

# LANGUAGE IN CONTEXT

ESSAYS FOR ROBERT E. LONGACRE



Shin Ja J. Hwang  
William R. Merrifield  
Editors



**Language in Context:  
Essays for  
Robert E. Longacre**

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## Introduction

These essays are for Robert Edmondson Longacre, written by his friends, colleagues, and students, to honor him on his seventieth birthday. He was born in Akron, Ohio, on 13 August, 1922. His higher education culminated in a Bachelor of Arts degree from Houghton College (New York) in 1943, a Bachelor of Divinity degree from Faith Theological Seminary (Delaware), and two linguistic degrees from the University of Pennsylvania—a Master of Arts degree in 1953 and a Doctor of Philosophy in 1955. He translated the New Testament into the Trique language of San Andrés Chicahuaxtla, an Otomanguan language, as the centerpiece of over twenty years of fieldwork in the State of Oaxaca, Mexico.

Kenneth L. Pike once said that the impact of Leonard Bloomfield on Linguistics was almost entirely through his writings, especially his book *Language* (which helped to shape the linguistic paradigm of the first half of the twentieth century), while Edward Sapir influenced many scholars more through personal touches—his gentle, insightful, and considerate consultations. Bob Longacre's influence upon us has been through both. He has written eleven books, edited seven others, and written some eighty essays in his career as a linguistics scholar. His influence on OWLS—Ordinary Working Linguists (a term he himself coined)—extends far beyond those printed materials.

Since the early 1960s, he has been consultant to SIL linguist-translators working around the world, professing to enjoy that mode of teaching above all others. He tirelessly spends long hours consulting with field linguists—puzzling over the peculiar features of the languages they study, whether they speak them as their first language or as languages learned as adult field linguists. He began conducting annual linguistics workshops in Mexico in the early 1960s, training others in the consulting discipline as

part of this task, and has since conducted major workshops in the Philippines (1967–68, 1982), in Papua New Guinea (1970), in Colombia (1974–75), in Mexico (1978), in Africa (1984), and in India (1987). There have also been innumerable less formal workshops and private consulting sessions with linguistics students and fieldworkers in their search to solve recalcitrant problems in the analysis of linguistic data, to create literacy materials, and to translate biblical and other material in the best way possible.

Since the Fall of 1972, Bob has been a member of the Graduate Faculty in the Department of Foreign Languages and Linguistics of the University of Texas at Arlington<sup>1</sup> where many have sought him to supervise their theses and dissertations (seventeen dissertations are completed and three are currently in progress), in addition to taking courses from him. Through the years, he has taught a variety of linguistics courses (such as theory of grammar, theory of discourse, linguistic field methods, morphology, case grammar and clause structure, the constituent structure of discourse, the sentence structure of discourse, the paragraph structure of discourse, text analysis, historical and comparative linguistics, and non-Indo-European linguistic structures) and has taught at numerous institutions in addition to UTA—the University of Michigan, Houghton College, SUNY Buffalo, and at SIL schools associated with the University of North Dakota and the University of Oklahoma, as well as the SIL school held at Horsleys Green (Buckinghamshire, England). In 1990, he received from UTA the University Award for Distinguished Record of Research or Creative Activity based upon his long record of research and publication.

His lectures and relationships with students, both inside and outside of the classroom, reveal him to be not only a frontier linguist, exploring the leading edge of linguistic ideas, but also a down-to-earth, friendly, and personable father figure who cares for his students as individuals. He is quick to pun and joke, suiting his humor to the topic and situation, thereby helping to reduce tension or anxiety that might arise from the subject matter.

He began to introduce SIL students to string analysis in syntax in 1954 at the University of Oklahoma—three years before the spread of the dogma that all grammar is binary and understandable through the study of English alone. His first major monograph—Proto Mixtecan—became the cornerstone and model for a plethora of studies, largely by SIL colleagues, which together have resulted in the documentation of the linguistic history of one of the better-known language families of the Americas—Proto

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<sup>1</sup>In the Fall of 1991 Linguistics and Foreign Languages became separate Departments.

Otomanguean. In the face of broad rejection of discovery procedures by American linguists of the 60s and 70s and of the analysis of languages by nonnative speakers, Longacre boldly authored his *Grammar Discovery Procedures* (1964), an analytical tool used by hundreds of language students of the period who have produced a goldmine of descriptive treatments of non-Indo-European languages that has outlasted the dogma which scoffed at their preparation. In this and related essays, he became the spokesman of his own version of Pike's tagmemic theory.

The present collection of essays reflects the varied, interdisciplinary interests which Bob has had through nearly fifty years of work as teacher, consultant, translator, and scholar. Topics range from studies on tone and historical linguistics to grammatical concerns from clause and causatives to textlinguistics. His first major linguistic problem to solve was in phonology and orthography. As Edmondson and Gregerson describe, he broke ground in tone analysis in 1952 by proposing five phonemic levels of pitch for Trique, at a time when noncontour tone systems were considered to be limited to three or four levels at most.

Starting from the late 1960s, his "overriding concern [became] that people interest themselves in the study of discourse" (1983:269). With this in mind, he has lately become the founding editor of the *Journal of Translation and Textlinguistics* (JOTT);<sup>2</sup> but in the intervening years he has posited both surface structures of individual languages and notional structures common across languages at all levels of grammar—from morpheme and stem to paragraph and discourse. Because of the strength of his current interest in discourse studies, we solicited the essays for this volume with the following statement to potential contributors:

Bob has had varied professional interests through the years and has influenced us all in any number of areas of language study. His more recent work, however has focused primarily upon textlinguistics. In *The Grammar of Discourse*, he states that "language is language only in context." If your professional areas of interest provide comment on this thesis, you might tie your contribution to it in a way which will challenge our thinking.

This thesis that "language is language only in context" provides the title for this volume, and more than half of the authors have dealt with it in relation to discourse, largely of the narrative type but also of the expository type as well. The topics within discourse grammar range from

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<sup>2</sup>The first four volumes (1987–1990) were published under the title *Occasional Papers in Translation and Textlinguistics* (OPTAT). Volume five is appearing under the new title in 1992 with a one-year hiatus in 1991.

storyline and systems of tense-aspect-mode to quote-formulas, topic, focus, the meaning of discourse particles, and switch reference.

We have made an effort to group the essays in a meaningful way, but realize the arbitrariness of some of our choices. The languages studied span the globe: North America (Chinantec, Mixe, Mixtec, Popoluca, Trique, Zoque), South America (Amuesha, Araona, Guaraní, Guarayu, Ndjuka, Mbyá, Ticuna), Europe (English, French, German, Classical Greek, Koiné Greek, Italian, Latin, Polish), Africa (Hausa, Mofu-Gudur, Obolo), the Middle East (Biblical Hebrew), Asia (Shidong Kam, Korean, Thai), and the Pacific (Berik, Tok Pisin).

It is with gratitude and pleasure that we offer this volume to our friend and colleague.

Shin Ja J. Hwang  
William R. Merrifield  
*Dallas, Texas*



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of  
Robert E. Longacre**

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## Best Wishes to Bob

Kenneth L. Pike

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Longacre has long been writing to serve his colleagues and his world. But he could not always have found it easy—I did not. So my sympathy is shown in *Write!* I also share the pain of days past, when work was in the future—until *now* and *then* no longer are before, hence *Now*.

Now

*Then* is gone—

When it's *today*,

Tomorrow.

How last that long?

If *then's* today,

It can't be long—

It's only now

And then.

**Write!**

*What! Me, to write?*

Right!—You must write!

*I don't want to.*

So what! Write!

*Write what?*

You know—He told you.

*My sounds are 'five smooth stones!'*

What more do you need?

*They're just choking and hissing!*

Of course— isn't that phoneticizing?

*It gives me a fever!*

Why not? Phonetics is hot stuff.



## **Discourse Structures and Strategies**



## **Marked and Unmarked Text Strategies within Semiotically Based NATURAL Textlinguistics**

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This contribution intends to present a semiotically based NATURAL model of textual microstructure. The model (Dressler 1989; cf. Merlini 1988; Dressler and Merlini 1987) derives from two sources: (a) a procedural model of textlinguistics (Beaugrande and Dressler 1981; for text production, cf. Beaugrande 1984), (b) the markedness or preference approach of Natural Phonology and Natural Morphology based on a semiotic metatheory as in Dressler 1985. In this framework, MARKED stands for 'more marked than' or 'dispreferred' or 'less natural than', and, correspondingly, UNMARKED for 'less marked than' or 'preferred' or 'more natural than'. Applied to the text level, this means that more vs. less marked options are often available in text production.

My markedness approach is based on Peircean semiotics (Peirce 1965, Buchler 1955, Hookway 1985, Eco 1984) because, first of all, if linguistics deals with language as a system of verbal signs, and if semiotics deals with signs in general, then semiotics is an appropriate metatheory for linguistic theory; secondly, Peircean semiotics seems to be a semiotic model particularly adequate for being used in linguistics (Dressler 1989). A final caveat about the use of markedness: With this I do not mean overall markedness, but a marked option on a specific universal, semiotically based parameter. In this contribution I must limit my brief presentation to universal markedness (neither typological nor language specific preferences, cf. Dressler 1983, 1989) and to the most important text-semiotic parameters. Thus I must neglect both language-specific discourse markedness and text-related language typology as pioneered by Longacre (e.g., 1982).

I will illustrate unmarked vs. marked text strategies with a few selected examples from English, French, German, Italian, and Latin, sometimes accompanied with translations from one language into another in order to show either crosslinguistic stability of text-strategic preferences or conflict between universal preferences and language specific factors.

Textlinguistics is the linguistic discipline which takes TEXT as its basic unit (Heydrich and Petöfi 1986). Text has been defined by Enkvist (1989:370ff, 377f) as a meaningful (i.e., interpretable) sequence of symbols in a natural language, and—in contrast to discourse—a stretch of language which can be studied outside of its situational context. This decontextualization is, of course, easier with written texts than with oral ones (particularly if they are not transcribed). Note that such a definition offers a lower limit to the stretches of language that qualify as text by excluding uninterpretable pieces of text, but does not offer any definite upper limit; e.g., a self-contained chapter or oral utterance—even a collection of papers by the same author or on a common topic—qualifies as a text. Only if the sequence of symbols comes to lose meaningfulness, do we arrive at marginal texts, quasi-texts, or nontexts, such as with telephone books or with a volume consisting of papers bound together by mere chance such as in certain book auctions. Here the seven standards of textuality of Beaugrande and Dressler (1981) allow further differentiation. At any rate, whereas scientific idealization may justify, at least provisionally, studying a text outside of its situational context, it is even more difficult to isolate a piece of text which may qualify as a text, from its cotext, i.e., from the larger text it forms a part of.

Moreover, in Beaugrande and Dressler 1981 we have insisted (a) on the procedural aspect of text production and text reception and (b) on the limits of decontextualization of text. The procedural aspect (a) fits well to the Peircean view of semiosis as a dynamic process involving signans, signatum, interpreters and the interpretant they produce (i.e., the communicative or cognitive effect of semiosis as a new sign). Concerning (b), textual semiosis starts with the level of social interaction the text producer is involved in when motivated to construct a concept of the text s/he wants to produce; and this semiosis and its outcome (the interpretant) can never be judged outside of its situational context.

### 1. Iconicity

Within the Peircean sign triad of icons, indices, and (conventional) symbols, icons are the most natural signs, or more precisely: All linguistic signs are, at least minimally, conventional/symbolic (Saussure's *arbitraire du signe*), but they may, simultaneously contain iconic or indexical aspects or



both. In this way, Seiler (1989:5)—who distinguishes the three functional principles iconicity, indicativity and predicativity—is much closer to Peirce than he claims. Now, according to Peirce (1965:276), “The only way of directly communicating an idea is by means of an icon; and every indirect method of communicating an idea must depend for its establishment upon the use of an icon.” Iconic memory and iconic perception are thus the most elementary types of memory and perception, and an iconic bookkeeping device facilitates production (Lang 1987). Thus, the more iconicity a sign contains, the more natural, more preferred, less marked it is. This establishes the universal parameter of iconicity (with its subparameters) where iconicity means similarity between signans and signatum in the mind of the interpreter.

On the text level, the best known aspect of iconicity is the universal preference for the *ordo naturalis* (Enkvist 1981; Levelt 1983). The *ordo naturalis* represents, so to speak, a diagram between cognitive order (i.e., the cognitively perceived order of events) and sentence order. Thus the text strategy of *ordo naturalis* is unmarked and more iconic than the marked *ordo artificialis*, which is more symbolic insofar as it is either motivated by language-specific or stylistic conventions or contains additional predications, in the sense of Seiler 1989 (e.g., symbolic descriptivity). The *ordo naturalis* has been most studied in narrative texts, with contingent temporal succession and agent orientation in the sense of Longacre 1982:460.

But the *ordo naturalis* is also very much preferred in instructive text types (or procedural discourse), where sequential, goal-oriented activities allow a clear distinction between *ordo naturalis* and *ordo artificialis*, similar to contingent temporal succession and agent orientation in narrative text. For example, in the Roman cookbook of Apicius there is nearly only *ordo naturalis*, and both French and German translations retain this *ordo naturalis*, as in (1).

- (1) a. *Apium coques ex aqua nitrata, exprimes et concides minutatim. In mortario teres piper, ligusticum, origanum, cepam, vinum, liquamen et oleum. Coques in pultario, et sic apium commisces. (recipe 104)*
- b. *Faites cuire du céleri à l'eau avec du carbonate de soude, égouttez-le et hachez-le finement. Pilez dans un mortier du poivre, de la livèche, de l'origan, de l'oignon, du vin, du garum et de l'huile. Faites cuire dans un plat à bouille et mélangez-y alors le céleri.*
- c. *Koche eine Sellerieknolle in Wasser mit Natronzusatz, drücke sie aus und schneide sie in kleine Stückchen. DANN verarbeite im Mörser Pfeffer . . . und Öl. In der Kasserolle aufkochen lassen und die gehackte Sellerie darunterstreichen.*

Here the sequential order of phrases in the recipe follows closely the chronological order of steps in the actions the cook has to take. The addition of *dann* 'then' in the German translation is thus unnecessary, because the German reader expects the *ordo naturalis* to prevail.

The *ordo naturalis* not only holds for finite verbs within main clauses but also for embedded participles, as in (2), and embedded secondary clauses, as in (3); and whenever the French and German translations change the type of embedding, the *ordo naturalis* is still preserved.

- (2) a. *Assam a furno simplicem salis plurimo conspersam cum melle inferes. (recipe 268)*  
 b. *La viande est rôtie au four, sans sauce, saupoudrée abondamment de sel et servie avec du miel.*  
 c. *Im Rohr gebratenes Fleisch bestreue reichlich mit Salz und serviere es mit Honig.*
- (3) a. *Pernam, ubi eam . . . elixaveris, detracta cute tessellatim incidis . . . Et cum farina cocta fuerit, eximas furno et ut est inferes. (recipe 290)*  
 b. *Après avoir fait cuire le jambon à l'eau . . . détachez la couenne et faites des incisions en carrés . . . Quand la pâte sera cuite, enlevez du four tel quel et servez.*  
 c. *Wenn du die Keule . . . gekocht hast, dann entferne . . . Ist der Mehlüberzug braun gebacken, dann nimm die Keule aus dem Ofen und serviere sie, so wie sie ist.*

There are very few examples where the *ordo naturalis* appears to be violated, as in (4), where the cooking of the pork brains is of such minor importance that it is embedded into an attributive participle without consideration of chronological order.

- (4) a. *Cucumeres rasos elixabis cum cerebellis elixis. (recipe 83)*  
 b. *Concombres pelés: Faites-les bouillir avec des cervelles cuites à l'eau.*  
 c. *Schmore die geschälten Gurken mit gebrühten Schweinehirschchen.*

Finally, in (5), a nonchronological afterthought is added at the end of a recipe concerning the preparation of rose wine.

- (5) a. *Sane custodito ut rosam . . . optimam mittas. (recipe 4)*  
 b. *Prenez bien soin de mettre des roses de premier choix.*  
 c. *Man beachte, dass man nur die besten . . . Rosenblätter nehme.*

In the rare cases of *ordo artificialis*, like those of (4) and (5), the violation of the diagrammatic preference for the *ordo naturalis* is justified. This marked order is, therefore, translated in the same way.

Another instance of diagrammaticity can be observed in the unmarked word order of functional sentence perspective (Sgall 1987). If on the cognitive level that which is known is the starting point for what is new, and if on the expression level the theme (given, known) precedes the rheme (new, unknown), then we have diagrammaticity again. Let us examine a German translation of Pasolini (1977/1982). In a translation unit where Pasolini speaks about the *koinè italiana*, he continues in the second sentence of (6) with a thematic element, whereas a verb precedes it in the German translation, as if something entirely new were presented, such as in the very first sentence of a paragraph or chapter.

- (6) a. *Questo implica un fatto che del resto è ben noto: IN ITALIA non esiste una vera e propria lingua italiana nazionale.* '... in Italy there is no proper national Italian language.'  
 b. ... *es gibt IN ITALIEN keine wirkliche Nationalsprache.* '... there is in Italy no true national language.'

So far we have dealt with PARADIGMATIC DIAGRAMMATICITY, i.e., with diagrammatic relationships between meaning and form. Now we are going to pass to a syntagmatic type of diagrammaticity, i.e., PARALLELISM. Identity of position of the same or similar elements facilitates both production and perception (Lang 1987), due to its iconicity. Thus parallelism is a preferred option in all types of texts (Weinrich 1972), including poetry, e.g., Paul Eluard's poem *L'amoureuse* (with Samuel Beckett's translation):

- (7) *Elle est debout sur mes paupières...* She is standing on my lids  
*Elle a la forme de mes mains,* She has the colour of my eye  
*Elle a la couleur de mes yeux,* She has the body of my hand  
*Elle s'engloutit dans mon ombre* In my shade she is engulfed  
*Comme une pierre sur le ciel.* As a stone against the sky.

Beckett inverts the order of sentences, which is rather rare in itself. Moreover, he also violates parallelism in the second to last line, without any other apparent reason than the great liberties that he takes in translating. This contradicts Jakobson's claim about the inherent poetic quality of parallelism (see also the critiques in Werth 1976).

Somewhat different is our next example taken from Arthur Rimbaud's *Le Bateau Ivre*, as translated by Beckett.

- (8) a. *PLUS LÉGER qu'un bouchon j'ai dansé sur les flots*  
*Qu'on appelle rouleurs éternels de victimes,*  
*Dix nuits, sans regretter l'oeil ni ais des falots.*  
*PLUS DOUCE qu'aux enfants la chair des pommes sûres . . .*
- b. *Nine nights like a cork on the billows, I danced*  
*On the breakers, sacrificial, for ever and ever,*  
*And the crass eye of the lanterns was expunged.*  
*MORE FIRMLY BLAND than to children apples' firm pulp . . .*

Here the first French comparative is not translated by a parallel, sentence-initial English comparative, because the expected synthetic comparative *lighter* would not form an easily recognizable parallelism with the second, analytic comparative *more firmly bland*.

## 2. Indexicality

This parameter is based on the character of the indexical signans defined by Peirce (1965:369) as that "which like a pronoun demonstrative or relative, forces the attention to the particular object intended (= indexical signatum) without describing it." Indexicality may point either to an element within the context of situation (exophoric deixis) or to a cotextual element, i.e., within the same text (endophoric deixis) and thus either backwards (anaphora) or forwards (cataphora).

On the parameter of indexicality, anaphoric indexicality is universally preferred over cataphoric indexicality (Lichtenbeck 1988). Because anaphora refers back to what is already known and cataphora to a (potentially) uncertain future, the former establishes the more reliable sign relationship, in the sense of Morris 1938:365. The indexical signata of the anaphoric signantia in (9a), for example, are usually much easier to find in the cotext than those of the cataphoric signantia in (9b).

- (9) a. *see above, the above mentioned, the above*  
 b. *see below, the below mentioned, \*the below*

In many languages there is even a distributional asymmetry in the inventory of endophoric elements (*the above* vs. *\*the below*, normally used *antecedent* vs. very rarely used *postcedent*). Thus anaphoricity, as in (9a), is the unmarked option, cataphoricity the marked option. One representant of this marked option is the marked stylistic strategy of jumping in, which can be illustrated by the first page of a novel by Thomas Mann (Harweg 1968), as seen in (10), where only after a page-long series of cataphoric

pronouns do we finally learn who the indexical signatum is, namely Moses. This remains a marked text strategy even for a reader who recognizes Moses as the hero before he reads his name.

- (10) *SEINE Geburt war unordentlich . . . ER . . . MOSES . . .*  
 'His birth was unorderedly . . . he . . . Moses . . .'

A more delicate illustration of jumping in can be found with Italian interfixes (Dressler and Merlini Barbaresi 1989). Diminutives with (morphopragmatic) interfixes prefer anaphoric position in regard to diminutives (or a *fortiori*, *simplicia*) without interfixes, such as in the dialogue (11) between a lady (a) and her gardener (b).

- (11) a. *Già, e le mie piant-INE, mentre sono via?*  
 'Well, and my little plants, while I'm away?'  
 b. *Innaffieremo anche le sue amate piant-IC-INE.*  
 'We'll water your beloved little plants as well.'

As both spontaneous speech and tests run by Merlini Barbaresi have shown, native speakers of Italian nearly always prefer this order simplex/diminutive-interfixed diminutive over the inverse order.

In the Italian newspaper *Corriere della Sera*, however, I found a report about the derailment of the Brenner express train near Bologna which starts with the sentence of (12).

- (12) a. *Così un vecchio ponticello ha 'tradito' il treno*

*Un ponticello costruito dai nostri nonni non ce l'ha fatto pi.  
 Erano passato da poco le 23,30 quando il treno è arrivato a scavalcare in piena velocità quel piccolo ponte di appena tre metri . . .*

- b. *Thus a (dear little) old bridge 'betrayed' the train*

*A (dear little) bridge built by our grandparents hasn't made it any more. It was just after 11:30 P.M. when the train came at full speed to pass the bridge of hardly three meters . . .*

Here, the title already starts with two emotive elements which are meant to, cataphorically, arouse tension and interest, i.e., the interfixed diminutive of *ponte* 'bridge' and the metaphoric verb *tradire* 'to betray'. Also the first sentence of the text (again with the interfixed diminutive) continues this

emotive register, whereas the second sentence falls back into the expected sober news report register.

As Peirce has clearly expressed in his above cited characterization of indices, pure indices may not be descriptive. This holds both for pronominal and zero anaphora. Anaphoric lexical recurrence (repetition), however, contains the same amount of descriptivity as the repeated antecedent, albeit without adding any new descriptive element. But if these anaphoric elements are substituted for by a new coreferent that is only a partially synonymous word or word group, then this represents a descriptive paraphrases that adds symbolicity and, possibly, pragmatic value that reveals author perspective. Such pragmatic reloading is evident in the following episode (13) from *Robinson Crusoe*, where Defoe speaks about Friday and other victims of cannibals.

- (13) a. *I perceived . . . two miserable WRETCHES dragged from the boats . . . I perceived one of THEM immediately fell . . . while the other VICTIM was left standing . . . In that very moment this poor WRETCH . . . and HE started away from them . . . and this I saw plainly, HE must necessarily swim over, or the poor WRETCH would be taken there. But when the SAVAGE escaping came thither, he made nothing of it [I omitted 8 instances of he].*

Also the German translation (13b) contains a similar variation among these different anaphoric elements. However, the respective choices are made in different places, i.e., mere indexicality vs. symbolic reloading does not occur at the same places in the original and in the German translation:

- (13) b. *Da bemerkte ich . . . wie man zwei UNGLÜCKLICHE aus den Booten . . . herbeischleppte . . . Den einen DAVON sah ich alsbald . . . niederstürzen . . . während das andere SCHLACHTOPFER wartete . . . In diesem Augenblick zuckte ER zusammen und O rannte . . . Es war klar, daß der arme KERL diese durchschwimmen mußte, wenn ER nicht in die Hände der Verfolger fallen sollte. Wirklich warf sich der FLÜCHTLING . . .*

The German translator has obviously taken Defoe's varying choices as a matter of pure and random stylistic variation in order to avoid tiresome repetitions and has reacted with truly random variation. This translation has thus changed the information flow and shifts in author perspective.

Since, according to Peirce (Hookway 1985:155ff), perception comprises an indexical component, an additional indexical relation is established in the hearer's perception of the speaker and between their utterances.

Therefore, the indexical relations between turns—e.g., within question answer pairs—are stronger than between adjacent sentences uttered by the same speaker. In addition, questions contain cataphoric elements pointing forwards to the answer. This strength of indexical cohesion explains why more anaphoric ellipsis is possible in answer than follow-up sentences of the same speaker (Schimanski 1975).

### 3. Transparency

According to Koj (1979), “Transparency to meaning . . . appears precisely when we completely cease to perceive the material shape of a sign . . . and are conscious only of its semantic sign,” i.e., when cognitive or pragmatic or semantic meanings are directly reflected on the surface of the text without further necessity for inferencing or reconstructive processing. Full transparency, of course, can obtain only in an idealized state of affairs where economy of processing is not necessary; normally we can find varying degrees of opacity.

For example, in trains, we can read inscriptions like those of (14).

- (14) a. *Do not lean out*  
 b. *Ne pas se pencher en dehors*  
 c. *Nicht hinauslehnen*  
 d. *‘E pericoloso sporgersi* ‘It is dangerous to lean out.’

In none of the four versions of (14) is the window mentioned. This noun can be easily inferred, however, because the inscriptions are always written beneath the respective window so that there is little real opacity in the material context of situation. But the Italian version does give a justification—Italian public, postfascist inscriptions often appeal to the intelligence of their intended readers—which at first sight makes the prohibition to lean out somewhat opaque. One may even think of an adventurous person who, when reading this Italian inscription, may feel encouraged to take a risk. In the social context of situation, however, or within the frames of public transport in general and of trains in particular, risks are understood to be avoided. This shows us that the degree of transparency (or opacity) can only be calculated within the context of situation (situationality of Beaugrande and Dressler 1981) or within the cotext of which the respective text chunk forms a part.

Direct speech acts are more transparent than indirect speech acts; i.e., the degree of directness of a speech act is correlated with its illocutionary transparency. Direct speech acts are universally unmarked insofar as they

are easier to understand, earlier learned by children, better preserved in aphasia. Their predicted frequency of use is highly restricted, however, by language- and culture-specific conventions, particularly by norms of politeness, although indirectness does not always increase politeness (Held 1990).

Since we are more interested in cotext than in context, let us return to (iconic and indexical) repetition and to its role on the parameter of transparency. Let us start with sentences from Anthony's oft-repeated funeral speech in Shakespeare's *Julius Caesar*.

- (15) *For Brutus is an honourable man*  
*And . . .*  
*For sure he . . .*

The illocutionary force of Anthony's sentence may be opaque or ambiguous to his readers at first reading. But with each repetition the new context helps to disambiguate the intended meaning, i.e., repetition renders the meaning more transparent. This is clearly only possible because the hearer is able both to grasp the indexical character of repetition and to assume diagrammaticity of this indexical relationship, i.e., to assume that these repeated sentences always have the same meaning.

Of course, rhetorical/poetic repetition also increases the perlocutionary force, both in literary and in ordinary speech.

As we have seen, all parameters discussed so far can be applied both to the paradigmatic and to the syntagmatic axis of language; paradigmatic iconicity is preferred in the relations between levels of meaning and form, syntagmatic iconicity occurs in repetition, parallelism and lexical/semantic/syntactic recurrence—all elements which simultaneously presuppose syntagmatic indexicality. And transparency has these same two options. The next, and last parameter we are going to present is restricted to the syntagmatic axis (unless we include what is omitted, i.e., is not uttered at all).

#### 4. Figure and ground

This parameter of contrasting a more important, more precise, more dynamic figure (or foreground) with a less important, more pallid, more static ground (or background) has been taken over from gestalt psychology into semiotics (Ertel 1981, Holenstein 1976, Scherer 1984:156ff). This parameter seems to be adequate for capturing hierarchies within the rhythmic structuring of sequential linearization of text—and all texts must have hierarchical structuring. This rhythmic structuring follows—again iconically—from underlying cognitive, pragmatic, and semantic hierarchies. The stronger the contrast



between figure and ground, the better the figure is perceived, i.e., the "percept . . . obtrudes itself on my gaze" (Peirce 1965:619).

Languages have several means of enhancing the contrast between foreground and background, e.g., of the story/event-line vs. the setting.<sup>1</sup> These include, for example, (a) verbal aspect, i.e., the difference between perfective and imperfective aspect (and its equivalents), (b) embedding into secondary clauses, participles or preposition/noun phrases, (c) (compensatory) particles. Let us reanalyze a translation unit from Ernest Hemingway's *The Old Man and the Sea* and its French, Italian, Spanish, and German translations (Wandruszka 1957).

- (16) a. *They walked down the road to the old man's shack and all along the road, in the dark, barefoot men WERE MOVING, CARRYING the masts of their boats.*  
 b. *Ils descendIRENT . . . des gens se mouVAIENT . . . les mâts de leurs bateaux sur leurs épaules.*  
 c. *ScESERO . . . si muOVEVANO uomini scalci, che portAVANO . . .*  
 d. *MarchARON . . . se VELAN hombres descalzos PORTANDO . . .*  
 e. *Sie GINGEN die Landstraße hinunter bis zu der Hütte des alten Mannes, und die ganze Straße entlang im Dunkeln bewegTEN sich barfüßige Männer, die die Masten ihrer Boote TRUGEN.*

According to the criterion of verbal aspect the English simple form *walked* refers to the foreground, the expanded/progressive form *were moving* to the background. By embedding, the participle *carrying* is still further backgrounded. The Spanish translation comes closest with the equivalent triad *preterito perfecto simple, imperfecto, participio*. The French translation comes close with *passé simple, imparfait*, and a nominalized phrase. The Italian translation as well with *passato remoto, imperfetto*, and an *imperfetto* embedded into a secondary (i.e., relative) clause. Embedding into a relative clause is also chosen in the German translation. Since German has no grammatical equivalent to verbal aspect, however, the translator has flattened the difference between figure and ground by translating both the English simple and progressive form by a German preterit.

My final example (Latin, with English, French, Italian, and German translations) is from Virgil's *Aeneis*, where Aeneas exhorts his companions within the burning city of Troy. It is meant to illustrate (frequent!) parameter conflicts.

<sup>1</sup>As in Longacre 1985, 1987; cf. Grimes' 1982 concept of staging and, in general, Grimes 1975:51ff.

- (17) a. *moriamur et in media arma ruamur*  
 b. *come, let us die, we'll make a rush into the thick of it*  
 c. *Mourons et jetons-nous au milieu des armes*  
 d. *moriamo, e gettiamoci tra le armi*  
 e. *(Thassilo von Scheffer) so stürzen wir denn zum Kampf und zum Tode.*

This Latin exhortation clearly violates the diagrammatic parameter of the *ordo naturalis* in its basically chronological interpretation and thus is a classical example of a *hysteron proteron*. The decision to die is foregrounded, however, by getting sequential priority. In other words, there is a conflict between the parameters of diagrammaticity and of figure and ground. Virgil's stylistic choice is maintained in all but the German translation. In respect to scientific texts, we may compare the textual strategy of ordering material according to "order of importance" (Trimble 1985:60ff).

Waugh (1982) maintains that the pair MARKED-UNMARKED can be considered as a contrast between figure and ground. However, marked and unmarked refers both to the paradigmatic and the syntagmatic axes (even predominantly to the paradigmatic axis), whereas figure and ground do not. Second, figure and ground form a clear binary contrast, whereas preference/markedness/naturalness allow a continuum, although each continuum can be dissolved into bundles of binary opposition pairs.

## 5. Conclusion

I have tried, in this brief presentation, to show that seemingly unimportant properties of a text such as word order, repetition, and use of pronouns have a meaning in texts, that they help to shape the flow of discourse, and that they are, thus, also relevant to an analysis of relative markedness. By inserting these phenomena into a semiotically based preference model, I have distinguished parametrized marked vs. unmarked text strategies. Since semiotic relations are much richer and more complex on the text level than in phonology and morphology, the predictive power of a semiotic parameter is in itself more limited on the textual level, although it may be involved much more frequently in the explanation of linguistic phenomena and of their cross-linguistic distributions.

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## **Relational Discourse Structure: A Comparison of Approaches to Structuring Text by 'Contrast'**

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A number of researchers studying written texts have converged on the centrality to discourse organization of semantic or discourse functional relations among the parts of the text, specifically between clause-like units and constructions containing such units.

As one of the pioneers in the study of text relations, Robert Longacre has been highly influential. Inspired by his work in this field, we dedicate this paper to him and offer it as a small contribution to the understanding of one broad area of text relations. Our goal in this paper is to consider the ways in which Longacre himself and various others have dealt with that subset of text relations having to do with CONTRAST, FRUSTRATED EXPECTATION, SURPRISE, and so on. Their views provide a kind of snapshot of the status of the study of discourse relations and suggest a model of what future relational accounts might include.

Our comparative study assumes that the various approaches we discuss are in fact approaches to the same linguistic phenomenon. In spite of variation in terminology and minor differences in stance toward the units which enter into relations, we have found this assumption to be justified. All the researchers we discuss here take PREDICATIONS, or PROPOSITIONS, to be basic units of text; a prominent subset of these are typically represented in language as CLAUSES. Thus, relations between these units can be designated as, e.g., INTERCLAUSAL RELATIONS (Ballard, Conrad, and Longacre 1971), RELATIONS BETWEEN PREDICATIONS (Grimes 1975, Longacre 1983), etc. Most authors extend these relations to larger, aggregated units as well. Since the terminology in this area is not consistent, we simply call the

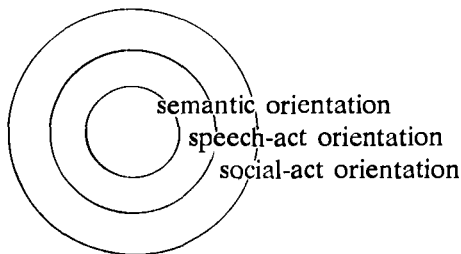
relations in question TEXT RELATIONS. Our survey includes the work of Longacre, Beekman and Callow, Winter, Hoey, Jordan, Halliday, Hasan, Martin, Grimes, van Dijk, and Mann and Thompson.

### 1. Theoretical foundations

There is widely shared agreement concerning the building blocks of which relational discourse structure is composed. Virtually all researchers take clauses (or entities realized by clauses) as the minimal working unit, often adjusting definitions to include elided clauses and exclude dependent clauses. This means that the dividing lines of discourse structure are generally clause boundaries.

The clauses are then used to build structure in very different ways, depending on choices among some very basic orienting assumptions. With some simplification, we can characterize the assumptions as falling into one of three groups. These groups can be seen as concentric circles, where each successive group includes the assumptions of the preceding group, but adds its own assumptions, as in (1).

(1)



A semantic orientation is centrally concerned with the propositions expressed in a text, their truth values, and how fragments of text correspond to propositions. For discourse, the logical combination of propositions into larger propositions is a key concern, as is understanding the loose and multivalued correspondences between natural conjunctions and the AND, OR, and NOT of logical systems. Declaratives are given nearly exclusive attention. One of the ideals of this orientation is to link discourse theory into existing formal semantic approaches to sentences. One result has been that the notion PROPOSITION has been stretched to the point where propositional structures have been made to appear more effective than they really are.

A speech-act orientation sees the clause as an action of a speaker. In the case of declaratives, the speaker is affirming some proposition, and all of the issues of the semantic orientation are relevant. But in addition, this approach considers it important to identify the act performed by a simple

or composite discourse entity and to specify how acts combine to produce composite acts. Because of the urge to reconcile work with the semantic orientation, the terminology of the speech-act orientation has tended to be similar, but the underlying claims about fragments of text are quite different.

A social-act orientation sees language as involving both speaker and hearer in essential ways. So, for example, when a speaker uses a declarative sentence, the particular propositions and commitments that are involved depend on the hearer and on aspects of the situation, as well as on the particular language used. Because sentences are not simply independent social transactions, this orientation proposes that discourse analysis should reveal the influences that determine the significance and effects of each part of the speaker's text. Part of the work of discourse research is to describe the ways that language can work as a social resource for conveying complex meanings and performing complex but organized social acts.

In a semantic orientation, this view of relations entails that they are logical relations, yielding added assertions, truth values, or truth functions of combinations of propositions, projecting the creation of a compositional semantics of entire texts. In speech-act or social-act orientations, relations are used to form complex acts of the appropriate kind.

Each of these three orientations is a prototype, only partially fulfilled in any particular researcher's work. And a researcher's hopes and intentions often have a different orientation from the theories produced by that researcher.

By way of illustration, we can compare these three orientations with respect to a simple example. Example (2) contains an extract to the editor of *BYTE* magazine from a reader praising a federal income tax program published in an earlier issue.<sup>1</sup>

- (2) a. *The program as published for calendar year 1980 really works.*  
b. *In only a few minutes, I entered all the figures from my 1980 tax return*  
c. *and got a result which agreed with my hand calculations to the penny.*

We have analyzed this extract as an example of the Evidence relation in Mann and Thompson (1987); that is, units (2b) and (2c) offer evidence for the claim in unit (2a). We suggest that the three orientations just outlined might offer the following analyses of this excerpt.

a. A semantic orientation deals with the truth value or truth functional status of the claim and the evidence. Typically the relation between the

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<sup>1</sup>The numbering of units in this example follows the conventions set forth in the literature on Rhetorical Structure Theory, e.g., Mann and Thompson (1987).

two would be identified with the logical conjunction *and*, and possibly a further proposition would be derived from the pair, perhaps stating somehow that the evidence tends to support the truth of the claim. A purely semantic orientation lacks a clear status for commands and questions, either as single clauses or formed as compositions of clauses. It also tends to lose the distinctions between various relations that are distinct on interactional grounds.

b. A speech-act orientation adds a role for the speaker. The speaker may be asserting, questioning, commanding, and so forth. In the case of evidence, the speaker is asserting the claim and also asserting the evidence. This orientation overcomes some of the disadvantages of the purely semantic orientation. It has no way to say why the evidence is given, however, or what function it performs in the text in which it occurs.

c. A social-act orientation generally affirms everything that a speech-act orientation affirms, but adds a role for the hearer. In this orientation, it is the hearer's belief system in which the claim must be made credible, and in some treatments the speaker has an explicit purpose or goal in giving evidence: to cause the hearer to believe the claim. A social-act orientation tends to regard text structure as descriptive of complex transactions between speakers and hearers. It tends to recognize the greatest diversity of text relations, and incidentally also has the easiest accommodation for utterances such as greetings, requests for permission to speak, and the like, since these are characteristically social in character.

Many of the differences among the accounts we survey in this paper arise from the differences in orientation we have described in terms of these three concentric circles. Despite the differences of orientation, however, we note that there is a heartening amount of agreement among the approaches we survey on a number of points. For example, all agree that text relations can hold between linguistic entities realized as clauses as well as between larger entities which are realized by corresponding collections of clauses.

One of the points of noncomparability between researchers' views regards language coverage. Some researchers, especially those concerned to some extent with translation, intend their taxonomies to be universally applicable (Longacre, Beekman and Callow, Grimes). Others (including Winter, Hoey, Jordan, and Mann and Thompson—because they have studied these relations primarily in texts in English) have not attempted to project their claims beyond English. In spite of the variation in this respect, we see that there is a surprising amount of comparability among their views, suggesting that at least some relational aspects of written discourse organization may be universal.

We begin our investigation with Longacre himself.



## 2. Longacre

Current linguistic discussions of text relations can legitimately be said to have been much influenced by a seminal paper by Ballard, Conrad, and Longacre (1971). Chapter 3 of Longacre 1983, entitled *Combinations of predications*, is the heart of his most recent revision of this work and of Longacre 1976 regarding a taxonomy of text relations; all references in this section are to this chapter. Here Longacre makes it clear that his text relations serve to combine predications, which are realized as SURFACE STRUCTURE CLAUSES (76). Longacre's basic approach is a propositional semantic one, as characterized above; he explicitly refers to his system as a PROPOSITIONAL CALCULUS.

Longacre's methodology thus begins from imagined predications and considers how they are combined, rather than beginning with the text and considering how its parts are related, though he readily acknowledges that his relations may connect parts of discourses that are several propositions in length.

Longacre distinguishes four basic relations (79)—CONJOINING, ALTERNATION, TEMPORAL, and IMPLICATION. Of these, we will be concerned first with conjoining, since it is under this heading that his CONTRAST is to be found.

Contrast is thus a subtype of conjoining. Longacre's definition of contrast is relatively narrow: to be in a contrast relation, two predications must be involved which contain at least two pairs of opposed lexical items (83); his example is repeated here as (3), where *I* contrasts with *my wife*, and *don't like hamburgers* contrasts with *does*.

(3) *I don't like hamburgers, but my wife does.*

All of the approaches we discuss recognize at least one relation of contrast. Longacre's system, however, has an innovative feature not shared by most other approaches: a notion of FRUSTRATION, or COUNTEREXPECTATION, where predication P normally implies predication Q, but in the text, the "opposite positive-negative value" of Q obtains (134). Longacre is careful to note that the expectation may range from highly general to highly specific.

Thus, for many of the subtypes of his basic relations (conjoining, alternation, temporal, and implication), he posits a parallel FRUSTRATED relation. COUPLING, a subtype of conjoining, for example, has a frustrated counterpart, FRUSTRATED COUPLING, as in (4); and SUCCESSION, a subtype of temporal, has its frustrated counterpart, FRUSTRATED SUCCESSION, as in (5).

- (4) a. Coupling: *He's short and he's fat.* (81)  
 b. Frustrated coupling: *She's fat but she's not sloppy.* (134)
- (5) a. Succession: *She spent an hour getting supper, then half an hour eating it.* (98)  
 b. Frustrated succession: *He killed and cooked his game but never ate it.* (136)

Kroon (to appear) provides the following diagram showing which of Longacre's basic relations have frustrated counterparts.

(6)	<b>Basic structures</b>	<b>Frustrated counterparts</b>
	additive	
	disjunctive	(concessive/adversative)
	temporal	
	causal-conditional	
	<b>Elaborative deep structures</b>	
	paraphrase	
	illustration	
	deixis	
	attribution	(concessive/adversative)

Note that Longacre's frustrated relations are consistently distinct from his contrast relation by virtue of the narrow definition of contrast: a pair of predications is not considered to be related by contrast unless there are at least two pairs of opposing lexical items. Relations between predications which present a contrast in a broader sense but which do not contain two pairs of opposing lexical items are considered frustrated counterparts of some other relation.

### 3. Beekman and Callow

Beekman and Callow (1974) is widely acknowledged by nearly all subsequent researchers, including Longacre, to be a major influence in the study of text relations. This discussion is expanded in Beekman, Callow, and Kopesec (1981), but since the changes in the relations we discuss are minor, and since the latter work is less accessible, we restrict our discussion to Beekman and Callow (1974).

Text relations are considered by Beekman and Callow to be part of the SEMANTIC STRUCTURE of a text. One of the basic units in the semantic analysis of a text is the PROPOSITION (268), which is defined as a "unit of communication, that is, it affirms, denies, questions, or commands something" (272). For our purposes, we may think of a Beekman and Callow proposition as a speech act. As we shall see below, however, their approach generally embodies a semantic rather than speech-act orientation. Semantic analysis begins with the text itself, and consists largely of identifying the propositions in a text and analyzing the relations between them.

Beekman and Callow's chapter 18, *Relations between propositions*, outlines their approach to these relations. They make a basic distinction between propositions which DEVELOP some semantic unit of the text and those which SUPPORT it (288).<sup>2</sup>

The relation between developmental propositions is that of ADDITION, while that between support propositions is that of ASSOCIATION. It is the latter type with which we shall be concerned here, since that is where the relations in the contrast area are to be found.

According to Beekman and Callow, "support propositions sustain associative relations to the propositions they support" (289). Unlike developmental propositions, which are "of equal rank relative to one another," "a support proposition is considered to be of unequal rank relative to the supported proposition" (289). "Support propositions can be classified according to their semantic functions in a discourse" (289): the support proposition clarifies another proposition, argues for another proposition, or orients another proposition. Of particular interest to this study are two relations found between a support proposition and its supported proposition: CONTRAST is one of the relations under SUPPORT BY CLARIFICATION, while CONCESSION-CONTRAEXPECTATION is one of the relations under SUPPORT BY ARGUMENT. We note that this classification carries the assumption that functions in discourse are semantic, an echo of the semantic orientation. ARGUES FOR, ORIENTS, and CLARIFIES all have to do with transmitting the propositional (or Halliday's IDEATIONAL) content.

Beekman and Callow's contrast is defined as follows:

The relation of CONTRAST occurs between two propositions if there are at least two points of difference between them, and if one of the points of difference is a positive-negative opposition. (295)

Their example, presented here as (6), is entirely analogous to Longacre's example in (3) above.

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<sup>2</sup>There is a comparable notion in RHETORICAL STRUCTURE THEORY, called LOCUS OF EFFECT, described in Mann and Thompson 1988 (see §12).

(7) *He sings in his bath, but I don't. (295)*

The second proposition is a support proposition because it is said to support the first by clarifying it, specifically "by highlighting or explaining it" (289). The example is one of contrast because the two propositions contain two points of difference (*he* vs. *I*, and *sings* vs. *don't*), the latter of which is a positive-negative opposition.

Beekman and Callow's definition of contrast is similar to Longacre's in recognizing two propositions with at least two points of difference, but is more flexible than his in not restricting the contrast to opposed lexical items or to predications. However, Beekman and Callow's definition is more restricted than Longacre's in insisting that one of the points of difference be a positive-negative opposition, rather than simply an opposition. One thus surmises that an example like (8) would count as contrast for Longacre, but not for Beekman and Callow.

(8) *She likes strawberries, but I like raspberries.*

Like Longacre, Beekman and Callow also recognize a distinct type of CONTRASTIVENESS involving the notion of EXPECTANCY and its reversal, CONCESSION-CONTRAEXPECTATION, a subtype of support by argument. In concession-contraexpectation, the effect takes the form of an unexpected result. Their example (Beekman, Callow, and Kopesec 1981:105) is presented here in (9).

(9) *Although the doctor told Bill to stay at home, he went to a baseball game.*

Beekman and Callow readily acknowledge that it may often be difficult to decide whether a given pair of propositions is related by contrast or concession-contraexpectation, since expectancy is often culturally bound, or implicit; thus, "it is sometimes difficult to decide whether a contrast relation has the implication that it was contrary to expectation" (296).

#### 4. Winter

In unpublished work as early as 1968, Eugene Winter began making contributions to the literature on text relations. In published work, there is no attempt to provide an exhaustive taxonomy of text relations; however, brief discussions of text relations (Winter's CLAUSE RELATIONS) can be found in Winter 1977, 1979, 1982, and 1986. Our summary of his views comes largely from the last-mentioned of these, since it focuses on clause

relations, albeit in the service of a larger point (see §5); page numbers refer to this work unless specified otherwise. Here we find two relations which fall under the general heading CONTRAST.

Winter's most recent definition of clause relation revises all of his earlier definitions and is worth repeating here in full:

A CLAUSE RELATION is the shared cognitive process whereby we interpret the meaning of a clause, or group of clauses in the light of their adjoining clause or group of clauses. Where the clauses are independent, we can speak of SENTENCE RELATIONS. (1986:91)

Winter's methodology is thus similar to that of Beekman and Callow in starting with the text itself. However, he differs from them in the additional cognitive element he provides. Recall that Beekman and Callow consider text relations to be part of the semantic structure of the text, revealing their semantic orientation. Winter's statement, in contrast, explicitly recognizes that text relations involve the cognitive input of the interpreter; to this extent, his orientation is much closer to the social act prototype.

Clause relations for Winter can be either of the MATCHING or the LOGICAL SEQUENCE type (1977:6ff, 1986:91ff). Matching relations all involve a comparing component, while logical sequence relations all involve events in a temporal relation with each other, including events of a "deductive or causal sequence" (1986:94).

Though Winter and Longacre do not refer to each other, it is fairly clear from their descriptions that Winter's matching relations roughly correspond to Longacre's conjoining and alternation relations, while his logical sequence relations roughly correspond to Longacre's temporal and implication relations.

As can be inferred, it will be within the area of matching relations that we will find contrast. The matching relations include "the semantics of compatibility and incompatibility" (92); thus, "within incompatibility, we have contrasts and contradiction" (92). Winter's example is presented in (10).

- (10) *No Russian* wants to conquer the world.  
*Some Americans* do, on the best crusading grounds. (93)

In addition to matching and logical sequence relations, Winter postulates a MULTIPLE CLAUSE RELATION, "where both the relations of matching and logical sequence are present in the same clause pair" (95). Under multiple clause relation, we can find the CONCESSIVE relation, which Winter characterizes as "a case of matching semantics operating within the deductive reasoning of logical sequence" (96), as in (11).

- (11) *I'm not rich and yet I am happy.*

A central feature of Winter's research into clause relations is the use of questions as a clause-relational defining technique. As particularly elaborated in Winter 1982 and Winter to appear, this technique involves viewing all the sentences in a text as answers to specific questions which readers might ask of the writer. According to Winter, to the extent that an invented question "makes more sense of the particular connection between two sentences or clauses," this question can be used as a clue to the relation holding between these sentences or clauses, though precisely what the relationship is between the question and the clausal relations is not made explicit.

More elaborated treatments of Winter's general framework, as outlined here, can be found in the work of Michael Hoey and Michael Jordan, to which we now turn.

## 5. Hoey

Hoey's major focus is not to provide a taxonomy of text relations, but to illustrate how certain very general relations, particularly PROBLEM-SOLUTION, can serve to organize entire texts. We do not, therefore, find an in-depth discussion of individual relations. Hoey's elaboration of Winter's schema is so insightful, however, that it will be enlightening for us to note some of his salient contributions.

Chapter 2 of Hoey 1983 aims to outline the basic characteristics of Winter's approach to clause relations. Following Winter's definition of clause relation given above, Hoey observes that "the clause relation is not so called because it relates only clauses. Rather it is so described because all systems for signaling relations are rooted in the grammar of the clause" (18). So Hoey and Winter, like all the other researchers in text relations we have surveyed, clearly acknowledge that clause relations may relate larger portions of text than simply clauses.

Hoey points out that one of the implications of Winter's definition is that a relation involves the ADDITION of something; "when two pieces of language are placed together, if their meaning together is more than the sum total of their separate parts, then they are in a relation with each other" (18).<sup>3</sup> Although we are concerned in this paper with a comparison among various approaches to notions of contrast, it is worth remarking that Hoey's larger goal (and that of Winter and Jordan as well) is "to discover what in the discourse allows the reader's acts of interpretation to take place and what ensures that the various acts of interpretation that take place occur within a given range of possibilities" (19). Hoey is thus

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<sup>3</sup>This idea is also made explicit in Rhetorical Structure Theory (see §12).

focusing on the necessity for a taxonomy of text relations to be securely embedded within a theory of text interpretation, a point which none of the researchers we are discussing would deny, though Hoey and Jordan stand out as providing explicit attempts to actually address the question of what such a theory would look like.

After providing a thumbnail sketch of Winter's categories of clause relation, Hoey addresses the issue of the relationship between signals of relations and relations themselves. He notes that "the most apparent means whereby a clause relation may be signaled is by the use of one of the two finite sets of grammatical connectives"—subordinators and conjuncts (21). But he emphasizes that in Winter's approach, the relationship between these signals and the clause relations is "both close and complex." Hoey notes that in Winter's approach, in other words, "relations have typical grammatical representations, but there is no one-to-one correlation between relation and representation" (22).

Hoey suggests that this insight of Winter's focuses on two facts about relations that should inform research on discourse; it is worth citing these in full, for they summarize an issue addressed by most of the work on relations we are surveying here:

First, a relation is not identified by intuition alone nor is it an adequate description of a passage simply to note how its clauses are related; a relation is linguistically signaled and it is necessary to identify how it is signaled in any given case. Secondly, a relation is not simply a label for a set of signals; it can be identified only by examining the content of the clauses and their context. (22)

While every linguist working on text relations, we think, would agree with the spirit of these remarks, the approaches we are considering here vary with respect to which side of the fence they come down on. At least one approach we wish to discuss, that represented by Halliday, Hasan, and Martin, for example, explicitly begins with the morphological signals as a way of describing text relations. We also note that Hoey's remarks fail to pick up on Winter's insistence on the cognitive aspect of interpretation by not acknowledging the role of the reader in supplying meaning, sometimes quite independently of signals.

Hoey's discussion of the contrast set of relations parallels that of Winter, with contrast as a subtype of the matching type of relation. Consistent with the quote given just above, however, a very important feature of Hoey's approach to text relations is his concern with the importance of providing analytic criteria by which to identify relations. This is an aspect of analysis left implicit in nearly all of the other descriptions of text relations that

we know of.<sup>4</sup> Thus, for example, Hoey uses an example from a passage comparing potassium with sodium to illustrate the criteria for establishing contrast.

... while the hydroxides of most metals are either insoluble in water or slightly soluble, those of both sodium and potassium are extremely soluble. (116)

The indications that suggest that the relation is one of contrast are:

- a. the first clause is subordinated by *while* which in one of its uses is an indication of contrast;
- b. the two clauses show the antonym pair *soluble/insoluble* and the near-antonym pair *slightly/extremely*;
- c. it is possible to insert a DENIAL PARAPHRASE between the two clauses, such as *the same is not true of sodium and potassium*. (117–18)

Various other signals of contrast can be found; Hoey notes another example later in the passage in which a sentence between the two in contrast actually serves the function of a denial paraphrase, as in (12).

(12) *Here again sodium and potassium stand apart.*

In sum, Hoey's discussion of text relations can be studied with reward. Though he does not attempt to present anything like a taxonomy of relations, his useful and clear treatment of specific examples offers much insight into how to use an analysis of text relations to arrive at a deeper understanding of texts.

## 6. Jordan

Jordan 1988 is the most recent published version of Jordan's research into clause relations (but see Jordan 1984 and 1985). Also strongly influenced by Winter, Jordan proposes to extend Winter's question criterion as a "means of extending our knowledge of basic relations into a powerful explanatorily-adequate theory of textual cohesion" (1988:282-83). In fact, Jordan goes on to make the strong claim that "the question criterion, when used systematically and thoroughly, is probably adequate as the sole clause-relational criterion in language" (1988:283), and his taxonomy in the

<sup>4</sup>Though we have tried to provide such criteria in Rhetorical Structure Theory (see §12).



appendix to that article reflects this conviction. Thus, for example, unlike most of the other researchers being surveyed here, Jordan postulates relations ACTIVE and PASSIVE, which answer the questions *What has it done?* and *What has been done to it?*, respectively.

## 7. Halliday and Hasan

Halliday and Hasan, like Martin (§9), differ from the other researchers we have been considering in taking as their starting point relations among clauses. None of the taxonomies proposed by these three scholars considers whether interclausal relations might also relate larger portions of text, although in personal communications all three acknowledge the possibility.

Except for this fact, Halliday and Hasan's view of the set of relations involving contrast is remarkably similar to that of Longacre, although they do not note this themselves.

Halliday and Hasan (1976) view CONJUNCTION as one of the four types of cohesive relation in texts, the other three being REFERENCE, SUBSTITUTION, and ELLIPSIS. Halliday and Hasan acknowledge that conjunction is different from these other three in that conjunctive relations specify "the way in which what is to follow is systematically connected to what has gone before" (227).

Halliday and Hasan group conjunctive relations into four categories: ADDITIVE, ADVERSATIVE, CAUSAL, and TEMPORAL, with the words *and*, *yet*, *so*, and *then* "typifying these four very general conjunctive relations" (239).

Before proceeding with a discussion of Halliday and Hasan's treatment of contrast, we must mention an important distinction which they have consistently made between two types of conjunctive relations, what they call EXTERNAL relations, "those which exist as relations between external phenomena," and INTERNAL relations, "those which are as it were internal to the communication situation" (240). A clear example of this distinction can be seen in their pair repeated here in (13).

- (13) a. *She was never really happy here. So she's leaving.*  
 b. First speaker: *She'll be better off in a new place.*  
 Second speaker: *So she's leaving?*

In (13a), spoken by a single speaker, "there is a causal relation between two phenomena. The meaning is 'because she was not happy, she's leaving'." In (13b), which is a dialogue, "there is also a causal relationship, but it is within the communicative process; the meaning is 'because you refer to her being about to be in a new place, I conclude she's leaving'" (241).

Although there are circumstances under which it can be difficult to distinguish between external and internal relations, the distinction is important, and must be recognized by a complete theory of text relations.

Halliday and Hasan's description of contrast relations matches Longacre's in recognizing a distinction between simple contrast and counterexpectation. Like Longacre (and Winter as well), Halliday and Hasan include simple contrast in their additive group, or what they call COMPARISONS OF DISSIMILARITY, as expressed by *on the other hand*, *by contrast*, and *conversely* (250). The adversative relation, for Halliday and Hasan, is CONTRARY TO EXPECTATION (250).

So we see that Halliday and Hasan have independently arrived at the same insight as Longacre, in making a distinction between simple contrast and counterexpectation.

Halliday and Hasan are equivocal about whether they are interested in text relations in general or only in those which are signaled.<sup>5</sup> Their definition of CONJUNCTION is "a specification of the way in which what is to follow is systematically connected to what has gone before" (139). As Noel (1989) points out, the word *specification* strongly suggests that the researchers are talking about just those relations which carry signals that can do the specifying. Indeed, the chapter on conjunction begins with a discussion of CONJUNCTIVE ELEMENTS, which are lexical realizations of relations, and, as can be seen immediately below, Halliday and Hasan's taxonomy of conjunctive relations is stated in terms of these conjunctive elements. Further, all of Halliday and Hasan's examples illustrate relations which are signaled.

However, it is important to note that Halliday and Hasan do allow for "the presence of a relation . . . even when it is not expressed overtly at all" (229).

Halliday also reflects this equivocality:

It is clear that texture is achieved through conjunctive relations of this kind [i.e., the implicit kind] and there is no reason not to take account of it. On the other hand, to attempt to include it in the analysis leads to a great deal of indeterminacy, both as regards whether a conjunctive relation is present or not and as regards which particular kind of relationship it is. (1985:308)

It is perhaps as well, therefore, to be cautious in assigning implicit conjunction in the interpretation of a text. It is likely that there will always be other forms of cohesion present, and that these are the main source of our intuitions that there is a pattern of conjunctive relationships as well. (1985:309)

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<sup>5</sup>This discussion owes much to Noel (1989).

From these remarks, we infer that Halliday is suggesting a similar kind of healthy caution in examining text relations as does Hoey (§5). We interpret both to be suggesting that neither explicit conjunctions nor implicit relations be taken as the defining feature of text cohesion; rather both should be used, along with any other available clues in the text, to arrive at an understanding of both the meaning and structure of the text, and of the relationship between the relations and the grammatical and lexical elements that guide our interpretive processes.

Halliday and Hasan's taxonomy of adversative relations is quite rich; a slightly oversimplified summary (242, 255) is presented in (14).<sup>6</sup>

- (14) a. Adversative relations proper (can be external or internal) ('in spite of'): *yet, though, only, but, however, nevertheless, despite this, all the same*
- b. Contrastive relations (internal) ('as against'): *but, and, however, on the other hand, at the same time, as against that, in fact, actually, . . .*
- c. Corrective relations (internal) ('not . . . but'): *instead, rather, on the contrary, at least, . . .* (255)

As we shall see, these correspond roughly to the three relations in RST that are contrastive: concessive, contrast, and antithesis, respectively, although they differ in that, unlike in RST, they form a taxonomy of realizations rather than meanings.

### 8. Halliday (1985)

Halliday's (1985) taxonomy of conjunction is presented in the context of his distinction among three different types of clause relations. While we cannot do justice to his taxonomy here, we outline it in broad terms, since contrast relations can be found in several categories.<sup>7</sup>

Halliday notes that there are three ways in which a clause can expand another clause, by (a) elaborating it, (b) extending it, or (c) enhancing it (196).

We infer that Halliday and Hasan's four-way classification—ADDITIVE, ADVERSATIVE, CAUSATIVE, and TEMPORAL—distributes into Halliday's three-way

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<sup>6</sup>From the typical conjunctions they list, one can infer a distinction between the contrastive relations and the "comparisons of dissimilarity" mentioned above, but Halliday and Hasan do not deal with this distinction directly.

<sup>7</sup>Except for his PROJECTION, which we do not discuss here; cf. Halliday 1985:196ff.

distinction within expansion—ELABORATING, EXTENDING, and ENHANCEMENT—in the following way:

(15)	<b>H and H (1976)</b>		<b>Halliday (1985)</b>
	additive	=	Extension: addition
	adversative	=	Extension: adversative, replacive, subtractive
	causative	=	Enhancement: causal-conditional
	temporal	=	Enhancement: spatio-temporal

Halliday has refined the earlier Halliday and Hasan classification. In the 1985 discussion, it is no longer clear that addition includes simple contrast. In addition, Halliday 1985 has regrouped the earlier adversatives. Now adversative includes *but*, *yet*, *however*, and there are two new subgroups: REPLACIVE includes *on the contrary* and *instead*, and SUBTRACTIVE includes *apart from that* and *except for that* (304).

Finally, there is a new group. Under CAUSAL-CONDITIONAL, Halliday introduces CONCESSIVE as a subtype of conditional, though he does not mean what other scholars have meant by concessive conditionals (exemplified by *even if*). Instead, Halliday's concessive includes *yet*, *still*, *though*, *despite this*, *however*, *even so*, *all the same*, *nevertheless*.<sup>8</sup>

## 9. Martin

Martin (1983), like Halliday and Hasan, discusses text relations strictly in terms of interclausal relations. Like them, he also focuses on signalled relations, but allows for the possibility that a given relation might not be explicitly signaled:

These LOGICAL relations may or may not be made explicit in a text . . . The simple juxtaposition of the clauses . . . is sufficient to signal the relation. (1)

Martin postulates four main types: temporal, consequential, comparative, and additive, all of which can be either external or internal. Within each of these, extensive branching diagrams indicate ever more DELICATE subgroups. As with Halliday and Hasan, contrast relations can be found at various points in the taxonomy. Under CONSEQUENTIAL, for example, we find CONCESSIVE (*even though*, *although*) (12). COMPARATIVE includes EXCEPTION

<sup>8</sup>No discussion is offered as to how these various contrast relations might actually be distinguished in analyzing a text; for example, it is not clear from the presentation how the adversative *however* is to be distinguished from the concessive *however*.

(*instead of*), and OPPOSITION (*whereas*) (21), as well as CONTRAST (*but, on the other hand*) (26). He also has COUNTERING (*but, nevertheless*) under INTERNAL CONSEQUENCE (35).

This taxonomy is refined in Martin (to appear, Chap. 4), where it is applied to the analysis of an extensive spoken English database.

## 10. Grimes

Grimes 1975 is well recognized as one of the earliest to formulate a relational account of text structure, which he called rhetorical structure.<sup>9</sup> His terminology and conceptual framework are of the semantic orientation, but very broadly conceived. The identifying description of the relation is in terms of function rather than lexical form.

Grimes (1975) presents about twenty text-structuring relations, including one called ADVERSATIVE, the only contrastive relation in the set. His informal description of this relation says in part:

In its paratactic form it simply presents what happened along with what did not happen, or along with what the hearer might think happened: *it was a case of sink or swim.* (228)

Grimes' work has been influential, in part because many of his other relations are given much more elaborate treatment.

## 11. van Dijk

Van Dijk is known for his extensive work on discourse structure, including the formulation of Macrostructures (van Dijk 1980, 1981, and van Dijk and Kintsch 1983). He works primarily in the semantic orientation (although his general discussion is clearly oriented to see all language use as inherently social). So one might expect that his principal varieties of large-scale text structures, macrostructures and macropropositions, might be relational text structures built on a propositional notion of relations, comparable to that of Grimes. But the various macro constructs are of a very different sort.

One of van Dijk's major goals is to create a basis for reconciling formal semantics to discourse analysis. In van Dijk 1977, he presents the basics of formal semantics and then goes on in a formal semantic framework to discuss CONTRASTIVES (81), principally contrastive conjunctions, but also

<sup>9</sup>He references earlier work by Longacre and by Fuller.

adverbs and prepositions. The conceptual basis of his view of contrastives is in the differences between *NORMAL POSSIBLE WORLDS* and *EXCEPTIONS*. Exceptions are *UNEXPECTED*.

The antecedent expresses a sufficient condition for the negation of the proposition expressed by the consequent. (81)

Van Dijk does not identify whether the violated expectations are generally those of the speaker, the intended audience, society, or general linguistic convention; but he does identify certain cases, e.g., *yet*, as representing the hearer's presumption of the speaker's expectations, or those of a previous speaker in dialogue (213).

Global textual organization is seen as semantic, and not relational in the manner suggested by Grimes or Mann and Thompson. Sentences and combinations of sentences combine by means of four macrorules—*DELETION*, *GENERALIZATION*, *CONSTRUCTION*, and *ZERO*. Taken together they are partial aggregation rules, building the global propositions of the text out of those of the individual clauses. In this scheme there is no explicit place for the contrastive connectives. Contrastive relations thus do not appear in van Dijk's global macrostructures.

## 12. Mann and Thompson

Mann and Thompson have developed Rhetorical Structure Theory (*RST*) as a vehicle for describing the structure of discourse. In terms of the categories described above (§1), its orientation is social rather than to semantics or speech acts. Ordinary discourse is seen as having a pervasive relational structure in which the coherence of a text arises from the network of relations that links each part into the whole.

In Mann and Thompson 1988, English texts are described in terms of twenty-three relations.<sup>10</sup> Each relation has a systematic definition which can be used to guide text analysis. An example of such a definition is given for the concession relation in §12.3 below.

A relation definition contains a set of constraints on the items related, and also an *EFFECT FIELD*, which states the speaker's intent in presenting the items, linked by the particular relation. More than anything else, this effect field is what gives the discourse structure its social character. The speaker is trying to produce in the audience a belief, a desire to act, approval of actions, or some other specific response. In text analysis, the

<sup>10</sup>This article is an abridgment of Mann and Thompson 1987, which, though less accessible, is currently the most complete statement of the theory.

analyst decides whether it is plausible that the speaker had the particular intent specified by the relation definition.

An RST structural analysis typically sees the whole text as consisting of two spans, linked by a particular relation. These spans in turn consist of smaller spans linked by relations, down to the level of independent clauses. When two spans are linked by a text-structuring relation, one of the spans is typically more essential to the speaker's purpose, more capable of standing without the other span, and less susceptible to substitution of other content. So, for example, for a pair of spans consisting of a claim and evidence for that claim, linked by an EVIDENCE relation, we find that presentation of the claim is more essential to the speaker's purpose, the claim (but not the evidence) could stand without the other in the text, and substitution of other evidence is much easier and less disruptive than substitution of a different claim supported by the same evidence.

Reflecting these sorts of observations, nearly all of the relation definitions are asymmetric, with the two spans of text playing different sorts of roles. One span is called the NUCLEUS and the other the SATELLITE. The nucleus span is the one that is more central to the speaker/writer's purpose.

Three of the RST relations are contrastive. They are called ANTITHESIS, CONCESSION, and NEUTRAL CONTRAST. Of these, the first two are of the common sort that have a nucleus and a satellite, and the third, neutral contrast, is MULTINUCLEAR, which means that the two spans linked by this relation are in a symmetric relationship in which neither span is claimed to be more central than the other.

Of these three relations, antithesis and neutral contrast both involve a general notion of contrast. According to this general notion, two items are said to be in contrast if they are:

- (16) a. comprehended to be the same in many respects,
- b. comprehended as differing in a few respects, and
- c. compared with respect to one or more of these differences.

In these terms, the antithesis and neutral contrast relations express contrast, but concessive does not. We will see why in the discussion of the individual relations. Concession is included in this presentation because most discourse analysts either consider it contrastive, or treat concessive conjunctions such as *although*, *nevertheless*, and *yet* as expressing contrast.

**12.1. Antithesis.** The antithesis relation, which has generally received very little attention in the text relations literature, is used to present a preference for one action or belief over another similar one. RST introduces

the concept of POSITIVE REGARD in order to generalize over several kinds of orientation of the hearer; these are:

- (17) a. The hearer believes a particular proposition.  
 b. The hearer wants to perform a particular action.  
 c. The hearer approves of a particular action by others.

The effect field of the definition of the antithesis relation says that an apparent purpose of employing the relation must be to increase the hearer's positive regard for the content presented in the nucleus. Antithesis is, thus, always used to try to create some kind of preference.

There is also a constraint in the definition that requires the nucleus and satellite to present items that are in contrast (as presented above).

As an illustration of the antithesis relation, consider the last two clauses of a letter to the editor of *The Christian Science Monitor*. The writer of this letter has been deploring U.S. foreign policy, and suggests that the U.S. should set a good example of a generous democratic state.

- (18) a. *Rather than winning them with our arms,*  
 b. *we'd win them by our example, and their desire to follow it.*

The antithesis relation has been described in detail in Thompson and Mann 1987.

**12.2. Neutral contrast.** The RST neutral contrast relation is multi-nuclear, with two nuclear spans. It is used to cause the hearer to understand the particular differences between the two items being presented. The items must be in contrast (in the terms presented above). As an example, consider the abstract from *Scientific American* presented in (19).

- (19) a. *Animals heal,*  
 b. *but trees compartmentalize.*  
 c. *They endure a lifetime of injury and infection*  
 d. *by setting boundaries that resist the spread of the invading microorganisms.*

There is a neutral contrast relation between the first two clauses, so that the reader can attend to the differences between healing, which animals do, and compartmentalization, which trees do. Notice that the author is not trying to advance one over the other, as would be the case for a concession or antithesis relation.



**12.3. Concession.** Concession, as mentioned above, is distinct from antithesis and neutral contrast in that it does not involve the general notion of contrast. This is because condition (16c) is not met: the two spans are not compared in terms of their differences, but rather are presented as compatible.

The idea of concession is familiar in discourse studies, and is commonly used to explain lexical items such as *although*, *yet*, *nevertheless*. The concession relation is used to promote a particular belief or action in the presence of apparent contrary information. The belief or action being promoted is in the nucleus, and the apparent contrary information in the satellite. The speaker acknowledges the apparently contrary information, but then advances the nucleus anyway, showing that s/he does not regard the two as genuinely incompatible. This tends to remove the satellite as an obstacle toward favoring the nucleus.

One obvious way to signal a concession relation is an *although* clause.<sup>11</sup> A clear example in a *Scientific American* abstract of an article entitled *Dioxin* is presented in (20).

- (20) a. *Concern that this material is harmful to health or the environment may be misplaced.*  
 b. *Although it is toxic to certain animals,*  
 c. *evidence is lacking that it has any serious long-term effect on human beings.*

In this text, the writer both signals that units (20b) and (20c) are compatible and acknowledges their potential incompatibility. That is, dioxin's toxicity to certain animals is compatible with the lack of evidence that it is harmful to humans, but it is also potentially incompatible with it, since toxicity to animals often implies toxicity to humans. Acknowledging the compatibility between the nucleus and the satellite is seen by the speaker as a strategy to increase the hearer's positive regard for the situation presented in the nucleus.

**12.4. The three contrastive relations in RST.** The three contrastive relations represent three different strategies of presentation, and three rather different sorts of goals of the speaker. They perform different functions for the speaker: inducing a positive regard for one item, or setting aside an objection, or simply drawing attention to differences. The fact that all three relations are sometimes realized by *but* and that no other RST relation is realized by *but* confirms their similarity.

<sup>11</sup>But see Thompson (1987) and Thompson and Mann (1987) for discussion of the form-function relationship with concession.

Only concession is realized by *although*, *yet*, or *nevertheless*, which confirms its distinctness. And only antithesis has the purpose of inducing a preference. While we use the patterns of realizations as clues to help identify relations, the essential distinctions are functional rather than realizational.

These observations lead to having three distinct relations. Surely other observations could have led to a different array of relations, still capturing the distinctives that appear in these three. As we have seen in the discussion of other work, many researchers make the notion of expectation very prominent in discussing contrast, whereas it is not used in the current version of RST. Perhaps if the notion of expectation were made prominent in RST there would be more contrastive relations.

### 13. Comparing approaches

**13.1. Relational discourse structure.** Since the approaches to relational discourse structure are diverse and since the terminology used is even more diverse, it is useful to compare the approaches. Each approach has its own contribution to make to future research. It is convenient to divide the points of comparison into those that apply to all relations and those that specifically involve contrast.

Perhaps the most consequential difference between approaches to relational discourse structure is the difference in orientation discussed above in §1. When we seek to identify particular researchers with particular orientational stereotypes, the situation is more complex. Van Dijk is a good example. His aspirations are clearly to achieve a theory of language as social action, with speaker and hearer well accounted for. But his account of discourse structure has a full semantic orientation. Some of his discussions focus on the speech act level as well. Other authors, including Grimes, have similar differences between their general aspirations and the specifics of their discourse structures. And some, including Beekman and Callow, are able to stretch the semantic orientation a significant distance toward including the speaker and hearer in the accounts, while retaining terminology that suggests that they are in the semantic group. Longacre has a semantic orientation, and Winter, Hoey, and Jordan also tend to adopt this orientation rather than the others. Halliday and Hasan, along with Martin, have a social-act orientation which is elaborated extensively in other work. Mann and Thompson also take a social action orientation; their use of the effect field as a specification of speaker's intent is perhaps the clearest illustration of this as their general approach.

Considering technical accounts rather than authors, the different orientations show up clearly in the status of the aggregate units. Grimes' rhetorical predicates are clearly intended to form propositions. Van Dijk's macrostructures are likewise semantic, intended to interface with formal sentential semantics. And Longacre uses mathematical logic as the inspiration for the organization of his discussion of combinations of predications.<sup>12</sup> The units for the social act accounts, in contrast, are seen in terms of a theory of language as a social phenomenon, and are inspired by the need to account for how language accomplishes social work (Halliday 1978, Sacks, Schegloff, and Jefferson 1974).

Several of the approaches to relational discourse structure have distinctive elements that we should recognize. One of these, in RST, is the notion of nuclearity, the roles of related spans of text as nucleus and satellite. It is anticipated in Grimes' (1975) discussions of hypotactic and paratactic versions of relations and in Beekman and Callow's distinction between support and developmental propositions. Most linguists, of course, recognize dominant, or main, clauses at the level of clause combinations; certainly when particular clauses are satellites, often they are dependent as well (cf. Matthiessen and Thompson 1988). But since nuclearity applies to large spans of text, it is not simply a reflex of a particular kind of realization.

Another point of comparison concerns the role of particular realization patterns—conjunctions, clause relations, and the like—in the identification of relations. Differences here often reflect differences in the research task chosen rather than a difference of underlying theory. Someone who takes on the task of explaining the meanings of conjunctions will naturally have a set of conjunctions in correspondence to each relation, while one who seeks to explain a text's perceived organization will not.

Concerning overall text structures, some authors have concentrated on the relations and have not been explicit about how they may combine. Even with a fixed set of relations, combining them into a fishnet will give a very different sort of discourse structure than, say, combining them into trees. In RST, which has attempted to be very explicit about this, it is clear that there are some problems of overall structure that no one has yet solved. Parallelism, ambiguity of discourse structure, an adequate treatment for titles of short written texts, sharing of a span of text between two parts of a discourse, and intentional simultaneity of multiple structures all need further exploration.

Finally, an important difference among approaches is the recognition of an external/internal distinction, as Halliday and Hasan and Martin have done. RST acknowledges this as a distinction between certain relations

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<sup>12</sup>The approach favored by Winter, Hoey, and Jordan does not focus on aggregate units.

involving presentation and others involving subject matter. Future research should address the issue of the empirical consequences of an account in which external/internal is an option for each relation, as opposed to one in which certain relations are external and others are internal.

**13.2. Contrastive relations.** Turning to contrastive relations in particular, the most obvious difference between approaches is in how many relations are recognized. The particular number is not important, but the distinctions that lead to recognizing distinct relations are. RST has three relations because it posits differences in presence or absence of satellites, and because it separates the concessive strategy from others. Nearly all of the approaches surveyed here recognize several relations under the general heading of contrast.

For some authors, relations are distinguished on the basis of whether they involve counterexpectancy, and the hearer's expectations are an important part of the framework. Longacre, with his notion of frustration, Beekman and Callow, and Halliday and Hasan, have made it a central part of the general issue of contrast, but others have not.

Longacre differs from others in requiring that for a contrast relation to be found, the differences must be expressed lexically. Whether this feature should be employed is really part of the much larger issue of whether the relations are functional and capable of diverse realization, or alternatively part of an explanation of specific realization patterns, as suggested in §13.1. Ideally, one would expect to use the same approach for every relation of a particular theory.

## 14. Current issues

Research on text relations has progressed to the point where further discussions of relational discourse structure should be attempting to integrate the threads which have been contributed by such scholars as those surveyed in this discussion of contrast.

At the moment, however, the diversity of the current research results on this topic suggests that future work must address a wide variety of issues. Despite the numerous similarities between particular approaches, there are few questions on which all researchers agree. A constructive approach will take definite positions on the issues that have been raised, being explicit enough so that others can confirm and agree (or disconfirm and refute). This line of research is now mature enough to expect defined terminology, explicit criteria of analysis, and definite stands on open issues.

The most important of these include the basic issue of theoretical orientation. The treatment of the presentational versus subject matter contrast (Halliday's internal versus external) also deserves careful attention.

In the crucial area of methodology, given the widespread acknowledgment of unsignalled relations, the role of explicit signals in a methodology is also of basic importance. The place of explicit definitions of relations and other constructs is also now an important issue. The explication of what overall discourse structures can arise is another central matter.

We also note a need for text relational research to provide precise operational definitions for relations; it should be possible for one researcher to apply another's analysis to a new text. For contrast, in particular, the place of the hearer's expectations now deserves special attention. In semantic frameworks that bypass the hearer, there is now an issue of whether the framework should be retained.

We conclude this paper with a list of questions which raises issues that we would like to see future work address in some definite way:

1. What is the nature of discourse structure? What is the character of structure-building elements? Are they semantic, forming propositions and truth functions? Do they form actions? Do they perform social transactions? Do semantic properties follow from interactional properties?
2. What relations are there that form discourse structure?
3. Does discourse structure consist entirely of relations?
4. Are there a fixed number of relations or can the set of relations be extended? How can it be extended?
5. What is the status of a combination? What things can combine? What structures of combinations are possible (unrestricted networks, trees, sets of trees, etc.)?
6. Do texts have unique discourse structures, or can several structures apply legitimately to one text?
7. What kinds of objects (clauses, propositions, possible worlds, speech acts, situations, ...) are related by the relations? Similarly, what kinds of aggregate and introduced objects are created by the relations?

For particular relations:

1. How is the relation recognized? How does the recognition process require or use lexical and syntactic elements of the text?
2. How is the relation used?
3. Can the relation be used to express presentational relationships ("Secondly, ..."), relationships in the subject matter ("Next, he went ..."), or both?
4. How does it relate (e.g., taxonomically) to other relations?

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## Basic Elements of Discourse Structures

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For more than 2,000 years most persons in the western world who were interested in how to organize a discourse and make it effective depended directly or indirectly on the unusual insights of Aristotle's *Poetics*. But with the advent of structural linguistics—especially as the result of the work of the Russian structuralists, the Prague school, British functionalism, and American anthropological linguistics—the understanding of and appreciation for rhetoric and poetics have experienced a rewarding renaissance. Several aspects of these significant developments have been effectively treated by Jakobson (1960, 1970), who probably did more than any other person to interpret these insights to others since he himself was at the center of a rapidly growing concern for the relation of literature to language.

A number of literary critics have been eager to employ these linguistic insights, e.g., Derrida (1967), Culler (1975), and Fowler (1977); and some theologians saw in textlinguistics an opportunity to deal with some of the problems of Bible interpretation by classifying discourses into numerous genres. Several literary critics tended to divorce interpretation from the setting of a text, as though the sociological setting was irrelevant, and certain theologians developed such rigid systems of genre classification that their interpretations became less and less relevant.

Many linguists have regarded discourse as only an extension of syntax, e.g., Petöfi (1972); and others believe they can explain discourse patterns by expanding their use of propositional logic. Both of these approaches, however, have largely given way to more insightful and practical ways of studying and describing texts. Some of the most useful of these linguistically oriented approaches to discourse have been developed by persons such as Beaugrande and Dressler (1981), Halliday and Hasan (1976), and

Grimes (1975), but in terms of the variety of structures, the number of different languages involved, and the capacity for detailed analysis of diverse patterns, Longacre's contributions have been unexcelled. Note especially his studies of Philippine languages (1968), New Guinea languages (1972), African languages (1990), and his general treatment of the grammar of discourse (1983).

There may, however, be some significant advantage in identifying some of the more important basic elements of discourse structures, i. e., the BEAMS and the PLANKS used in the construction of discourses. These fundamental features may also be thought of as organizing principles for the great diversity of possible genres. These are not, however, the frames, scenarios, schemata, or scaffolding of the verbal discourses; they represent a much more basic level of structure and may be divided into primary and secondary features.

The primary features of discourse structure are time, space, and class. Time is an obvious element in all kinds of discourses involving a sequence of related events—as in novels, short stories, dramas, epic poetry, history, how-to-do-it manuals, and even genealogies. All of these are oriented with respect to a TIME LINE, although there may, of course, be flashbacks and flash-forwards.

Space is also a fundamental feature of many discourses or parts of discourses, since the description of any entity and even of some events is dependent upon a spatial orientation. A person is normally described in a spatially significant manner, e.g., beginning with the face and then extending systematically to other parts of the body or possibly beginning with the feet and working up. The spatial relations may not always be evident but descriptions of entities or events almost inevitably have some spatial determinants which influence the order and arrangement of information about them. It is impossible, in fact, to conceive of entities or events such as people, buildings, printed discourses, explosions, sunsets, or running without locating them in space.

Class is also a fundamental feature of almost all discourses. In novels, it applies to the people who have particular roles. The characters of narrative are more than unique, isolated entities; they are members of particular classes of entities. The classes of entities, events, characteristics, and even of relations are basic to any extended discourse, and their coordinate relations may be specified as additive (*and*), alternative (*or*), or subtractive (*but, except*).

The secondary features are rank, consequence, and dialogic sequencing. They are secondary because they are essentially extensions of the primary features. Rank, for example, is simply an extension of the notion of class, so that entities, events, and characteristics can be organized in terms of various dimensions, such as from less important to more important, from generic to specific, from dominant to subordinate, from good to bad, from greater to lesser, and so forth. The order in which characters are introduced

in a narrative is not a matter of mere temporal sequence, but more often than not depends upon both class (the type of role) and rank (their strategic importance).

Consequence is essentially a matter of cause and effect, but is logically organized in terms of condition, concession, purpose, result, and basis--assumption.<sup>1</sup> These various logical relations may constitute the major structural features of an entire discourse. An initial section, for example, may state the purpose of a series of actions, and subsequent sections may detail the results; or an initial chapter may describe conditions, and the rest of the book may project results.

Dialogic sequencing involves two or more elements in which following ones are formally and semantically linked to those that precede them. Examples include affirmations and negations, questions and answers, statements of similarity and differences, old and new information, intertextual dependencies (parodies, allusions, quotations), and series involving *STREAM OF CONSCIOUSNESS*. This last dialogic set is the most confusing, since in many instances the relations seem to make little or no sense—the kinds of relations that psychiatrists try to untangle.

Almost no discourse consists of a single basic type, although a grocery list is perhaps the closest to a pure listing by class. But in making out such a list, most people use spatial relations in the supermarket as a means of grouping items. Even a genealogy is structurally somewhat complex, since it involves not only class (a series of animate beings) arranged in a temporal sequence (time), but also implies rank. Lyric poetry is often a description of personal feelings by means of one or more events (with temporal sequencing) which bear intriguing resemblances (class) to an author's emotive state or to that of a projected persona.

Many descriptions of entities are organized almost entirely on the basis of space, but they may also be organized in terms of class. A building may be described, for example, either in terms of the spaces which are enclosed or in terms of the various classes of features—the number of rooms, windows, doors, and storeys. An additional feature of time may also be involved in the description of a building. For example, many descriptions of such objects imply that the viewer is moving from one part of a building to another part.

Any well-ordered narrative consists of a highly organized combination of practically all the primary and secondary features of discourse. The sequence of events always involves some aspects of time and of classes of participants who are inevitably assigned certain features of rank. Space is a basic element in any event even though it may be largely implicit, but in general it forms an important element in description. The temporal sequence

<sup>1</sup>For example, *Since he was in New York, he must have gone to the Metropolitan.*

of events is of course largely irrelevant without the consequences of cause and effect, condition, concession, reason, purpose, and result—the stuff of which meaningful scenarios are constructed. Any incorporated dialogue or conversation is filled with dialogic sequencing, and the interpretation of motivations for action is usually full of strictly stream-of-consciousness sets. Rather than describing or classifying discourses on the basis of various thematic elements and a few formal devices, it would seem far more relevant to think in terms of the basic features of time, space, class, rank, consequence, and dialogic sequencing. For each discourse type, however, it is necessary to determine the number, relative importance, and degrees of interdependence of these different features. Only then can a person be certain of attaining verifiable results.

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## Some Observations on Aphasic Texts

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*We insist on interpreting any passage as text if there is  
the remote possibility of doing so (Halliday and Hasan 1976).*

There have been relatively few studies of written texts produced by aphasic individuals. This can be explained by a number of factors. First, studies of connected language in aphasia have dealt with production and comprehension of spoken language (Joanette and Brownell 1989). Furthermore, written language is often not preserved in aphasia since it is more vulnerable than the spoken language. Finally, from a clinical point of view, written language is not considered to have much diagnostic significance for subclassifying aphasic patients (Goodglass and Kaplan 1972).

Our rationale for choosing written texts for this investigation was to provide optional conditions for production of GOOD discourse. Unlimited time for completion of tasks as well as the opportunity to consult dictionaries and to produce rough copies and outlines prior to completing the final text were allowed. From a general perspective, the present study represents a type of dissociation investigation which has a long history in neurolinguistic research. Dissociation of language functions comes as a result of the nature of the disruption in aphasia and, more specifically, the selective damage in the language system. Thus, cases have been described where specific lesions to the brain produce a selective impairment of one language component without any damage to the remaining components. For example, cases of alexia without agraphia, i.e., inability to read with preserved writing, or normal reading with jargon-type speech, have been observed in aphasics. Within the linguistic components, impairments of

inflectional morphology with preservation of derivational morphology were documented in Polish aphasics (Ulatowska and Sadowska 1988). Several studies pointed to the relative vulnerability of inflectional morphology with preservation of syntactic word order for several languages including Italian, German, Serbocroatian, and Polish (Menn and Obler 1990).

Numerous studies of agrammatism in aphasia in languages as typologically remote as Japanese, Italian, and English documented differential impairment in function words as opposed to content words in certain types of aphasia (Kean 1985). It was the unexpected difficulty of explaining dissociation between sentence-level performance and discourse in an English-speaking Wernicke's aphasic that set us on our course of discourse studies of aphasic subjects years ago (Freedman-Stern et al. 1984). Since that study we have embarked on a longitudinal investigation of the writing of another Wernicke's patient, this time a speaker of Polish. The study later expanded to investigate written texts of other Polish aphasics.

This paper focuses on selected observations we found especially revealing for the nature of disruptions and preservations of language in aphasic written texts. We first discuss the relationship between certain aspects of surface structure necessary for producing cohesion and coherence in discourse and their effect on information structure in aphasic discourse (§1). Our observations are based on texts provided by two Polish individuals (§2). We have identified three major text areas which show some interesting features that characterize aphasic texts and which provide a bridge between some surface structure features and cohesion and coherence in discourse. The first area is the expression of temporal relations in texts (§3), the second is reference (§4), and the third is macrostructure (§5).

## 1. Aphasic texts

The majority of texts produced by aphasics belong to the narrative genre consisting of autobiographical reports and descriptions of film and play events. The most basic feature of narrative texts is that they consist of a sequence of temporally organized events. The natural order for presenting a narrative is in the form of a series of events that are meaningfully related to each other. The narrative genre is controlled by the superstructure which dictates the global thematic organization and development of the plot from a setting through complicating action to resolution. There are a number of devices signaling temporal aspects of narrative structure: temporal connectors, temporal adverbial expressions such as adverbs and prepositional phrases, the tense and aspect systems in verbs, and semantic

verb classes expressing various temporal features such as duration or inception of action.

We next discuss changes observed in the aphasic texts studied. We report on some features characterizing the texts of two different types of aphasics—ANTERIOR APHASICS (Broca's) and POSTERIOR APHASICS (Wernicke's). The anterior and posterior descriptions refer to the site of the lesion in the aphasic's brain, the anterior being primarily restricted to the frontal lobe and the posterior to the temporal or parietal lobe. Differences in lesion location are associated with different patterns of breakdown of the language system. It is important to point out that these differences in patterns have been defined primarily in terms of sentential and not discourse grammar.

Anterior aphasics often exhibit simplification of sentential structure and, in the more severe cases, reduction to so-called telegraphic-style sentences, i.e., stripped to the bare minimum of verbs and nouns with no embedding. There is a considerable reduction of function words, such as articles, prepositions, conjunctions, and bound grammatical morphemes. Although misuse of the functors occurs, the omission of functors is more characteristic of this disturbance. Historically, this syndrome was referred to as AGRAMMATISM.

Posterior aphasics, on the other hand, exhibit a much greater variety of syntactic structures at both sentential and phrasal levels with embedding present, although it is somewhat reduced relative to normal use. The pattern of impairment is seen primarily in the incorrect distribution of functors and bound grammatical morphemes and not in their omission. Historically, this syndrome was referred to as PARAGRAMMATISM. Although occasional mention has been made to anterior and posterior aphasics in discourse investigations of aphasia (Ulatowska, Allard, and Bond-Chapman 1989; Freedman-Stern et al. 1984; Pehler and Holland 1984), no systematic study has been made of the effect on discourse performance of these two aphasia types. In §§1.1–2, we describe some of the effects that agrammatism and paragrammatism have on two aspects of texts—temporal relations and reference. In §1.3, we discuss the relationship between macrostructure and the text processing.

**1.1. Temporality.** Temporality contributes significantly to text coherence by providing an organization for narratives which is reflected in the temporal ordering and sequential unfolding of events. This temporal organization is distinct from narrative SUPERSTRUCTURE which defines the essential components but not the temporal order of events. Linguistic devices used to signal temporality include verb tense and aspect, connectors,

prepositional phrases, lexical words expressing duration of action, and embedded clauses.

Information regarding manipulation of cohesive devices of temporality in aphasic subject's discourse is sparse, as this aspect of text processing has been considered only recently. Nonetheless, the preliminary data suggest that surface markings of temporality may be impaired in aphasia, disrupting coherence (Reyes 1989). The surface markings of temporality are of the following types: temporal connectors, prepositions, temporal features in the verb system, and clausal embedding.

*Connectors.* The use of intersentential connectors including temporal conjunctions, e.g., *then*, is reduced for both Broca's and Wernicke's aphasic patients. Aphasic patients use fewer connectors and have a reduced repertoire of such devices (Berko-Gleason et al. 1980, Dressler and Pléh 1988, Freedman-Stern et al. 1984). Instead, aphasic subjects tend to chain simple clauses without any surface level marking of a temporal nature. When temporal connectors are present, they tend to consist of high frequency words such as *when* and *as* or the adverbial connectors *now* and *next*.

*Prepositions.* Prepositional phrases are commonly used to denote temporal information. Aphasic patients often rely on specific dates and times in the form of prepositional phrases to signal temporality. Frequently, however, the preposition before the date is omitted in Broca's type aphasia and misused in Wernicke's aphasic patients. For example, aphasic patients might express temporal information in the form of a specific date expressed in one of the following ways: *In 1930, 1930* (omitting the preposition), or *on 1930* (misusing the preposition) rather than expressing the temporal information in clausal form as normal subjects tend to do, e.g., *When I was in high school*.

*Verb system.* Verbs carry important temporal information within narratives through verb tense and aspect. The control of verb tense serves to move the action along and to signal different types of information. Verb tense shifts are frequently used to signal new episodes or to change the focus. Inappropriate shifts in verb tense within a single episode can disrupt cohesion. Aphasic patients often make inappropriate shifts in verb tense within episodes causing a disruption in the continuity of meaning (Ulatowska et al. 1989). Aspect, another feature of the verb system, is also used to signal certain temporal information such as the particular status of actions. An action may be completed, for example, or it may be continuous. Aspect is marked by morphological suffixes in certain languages and is more readily observed in inflected languages like Polish, as compared to uninflected languages like English; difficulties are present, however, in aphasic patients of both languages. Temporality in verbs may also be expressed by semantic features of the verb class. Verbs such as *last* and



*continue* belong to this class. In mildly impaired aphasic texts, these verbs are sometimes replaced by general verbs as exemplified in the following response: *The war was for 10 years* instead of *The war lasted 10 years*.

*Clausal embedding.* Embedded clauses contribute significantly to textual cohesion and coherence. Without embedding, it is difficult to signal temporal relationships between narrative actions. In narrative texts produced by mildly impaired aphasic subjects, the presence of embedded clauses is greatly reduced and is especially noticeable in texts by Broca's patients (Ulatowska and Sadowska 1989).

**1.2. Reference.** Reference contributes significantly to the coherence or well-formedness of texts by providing an organizational framework reflected in the continuing participation of the actors within a story. Recurring mention of the same actors contributes to the sequential connectivity of text. Reference is signalled by nouns and pronouns. It has been suggested that reference may be the single most important criterion for evaluating cohesiveness of text.

Disruption of reference in aphasic texts has been well documented, both in comprehension and production tasks (Berko-Gleason et al. 1980, Bond 1986, Ulatowska et al. 1989). It is interesting to note that manipulation of reference is differentially impaired for Broca's and Wernicke's aphasic subjects. For Broca's aphasic patients, reference is marked primarily by nouns. Since the availability of nouns is reduced in Broca's aphasia, the patients use repetition of the same noun form. This reiteration of the same noun can lead to ambiguity of reference, since pronouns more typically signal previously mentioned participants. Wernicke's patients, on the other hand, exhibit the opposite behavior in that they overuse pronouns. Overuse of pronouns can also lead to ambiguity, particularly in instances where several participants are of the same gender.

Both aphasic types have difficulty introducing new ROLES to previously identified actors. For example, a woman may first be introduced as a wife and later described in her role as a mother. Aphasic patients have difficulty changing the perspective of the participants but have little difficulty with reference in autobiographical narratives expressed primarily from the patient's own perspective. Another disruption of reference, which may operate more at a conceptual level, is manifested by inappropriate shifts in the hierarchical marking of the characters. Normally, actors are introduced at a more specific level as the story unfolds. Aphasic patients break this rule by introducing characters at a very specific level and by referring to them at a general level later. Thus, it appears that reference may be disrupted at a linguistic level as well as a conceptual level.

The above evidence illustrates how impairment of certain cohesive devices (i.e., reduction of clausal embedding, reduction in range and use of connectors, disruption in the verb system, impoverishment of the lexical system, disruption of nouns and pronouns) located within sentential boundaries, disrupts coherence at a textual level. These specific cohesive devices are critical to marking temporality and reference at a textual level. This apparent association between linguistic deficits at a sentential level and disturbance in coherence at a textual level implicates the primary role of linguistic deficits in manipulating larger chunks of language.

Caution must be exercised, however, in interpreting this evidence from a unitary perspective. Alternative explanations are possible. Indeed, the manipulation of certain cohesive devices may be altered on the surface as a result of impairment at a conceptual level. The conceptual aspect of text processing has been evaluated by utilizing the theoretical construct of macrostructures. In §1.3, a discussion of the relationship between macrostructure and text-level processing is presented. Again, the major point is that the multiple facets of text representation and processing must be considered to advance our understanding of text processing aphasia. If these multiple facets are not considered, wrong interpretations will result.

**1.3. Macrostructure.** The construct *MACROSTRUCTURE* denotes the global semantic meaning of a discourse (van Dijk 1972). Textual macrostructures are represented by the main ideas of a text and are associated with notions such as theme, gist, and topic (Mross 1989). The constructs or macrostructure and superstructure are often confused primarily because there is some degree of overlap. Similarly, both macrostructures and superstructures operate much like an outline, providing a global schema for organizing information, both in comprehension and production. Contrastively, superstructures provide the structure and macrostructures provide the semantic content, in terms of amount, type, and distribution of information (van Dijk and Kintsch 1983). The content of the text itself can be used to evaluate intactness of macrostructure by examining: (a) relevant and irrelevant content, (b) distribution of information within superstructure components, and (c) distribution of important information and details.

Although research on macrostructure processing in aphasia indicated that macrostructure was impaired as measured by alterations in titles and summary production of narratives in comparison to normals (Ulatowska et al. 1989), a disruption in macrostructure was not as readily apparent in aphasic patients on simple narrative productions. Amount of language and information was selectively reduced for aphasic patients in that the most important information was retained, and the less important details were omitted. Therefore, there were not enough details to depart from the

macrostructure. While previous evidence suggested that narrative structure was preserved in aphasia (Ulatowska et al. 1989), this pattern referred to superstructure and not macrostructure. Narrative structure may appear intact for aphasic patients because superstructure drives the ongoing processing of narratives. This is to say that superstructure replaces macrostructure in guiding aphasic patients' narrative structure. Superstructure is more global, less demanding, and conceptually more simple than macrostructure. Further evidence to suggest that superstructure replaces macrostructure in narrative processing for aphasic patients is confirmed in that these patients cannot produce discourse genres with less conventional superstructures, e.g., expository. There appears to be a restriction in discourse genres available in aphasia in that expository discourse becomes either narrative or descriptive discourse. Additionally, aphasic patients have considerable difficulty combining discourse types. For example, they exhibit problems shifting from conversational to narrative discourse.

## 2. Description of subjects

In this section, two aphasic patients are presented to illustrate some of the problems of aphasic texts which were described above. It is important to note that the patients are ideally matched for the purpose of the comparison in terms of their etiology of disease, age, educational level, and motivation to participate in the study. The most important difference in the characteristics of these patients is the site of their lesions.

JB, a male, suffered a stroke at the age of 36. The arteriogram revealed narrowing of the left carotid artery. After the stroke he underwent an endarterectomy. JB suffered from high blood pressure for at least one year prior to his stroke. Prior to his stroke, JB was a patent lawyer residing in Warsaw. He presented with anterior aphasia with dense hemiplegia of his right upper and lower limb. At the time of investigation, two years after JB's stroke, his aphasia was assessed as moderate to mild.

HB, a female, suffered a stroke at the age of 39. For a number of years HB suffered from high blood pressure which went untreated. Prior to her stroke, HB was a psychologist residing in Warsaw. The angiogram revealed an aneurysm of the left middle cerebral artery. HB later underwent surgery to clip the aneurysm. HB presented with posterior aphasia. At the time of investigation, two years after HB's stroke, her aphasia was assessed as moderate to mild.

### 3. Temporal relations

*Temporal relations in texts of anterior aphasic (JB).* The most striking characteristic of the texts produced by the anterior aphasic was the very strong tendency to render any text topic in a narrative mode. This was evident in responses to assigned topics requiring an expository mode, such as *the role of the monuments in the life of the people of Warsaw* or *a portrait of a person I like*. Narratives were produced in response to all such expository topics.

JB utilized well the temporally driven narrative structure. These texts consist of segmental chaining of sentences, with a minimum amount of embedding in only five percent of the clauses in all the texts studied. Some of the texts have a complete absence of embedding. His sentential structure is simple, primarily of the *sv(o)* type. The sentential length is short, ranging from two to eight words with a mean length of 6.8 words. The sentences express a chronological sequence of events, and they follow the natural order of events. Occasional use of temporal connectors are of the most frequent unmarked type (*as*, *next*, and *when*); connectors representing duration or simultaneity of actions are completely absent. Occasionally, connectors are omitted, e.g., (*when*) *I was eight and my uncle gave me an old piano*. The narratives are marked by adverbial temporal phrases, all of them in initial position. They clearly add to localized intersentential function and not to backreferencing.

Interpretation problems occasionally arise when temporal information is not signaled typically by adverbial phrases at episode boundaries. This is particularly noticeable when long temporal gaps between events exist. Adverbial phrases of temporality often consist of erroneous preposition choices. It is important, though, that errors in prepositional usage stay within the temporal class, for example *in two years* instead of *after two years*. The range of temporal prepositions is reduced when prepositions express the most concrete aspects of time such as definite points in time, dates being most frequent.

These temporal markings with prepositional phrases occasionally exhibit an inappropriate level of specificity. In an autobiographical report of the subject's life, for example, a duration of unimportant background action is expressed, i.e., a specific instance of cigarette smoking: *She smoked a cigarette for 10 minutes* or *My father would come to pick me up from school at 4:30*. This excessive specificity of temporal aspect has a disruptive effect on the overall macrostructure of a narrative and may be associated with a more general feature of this subject's narratives which contain a high amount of detailed action. The occasional inappropriate double markings of time within the same sentence are also found, e.g., *When I was 37, in*

1988. Instances are found when errors in the aspect are present, where inappropriate shifts from perfective to imperfective verbs are present. Occasionally these errors produce difficulties in interpretation. Misuse of tense is also noted. Since these errors are not numerous, no specific direction in these substitutions of aspect and tense is noticed. At the lexical level, verbs signifying duration, as in *lasted for 10 years*, are occasionally replaced by a general verb, as in *was for 10 years*.

Finally, since no embedding of episodes is present in any of the narratives, simplification of temporal structure is also observed at the episode level.

*Temporal relations in texts of posterior aphasic (HB).* The tendency to produce the narrative genre type is not as conspicuous in HB's texts since she exhibits the whole repertoire of discourse types. Apart from narrative texts, she produces expository discourse plus a procedural one. Her narrative texts include discontinuities, because they often contain introspective and evaluative embedding. HB's sentential structure has more clausal embeddings—three times more than those of JB—with seven words as the length of most clauses. Temporal relations in HB's narrative are marked with both temporal prepositional phrases and temporal clauses with occasional errors in preposition use. The repertoire of temporal connectors is considerably reduced, and the most frequent connector *when* is predominant. The omission of temporal functors is, however, conspicuously absent. The most striking disruption of temporal relations occurs where imperfective or perfective aspect is used where the other is expected, without an observable direction for this substitution. Within the verb system, occasional inappropriate shifts of tense from past to present are also observed.

#### 4. Reference

*Reference in texts of anterior aphasic (JB).* The most striking feature of the reference system in the texts of the anterior aphasic is the marking of reference by nouns with infrequent use of pronouns. This feature reflects JB's agrammatism, which exhibits reduction of function words, in this case, pronouns related to the anterior lesion. This marking of reference with nouns allows him to produce relatively few reference errors. Those which occur consist of inappropriate marking of previously defined referents (old information) with nouns instead of pronouns, which on occasion look like a new referent and, thus, become ambiguous. The overuse of noun reference is further accentuated by the relatively small range of noun synonyms used, resulting in the repetition of the same noun. This feature sometimes makes a text sound simple or even primitive, even one that is conceptually

simple. It seems that the noun reference would be even more disrupted if texts of greater complexity were used, especially with a larger number of participants. This was evident in errors of pronominalization in texts with embedded reported speech. Verb past-tense suffixes often impair gender reference.

*Reference in texts of posterior aphasic (HB).* HB seems at first glance to have a relatively normal reference system. She uses nouns, pronouns, and zero anaphora to signal reference. She also uses determiners and possessive pronouns to identify noun referents. On closer analysis, however, she exhibits numerous disruptions of her reference system. There are occurrences of omission of definite, indefinite, and possessive markers of reference. She often makes inappropriate shifts in the endings of masculine and feminine reference in past tense verbs which, in some cases, produce ambiguity of reference with zero anaphora in subject position. It is interesting to note that disruption of reference in her texts is related to the complexity of information structure. Zero anaphora cannot be used, for example, when a given referent is described by the use of different descriptors. Disruptions such as these result in an ambiguous reference in contexts where a number of referents occur.

## 5. Macrostructure

*Macrostructure in texts of anterior aphasic (JB).* The striking feature of JB's texts is a strong temporal organization which creates a semblance of macrostructure in narrative texts. It is apparent in most of the texts, however, that the narratives consist of sequences of propositions which are not differentiated according to importance since the structure is rather simple and no clear distinction is made according to episodic structure. There is a remarkable absence of evaluation that identifies those parts of the narrative that can be considered important. No change of perspective is ever expressed. It is important to note that metatextual signaling of macrostructure such as topicalization, topic sentences, and summary paragraphs are conspicuously absent. In all of the texts, only one metalinguistic comment (*but let us return ad rem*) is found after a digression.

Autobiographical texts have a much better delimited macrostructure, presumably dictated by the conventional superstructure of autobiography and the clear narrative structure with temporal elements. Additionally, autobiographical texts exhibit a perspective which, because of its internalized nature, may be the most natural and, therefore, the easiest for the writer. One could also say that purely descriptive texts, because of their conceptual simplicity, represent a topical unity which may be easier to

control. In JB's texts there are very systematic and well-organized descriptions of particular items, such as his favorite car, described in terms of overt features such as shape, color, and components. The specificity of the description is often too high, however, and descriptive features which would usually be presupposed are mentioned explicitly. Impairment of macrostructure is occasionally manifested at the microlevel in an inability to state some information succinctly; e.g., *And Jan asks me something and I answer and I ask something and Jan answers* instead of *and we talk with Jan*. Despite their simplicity, many texts exhibit conventional codas of the type *and that is how it ended*.

*Macrostructure in texts of posterior aphasic (HB)*. HB demonstrates competence in manipulating macrostructure in a number of different discourse genres. Not only is she not restricted to narrative discourse; she also produces expository discourse exhibiting relatively complex macrostructure. It is important to note that macrostructure is exhibited not only in texts containing retold information but also in those that are spontaneously produced. Many of HB's texts have good introductions, good closures, often of metaphoric or evaluative and introspective type and summary paragraphs, such as *Reality consists of problems of love, understanding, and search for another human being*. There is also extensive use of evaluation throughout the texts which highlights important information. Topic sentences and summary paragraphs are used to provide transitions between different topics and types of information. Disturbance of macrostructure is evident, however, especially when HB attempts to produce texts with considerable complexity involving embedding of different discourse genres within one text or involving shifts in perspective from descriptions of real events to those depicted in films or plays. In these cases, lack or scarcity of connectors and metatextual elements may account for these difficulties.

At the level of macrostructure processing, some difficulty was observed in some of HB's narrative texts where the information flow relating to plot is uneven—in some places too slow and in some, accelerated. Occasionally at a microlevel, background information and foreground information are not properly distributed. In terms of macrostructure, the most successful text provided by HB is a description of a television program on the brain. The text consists of expository discourse of both a descriptive and a highly introspective nature. It contains quite a complex macrostructure involving antithesis of information supported by syntactically parallel sentence structure. It is important to note that the salience of the topic for HB may have contributed to the good quality of this text (§8).

## 6. Comparison of texts of JB and HB

There are a number of similarities and differences in the texts of these two aphasics. In general, we can assume that most of the similarities observed are related to breakdown of language as a result of aphasia, whereas some of the differences may be attributed to the lesion site. It must be kept in mind, however, that observations are based on two subjects only. The results should thus be interpreted cautiously and not generalized to features of aphasic texts in general.

The most conspicuous feature of the texts of these two aphasics is the simplification or reduction of language, the simplification exhibited at various levels of language structure. At the most general level, this reduction is reflected in the amount of language produced per unit of time. Most of the texts were produced at a rate of one to two hours per one handwritten page. At the sentence level, both the sentential length and phrasal length are greatly reduced as are the amount of embedding and repertoire of dependent clauses. Connectors are also reduced and restricted to a very small number of the most frequently used. At the discourse level, episode structure is reduced since embedded episodes are extremely rare. Narrative plot structure is also simplified considerably, with an uneven flow of information. Both subjects have difficulty in providing transitions between different topics within the same text. It is not only the reduction at various levels of linguistic structure that is similar in the subjects' texts but also some patterns of disruptions. Reference is the primary area that is impaired in both subjects. Person markings in the verb suffixes are often disrupted. There are also cases of ambiguous reference. Temporality is another area in which impairment is manifested by inappropriate shifts in tense and aspect in the verb system and errors in the use of temporal connectors.

The most striking difference between these subjects' texts is the rigidity of the temporally-driven narrative and descriptive texts of JB and the diversity of HB's texts. This is characterized by a combination of different discourse types and attempted complexity of information structure. JB's texts exhibit a linear concatenation of information, whereas HB's texts have a mosaic-type pattern of ideas. JB's texts do not contain any devices to differentiate information according to its importance, while HB's texts contain an extensive number of these devices such as evaluation and contrast, some of these devices being quite complex.

At a sentential level, JB's texts show much greater simplification in both embedding and in the number of connectors. There is also a definite difference in the pattern of errors in functors expressing temporality, i.e., connectors and prepositions. JB's texts show more omissions of functors,



whereas HB's texts tend to have substitutions. In the use of reference, JB overuses nouns since he has difficulty in using pronouns. HB operates with a much richer system of referential markings but, with the increased complexity, displays more errors than JB. All of the above differences at a sentential level are consistent with the differences between agrammatism and paragrammatism in anterior and posterior aphasics as described in the literature.

## 7. Conclusion

Our aim in presenting these observations on aphasic texts was to show how various components of language are altered as a result of brain insult. In normally functioning language, all components seem to be working in perfect harmony to create cohesion in text. In aphasic language, what was previously possible becomes an arduous task. Both of the subjects described here were aware of that difficulty. HB once remarked when turning in a written assignment, *It took me four hours to produce this page and a half but it is not a composition but just a collection of individual sentences.* We acknowledge our patients' contribution to this study and realize their value in understanding the complex problems described in this investigation.

## 8. Appendix

- (1) Excerpt of JB's account of his stroke

*... For a month I was in bed and I slept. The nurse gave me sleeping pills. During the month I already spoke 10–20 words but not clearly. I already used a wheel chair. A nurse therapist came to room 9 and exercised 10–15 minutes on my bed my foot. After a week I got up and walked 2 meters and I sat in a chair and the therapist held my hand. I did exercises in the gym. Four months later I already walked but poor.*

- (2) Excerpt from HB's letter describing TV programs

*... A moment ago they finished showing a TV program Alfa and Omega: Who should get neuron transplants? As always I watched it. Discussion between physicians, professors, a neurologist, a philosopher, and a lawyer. The topic very rich—morality, ethics, preparing a patient for an operation.*

*Medicine examines a sick man, medicine copes with pathology. Logically speaking it makes sense but not everything. Human brain—a machine which interests many people but it is still unknown.*

*Another weekly program Television at Night. Many people are interviewed and they talk about their problems. I heard about a woman from Lublin, after a stroke, who has a son and his father, is a drunk. They are divorced so she has to cope on her own. The woman is a math teacher. She learned (who she was) from a nurse in a hospital because she forgot everything.*

*This is the charm of this disease. She writes to the TV station herself (or someone writes for her—I understand her situation), that she cannot work in her profession and what are the prospects, disability pension, just pennies. She has spent all the money that she saved before and what will happen. I have to write a letter to television.*

*Tuberculosis is a disease of society, it was described as such before, and now we have stroke although it is not called a disease, of the society. It is terrible of me to compare these diseases. Someone who had TB dies early, young, the brain of that person works excellently. We admire paintings of painters, we repeat with pleasure words of poets, writers, these people are taken away (killed) by tuberculosis. Life is short but has meaning.*

*Someone who suffered a stroke, reminds one of an animal; he eats inelegantly, he walks—does not remind you of an athlete, and he thinks eee . . . and so on and so on. Life is long but has no meaning.*

- (3) Excerpt from JB's account about the monuments in Warsaw

*... The monument of Mickiewicz was erected on Krakowskie Przedmiescie street by Dziekanka. At Podwale a monument of a young insurgent of the Warsaw uprising was erected. At Lazienki park Copernicus monument was erected in the old place by the Academy of Sciences. After the war several new monuments were added among them monument of Warsaw Nike, of Feliks Dzierzynski and of the Polish primate Wyszynski at Krakowskie Przedmiescie street.*

- (4) Excerpt from HB's account about the monuments in Warsaw

*... I crossed the street. The trees looked lovely. The blossoms of the linden tree gave a scent. The benches around the monument were taken by young and old people. There were even small children in prams with their parents.*

*I also sat down to look at the monument. I looked at the face (of the monument) beautiful and stern which resembled the stone it was made of.*

*If one asked why there were so many beautiful flowers around the monuments I could reply: "Wyszynski is a hero and a leader of our difficult postwar times."*

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# **'In the beginning' of Biblical Hebrew Discourse: Genesis 1:1 and the Fronted Time Expression**

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## **1. The new beginning in the study of the Hebrew Bible**

Early in the 70s it was found that knowledge of sentence and paragraph features of Philippine, Papua New Guinean, and other exotic languages, and tools of modern linguistic text theory might prove helpful to the analysis of Biblical Hebrew texts and grammar. The germinal ideas of such pioneer discourse grammarians as Andersen (1974), Longacre (1979, 1989),<sup>1</sup> and Schneider (1974) led to a great number of intriguing analyses of Hebrew grammar.

Prominent at that time was the discovery of the episodic structure of Biblical texts with their specific linkage and boundary markings by means of backreferences, participant maintenance mechanisms, and spatio-temporal setting systems. Longacre (1979) especially noted macrostructural features of the settings, inciting incidents, climaxes, and resolutions of episodes and paragraphs.

Another area studied was that of the uses of tense, aspect, and mood in relation to particular discourse types. It was found that Hebrew marks a distinction between foregrounded and backgrounded narrative by placing two past-tense verbs in opposition. The foregrounded mainline of a story

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<sup>1</sup>It is a great honor to pay this homage on the occasion of the 70th birthday of my teacher and friend, Professor Robert E. Longacre, in appreciation of his leadership 'in the beginning' of linguistic discovery in Biblical studies.

is expounded by a sequential or progressive narrative verb form with an initial connective *waw* 'and' prefixed to the PREFIX CONJUGATION (the verb form *wayyiqṭōl*, the so-called CONSECUTIVE IMPERFECT). The backgrounding supportive or depictive function is expressed by the suffix conjugation (the verb form *qātal*, also called PERFECT) or by more-static clause types.<sup>2</sup>

Despite all the great achievements of the founding fathers of discourse study we are nevertheless still only in the beginning. Not surprisingly, there are many unsolved problems in the current versions of discourse analysis.

One crucial question is the more precise interpretation of background forms and especially of the pattern of preposed NP + *qātal* in relation to the mainline form. We know that "PERFECT with preposed noun . . . introduce[s] or feature[s] a participant or prop. The action . . . is a secondary or preparatory action" (Longacre 1989:74). The problem is, however, whether this perfect construction is only OFF-THE-LINE, or whether it may equally in some uses be primary ON-THE-LINE or perhaps be primary, but serving some special function.

The nature of one of the remaining issues may be elucidated by beginning at the very beginning of the Genesis account. The initial phrase of the Hebrew Bible in Genesis 1:1, the well-known "In the beginning God created the heavens and the earth" is not only highly debated in modern Biblical study, but also poses far-reaching questions for discourse grammar. When this idea in Hebrew is expressed by NP + *qātal*, does that entail demotion to secondary or less important informational salience? Or may we look for other more subtle pragmatic functions? This is actually the real problem at the core of past and present discussions on the issue.

The problem has even become more acute in studies carried out within a modern linguistic framework by Gross (1981, 1987) and Niccacci (1990). At the same time, important new contributions by Tsumura (1989) and Jenni (1989) suggest new perspectives illuminating the 'in the beginning' of Genesis 1:1. They seem to indicate that discourse analysis may still have yet another piece of evidence to offer in respect to the crucial tale of how it all came into being.

## 2. Translating 'in the beginning' of Genesis 1:1

The syntactic problems posed by the initial verses of Genesis 1:1–3 have been stated time and time again, to the extent that this grandiose opening has become noted for its grammatical complexity.

The far-reaching consequences of a grammatical choice are borne out by their effect on Bible translations—in a sense encoding the very essence of the

<sup>2</sup>In Longacre 1989:59 *passim*, now developed into a structural cline for clause types

grammatical options chosen. In several recent versions of Genesis 1:1–3, for example, the traditional rendering has been consciously altered on the basis of new syntactic or textlinguistic interpretations. One case in point is the new sample edition of a preauthorization version of the Danish Bible,<sup>3</sup> which follows the margin of the RSV, NEB, and TEV translations:

In the beginning when God created heaven and earth—the earth at that time was waste and emptiness, and there was darkness over the primeval deep,<sup>4</sup> and the storm of God whizzed past<sup>5</sup> above the waters—then God said, “Let there be light!” And there was light. (Da Gud skabte 1985:11)

In this rendering, ‘in the beginning’ has been replaced by a subordinate time clause followed in 1:2 by a parenthetical description of desolation, utter darkness, and a frightful storm whipping up vast ocean waters. Only then does the action proper begin. The beginning of creation is thus demoted to the first events occurring when God issued his first majestic command to let the light come into existence.

Turning to the Hebrew Bible, the text in question runs as follows:

1:1	<i>bē-rēʔšīt</i> in-beginning	<i>bārāʔ</i> created	<i>ʔēlōhîm</i> God	<i>ʔet</i> ACC	<i>haš-šāmayim</i> the-heavens
	<i>wē-ʔēt</i> and-ACC	<i>hā-ʔāreṣ</i> the-earth			
1:2a	<i>wē-hā-ʔāreṣ</i> and-the-earth	<i>hāyētâ</i> was	<i>tōhû</i> aridness	<i>wā-bōhû</i> and-emptiness	
1:2b	<i>wē-ḥōšek</i> and-darkness	<i>ʔal-pēnê</i> on-the ^face^ of	<i>tēhôm</i> ocean		
1:2c	<i>wē-rûaḥ</i> and-spirit ^of	<i>ʔēlōhîm</i> God	<i>mēraḥpet</i> hovering	<i>ʔal-pēnê</i> on-the ^face^ of	<i>ham-māyim</i> waters

<sup>3</sup>This version is chosen at random as one case in point. The fairly literal back-translation into English by the author renders Danish *I begyndelsen, da Gud skabte himmel og jord—jorden var dengang øde og tomhed, og der var mørke over urdybet, og Guds storm piskede hen over vandene—da sagde Gud: “Der skal være lys!” Og der blev lys.*

<sup>4</sup>Danish *urdybet*—compare German *Urgeschichte*—has the sense of ‘the original deep-water’, ‘the primordial ocean’, or the like.

<sup>5</sup>In the Danish idiom *piskede hen over*, the verb has a core meaning of ‘whip’ but also allows the idiomatic sense of rushing past with great speed.

1:3a *way-yōʔmer ʔēlōhīm*  
and-said God

1:3b *yēhî ʔôr*  
Let^there^be light

1:3c *wa-yēhî ʔôr*  
and-there^was light

The prime issue facing the grammarian and translator in this passage is an intricate syntactic problem centering basically on the following two options for the initial phrase ‘in the beginning’ of 1:1.<sup>6</sup>

(a) *bērēʔšît* ‘in beginning’ is a time adverbial noun phrase which modifies the initial main clause ‘God created the heavens and the earth’. The problem here is that one would expect a vocalization with the definite article, *b-ā-rēʔît* ‘in THE beginning’.<sup>7</sup>

(b) *bērēʔšît* ‘in beginning’ is head of a modifying dependent attributive time clause literally to be rendered ‘of God creating the heavens and the earth’; i.e., ‘when God created the heavens and the earth’. However, one would expect the *qātal* form of the verb *bārāʔ* ‘created’ to be revocalized to the more natural infinitive construct form *bērōʔ* ‘[In-the-beginning-of] creating [God’s . . .]’ typical of postposed dependent clauses.

Facing this interpretative stalemate, it may be useful to turn to linguistic tools for help. That they are actually useful on several grammatical levels is here argued—on the level of (a) the syntax of 1:1–3, (b) the interclausal relations of 1:1 and 1:2, (c) the semantic content of the initial time expression, and (d) the functional basis for fronting the ‘in the beginning’ of 1:1. I suggest that a NEW BEGINNING can be made by reopening the case for understanding the expression *bērēʔšît bārāʔ* as ‘in the beginning God created’.

### 3. The syntax of 1:1–3

Modern alternatives to the traditional interpretation of this passage actually have a precursor as far back as in Rashi, who in Miqraoth Gedoloth suggested: “At the beginning of the creation of heaven and earth

<sup>6</sup>For the most recent bibliographic summaries, see Wenham 1987:10–11 and Jenni 1989:121 n.1.

<sup>7</sup>“Bleibender Anstoß dieser Deutung ist die Artikellosigkeit von *rē(ʔ)šît* in 1,1” Gross (1987:52).



when the earth was without form and void and there was darkness, God said" (Silbermann 1985:2). His interpretation clearly was determined by the construct form of *bēreʿšit*.

This has recently become the favored interpretation within theological academia—to take 1:1 as a preposed dependent time clause, followed by 1:3 functioning as the main clause consequent. The three remaining clauses of 1:2 thus become a parenthesis and an infinitival reading is often adopted for 1:1. This interpretation, still argued by Beyer (1971:76–81) and Westerman (1974:108–09, 130–36), is mirrored in the Danish translation proposal introduced above.

The weakness of this position, however, and the reason for its passing popularity is, among other things, that a parenthesis is an extremely unclear grammatical category and would be expressed in Hebrew without the introductory *w* 'and' of 1:2 (Gross 1981:143).<sup>8</sup>

New suggestions, therefore, have recently been made based on a more principled linguistic approach. The new textlinguistic interpretation of the syntax proposes that 1:1 is a preposed dependent temporal expression, with 1:2 as the main clause. Together, 1:1–2 form the narrative background for the events of 1:3 and onwards.

The latest contribution to the syntactic analysis of Genesis 1:1–3 (Niccacci 1990:36–38) is a clear elaboration of this position. He presupposes the foreground-background distinction and the use of *wē-x + qātal* as a narrative-initial retrospective form, i.e., a resumptive form for recovering information preceding the account. This is illustrated by the four diverse clause types of 1:1–2: the *x + qātal* (1:1), *wē-x + qātal* (1:2a) and the two nominal clauses expressed by *w-NOUN + PREPOSITIONAL PHRASE* (1:2b) and *wē-NOUN + PARTICIPLE CLAUSE*. All four are interpreted as retrospective antecedent forms preparing for 1:3. Syntactically, however, 1:1 is taken as antecedent to 1:2a, which in turn is followed by the last two coordinate clauses, communicating contemporaneous data.

This interpretation was revived originally by Gross (1981) in a study which delimited the class of backgrounded clause types that introduce narratives and subparagraphs.<sup>9</sup> He also suggested that a paragraph-medial clause be interpreted as background whenever a circumstantial interpretation might seem less likely (Gross 1981:137).

<sup>8</sup>Cf. in detail Schmidt (1967:74–75), who emphasizes the extreme complexity of such a reading.

<sup>9</sup>Cf. the forms noted above in Niccacci 1990. Gross (1981:141), by the way, includes the past *qātal* form of the copula verb *hāyāh* 'be' among the backgrounded description of states of affairs in the past.

Now, as Gross (1981:143) clearly admits, *wĕhā?āreš hāyētā tōhū* (1:2a) would fit nicely as a backgrounded clause of the connective *waw* 'and' + NOMINAL CLAUSE type that is additionally specified by the copula verb *hāyāh* for past tense. But instead, Gross strongly emphasizes the missing article of 'in-(the)-beginning' of 1:1 and analyzes the phrases that follow in verse 1 as an attributive clause which modifies the initial time adverbial expression in construct form (in Hebrew, the head noun of a genitival construction). Accordingly, 1:1 is interpreted as a left-dislocated time phrase embedding a backlooped, unmarked time clause, followed by the consequent in 1:2a, i.e., 'In the beginning, when God began to create the heaven and the earth, the earth was . . .'<sup>10</sup>

To be sure, Gross avoids the problem of arbitrarily changing the *qātal* verb form into an infinitive. However, the evidence he uses (1987:53 n.49) from the Gesenius-Kautzsch grammar (Kautzsch 1909:§130d)<sup>11</sup> is not only peripheral, it contains material of quite different character. Some of the cases are instances of a prepositional time phrase functioning as a subordinating conjunction, e.g., the postposed dependent clause *bĕyôm dibbēr YHWH ʔet-Mōšeh bĕHar Sīnāy* '(on-day = when) talked Yahweh with Moses on Mount Sinai' (Numbers 3:1).<sup>12</sup> This evidence perfectly illustrates the natural use of the phrase in the postposed dependent time clause of Genesis 2:4b: *bĕyôm ôššôt YHWH ʔēlōhīm ʔereš wĕšāmāyim* 'on-day-of doing Yahweh God earth and heavens' but can only with great difficulty be brought to bear on the dissimilar discourse context of 1:1.

The interpretation offered by Gross thus suffers from having recourse to a rather peculiar grammatical construction without an overtly expressed relative marker. Furthermore, he also has to assume a rather specialized function of the *qātal* form (as INGRESSIVE, 1981:145 n.54). But most importantly, he must even dismiss his own evidence for syntactically backgrounded descriptions in 1:2. He is forced to insist that 1:2 is

<sup>10</sup>Cf. the category PENDINGENDE ZEITANGABE ZU 1,2 in Gross (1987:53). With slightly less certainty, the same analysis of 1:1 has now been reiterated by Niccacci (1990:38, 200 n.24), who, however, confusingly states on the one hand that all of v.1 is a temporal clause and glosses in *the beginning* as 'When God began to create . . .', but on the other hand states that "v.1 (temporal phrase) functions as the PROTASIS while v.2 is the APODOSIS."

<sup>11</sup>Gesenius-Kautzsch 1909 classifies the material as adposition of an independent clause used as a virtual genitive modifier.

<sup>12</sup>Jenni (1989:122) remarks that "b + desemantisiertem Allgemeinausdruck . . . zur Nebensatzleitende Konjunktion wird." Similar uses are found in Exodus 6:28, Deuteronomy 4:15 and 2 Samuel 22:1; the form *kol-yēmē* 'all-the-days-of' is used in Leviticus 13:46, 14:46, 1 Samuel 25:15, while the relative pronoun *ʔāšer* 'who' is used in Leviticus 4:24, Deuteronomy 23:5, 1 Samuel 3:13, 2 Samuel 15:21, and 1 Kings 21:19.

foregrounded, despite the fact that “the clauses on the content side mention entities that are presupposed by the creation acts of verse 3 and onwards” (1981:145).<sup>13</sup>

We may then, after all, have a case for reconsidering the traditional interpretation, with a main-clause reading of ‘in the beginning’ of Genesis 1:1, as worthwhile. To dismiss the old Genesis 1:2 parenthesis interpretation as untenable and face the problems inherent in the new linguistic interpretation as the only alternative is to reconsider 1:1 as a main clause followed by other independent clauses in 1:2 and 1:3a.<sup>14</sup>

At the outset, one should keep in mind that this does not entail ideology prescribing the rules of grammar. The main clause reading of Genesis 1:1 does not by itself mean that the initial statement becomes a title to the following section, 1:1–2:4a. The initial main clause would then artificially be separated from the following statements of 1:2.<sup>15</sup>

Just how vulnerable this interpretation is to arbitrary ideological speculation may be seen from the remarks of Zenger (1983:64–65). By *PETITIO PRINCIPIO* he stipulates that the creation acts can only be expressed by the formulas ‘and God said’. This is then followed by a postulate that an alleged later priestly editor has here initially introduced his redaction of Genesis with a hermeneutical key to his work. On this assumption, Zenger interprets the verb as a pluperfect *credo* statement: ‘In the beginning God had created . . .’ which, however, has no grammatical support. There are no contextual indications to signal any special backreferential function of the verb form at this point.

Modern redactional and diachronic readings are, however, by no means the only possible way to support the traditional syntactic interpretation. In fact, the main clause reading can be supported on both semantic and pragmatic grounds, which are, by nature, grammatical rather than ideological.<sup>16</sup>

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<sup>13</sup>This is why the interpretation of Gross or Niccacci is actually “the least likely interpretation” (Wenham 1987:12).

<sup>14</sup>A similar move is made by Bjørndalen (1971:33–35) in a linguistically very-well-argued contribution. He, however, only considers 1:2a to be a circumstantial clause.

<sup>15</sup>For other points, see Young (n.d.) and Wenham (1987:12–13).

<sup>16</sup>When Gross (1987:52) evaluates the *CREATIO EX NIHILO* position of Scharbert as “wohl nur als Eintrag dogmatischer Gesichtspunkte verständlich,” it may not only be much too premature, but also a rather arrogant way of disposing the evidence.

#### 4. A semantic perspective of 'in the beginning' of 1:1

New semantic insights have recently been presented in the very commanding research of Tsumura (1989). Strictly limiting his task to an in-depth analysis of Genesis 1:2, his work virtually shatters the foundations of the usual 'chaos' interpretation of these expressions. At the same time, it provides a fresh basis for reconsidering other issues, such as the force of 'in the beginning'.<sup>17</sup>

Tsumura (1989:26–30) argues from etymology and semantics that *tôhû* means 'desert' rather than 'chaos' and, especially in the light of Akkadian evidence, that the word pair *tôhû wâbôhû* means 'be unproductive'. Other uses of the words in the Hebrew Bible support aridness/unproductiveness and emptiness (uninhabited) as the central meaning features of the word pair (41). Similarly, he shows that the 'deep', Hebrew *têhôm*, is not a direct loan from Akkadian *tiamat*, the mythological monster of the creation battle, but that it is, instead, related to the general semitic word for 'ocean' documented in Akkadian, Ugaritic, and Eblaite (45–47, 51–52).

Even on a larger scale, there are telling points to be gained from comparison. Tsumura documents a common earth-water relation in Genesis 1:1–2, 2:4–7 and the Babylonian accounts—a double setting with a negative description of the bare earth, not yet having the form they will have later—followed by a positive description of the water, before the creative event (79).

On the basis of this careful examination of the comparative evidence, the backgrounded and contextual nature of the descriptions in 1:2 come out very clearly.<sup>18</sup> All this, however, does not finally settle the problem of the phrase 'in the beginning' of 1:1.

Some of the earlier suggestions, to be sure, may still carry some weight and would remove the problem altogether. On the basis of one of the earliest textual witnesses, the Samaritan Text, supporting *bêrêʔšît* (Angerstorfer 1979:181), one could argue that the definite article was original. It would, however, be quite difficult to explain the rationale behind a later omission of the article from the present Hebrew text.

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<sup>17</sup>Tsumura's goal is a highly interesting combination of "etymological studies supplemented by . . . discourse grammatical investigation" (Tsumura 1989:15). Among the latter are highly significant observations such as that 1:2 is focused on the earth, and the description of 1:2 prepares for the productiveness of 1:11 and the habitation for living creatures and man in 1:24 and 26 (Tsumura 1989:42).

<sup>18</sup>Andersen (1974:85) similarly recognizes 1:2 as a "circumstance prior to the first fiat recorded in Genesis 1:3," although his discussion is somewhat blurred by the translation "had become (or had come to be)."

There is also clear evidence that time phrases like *mērē?šit* (Isaiah 46:10) and *mērō?š* ‘from the beginning’ (Isaiah 40:21, 41:4–26, 48:16, Proverbs 8:23, Ecclesiastes 3:11) as well as *qedem* ‘olden times’ and *ōlām* ‘eternity’ in adverbial use “occur almost invariably WITHOUT the article, and that in the absolute state” (Heidel 1963:92). Although this evidence for PREPOSITION + INDEFINITE TIME PHRASE has been dismissed because of its use only in poetry which has a different use of definite article (Gross 1981:144), it does at least show that this construction was by no means unintelligible (Jenni 1989:122).

Furthermore, the single counter example of *tēhillat* ‘in-beginning-of’ + *qātal* in Hosea 1:2 may not necessarily settle the matter once and for all,<sup>19</sup> because the noun does not have the preposition *bē* ‘in’ and could even be interpreted as a title (Jenni 1989:122), i.e., *tēhillat dibbēr YHWH bēHōšēā? wayyō?mer YHWH ?el-Hōšēā? . . .* ‘The beginning of the Lord speaking through Hosea: The Lord said to Hosea . . .’ Thus, when *biḥillat* is used before the noun with the preposition *bē* ‘in’, we only find the regular infinitive construct verb form, as in *biḥillat ?ālōt hallāqēš* ‘in-beginning-of growing-of the-summer-grass’ (Amos 7:1; cf. 2 Kings 17:25).

There is, however, another semantic aspect to the problem. A new interpretation has been proposed by Jenni (1989), who has investigated the semantic fields of phrases referring to the beginning or end of time periods in the Hebrew Bible. In many cases, these time expressions are used both in a relative and in an absolute sense without Hebrew formally indicating which of the two uses in question is intended.

One clear example is the unspecified time adverbial use in Judges 1:1 *mī ya?āleh lānū ?el-hakkēna?ānī bauṭēhillā* ‘who should go against the Canaanites for us FIRST’ which is to be contrasted with the time expressions specified by genitival modifiers as ‘in the beginning of a certain period’. Thus, several phrases may be used both in an extreme and a nonextreme sense, such as *bā?āhārōnā* as ‘later’ and ‘at last’, *bārī?šōnā* as ‘earlier’ and ‘earliest’, and a number of other cases (Jenni 1989:123–25).

On this account the missing link of Genesis 1, so to speak—the absence of the definite article in *bērē?šit*—may be purposely intended with the sense of ‘in the early times’, ‘in the very first period’, ‘in primordial time’, or the like (Jenni 1989:125). This elative rather than superlative temporal sense may actually be highly compatible with the most natural and traditional understanding of the text, as it leaves time for the existence of God

<sup>19</sup>Contrary to Andersen (1974:141): “The grammar of Genesis 1:1 is identical to that of Hosea 1:2: ‘At the beginning when Yahweh spoke with Hosea, then Yahweh said to Hosea . . .’ . . . As this parallel suggests, the term ‘beginning’ in Genesis 1:1 marks the commencement of the story, not the absolute beginning of everything.”

before the creation of the universe, and easily may be used in both the sense of 'in the beginning' as well as 'in very early times' (Jenni 1989:126).

Further support may be found in the parallel uses of *mēšôlām*, also missing the article but always functioning in both senses as 'in eternity' or 'in a remote past' (Jenni 1989:126). A clear parallel instance can be pointed to within the confines of Genesis. In Genesis 6:4, the *gibbōrīm* 'heroes' born at the time of Noah are referred to as *mēšôlām paṅšê hāššēm* 'from long time ago the famous men', i.e., certainly not from eternity.<sup>20</sup>

### 5. The pragmatics of fronting 'in the beginning'

On semantic grounds there are thus no compelling reasons to dismiss the unmodified interpretation of *bērēšît*, and various sorts of evidence actually favor this interpretation. It may, in fact, even be supported by discourse grammatical considerations to be suggested here as the final element in our chain of evidence.

The discourse perspective has recently been emphasized by Tsumura (1989:78 n.41), who observes, concerning the relationship between 1:1 and 1:2, that it would be "strange that a Hebrew creation narrative should begin with the present word order of v.2, i.e., *waw* + NP VP, without any temporal description."

The peculiar structural features of the initial clause are noted by Schneider (1974:186), who ascribes a framing function to *qātal* forms in the opening of a narrative, yet still has significant reservations about a static interpretation of Genesis 1:1:

In this case, where a finite verb is preceded only by a circumstantial expression, one may only reluctantly consider it a nominal clause, as it is not a description of a state, but just a highlighting of the temporal expression. (Schneider 1974:161)

Schneider's linguistically unfortunate idea of interpreting fronting of nouns as complex nominal clauses, obviously did not prevent him, in this case, from paying attention both to the preposed temporal element, and to the nonstatic nature of the predication.

More importantly, however, it is possible to link this observation with one of the central ideas of the Functional Grammar developed by Simon Dik—a language universal FRONTED PRAGMATIC CLAUSE POSITION (the P1

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<sup>20</sup>Similarly Wenhan (1987:12).

element in the clause template).<sup>21</sup> The function of fronting in presentative constructions has recently been elaborated upon within a FG-framework by Hannay (1990), who suggests that the fronting slot is a pragmatic-function stager which introduces new topics or spatio-temporal framing. From this point of view, the first element in the Genesis 1:1 clause may be taken as the time setting, while the rest of the clause expresses a highly foregrounded state of affairs: God created the universe.

An interesting parallel to this setting function actually occurs at the beginning of another narrative, Joshua 24:2:

- (1) *bēšēber hannāhār yāšēbū ʔābôtēkem*  
 at^other^side^of the^river lived your^fathers  
  
*mēšōlām, Tera . . .*  
 from^early^times, Terah . . .

In this example, the fronting position again functions grammatically as a preposed spatial-setting element. At the same time, the nonextreme meaning of the temporal expression occurs in the proper *x*-position of the Hebrew template *PIVSX*, and is in turn followed by the right-dislocated, split subject.

Furthermore, the Joshua example clearly shows that the question of the dynamics of action largely depends upon the type of predication. Thus, the semantics of the verb determines relative salience in the informational flow of the narrative. In Joshua, a state verb is used, while, in Genesis, *bārāʔ* is an action verb with an affected object. In the Genesis example, it is the combination of the predicate and its arguments that determines the semantic content of *creatio ex nihilo*, while it is the preposed time phrase followed by a *qātal* form that allows for its use in the beginning of the narrative.

That preposing of a stage or setting element does not alter the internal dynamics of the predication may be argued in yet another way. On the basis of some of the clear instances of oscillation between *wayyiqṭōl* *vsox*-clauses and *wē-x + qātal xvso*-clauses, it can be seen that temporal specification does not necessarily alter the foreground/background values. Compare, for instance, the two parallel accounts of the same incident with and without fronted time expressions:

- (2) *bišnat šēlōšim wāšēš lēmalkūt ʔāsāʔ*  
 In^the^year^of 36 of^the^reign^of Asha

<sup>21</sup>Longacre has observed different uses of fronted nouns, but is to be supplemented by Functional Grammar considerations brought up by Buth (1987) and elsewhere.

*ʕālā*      *Baʕšāʔ*    *melek*      *Yiśrāʔel*    *ʕal-Yēhûdâ*  
 went^up    Baasha    the^king^of    Israel      against-Judah  
2 Chronicles 16:1

(3)    *wayyaal*      *Baʕšāʔ*    *melek*      *Yiśrāʔel*    *ʕal-Yēhûdâ*  
 and^went^up    Baasha    the^king^of    Israel      against-Judah  
1 Kings 15:17

All of these corroborating lines of semantic and pragmatic evidence together make it highly sensible to stay with the traditional position on the creation of the world.

## 6. Conclusion

To understand the nature of Genesis 1:1 it is imperative to keep two things in mind and strike a balance: at one and the same time it contains a temporal specification and describes a foregrounded self-contained action.

The main clause ‘in the beginning’ is temporally staged as befits its discourse-initial position on a content plane, but otherwise describes an action. In a sense it is a whole narrative of just one clause embedded or preposed at the beginning of a full narrative. The following clauses of 1:2 further elaborate details of the initial action-setting, and the earth in the beginning of 1:2 rhetorically links back to 1:1, singling out a subtopic of 1:1 for further description. Syntactically, however, it provides the backgrounded information ‘Now the earth was...’ introducing the following narrative in 1:3ff: ‘Then God said’.

As a consequence of this limited analysis, one may say that Hebrew has *x + qātal* forms that, in a textual context, may function as backgrounded-narrative initial clauses without being secondary or marginal, but rather being very highly foregrounded in terms of semantic content. Genesis 1:1 may be unique in its action status, but it can at least be accounted for by the rules of grammar when including semantic and pragmatic perspectives.

This may actually not provide us with a neat rule of thumb for preposing clause types in Hebrew, but the complexities of language should be dealt with rather than tinkered with, dismissed with, or anything similar. This was the hallmark of the pioneers of discourse analysis in the beginning, and it should certainly remain so for any progress to continue in years ahead.



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## **Topic, Focus, and Discourse Particles**



## Topic and Focus in Hebrew Poetry—Psalm 51

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This paper<sup>1</sup> discusses topic and focus structures in Psalm 51. The question has practical, exegetical relevance in explaining many fronted noun phrases and in pointing out places where there may be preferences for some readings, or even in pointing out ambiguities. The analysis can become a tool for evaluating suggestions in commentaries.<sup>2</sup> But before proceeding to the more salient parts of the paper, we need to cover a few preliminary issues. First of all, what do we mean by the terms TOPIC and FOCUS? Of these, focus is the easiest for speakers of English and other European languages to understand.

- (1) FOCUS FUNCTION is a choice to use a marked, special structure to highlight a salient constituent of a clause for reasons of completion, contrast, or counter-presupposition.

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<sup>1</sup>This is a revision of a paper read at the Society of Biblical Literature, Linguistics and Biblical Hebrew Group (New Orleans, 1990), a group that Professor Longacre has addressed on more than one occasion. Many of the discussions of that group are in areas for which Robert Longacre has called for investigation for over twenty years. This paper is one modest response and it is an honor to present it to him.

<sup>2</sup>In verse 5, for example, is *pěšāʾay* 'my crimes' marked for focus, is *?ānī* 'I' marked for focus, or is *?ēdāʾ* 'know' marked only for normal saliency? Briggs and Briggs (1907:10), for example, reject 51:5 *?ēdāʾ* as a gloss because the line is too long. They reject 51:8 *běsātum* as a gloss on *ṭwḥwt*. Addressing the problem of *?ānī* 'I' in 51:5, Dahood (1968:3) says there is "no palpable emphasizing function in this context."

For example, (2) presents a nonfocus, normal English structure, which can be read with normal intonation.

(2) *I saw the movie.*

In Prague terminology, the phrase *saw the movie* of (2) is said to be the rheme of the clause. This is helpful but only addresses the unmarked structure. While we can say that focus is associated with the rhemic part of a basic, unmarked clause, focus goes beyond this. Consider (3), for example, which has focus intonation on the word *movie*.

(3) *I saw the MOVie.*

The intonation on *movie* yields a marked structure, which can be used in contexts where it (a) challenges a presupposition that the speaker assumes for the audience, (b) contrasts another action, or (c) adds a significant new piece of information from the speaker's viewpoint.

In this context, the term FOCUS can be informally defined as a structure used for emphasis. A focused constituent is not present in every sentence, but occurs only where special emphasis is desired.

Topic, on the other hand, is a special function for orienting a text or clause to its larger context—not to provide emphasis. We must again invoke the notion of a marked structure, as in (4).

(4) TOPIC FUNCTION uses a special, marked structure to set off a constituent as a point of relationship to the context—either forwards (cataphoric), backwards (anaphoric), or both.

The definition of topic is more complex than this statement would indicate because of other factors such as continuity or discontinuity of action, but we can leave such complexities to one side for the present purpose. In any case, this definition of topic is relational, not emphatic; in these terms, topic does not provide the salient reason for the existence of a clause, unless a focus function is also present.

Consider now the phrase *after the struggle*, which occurs in unmarked order in (5) and in topicalized order in (6), both with normal English intonation.

- (5) *Bernard breathed a sigh of relief after the struggle.*
- (6) *After the struggle Bernard breathed a sigh of relief.*

In (6), we see a nonemphatic, marked topic structure.<sup>3</sup> It is important to recognize the difference between a marked topic and a marked focus, because in Hebrew—as well as in many other languages—a clause-initial position can sometimes be used for either topic or focus. Let us look at focus and topic in Hebrew poetry.

Although Hebrew is generally a verb-initial language—which is to say that nonfocal, nonemphatic sentences tend to begin with a verb—many clauses in poetry do not begin with a verb. Some clauses begin with one nonverbal constituent, usually nominal; a few begin with two nonverbal constituents.

One of the undefined areas of poetic syntax concerns the functions of these preverbal elements. Two common ways of approaching the problem are to lump everything together under a vague category of *EMPHASIS*, or to plead ignorance on the grounds that poetry has rhythmic or alliterative influences that undermine any attempt at syntactic analysis.

In this paper, I assume that a writer or reader of a poem uses the normal grammatical devices of a language to find meaning in a text. Any structure used *will be* interpreted by the audience. Until the audience has learned a special grammar for poetry, it perceives the normal functions and relationships of those structures. We can, therefore, begin our analysis from what is known about the language in general in order to determine how the system applies to a poem.

What, then, is known about topic and focus systems in Hebrew? Textlinguistics has revealed a number of functions of topic and focus in Hebrew; these may be briefly stated as follows:

- a. The distinction between topic and focus made in general linguistics must also be made in Hebrew syntax.
- b. Both topic as a cohesive device for marking discontinuities in topic spans and topic as a cohesive device for marking discontinuities in action can be joined under a generic idea of *DISJUNCT TOPIC*. This was first suggested by Givón (1983) and provides a way of linking both the nominal character of marked topics together with background functions which have been noted in Hebrew. (Buth forthcoming)

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<sup>3</sup>Some may want to call this *SETTING* or *BASIS* or *PIVOT* or *DISJUNCT*, but the name of the function is beside the point.

- c. Focus systems may be marked by intonation, special particles (such as Hebrew *fôd* or *gam*), and word order.
- d. In Hebrew, preverb word order is certainly used for both focus and topic, as the following illustrations show.

In Jeremiah 1:11, *maqql shaqed* ‘almond branch’ precedes the verb as a constituent in focus. The subject ‘I’ also precedes the verb, but this is the normal order with a participle and cannot be considered a marked topic; nor is it focus.

- (7)
- |  |                 |               |                  |                 |              |
|--|-----------------|---------------|------------------|-----------------|--------------|
|  | <i>mâ-Pattâ</i> | <i>rô?eh,</i> | <i>yirmëyâhû</i> | <i>wâ-?ômar</i> | FOCUS        |
|  | what?-2ms       | see,          | Jeremiah         | and-said^1s     | <i>maqql</i> |
|  |                 |               |                  |                 | almond       |
|  |                 | SUBJECT       | VERB-PARTICPLE   |                 |              |
|  | <i>šâqēd</i>    | <i>?ānî</i>   | <i>rô?eh</i>     |                 |              |
|  | stick           | 1s            | see              |                 |              |
- What do you see, Jeremiah? And I replied, “I see the branch of an almond tree.” (Jeremiah 1:11)

A similar example is found in Numbers 10:2.

- (8)
- |  |                 |             |              |                 |              |              |
|--|-----------------|-------------|--------------|-----------------|--------------|--------------|
|  | <i>ʔāšēh</i>    | <i>lēkâ</i> | <i>štê</i>   | <i>hăšôšrôt</i> | <i>kesep</i> | FOCUS        |
|  | make^ms         | for^2mp     | two          | trumpets        | silver       | <i>miqšâ</i> |
|  |                 |             |              |                 |              | hammer^work  |
|  | VERB            |             |              |                 |              |              |
|  | <i>taʔāšēh</i>  |             | <i>?ôtām</i> |                 |              |              |
|  | should^make^2ms |             | 3mp          |                 |              |              |
- Make yourselves two silver trumpets; make them of hammer work. (Numbers 10:2)

In both of these passages, the preverb material adds salient, nonpresupposed information to the text and does so with a marked, special structure. These are classic examples of focus and, were we reading them aloud, we would be justified in using a special intonation.<sup>4</sup>

In Genesis 37:2–3, on the other hand, we find a case of topic function. In verse 2, there is a change of subject to ‘Joseph’, but changing the subject does

<sup>4</sup>Note, however, that the Massoretic disjunctive *ʔiphâ* accent (at Jeremiah 1:11 and by chance at Numbers 10:2 as well) is not focal, since it is used in many nonfocal contexts, e.g., three other times in Jeremiah 1:11–12.



not in itself entail movement to preverb position. In verse 3, however, the introduction of the new subject 'Israel' causes a break in the action. This is a common context for the occurrence of a marked topic in Hebrew narrative. This subject is, therefore, topicalized by movement to the preverb position.

(9)	VERB	SUBJECT			
	<i>way-yābēʔ</i>	<i>yôsēp</i>	<i>ʔet-dibbāt-ām</i>	<i>rāšā</i>	<i>ʔel-ʔābī-hem</i>
	and-brought <sup>^</sup> <sub>3ms</sub>	Joseph	ACC-slur-3mp	evil	to-father-3mp

TOPIC	VERB				
<i>wě-yiśrāʔēl</i>	<i>ʔāhab</i>	<i>ʔet-yôsēp</i>	<i>mikkol</i>	<i>bānāyū</i>	
and-Israel	loved <sup>^</sup> <sub>3ms</sub>	ACC-Joseph	over-all	sons <sup>^</sup> <sub>3ms</sub>	

VERB					
<i>wě-ʔāsā</i>	<i>lō</i>	<i>kētōnet</i>	<i>passīm</i>		
and-would <sup>^</sup> make <sup>^</sup> <sub>3ms</sub>	<sub>3ms</sub>	coat	stripes		

And Joseph brought his father a bad report about them. Now Israel loved Joseph more than any of his other sons . . . and he used to make a richly ornamented robe for him. (Genesis 37:2-3)

It is this kind of discontinuity of action that relates to narrative topics. However, because 'Israel' is also the subject of 37:3c ('he used to make him a striped coat' [note the habitual tense]), one may argue that 37:3a is breaking up the topic-subject span as well as the action span. Either way, this is still a disjunct topic. It is part of the contextual marking system and not an emphatic focus.

Genesis 18:33 is another example of a disjunct topic. Two actions—the Lord departing and Abraham returning—occurred at the same time. This pause in the chronology of story is marked by a disjunct topic. The preverb position of 'Abraham' does not add special, emphatic information to the story.

(10)	VERB	SUBJECT			
	<i>way-yēlek</i>	<i>YHWH</i>	<i>kaʔāšer</i>	<i>killâ</i>	<i>lēdabbēr</i>
	and-went <sup>^</sup> <sub>3ms</sub>	Yahweh	as <sup>^</sup> that	finished <sup>^</sup> <sub>3ms</sub>	speak

	TOPIC	VERB	
<i>ʔel-ʔabrāhām</i>	<i>wě-ʔabrāhām</i>	<i>šāb</i>	<i>limqōmō</i>
to-Abraham	and-Abraham	returned <sup>^</sup> <sub>3ms</sub>	place <sup>^</sup> <sub>3ms</sub>

When the Lord had finished speaking with Abraham, he left, and Abraham returned home. (Genesis 18:33)

e. When there are two preverb elements in a clause, the unmarked order is topic followed by focus, as in Leviticus 25:24 and Judges 21:25.

- |      |                                      |              |                                       |                |  |
|------|--------------------------------------|--------------|---------------------------------------|----------------|--|
| (11) | TOPIC                                |              |                                       | FOCUS          | VERB   |
|      | <i>ûbkōl</i>                         | <i>ʔereṣ</i> | <i>ʔāḥuzzatkem</i>                    | <i>gěʔullâ</i> | <i>tittěnu</i>                                       |
|      | and <sup>^</sup> in <sup>^</sup> all | land         | possessed <sup>^</sup> <sub>2mp</sub> | redemption     | should <sup>^</sup> give <sup>^</sup> <sub>2mp</sub> |

*lāʔāreṣ*  
to<sup>^</sup>the<sup>^</sup>land

Throughout the country that you hold as a possession, you must provide for the redemption of the land. (Leviticus 25:24)

- |      |                             |                       |  |   |                |
|------|-----------------------------|-----------------------|--|---|----------------|
| (12) | TOPIC                       | FOCUS                 |  | VERB  |                |
|      | <i>ʔiṣ</i>                  | <i>hayyāšār</i>       | <i>běfēnāyu</i>                                  | <i>yaʔāseh</i>                                    |                |
|      | man                         | the <sup>^</sup> good | in <sup>^</sup> eyes <sup>^</sup> <sub>3ms</sub> | would <sup>^</sup> do <sup>^</sup> <sub>3ms</sub> |                |
|      | Everyone did as he saw fit. |                       |  |   | (Judges 21:25) |

### Disjunct topics and a narrative psalm

The next question to address is how disjunct topics function in relation to sequentiality in a narrative Psalm? Is there any correlation between the common narrative use of a disjunct topic for action discontinuity and the use of topic in poetry?

Psalm 78 is a historical psalm that lets us examine how the structures of prose syntax are used. In particular, it is instructive to see the degree to which preverb, topic marking reflects the breaking up of action continuities. We find in Psalm 78, in fact, a strong correlation between disjunct topic marking and action discontinuities and between verb-initial *wāw haḥippûk* clauses and action continuity.<sup>5</sup> Two representative examples follow.

In Psalm 78:23–24, the ‘opening’ of heaven is mentioned twice in verse 23, first with an INVERTING-*waw* (*wāw haḥippûk*) verb and then with a preverbal topic (*x + v*) clause. Verse 24 continues to the next event (supplying the food itself) which is mentioned twice with the same structures as in verse 23.

<sup>5</sup>In the seventy-two verses of Psalm 78, the following may be exceptions to the above correlation: (a) *wāw haḥippûk* (inverting *waw*) for nonsequential action in verses 59 and 80; (b) disjunct topic for sequential action in verse 60.

- (13) VERB TOPIC  
*way-yamṭer* *šālê-hem mân* *leʔêkôl* *ûdêgan*  
 and-rained<sup>3ms</sup> On-3mp manna to<sup>eat</sup> and<sup>grain</sup>

VERB TOPIC  
*šāmayim nātan* *lāmô lehem ʔabbîrîm*  
 heaven gave<sup>3ms</sup> them bread mighty<sup>men</sup>

VERB TOPIC VERB  
*ʔākal ʔiš šedâ šālah lāhem lāsōbaʕ*  
 ate<sup>3ms</sup> man supplies sent<sup>3ms</sup> 3mp for<sup>filling</sup>

He rained down manna for the people to eat, he gave them the grain of heaven. Men ate the bread of angels; he sent them all the food they could eat. (Psalm 78:23-24)

Verse 36 of the same psalm shows exactly the same relationships as do verses 23 and 24, with the addition of a temporal-aspectual merism between the two verbs. That is, the first verb is part of the past-perfective tense-aspect system while the second verb apparently is part of the future-imperfective system as a habitual action.<sup>6</sup>

- (14) VERB  
*wa-yēpattûhû* *bēpîhem*  
 and-deceived<sup>3mp</sup> <sup>3ms</sup> with<sup>mouth</sup> <sup>3mp</sup>

TOPIC VERB  
*ûbilšônām yēkazzēbû -lô*  
 and<sup>with</sup> <sup>tongue</sup> <sup>3mp</sup> would<sup>lie</sup> <sup>3mp</sup> to<sup>3ms</sup>

Then they would flatter him with their mouths, lying to them with their tongues. (Psalm 78:36)

f. It seems prudent to adopt one final principle for interpreting texts in which the presence of a topic function is a possible reading:

- (15) Between two equally possible readings of a text, the less marked reading should be preferred.

<sup>6</sup>It is also possible to read the latter verb as merely a poetic device or, less probably, as an archaistic \**yaqtul*.

When it seems possible to read a constituent as either topical or focal, the more relational TOPIC should be assumed rather than the more salient FOCUS. In Psalm 51:12a or 17a, for example, a topic reading is preferred over focus.

### What do we have in Psalm 51?

*Result 1.* First, parallel repetition is used as a kind of linking topicalization. For example, verses 3b, 4b, 6b, 8b, 11b, 12b, 15b, 17a, 17b, 18b, and 19b all use a preverb phrase to repeat salient information from the previous colon. These are marked in the appendix with (RS) or (R) and roman (nonitalic) type. Because such repetitive clauses bring a pause to any chronological or logical movement in the text, they typically use topic structures in narrative. We may be inclined to label these as topics here in poetry, too. There is, however, a natural prominence or highlighting effect when one colon parallels or repeats a previous colon. When we consider that the fronted phrase repeats the salient information of the previous clause we recognize that this is part of the ‘and-what’s-more’, to borrow Kugel’s words. Such a marked salient phrase can rightly be taken as focus. In fact, most of these examples may reflect both topic marking and focus marking on the same phrase in the underlying grammar.

There are only two places where exception might be taken to such an analysis—verses 8b and 12b. At 8b the word *ûbsâtûm* ‘in the hidden place’ is probably only a marked topic; *hokmâ* ‘wisdom’ follows and is a marked and salient focus. In the previous clause also, the parallel to *ûbsâtûm* is probably not the most salient element. The word *ʔemet* ‘truth’ is new, salient, and probably a marked focus, leaving *baʔtûhôt* ‘in the inner parts’ as an unmarked, default structure and less salient than *ʔemet*. Thus, in 8b, the first phrase is only a topic, even though it repeats the last constituent of 8a in a way similar to the repetitions in 3b, 4b, 6b, etc.

*Result 2.* Focus alone on a constituent can be isolated in several lines: 4a, 5a, 6a, 8a,b, and probably 9b and 15b. These are set off in the appendix by boldface.

In 4a, the adverb *hereb* ‘greatly, thoroughly’ is the new, most salient constituent of the colon and is, therefore, marked focus.

In 5a, *ʔānî* ‘I’ is semantically unnecessary. When one considers its order as marked—preverb and posttopic—as well as the contrast with the marked constituent of 51:6 ‘you yourself’, we must conclude that *ʔānî* is truly marked for focus.

In 6a, the only new, salient constituent is preverb *lĕkā lĕbaddĕkā* 'you yourself', which is, therefore, a marked focus. The repetition of the reference 'you yourself' adds support to this analysis.

In 8a, preverb *ʔĕmet* 'truth' is parallel to the salient, marked focus of *ḥokmā* 'wisdom' in 8b. So *ʔĕmet* is also probably in focus. It presents a new perspective to the poem after all the lines about 'sin'.<sup>7</sup>

In 9b, *ūmiššeleg* 'and than snow' expresses the salient degree as marked and is, therefore, in focus in the same way as the adverb *hereb* 'greatly' of 4a.

*Result 3.* Psalm 51:5a and 8b have topic + focus + verb. This would be the expected order in the double use of marked functions. In addition to what was said above, the next clause in 5b supports this focal reading of *ʔānī* because 'before me' is the salient predicate and follows the subject along with the additional nonnuclear adverb.

The general principle that topic precedes focus when both occur in preverb may hold for poetry and gives a good reading in 51:5 and 8b, and perhaps 15b, if the two elements are not both topics.

*Result 4.* Topics which are the first part of a bicolon coincidentally begin small units: 5a, 7a, 12a. This works for Psalm 51, but I suspect that other poems will produce more options.

*Result 5.* Even with a minimal reading of focus functions vis-à-vis topic, we can see a large increase of focus functions as well as topic functions in Hebrew poetry as compared to narrative.

### Conclusion

By paying attention to marked focus, marked topic, and the distinctions between them, we get a more precise treatment of features that are often poorly treated in commentaries. The syntax is relevant to poetry, whether narrative or topical. Instead of throwing out or ignoring words like *ʔnī* (51:5) and *ūbstūm* (51:8), we are now able to see their function within the textual structures and can evaluate them, making exegetical suggestions based on syntax.

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<sup>7</sup>Beyond the recognition of its marked syntactic functions, this is a theologically provocative verse, a factor that cannot be discussed here.

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## Appendix

The full text of Psalm 51 is appended here for the reader's convenience as (16). (RS) indicates an element which repeats or parallels a more-salient constituent; (R) indicates an element which repeats or parallels a less-salient constituent; (?) indicates a questionable reading; (Syr) indicates a Syriac reading.

## (16) Psalm 51

- 3 *honnē-nî*      *ʔēlōhîm*      *kě-ḥasdekā*  
 have^mercy-1s! God      according-unfailing^love^2ms  
 Have mercy on me, O God, according to your unfailing love;

*kě-rōb*      *raḥām-êkā* (RS)      *měḥēh*      *pěšāf-āy*  
 according-greatness      compassions-2ms      blot^out      transgressions-1s  
 according to your great compassion blot out my transgressions.

- 4 **hereb** (*Qere*)      *kabbēsē-nî*      *mē-ʔāwō-nî*  
 many      wash-1s      of-iniquity-1s  
 Wash away all my iniquity

*û-mēḥaṭṭāʔ-tî* (RS)      *ṭahārē-nî*  
 and-sin-1s      cleanse!-1s  
 and cleanse me from my sin.

- 
- 5 *kî-pěšāf-āy*      **ʔānî**      *ʔēdāf*  
 for-transgressions-1s      1s      know^1s  
 For I know my transgressions,

*wě-ḥaṭṭāʔ-tî neg-dî tāmîd*  
 and-sin-1s before-1s always  
 and my sin is always before me.

6 **lě-kā lēbaddē-kā ḥāṭṭāʔ-tî**  
 against-2ms self-2ms sinned-1s  
 Against you, you only, have I sinned

*wě-hāraʕ bē-ʕên-êkā (RS) ʕāśî-tî*  
 and-evil in-eyes-2ms did-1s  
 and done what is evil in your sight,

*lēmaʕan tišd-aq bē-dobre-kā*  
 so proved^right-2ms when-speak-2ms  
 so that you are proved right when you speak

*tizk-eh bē-šopʕe-kā*  
 justified-2ms when-judge-2ms  
 and justified when you judge.

7 **hēn-bē-ʕāwôn (?) ḥôlāl-tî**  
 surely-in-sin was^born-1s  
 Surely I have been a sinner from birth,

*û-b-ḥēṭʔ (R) yeḥēm-at-nî ʕimmî*  
 and-in-sin conceived-3fs-1s mother^1s  
 sinful from the time my mother conceived me.

8 **hēn-ʕēmet ḥāpaš-tā baṭ-ṭūḥôt**  
 surely-truth desire-2ms in-inner^parts  
 Surely you desire truth in the inner parts;

*û-b-sātûm ḥokmâ tôd-ʕy-ēnî*  
 and-in-inmost wisdom teach-2ms-1s  
 you teach me wisdom in the inmost place.

9 **těḥaṭṭěʔ-ēnî bē-ʕēzôb wě-ʕeṭhār**  
 cleanse^2ms-1s with-hyssop and-will^be^clean^1s  
 Cleanse me with hyssop, and I will be clean;

*tēkab-bēs-ēnī ū-miššeleg (?) ʔalbīn*  
 wash-2ms-1s and-more^than^snow will^be^white^1s  
 wash me, and I will be whiter than snow.

- 10 *tašm-īf-ēnī (Syr) šāsōn wē-simḥā*  
 let^hear-2ms-1s joy and-gladness  
 Let me hear joy and gladness;

*tāgēlnā fāšāmōt dikkī-tā*  
 let^rejoice^3p bones crush-2ms  
 let the bones you have crushed rejoice.

- 11 *hastēr pān-ēkā mē-ḥāṭāʔ-āy*  
 hide! faces-2ms from-sins-1s  
 Hide your face from my sins

*wē-kol fāwōnō-tay (RS) mēḥēh*  
 and-all iniquities-1s blot^out!  
 and blot out all my iniquity.

- 12 *lēb ṭāhōr bēraʔ-l-ī ʔēlōhīm*  
 heart pure create!-in-1s God  
 Create in me a pure heart, O God,

*wē-rūaḥ nākōn (R) ḥaddēš bē-qirb-ī*  
 and-spirit steadfast renew! in-inside-1s  
 and renew a steadfast spirit within me.

- 13 *ʔal-tašl-īk-ēnī mil-lē-pān-ēkā*  
 not-cast-2ms-1s from-in-presence-2ms  
 Do not cast me from your presence

*wē-rūaḥ qodš-ēkā (R) ʔal-tiqq-aḥ mim-mennī*  
 or-spirit holiness-2ms not-take-2ms from-1s  
 or take your Holy Spirit from me.

- 14 *hāšībā ll-ī šēsōn yišf-ēkā*  
 restore! to-1s joy salvation-2ms  
 Restore to me the joy of your salvation



wě-rúah nēdībâ (R) *tism-ĕk-ēnî*  
 and-spirit willing sustain-2ms-1s  
 and grant me a willing spirit, to sustain me.

- 15 *ʔālammedâ pōšēf-îm dērāk-ĕkâ*  
 will^teach^1s transgressing-NOM^p ways-2ms  
 Then I will teach transgressors your ways,

wě-ḥaṭṭāʔ-îm (R) *ʔĕl-ĕkâ (?) yāšû-bû*  
 and-sin-NOM^p to-2ms will^turn^back-3mp  
 and sinners will turn back to you.

- 16 *ḥaššîl-ēnî mid-dām-îm*  
 save!-1s from-bloodguilt-NOM^p  
 Save me from bloodguilt,

*ʔĕlōhîm ʔĕlōhê tēšûʔ-āʔî*  
 God God salvation-1s  
 O God, the God who saves me,

*tĕran-nĕn lēšō-nî ṣidqā-tekâ*  
 will^sing-3fs tongue-1s righteousness-2ms  
 and my tongue will sing of your righteousness.

- 17 *ʔādōnî šēpā-tay (R) tipt-āḥ*  
 Lord lips-1s open-2ms  
 O Lord, open my lips,

û-pî (R) *yaggî-d tĕhillā-tekâ*  
 and-mouth^1s will^declare-3ms praise-2ms  
 and my mouth will declare your praise.

- 18 *kî lôʔ-taḥp-ōš zebah*  
 for not-delight-2ms sacrifice  
 You do not delight in sacrifice,

wě-ʔettēnâ ʔôlâ (RS) *lôʔ tirs-eh*  
 or-would^bring^1s burnt^offering not take^pleasure-2ms  
 or I would bring it; you do not take pleasure in burnt  
 offerings.

- 19    *zibhê      ʔĕlōhîm    rūaḥ    nišbārâ*  
 sacrifices    God      spirit    broken  
 The sacrifices of God are a broken spirit;

*lēb-nišbār      wě-nidkeh (RS) ʔĕlōhîm    lōʔ    tibz-eh*  
 heart-broken    and-contrite    God      not    will^despise-2ms  
 a broken and contrite heart, O God, you will not despise.

- 20    *hēṭîbâ              bi-ršôn-kā              ʔet-šiyyôn*  
 make^prosper!    in-pleasure-2ms    Zion  
 In your good pleasure make Zion prosper;

*tibn-eh              ḥômôt      yĕrûšālāyim*  
 build^up-2ms    walls      Jerusalem  
 build up the walls of Jerusalem.

- 21    *ʔāz    taḥp-ōš              zibhê-šedeq              ʔôlâ*  
 then will^delight-2ms    sacrifices-righteous    burnt^offering  
 Then there will be righteous sacrifices, whole burnt offerings

*wě-kālîl              ʔāz    yaʔāl-û              ʔal-mizbah-ākā    pārim*  
 and-whole^offering    then    will^offer-3mp    on-altar-2ms    bulls  
 to delight you; then bulls will be offered on your altar.

## When Switch Reference Moves to Discourse: Developmental Markers in Mbyá Guaraní

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SWITCH REFERENCE is a means of marking a clause to indicate whether it has the same or different subject referent as a neighboring clause. According to this canonical view (Haiman and Munro 1983:ix), switch reference is essentially a phenomenon relating to grammatical structure within the sentence.<sup>1</sup> However, in Mbyá Guaraní,<sup>2</sup> a Tupí-Guaraní language of southern Brazil, northern Argentina, and eastern Paraguay, switch-reference marking is also used to link sentences or larger units within a discourse. In an earlier study of Mbyá switch reference on the interclausal level, it was found that it compares subject reference in more than ninety-eight percent of all cases; it is used for comparison of other categories—semantic or pragmatic—only when comparison of subject reference becomes difficult in some sense (Dooley 1989).

When switch-reference marking moves to the intersentential, discourse level, however, it no longer signals sameness versus difference of subject referents, although its higher-level use would correctly predict subject referents around ninety percent of the time. Rather, it signals sameness or

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<sup>1</sup>An early study of switch reference in New Guinea languages is found in Longacre 1972. Reesink 1983 reexamines the phenomenon in many of the same languages. Haiman and Munro 1983 is an important collection of papers on the topic.

<sup>2</sup>The present study is based on field work carried out from 1975 through the present in southern Brazil under the auspices of the Summer Institute of Linguistics. The author wishes to acknowledge the helpful comments of Stephen Levinsohn, and of Joseph Grimes and Albert Bickford on earlier papers which have fed into the present one.

difference of semantic or pragmatic information. In particular, the erstwhile SAME SUBJECT marker signals the routine continuation of what will be referred to as an expectation chain, and the DIFFERENT SUBJECT marker signals, simultaneously, that it is not the case that an expectation chain is routinely continuing, and that there is a switch of sentence topic or actor. Similar connectives in Koiné Greek are described in Levinsohn 1987 as DEVELOPMENTAL MARKERS, particularly those which signal a new development in the narrative.

This paper is organized as follows. In §1, the mechanism of switch-reference marking in Mbyá is briefly presented, along with an overview of its usage within the sentence. A survey of intersentential connectives is presented in §2, particularly those used in narrative. §3 discusses the meaning of switch-reference marking on the discourse level. §4 presents a few concluding remarks.

### 1. Switch-reference marking

In Mbyá, switch-reference marking between clauses in a sentence is accomplished through one of two markers: *vi* (same subject) or *ramō* (different subject); *ramō* also has a contracted form *rã*. These morphemes occur as enclitics to a clause, as shown in (1) and (2).<sup>3</sup>

- (1) [ava o-o vi] moi o-exa  
 man 3-go SS snake 3-see  
 When the man went, he saw the snake.
- (2) [ava o-o ramō] moi o-exa  
 man 3-go DS snake 3-see  
 When the man went, the snake saw him.
- (3) [ava o-o rã] moi o-exa  
 man 3-go DS snake 3-see  
 When the man went, the snake saw him.

<sup>3</sup>With a few exceptions, the transcription of Mbyá data in this paper is that designed for use by the Mbyá-speaking community. There are six vowels /a e i o u i/ and fourteen consonants /p t x [ts] k ku [kw] ? h m n j [dy,ñ] ŋ ɲu [ŋw] v [β] r/. Nasal vowels are written with a tilde. Nasalization occurs throughout a word whose final vowel is nasal and is regressive from any nasal consonant. The following abbreviations are used: ANA (anaphoric pronoun), CAUS (causative), DS (different subject), NEG (negative), s (singular), SS (same subject), 1 (first person), 2 (second person), 3 (third person).

In these and certain other examples in the paper, the marking clause (the one to which the switch-reference marker is attached) appears in brackets. The labels *ss* and *ds*, abbreviating 'same subject' and 'different-subject', respectively, will be used throughout the paper as glosses of *vi*, *ramō*, and *rã*, even in their discourse-level use when these descriptions do not exactly apply. In (1)–(3), the marking clause precedes its matrix clause. It is also possible for the marking clause to occur following the matrix clause:

- (4) *ava o-exa moi [o-o vi]*  
 man 3-see snake 3-go *ss*  
 The man saw the snake as he was going.
- (5) *moi o-exa [ava o-o ramō]*  
 snake 3-see man 3-go *ds*  
 The snake saw the man when he left, or  
 The snake saw when the man left.

As indicated by the two free translations of (5), the relative ordering of the two clauses can have semantic consequences. It can also have pragmatic consequences. Compare (6) and (7) as answers to the question 'Why did you come?'

- (6) *a-ju [a-ma?e-apo vi]*  
 1s-come 1s-thing-do *ss*  
 I've come in order to work.
- (7) *[a-ma?e-apo vi] a-ju*  
 1s-thing-do *ss* 1s-come  
 It's in order to work that I've come.

Although the semantic content of (7) is the same as that of (6), it differs from (6) in pragmatic structuring, particularly in regard to focus. A discussion of such matters is beyond the scope of the present paper; see Dooley 1982 for fuller treatment.

Over ninety-eight percent of interclausal switch-reference marking in Mbyá compares subject reference in the straightforward way illustrated above. Nevertheless, there is a small residue of cases in which other kinds of sameness or difference are signalled: same versus different topic or agent, or else same versus different semantic type of predication.<sup>4</sup> The signalling of these pragmatic and semantic differences does not occur

<sup>4</sup>Longacre (1972:7–16) discusses exceptions to same-different subject marking within the sentence for languages of Papua New Guinea.

randomly among the more typical instances of switch reference. Rather, it occurs precisely in those places where same versus different subject referents would be difficult to calculate, namely where there is zero reference in both clauses or where the sets of subject referents have partial overlap (Dooley 1989).

That is, the norm for Mbyá switch-reference marking, in its interclausal use, is to signal strictly grammatical information. Instances where other kinds of information are signalled fit the prototypical pattern of exceptions to a norm, as can be seen both statistically and in terms of conditioning. For the intersentential (discourse) use of Mbyá switch-reference marking, however, the signalling of grammatical information cannot even be considered a norm, as will be shown in subsequent sections. In fact, all instances of these markers on the intersentential level signal semantic or pragmatic information.

## 2. Sentence-initial connectives

Expressions with Mbyá switch-reference markers on the intersentential level form part of a larger class of expressions, which are here referred to as SENTENCE-INITIAL CONNECTIVES.<sup>5</sup> Different genres of discourse typically use different sets of sentence-initial connectives. Those common to narrative text take the form displayed in (8); they are composed of the anaphoric pronoun *haʔe* 'that', followed optionally by the postposition *ramī* 'like', followed by a subordinating conjunction.<sup>6</sup>

### (8) *haʔe* (*ramī*) subordinating conjunction

In this construction, the reference of *haʔe* is the content of an antecedent sentence or grouping of sentences; the latter possibility—a text unit larger than a single sentence—can be specifically indicated by the occurrence of the postposition *ramī* 'like'. Since switch-reference markers enter into this construction in the role of subordinating conjunctions, this latter class is now discussed.

<sup>5</sup>The present section presents material that is discussed more fully in Dooley 1986.

<sup>6</sup>Foley and Van Valin (1984:239–63) claim that the relationship between clauses in a switch-reference construction within a sentence is not subordination, but rather what they term cosubordination. Their crucial point for this claim is that a clause with a switch-reference marker does not fill an adverbial role with respect to the matrix clause. See Dooley to appear, for evidence that would make this viewpoint problematic for Mbyá.

Besides the switch-reference markers *vi* and *ramō* (~ *rā*), other subordinating conjunctions are *rire* 'after', *jave* 'during', and *eʔi move* 'before'. This class coheres by means of both syntactic and phonological properties. Syntactically, subordinating conjunctions occur enclitic to the clause they are subordinating; phonologically, they do not ordinarily carry primary stress. (Coordinating conjunctions occur preceding the clause to which they are phonologically attached.)<sup>7</sup>

Clause subordination with subordinating conjunctions is of the adverbial type. With switch reference markers, this has already been illustrated in (1)–(7); (9)–(11) show *rire*, *jave*, and *eʔi move* as subordinating conjunctions.

- (9) [ava o-o rire] moi o-u  
 man 3-go after snake 3-come  
 After the man left, the snake came.
- (10) [ava o-o jave] moi o-u  
 man 3-go during snake 3-come  
 While the man was leaving, the snake came.
- (11) [ava o-o eʔi mo-ve] moi o-u  
 man 3-go NEG CAUS-more snake 3-come  
 Before the man left, the snake came.

The sentence-initial connectives indicated by formula in (8), then, are listed in (12):

- (12) *haʔe* (*ramī*) *rire* 'after that'  
*haʔe* (*ramī*) *jave* 'during that, meanwhile'  
*haʔe* (*ramī*) *eʔi move* 'before that'  
*haʔe* (*ramī*) *vi* 'continuity of expectation'  
*haʔe* (*ramī*) *ramō* 'discontinuity of expectation'  
*haʔe* (*ramī*) *rā* 'discontinuity of expectation'

One other sentence initial connective is common in narrative:

- (13) *haʔe ŋui* 'after that'

<sup>7</sup>An exception is *eʔi move* 'before', which carries primary stress on the negative morpheme *eʔi*.

*Ha?e ηui* does not, strictly speaking, derive from (8), since *ηui* 'from' is a postposition rather than a clause subordinator. \**ha?e ramī ηui* does not occur.<sup>8</sup>

As indicated by glosses of (12) and (13), sentence-initial connectives in narrative can be divided into two groups on semantic grounds—temporal connectives containing *rire*, *jave*, *e?i move*, or *ηui*, on the one hand, and nontemporal connectives containing switch-reference markers on the other. This semantic division has important correlates for the organization of Mbyá discourse, especially for narrative paragraphs. Paragraph-like units have been usefully characterized along notional lines (Longacre 1979, Givón 1983, etc.), as being units at whose boundaries occur significant changes in the major parameters of the discourse. For narrative, these parameters include scene, time, and character configuration. Where there is a significant change in one of these parameters, it is common practice for others to be updated as well.<sup>9</sup> Thus, for example, it is common to find characters being renamed paragraph initially where there is a change of scene.

Against this background, it is noted that in Mbyá narrative, sentence-initial connectives of the temporal type tend to occur paragraph initially, while those of the nontemporal type occur paragraph medially. In a sample of narrative texts, forty-seven percent of all paragraph-initial sentences began with a temporal connective, whereas only five percent of all paragraph-medial sentences did. That is, even though in a typical narrative all of the events occur one after the other, with larger or smaller temporal gaps in between, at paragraph boundaries it is common for the AFTERNESS to be presented as a discontinuity that necessitates an explicit updating of the temporal framework. Once a paragraph is under way, temporal orientation is not felt to require the same kind of attention, and the events being narrated are connected in other ways.

An example is due. The text segment given in (14) consists of a narrative paragraph which is fairly typical for Mbyá. In the preceding episode, a Guaraní man was coming home from hunting, carrying a load of coatis (raccoon-like animals) over his shoulder. He heard something behind him but didn't bother to look. Later he felt something tugging at the coatis' tails. When turned around, he saw a man who appeared to be grinning at

<sup>8</sup>The obvious explanation is that *ramī* is a postposition and *ha?e ramī* 'like that' is a postpositional phrase, thus does not function as the object of a postposition. The gloss 'after that' given for *ha?e ηui* is the same as that for *ha?e (ramī) rire* in (12). The difference between the two is basically hierarchical rather than semantic: *ha?e (ramī) rire* tends to be used to connect major units of the text, larger even than paragraphs. Especially when *ramī* is present, *ha?e (ramī) rire* carries a causal component of meaning as well as a temporal one: 'as a consequence of that'.

<sup>9</sup>The term SIGNIFICANT here has to do with the speaker's judgment in regard to the overall organization of the discourse and cannot be predicted on a priori grounds.



him. It was really a dangerous enemy, a mythical 'wild man', baring his teeth. But the man did not recognize him; he merely grinned back and went on his way. The events of (14) then follow:

- (14) a. *haʔe ŋui* 'after that' when he had gone a long way, he again felt something pulling on the coatis' tails.  
 b. *haʔe rã* the man looked again.  
 c. *haʔe rã* the other one was really baring his teeth again this time.  
 d. *haʔe rã* the man looked very closely.  
 e. *haʔe ŋui ae ma* 'only after that' he suddenly recognized what he was.  
 f. *haʔe vi* he threw away the dead coatis.  
 g. *haʔe vi* immediately the man took off running towards his home.

The sequence in (14) begins with the temporal connective *haʔe ŋui* 'after that'. It is dominated medially by the nontemporal connectives *haʔe rã* and *haʔe vi*. The connective *haʔe ŋui ae mā* in (14e) does not follow this pattern, but is a special-purpose focus element (Dooley 1982). In the nontemporal connectives, the choice of switch-reference markers does not match up completely with the distinction of same versus different subject. For example, the connective *haʔe rã* in (14b) does not correspond to a change in subject from the independent clause in (14a).

In (15), the opposite phenomenon can be observed; namely, *haʔe vi* occurs where there is a change of subject reference.

- (15) [A young man] arrived at the house of a rich farmer [with sheep to sell]. When he got there, he didn't know what to do with the sheep. So the sheep were just milling outside in the yard. *haʔe vi* the farmer got angry at him and said, "Don't you know that the sheep pen is over there?"

Since in Mbyá narratives, in general, the switch-reference markers in sentence-initial connectives predict grammatical subject only around ninety percent of the time, a somewhat different distinction appears to be indicated. In §3, that distinction is investigated.

### 3. Switch-reference markers on the discourse level

In this section a description is given of conditions under which connectives with switch-reference markers occur in Mbyá narrative. Consider (16) and (17), which are taken from the same narrative as (15), concerning a man who was looked down upon for having the skin of a black.

- (16) Afterwards [the black] was standing outside. *ha?e vi* the rich farmer said, "Don't you know that here is where you always come in and sit?"
- (17) The black was walking around outside not really knowing what to do. *ha?e rā* the old woman said, "You too go take a bath."

There is little apparent reason why the connectives should be different in (16) and (17). In both, the black is standing or walking about outside and someone tells him what to do. One difference, however, is that the farmer's comment in (16) can be taken as a routine continuation of the line of action, whereas the old woman's order in (17) cannot. Under these circumstances and in this culture, one could be expected to be told to come inside, but hardly to go take a bath. Further, in order to take the bath the young man took off his black skin, and this had important consequences for the rest of the story.

The distinction noted between (16) and (17) holds generally in Mbyá narrative for sentence-initial connectives containing *vi*, on the one hand, and *ramō* or *rā*, on the other. This distinction can be stated as in (18).

- (18) a. Connectives with *vi* indicate a predictable, routine continuation of the same line of action already begun, regardless of whether the subject, agent, or topic is switched or remains the same.
- b. Connectives with *ramō* or *rā* indicate potential for a new and distinct line of action that affects the development of the story; simultaneously, they indicate a switch in the sentence topic or actor.

The discourse-pragmatic criteria mentioned in (18) represent judgments on the part of the speaker that the analyst cannot expect to predict fully, but can only hope to see as reasonable because of what he understands about the context and the culture. As with many other discourse-pragmatic factors, they must be investigated in terms of a posteriori plausibility rather than in terms of a priori predictability.

**3.1 Examples.** As (18a) suggests, it should be possible to find connectives with *vi* where there is a switch of topic and actor. This is the case in (19), where there is a switch in topic (and subject) with *ha?e ramī vi*. The connective here signals that the placing of the money on the black's head is a predictable sequel to what has gone before.

- (19) [The black] spoke to [the goat's owner]. "Here is money. If I die first, as may happen, put the money on top of my grave," he said. "After I am buried," he said. "But don't let me be laid out," he said. "Stand me up. Then put the money on top of my head," he said. After that, eight days later, the black died. *haʔe ramĩ vi* the owner of the goat put the money on top of his head.

A similar thing can be noted in connection with (15), where *haʔe vi* occurs with a switch in topic (and subject), but the farmer's anger is routinely predictable, since he was observing his livestock being left to run loose through apparent negligence.

In (20), a *vi* connective occurs where neither subject, topic, nor actor remains constant:

- (20) Afterwards, after he went to the black man's house, on his way back he forgot the path. *haʔe ramĩ vi* it got quite late.

It predictably and routinely gets late when someone forgets the path.

(18b) states that when a connective with *ramõ* or *rã* is used, the switch is in topic or actor, not necessarily in grammatical subject. This is illustrated in (14). In both (14a) and (14b), the Guaraní man is subject of the independent clauses, but the real actor in (14a) is the person who was pulling on the coats' tails; the connective *haʔe rã* here is thus occurring with a switch in actor, but not in subject. Another important point in regard to (14b) is the fact that the Guaraní man turned and looked, which is more than a routine continuation of the line of action. It is the beginning of his recognition of the kind of being which was following him; in fact, it can be considered as the beginning of the climax of the story.

**3.2 Syntacticization.** The claim of (18), then, is that whereas Mbyá switch-reference marking within a sentence essentially signals grammatical information (i.e., same versus different subject), between sentences it signals essentially semantic and pragmatic information. There is, however, a predictable addendum to this type of description. According to Comrie (1988:271), "it is extremely rare across languages to find a formal device that literally, in one-to-one correspondence, encodes some pragmatic distinction or combination of pragmatic (and semantic) distinctions . . . instances that seem to be purely grammatical encoding of a pragmatic distinction often turn out . . . to involve some degree of syntacticization away from the original pragmatic distinction." By SYNTACTICIZATION, Comrie means the use of a pragmatic (and perhaps semantic) marker for purposes of signalling grammatical information, that is, information which is less than fully motivated

by the original pragmatic (semantic) distinction. In this section, a degree of syntacticization is noted in the use of sentence-initial connectives with switch-reference markers.

In Mbyá discourse, there are two very common uses of the connectives *ha?e ramō* and *ha?e rā*. Both uses arise as natural applications of (18b). The first use is to introduce a response in a conversational exchange, as in (21):

- (21) "What did you come for?" said the teacher.  
*ha?e rā* "I came to study," said the old man.

In a response like that of (21), the switch in speakers means both a switch in topic-actor and a certain nonpredictability as to what will be said, thus meeting the conditions of (18b) for the use of *ha?e ramō* and *ha?e rā*.

The second very common use of *ha?e rā* is to introduce the second statement in a contrastive pair, as in (22):

- (22) Our true father picked up a small stone [which he would eat  
 after making it into bread].  
*ha?e rā* his adversary picked up a large stone.

This type of contrast, called *DOUBLE-FOCUS* contrast by Chafe (1976:35), consists of two statements. The first statement makes an assertion about one entity, and the second makes a different assertion about a second entity. The two entities form "a closed and polarized microcosm" (Longacre 1983:84). In (22), this microcosm consists of 'our true father' and 'his adversary', the two participants on stage at that point. In Mbyá, the second statement in this type of contrast is typically introduced by *ha?e rā*. Note that the second statement in (22) has a switch in topic (from one pole of the microcosm to the other), and also that the second assertion does not follow routinely from the first, which is the whole point of the contrast. That is, the conditions in (18b) are fulfilled.

The common occurrence of *ha?e ramō* and *ha?e rā* in responses and double-focus contrast seems to have resulted in syntacticization in Mbyá, in the sense that *ha?e vi* appears to be inadmissible in such contexts, even in those rare cases where it might be plausible on discourse grounds. Consider (23):

- (23) The daughter said, "It's just at that [young man] I am going to  
 throw my flower."  
*ha?e rā* "All right then," her mother replied.

In cases such as (23), it would seem to be plausible to present the response as routinely predictable, yet *ha?e rā* occurs in place of *ha?e vi*.

Although this small degree of syntacticization does exist, the major factor in the use of connectives with switch-reference markers has to do with predictability: actions introduced with *vi* are presented as predictable continuations, while those introduced by *ramō* or *rā* are presented as embodying some type of switch or novelty. Put in another way, actions introduced by *ramō* or *rā* are presented as not being bound to a currently active expectation structure, but instead can take on a significance of their own in helping the narrative develop in interesting (i.e., nonpredictable) ways. This is similar to the distinction reported between the conjunctions *kai* and *de* in Koiné Greek by Levinsohn. The conjunction *de* begins a DEVELOPMENTAL UNIT in narrative, which is characterized by presenting a new development in the story (Levinsohn 1987:179); *de* is thus termed a DEVELOPMENTAL MARKER OR DEVELOPMENTAL CONJUNCTION. The form *kai* and certain other conjunctions, on the other hand, signal that the current developmental unit is simply continuing, hence do not carry with them the promise of significant developmental material. Although there are differences, the Mbyá connectives under discussion in this paper function in a similar fashion.<sup>10</sup>

#### 4. Concluding remarks

In this paper, the focus has been on the role of switch-reference markers in Mbyá Guaraní in what might be considered a noncanonical mode of use, that of connecting sentences or groupings of sentences within a discourse. When switch-reference markers are used between clauses within a sentence, they almost always signal same versus different grammatical subject. When they move to the intersentential (discourse) level, however, they are typically used to signal semantic or pragmatic information. Specifically, they signal whether the sentence is a predictable continuation of a line of action already begun, or whether it has potential for a new and distinct line of action that affects the development of the story (and involves a switch in the sentence topic or actor as well). Thus, switch-reference marking on the discourse level signals semantic and especially discourse-pragmatic information, whereas in its interclausal use it typically signals grammatical information. In Mbyá, then, switch-reference marking fills distinct but related roles on different levels of language organization.

People whose work involves language as a whole cannot afford the luxury of saying that only sentence-level grammar, or only discourse, is of interest. Certain facts of language itself, as illustrated here, require both

<sup>10</sup>There appears to be some corresponding syntacticization with regard to Greek *de*, in the sense that *kai* is inadmissible in conjunction with articular pronouns (Levinsohn 1987:88).

kinds of approach. The citation of Longacre's work at various points in this paper, and on various topics, should be taken as a tribute to one who has pioneered in a wide variety of linguistic phenomena, both within the sentence and on the level of discourse.

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## Topics in Mofu-Gudur

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Mofu-Gudur has one of the most flexible topic constructions ever described.<sup>1</sup> Topics can vary in length from a word or two to scores of words. They can function in discourse as cohesion devices or they can be used to announce or reannounce a discourse topic or they can be used to set the stage for a question word (or phrase) or for a new statement.

In this paper we describe the wide variety of topic constructions in §1 and then some of the variety of the pragmatic uses of topics in §2.

The marker for topic is *ná* (sometimes phonetically *ní*). It occurs at the end of the topical construction. There may be more than one topic in a sentence, which will be shown below.

### 1. The shapes and relationships of topic constructions

Topics occur in a variety of forms and relate semantically to the remainder of the sentence in which they occur in a variety of ways. This section presents a number of these variations.

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<sup>1</sup>Mofu-Gudur is a Chadic language spoken in northern Cameroon (Dieu and Renaud 1983). The data for this paper were collected by Kenneth and Judy Hollingsworth, working with the Société Internationale de Linguistique in Cameroon, under the auspices of the Centre for Anthropological Research and Studies and the Institute of Human Sciences in the Ministry of Higher Education, Computer Services, and Scientific Research of the Republic of Cameroon. Barreteau (1983a,b) has analyzed the Mofu-Gudur language and we have used his material in our analysis. Haller and Watters (1984) and Wolff (1983) have discussed topics in the related languages Zulgo and Lamang. Mofu is an svo language.

**1.1. A topic may be coreferential with a constituent of the following clause.** The topic is coreferential with the subject of the following clause in (1), with the object in (2), with a time adverb in (3), and is vocative with the imperative clause in (4).<sup>2</sup>

- (1) *ngwas káa ná a sərə́ ála áyaŋ*  
 woman there TOP 3S know<sup>30</sup> BE squirrel

*majá á wúdey ndér kaláh*  
 because 3S like peanut too<sup>^</sup>much

As for the woman, she knew it was the squirrel because he liked peanuts very much.

- (2) *gwágwar ná hánda ngáda kah*  
 chicken TOP take<sup>30</sup> for 2  
 As for the chicken, take it for yourself.

- (3) *tasána ná ya səkʷakwá lá dábá mádáŋgwas*  
 today TOP 1S wait<sup>INCL</sup> CMPL now old<sup>^</sup>woman  
 As for today, we will wait now, old lady.

- (4) *kah ná daw ta pərey a dábá mánjárav katáy*  
 2 TOP go and wash at back *manjarav* there  
 As for you, go and wash behind that *manjarav* tree (*Acacia albida*) there.

<sup>2</sup>Noun and noun phrase objects occur more often than noun or noun phrase subjects. Pronouns, such as *-á* (third-person subject), are enclitic, and belong to the verb phrase rather than functioning as subject at the level of the clause. Examples are presented in phonemic orthography. Most of the letters have straightforward values, but the following symbols require explanation: <sup>ˈ</sup> represents high tone on vowels, <sup>ʔ</sup> represents glottal stop, <sup>ɳ</sup> represents a nasalized *a*, *b* and *d* represent voiced glottalic ingressive stops, *c* and *j* represent voiceless and voiced palato-alveolar affricates, and *s/* and *z/* represent voiceless and voiced alveolar lateral fricatives. Abbreviations used in glosses are 1 first person, 2 second person, 3 third person, ADJ adjectivizer, ANA anaphoric, BE existential or equational, CAUS causative, CMPL completive, DEI deictic, DIR directional, DM deictic marker, FUT future, IDEO ideophone, INCL inclusive, INJ interjection, INTERROG question marker, LOC locative, NEG negative, O object, P personal, PRF perfect, PROG progressive/habitual, PL plural, PST past, REF backreference, REL relative marker, s subject, TAG tag question, TOP topic.



**1.2. A short topic may be noncoreferential with a constituent of the following clause.** Topics may be only additions to the main part of a sentence and not otherwise be a part of the sentence. The topic in (5) is an evaluation of the following clause.

- (5) *maayá ná sésárey ŋga daw*  
 good TOP spin for me  
 Spin for me, that would be better.

In (6), the topic is a locative or a deictic uttered by the speaker who has just figured out who killed the chief's wife and daughter.

- (6) *káa ná ya wúlkey táa mbadmátákáwa sém*  
 there TOP IS think PST<sup>3S</sup> transform<sup>PL<sup>3O</sup>PL<sup>2</sup>DIR</sup> PRF  
 As for that there, I think they have (killed them (your family) and) turned them (into drums).

The topic in (7) is a general statement that has no specific referent in the following clause, but is further specified and elaborated.

- (7) *ya kakwa ná yám dáha káa kwáslamará mey*  
 1s do<sup>INCL</sup> TOP water BE 2s rinse<sup>PL<sup>3O</sup></sup> mouth  
 As for how we do (judgment), there is water, you rinse out your mouths.

**1.3. A topic may be much larger than the remainder of the sentence.** This is especially true for the WH-question, where everything preceding the interrogative word or phrase must obligatorily be topicalized. Examples (8)–(13) are WH-questions.

- (8) *ká lávey sí yá vǎká tǎbǎŋ máaya ná majá me*  
 2s say must 1s give<sup>2O</sup> sheep good TOP because which?  
 As for your saying that I must give you a good sheep, why? or  
 Why do you say that I have to give you a good sheep?

- (9) *á yawa ná kwára*  
 3s born<sup>DIR</sup> TOP how?  
 How did he get to be born?

- (10) *ma cáfda bégóney ná wa*  
 one ask<sup>3O</sup> elephant TOP who?  
 Who asks Elephant?

- (11) *máatázlakáya ray ná ka hway dábá bá ná bay*  
 bald head TOP 2S run back NEG TOP chief

*mahurá fa hándáya lá da wará ma dá*  
 big PROG carry<sup>10</sup> CMPL afterward one FUT

*cáhkwará váv ná wa<sup>3</sup> ná*  
 stripe<sup>20</sup> PL body TOP who? TOP

You bald heads! Don't run away. The big chief (the elephant) is carrying me (to my death), after which whom will you find to cut the stripes on your body?

- (12) *mekey máaya ná wura*  
 make good TOP which?  
 Which one did good?

- (13) *tákwaw cek hay tábiyá kah má cáhtará váv*  
 Takwaw thing PL all 2 to carve<sup>30</sup> PL body

*táa ngá ná ta me*  
 with it TOP with what?

Takwaw, with what things do you carve a body?

A yes-no question does not usually require topicalization, as illustrated in (14); but in a yes-no question with a tag, the whole sentence before the tag is topicalized, as in (15).

- (14) *ká záy ngá áyaŋ á daw*  
 there excrement of squirrel this INTERROG  
 Is that the excrement of Squirrel there?

- (15) *káa sárey gágómay á ná ngá daw bá díyá*  
 2S spin cotton this TOP of me NEG TAG  
 As for this cotton you spin, it's mine, isn't it?

Sentence (16) ends in a short accusation, with everything before it being topicalized.

<sup>3</sup>The question word 'who?' is sometimes *wa ná*, which appears to emphasize the uncertainty of the reference.

- (16) *málgámá anja má nása hwáyak ná ala kah*  
 Məlgama when one destroy<sup>30</sup> country TOP BE 2  
 Məlgama, when someone destroys the country, it will be you.

**1.4. A topic may be closely related to the main part of the sentence.**

It may be the first part of a sentence as a condition clause, in which case it must be topicalized, as in (17), where an exclamatory word precedes the condition clause.

- (17) *yaw da ká wudiyá ná ya daw*  
 well if 2S want<sup>10</sup> TOP IS go  
 Well! if you want me, I'll go.

The topic may be a time clause, as in (18) and (19), or a reason clause, as in (20) and (21). A conjunction (LINK WORD, Longacre 1968b:1), if there is one, may be found either in the topic or in the rest of the sentence.

- (18) *anjá ka tákwáram ná bəzá daw hay ánga má*  
 when 2S burn<sup>PL</sup> TOP child my PL 3 PST<sup>REL</sup>  
*zákadáta sém*  
 throw<sup>CAUS<sup>30</sup>PL</sup> PRF  
 When you burned my children, it destroyed them.

- (19) *a da sawa dáa mádála ná cek áha áa dáha cəŋga*  
 3S FUT come in hunt TOP thing ANA 3P BE even<sup>SO</sup>  
 Even before he comes from the hunt, the thing is still there.

- (20) *da masa kah ta layáwa lá ná ka lawa gwágwar*  
 in that 2 PST take<sup>10DIR</sup> CMPL TOP 2S take<sup>DIR</sup> chicken  
*mábará dá ray ketkel dáha a hár*  
 white on head refuse<sup>pile</sup> BE at hand  
 In that you have stolen something for me, you can take a white chicken that is on top of the refuse pile.

- (21) *majá tábən máaya ná ya fá dá valdá dáa bá*  
 because sheep good TOP IS FUT give<sup>CAUS</sup> BE NEG  
 Because the sheep is a good one, I am not about to give it to you.

Linked closely to *bá* (negative), *ná* (topic) forms a kind of negative condition that is translatable by 'otherwise', as in (22).

- (22) *máaya ngá ndaw dáa bá bá ná ya bádákáwa*  
 good for man BE NEG otherwise IS exit<sup>CAUS</sup>20<sup>DIR</sup>  
 There is no good in man, otherwise I would pull you out (of the pit).

Example (23) is a contrast sentence with the conjunction *amá* 'but', in which the second part of the sentence is a negative existential clause.

- (23) *manjákáya ámbá ndaw ngá hándáwa yám amá*  
 sitting that person to bring<sup>DIR</sup> water but

*ndaw ná dáa bá*  
 person TOP BE NEG

He was sitting in order that someone would bring him water, but there was no one (who came).

Quotation formulas are not usually topicalized; but, in the exchange in (24), both quotation introducers are. Both speakers are already on stage and are preparing for battle. The first quotation introducer does not contain the verb 'say', but the second one does:

- (24) a. *ndaw kaa dábá tá jáhka sálay ná vǎǎvǎ vǎǎvǎ vǎǎvǎ*  
 person there now with spread foot TOP toot toot toot  
 (The ram) now spreads his feet apart (and blows on a horn), "toot, toot, toot."

- b. *bégáney á lávey ná ngama ná nákwá*  
 elephant 3S says TOP good TOP go<sup>INCL</sup>

*hárpatákwa ta hárpey gwáy*  
 stamp<sup>30</sup>PL<sup>INCL</sup> with stamp only

The elephant says, "That's good. Let's just go stamp on them."

The following three examples each show an activity that is topicalized and related to a following clause by a linking word—*ala* 'be' in (25), *tá* 'then' in (26), and *ta* 'with' in (27).

- (25) *meféy slalam ná ala wása ngá mámálkey*  
 blow flute TOP BE game for joy  
 Playing the flute has become a game of joy.

- (26) *mabár a sawa ná tá' a tuway a tuway*  
 lion 3S come TOP then 3S cry 3S cry  
 The lioness comes, then she cries and cries.
- (27) *a samáwa ná ta mekey wálay*  
 3S come<sup>PL</sup>DIR TOP with do song  
 They came, making music.

1.5. A topicalized element may lack overt marking of its logical relation to the remainder of the sentence. When such a topic announces the over-all topic, the main sentence may give an antithesis, an amplification, a reason, or a result. The topic in (28) is an unmarked protasis in an antithetical sentence; that in (29) is in a quotation and is amplified by the main clause; and that in (30) is the ground for action referenced in the main clause.

- (28) *a sápta ná a hátátár babá*  
 3S looked<sup>for</sup>30<sup>PL</sup> TOP 3S found<sup>30</sup>PL NEG  
 He looked for them (but) he didn't find them.
- (29) *a lávey ahá zəngwáw daw a key ná á tádey áa yam*  
 3S says ah donkey my 3S does TOP 3S fall into water  
 He said, "Ah, as for my donkey's doings, he has fallen into the water."
- (30) *ka ma hátátiwa tábán daw hay káa ná ehé*  
 2S REL find<sup>IO</sup>DIR sheep my PL there TOP behold
- yá valká tábán ngá máaya*  
 1S give<sup>20</sup> sheep for good  
 As for you finding my sheep for me, behold, I give you a sheep for free.

1.6. A topic may itself be grammatically complex. Topics are usually grammatically simple, but may also be compound or complex. The most frequent grammatically complex topic construction is a noun phrase containing a relative clause, such as the transitive WH-question in (31), which has an object noun phrase that contains a relative clause, or the WH-question in (32), which entails a relative clause within an existential clause and a quotation sentence.

- (31) *ya da kadá ndaw mesémédey máa wuriwa léy*  
 1s will kill person sorcerer REL burn<sup>10</sup>DIR field

*daw káa ná kwára*  
 my at TOP how?

How will I kill the sorcerer who burned my field?

- (32) *á lóvam díyáŋ ngá papáy ma zléy wálay dáha*  
 3s say<sup>PL</sup> bird of my<sup>father</sup> REL begin song BE

*ná ánga dáma*  
 TOP 3 where?

Where is Father's bird that they say sings?

**1.7. Two or more topics may occur in a single sentence.** When this happens each topic adds information that leads to the main declaration, as in (33)–(35), the last of which has six topics.

- (33) *kwakway ngá léy kah há ná masa kah má*  
 boundary of field your ANA TOP that 2 PST

*hávey ná tá ama*  
 cultivate TOP with where?

As for the boundary of your field that you cultivate, where is it?

- (34) *ma pá cek fá waw kedě ná ala waawa*  
 one put<sup>30</sup> thing on fire there TOP BE whoever

*ná fá ndáley lá*  
 TOP PROG consume Cmpl

Whoever put something on the fire here, whoever it was, it is getting burned up.

- (35) *dá ndaw masa má wudyá ná waawa ná nga*  
 if man that REL wants<sup>10</sup> TOP whoever TOP for

*dəzliyə ŋgwa kásl a gázlávay ámba ya*  
 construct<sup>10</sup> tower all to sky that is

*təldáta áta mamaŋ ŋgá zél daw*  
 take<sup>up</sup><sup>30</sup><sup>PL</sup> them mother of husband my

*ta gədəy ŋgá zél daw kede lá á vād*  
 and dog of husband my there CMPL to high

*ná yá kəzluwa ná da ma sluyá ná*  
 TOP IS drop<sup>DIR</sup> TOP if one takes<sup>10</sup> TOP

*waawa ná yah ŋgá ndaw áhá*  
 whoever TOP IS for man that

If a man wants me, whoever it is, (I wish that) he construct a tower all the way to heaven so that I can carry up there the mother of my (murdered) husband and the dog of my husband. I will throw myself off there, if one catches me, whoever it is, I will be his (wife).

**1.8. A topic may lack a semantic connection with the rest of the sentence.** Sometimes a topic encodes information that is extraneous to the rest of the sentence, its occurrence being governed by discourse considerations, as in (36).

- (36) *magwádakw záy ta sawa lá dəbá kəfcám kəfcám*  
 bird<sup>of</sup><sup>prey</sup> PST come CMPL now whoosh whoosh

*kəfcám ná dam ká a kar méy húsá húsá*  
 whoosh TOP girl there 3S make<sup>30</sup> voice shoo shoo

*húsá ánga kəfcám kəfcám a méy lá*  
 shoo 3 whoosh whoosh 3S take<sup>off</sup> CMPL

As for the bird of prey having come now, (he sits there flapping his wings) whoosh, whoosh, whoosh, the girl yells, shoo, shoo, shoo. He took off (flapping his wings) whoosh, whoosh.

**1.9. A topic may occur independently of a following main clause.** In running text, when a series of topics that are not closely related semantically occurs, one cannot be sure whether the topics are separate sentences or

should be connected to the next one. To get around that problem, we have taken the following examples from quoted (planned) conversations, where we can be sure that when the speech of one speaker ends there is a sentence break and that the speech of the next speaker begins a new sentence.

- (37) *ndáw málak á záma dáf wúré káa ná ya*  
 man stranger 3S ate<sup>3</sup> food now there TOP IS

*fəcárwa ver lá bá ná*  
 sweep<sup>3</sup>DIR chamber Cmpl NEG TOP

As for a stranger eating the food there, I had not yet swept the chamber.

- (38) *máaláhwa ray bágáney a ná anjá a sákwiya*  
 bald head elephant this TOP when 3S wait<sup>1</sup>

*bá ba ya kadámará ná*  
 not that IS fight<sup>PL</sup>30 TOP

That bald headed Elephant! Why didn't he wait for me so that we could argue about it?

This completes our survey of the types of topics. The topicalization for WH-questions and of condition clauses is obligatory for all speakers. The rest of the topics are optionally topicalized. Some speakers of the language simply leave out *ná* (topic) and give the same constructions, sometimes marking them off with a phonological break. Other speakers put in *ná* (or its *ní* variant) whenever they can. Most people fall between these two extremes.

This topic system seems even more flexible than the topic system in Lisu, as described by Manaster-Ramer (1988), and far more flexible than the topic systems of Japanese, Korean, and Mandarin described by Li and Thompson (1976). There might even be some question about considering this phenomenon as TOPICALIZATION in Mofu-Gudur, but we have no better term for it so far.

Now we look at the pragmatics of how topics are used.

## 2. The pragmatic uses of topics

The topic construction can be used on different grammatical levels. In §1, we illustrated topics in different sentences, such as in WH-questions or condition clauses, where they must be made into topics. In this section we illustrate



the uses of topics on various grammatical levels, showing how they contribute to sentence-level, paragraph-level, and discourse-level functions.

**2.1. A topic may summarize the preceding sentence within a paragraph.** Within a paragraph, a topic can serve as a cohesion device by summarizing or repeating what has been previously said. This usage of topic is especially seen in introductory material in stories or in the dramatic peak of a story. Example (39) is the closing summary of an expository text. The topic in the second sentence repeats the idea of 'raising chickens' to give coherence to the paragraph which summarizes the points expounded in the text.

(39) a. *á gáltá gwágwár ngá hay ná ánda kéde*  
 3S raise<sup>30</sup> PL chicken her PL TOP like this  
 As for her raising chickens, it is like this.

b. *gwágwár háy fá mey ngá ná kwakwadba da*  
 chicken PL at mouth her TOP many if

*fá sápa ta méy a ánda káde*  
 PROG seek<sup>3</sup> with word 3 like this

As for her having chickens, there will be many if she does like we have said.

Example (40) is the peak of a narrative tale. The topic repeats the action of one character in order to relate his action to the action of other characters also named in the paragraph, to create a very tight paragraph cohesion.

(40) a. *a da lálawa pápárákw héyey*  
 3S fut take<sup>DIR</sup> hoof ANA  
 He was going to take the hoof (of the roasted goat).

b. *a lálaráwa pápárákw a hámbáda dábá ná*  
 3S take<sup>30</sup> DIR hoof 3S chew<sup>30</sup> now TOP

*zel pak ngwas káa héyey pák dá wáyam*  
 husband IDEO wife there ANA IDEO from river

As for him taking the hoof and chewing on it, the husband suddenly returned (and) the aforementioned wife suddenly returned from the river.

- (41) a. ... *a daw a gurbá slám áhá*  
           3S goes 3S clear<sup>30</sup> place first  
           ... he goes and clears this place.
- b. *ta gurbá cáy ná tá' a wáwúra ta áwaw*  
       PST clear<sup>30</sup> CMPL TOP then 3S burn<sup>30</sup> with fire  
       Having cleared it, he then burns it off with fire.

Example (41) is from an activity text that uses a topicalized recapitulation to create cohesion within the paragraph.

**2.2. A topic may introduce a paragraph by reflecting material from the preceding paragraph.** It may be used to call attention to paragraph boundaries, especially in activity texts. Few are found in narrative paragraphs except as EPISODE beginnings (§2.3).

A topic which serves in the initial sentence of a paragraph creates cohesion by either TAIL-HEAD LINKAGE (Longacre 1976:204) which recapitulates a previously mentioned thematic word or phrase, or by TEMPORAL LINKAGE, which is perhaps expected but newly mentioned.

Example (42) is taken from an activity text about how women collect termites to feed their chickens. It is an introductory sentence in a paragraph about the best type of termites to feed chickens. The word 'termite' was introduced in the sentence that precedes the paragraph.

- (42) *máacah hay káa ná mékelé mékelé dáha*  
       termite PL DEI TOP other other BE  
       As for these termites, there are many different kinds.

Example (43) recounts an actual event, with the first topic indicating a new paragraph by marking a time sequence between what preceded and what follows. The second topic binds two closely related events together.

- (43) *pás hakwád ná gúmiya ma hawá ngáda way*  
       day evening TOP Gumiya REL return<sup>DIR</sup> to home

*a wuswa ná barre táp a ver*  
       3S enter<sup>DIR</sup> TOP IDEO IDEO to bedroom

At evening, Gumiya having returned home, went directly to his bedroom, (he didn't speak to a soul).

**2.3. An episode may begin with a topic reflecting material from a preceding episode.** Just as a topic can mark new paragraphs and at the same time provide tail-head cohesion or temporal cohesion from one paragraph to another, so may they function between episodes in narratives or between new POINTS in nonnarrative texts. In Mofu, the topic-created cohesion may be in the form of a resumptive bringing back of some earlier part of the story for further development or simply a reintroduction of a previously named character, character trait, or topic.

Example (44) is from a narrative where previous episodes have been concerned with the actions of a certain protagonist after a hunt. At the beginning of this new episode, the topic provides cohesion by restating an action of that person reported in a preceding episode.

(44) a. *ndəhay a samáwa dáa mádála ndaw kedé a*  
 men 3S come<sup>DIR</sup> from hunt man this 3S

*daw a way ná dam kede mánakáya dá ver*  
 go to home TOP girl this lying in chamber  
 The men return from the hunt and this man goes home  
 and this girl was lying in her chamber.

b. *manjákáya ámbá ndaw ngá hándáwa yám daw*  
 staying that person to carry<sup>DIR</sup> water 10

*ná dáa bá*  
 TOP BE NEG  
 She stayed (there) so there was no one to carry him water.

Example (45) is the beginning of a third episode of a narrative text. It reintroduces the main character of episode one, *bay* 'chief', and the main character of episode two, *cék* 'thing' (bird). The second clause marked by *ná* (topic) sets up a contrast with the main part of the sentence.

(45) *bay a sawa dá léy ná ba cék ngá zlar*  
 chief 3S come from field TOP that thing to begin

*wálay ánda máamándaw daw ná dáa sabá*  
 song like days<sup>before</sup> going TOP BE no<sup>longer</sup>  
 The chief came from the field (to hear) the bird sing for him as was  
 his custom in days past, (but) it no longer existed.

**2.4. A topic may set the stage as preamble to the introduction of new material.** It may present new information which contributes to the setting of the stage of a narrative<sup>4</sup>—a new situation (45), a new character (46), or a new point (47). Example (46) begins an episode by introducing monkeys as new characters; (47) introduces an activity text on how to plant a field with the first point, choosing a place to plant.

- (46) *duwak hay a samáwa ngá séy yám ná*  
 monkey PL 3S come<sup>PL</sup>DIR for drink water TOP

*a hatfámará áa dá dāma*  
 3S find<sup>LOC</sup>PL<sup>3O</sup> 3P in there

As for monkeys coming to drink water, they found him in there (a deep hole).

- (47) *yaw anda ndaw a wudey amba a da key ley ná*  
 INJ as man 3S want to 3S FUT make field TOP

*sí témé a daw á nəkwa slam dá ley dāgay*  
 must first 3S go 3S look<sup>DIR</sup> place in field first

Well, when one wants to go make a field, he must first go check that field out.

**2.5. A topic may mark the peak of a narrative or activity discourse.** Topics often occur at narrative PEAKS or INCITING MOMENTS. They serve to call attention to the other surface structures that characterize such places in discourse, appearing to be a form of highlighting (Longacre 1983:86 and Wiesemann et al. 1983). The surface structure of the topic is usually different from the remaining part of the sentence. In the case of a narrative peak which is marked by ideophones instead of normal verbs, the topic portion of a sentence precedes the ideophones. In the case of an inciting moment marked by use of nonnarrative tense-aspect (usually future or progressive), the topic usually precedes the verb phrase that is so marked.

A topic found at the peak of a narrative is illustrated in (40), where the topic is marked for tense-aspect as expected in narrative. The topic restates

<sup>4</sup>In Mofu, stage setting material is often topicalized when the hearer may already know the material (it is UNUSED-NEW MATERIAL, Prince 1979) but it needs to be called to the hearer's attention. To the outsider, the material may be BRAND-NEW MATERIAL which needs some better introduction.

the anticipated action, thereby focusing attention on the action that will clash with that of the peak, which is expressed by ideophones.

A topic may also emphasize the action that marks an inciting moment. This is shown in (48), which is taken from an inciting moment of a narrative episode. The third topic in this example is part of the inciting moment which, in this case, is marked by progressive aspect.

(48) *áta ma kádmara gaanga á ná ngá ray ngá ngwas*  
 they REL hit<sup>PL</sup>30 drum DEI TOP of head of wife

*ngá bay ta dam ángá kedé héyey ná ánja*  
 of chief and daughter his DEI mention TOP when

*ndaw dáha fá daw ná fá jákey slamay*  
 man BE PROG GO TOP PROG hear ear

As for their (the monkeys') drumming the drums (made) of the heads of the chief's wife and daughter, there was a man who came and listened.

**2.6. A topic may end a sentence.** This situation, where the main part of the sentence does not follow the topic, is rare; and the meaning of ending a sentence with the topic marker is uncertain. In this context, the actual occurrence of *ná* (topic) is optional, depending on individual dialects. When used, it adds emphasis, either positive or negative. Illustrations (49) and (50) are chosen with care, from texts where we can be certain of sentence boundaries. Example (49) is a question boxed in by quotation formulas 'he says'; (50) is the last sentence of an explanatory text and is a summary of what that text is about.

(49) *kah kutáf ná wewér kah kaláh ka da hándíwa*  
 you turtle TOP tricky you too<sup>much</sup> 2S FUT carry<sup>DIR</sup>

*áa yam ná*  
 to water TOP

(Squirrel says) "As for you, Turtle, you are very tricky; you will put it in the water." (Turtle says, "Please, Squirrel, no I won't.")

(50) *ánda kedě ngusay gá á nasmatará caved*  
 like that woman<sup>PL</sup> many 3S destroy<sup>PL</sup>3O<sup>PL</sup> way

*ngá mézôle hay ná*  
 of husband PL TOP

As for how many women destroy the lives of their husbands, (it is like that).

### 3. Conclusion

The topic construction in Mofu-Gudur is a very flexible construction in its extent and in its function. It may or may not be coreferential with a constituent of clauses that follow, or it may be a restatement of preceding sentences. It functions not only on the sentence level, but can function simultaneously on one or more higher levels as well.

A topic may help mark important parts of a paragraph or discourse by serving as a device for scene setting, linking, or highlighting. A topic used for scene setting may introduce new material (§2.3) or recall previously mentioned material (§2.1-2). A topic that creates cohesion may do so in terms of tail-head linkage as in (42), temporal linkage as in (43), or logical linkage as in (42). A topic that calls attention to the appearance of a new structure may be a topicalized participant reference as in the second topic of (48), an event reference as in (40), a logical reference as in (42), or summary as in (50).

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## **In Pursuit of Discourse Particles**

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1. Longacre (1976) called them “mystery particles and affixes” while Grimes (1975:93) dubbed them “pesky little particles.” Both these descriptions aptly express the viewpoint of the linguist when he first runs into these queer little particles or affixes. I’m referring to the type of particle or affix that is found in many languages which defies a simple lexical gloss and, in fact, generally elicits quite a range of unrelated meanings from a naive native speaker, and which at first appears to be arbitrarily “salt and peppered” (Longacre 1976:468) throughout texts. If, however, the particle or affix is eliminated from texts, native speakers generally find the texts unnatural which, of course, leads the linguist to label it a DISCOURSE PARTICLE.<sup>1</sup>

Deciding that it is a discourse particle is only the beginning of providing an analytical explanation of its behavior in the language. How, then, does the linguist determine an analysis?

There is, of course, some preliminary preparation that will help, such as reading a number of analyses of discourse particles in other languages. A list of relevant articles would include Binder 1977, Burgess 1979, Gratix 1978, Henriksen and Levinsohn 1977, Jones and Nellis 1979, Koontz and Anderson 1977, Moore 1977, Morton 1978, McArthur 1979, Salser and Salser 1977, and Wiebe 1977. It is often helpful to chart a text. Various methods are detailed in the literature, such as in Grimes 1975, Jones 1977, and Longacre and Levinsohn 1978.

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<sup>1</sup>In the context of this paper, I use particle to cover both particles and affixes.

What I would like to focus on in this paper, however, are the goals which should guide the researcher in pursuing the analysis of a discourse particle.<sup>2</sup> These goals provide a basis for measuring progress toward a satisfactory analysis. For illustrative purposes, I draw on data from the Berik language, a Papuan language of Irian Jaya, Indonesia. These goals were pursued in the analysis of the Berik particle *ga*. My basic purpose here is to present the goals; a complete analysis of Berik *ga* is not detailed here, but is found in Westrum 1987.

2. The first goal is to predict where the particle *MAY* occur, not where it *WILL* occur. The key words *may* and *will* correlate loosely with *optional* and *obligatory*, respectively. It has been said that there are no truly optional elements in a text. Thus, *optional* simply means the analysis has not yet been completed, because a thorough understanding of the optional element often reveals that, in fact, it contributes in some important way to the structural coherence of the text.

I would like to suggest a different approach to understanding this notion. If we view one goal of a speaker or writer of a text to be to strike a balance between ambiguity and maximal clarity, we may regard an element as *optional* if:

- (1) a. It does not always occur in positions where it may occur.  
(The principle of ambiguity risk)
- b. It may occur in positions where, strictly speaking, it need not occur.  
(The principle of clarity)

English conjunctions such as *then*, *however*, and *so* fit this definition of *OPTIONAL*. As an example, consider the following text. The words in parentheses may be deleted with little effect. These words may occur in the places indicated, but they need not (1a).

- (2) *Let me tell you what happened to Herb's son. He wanted to get coconuts. So he climbed a coconut tree. He climbed very high. (Then) he cut off some coconuts and they fell to the ground. Then he wanted to go back down. (Then) suddenly he fell.*

In this same text, note the word *so* in the third sentence. While *so* may be deleted here, the result is not as smooth or natural. The same is true for *then* in the penultimate sentence. Strictly speaking, the conjunctions

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<sup>2</sup>This is a slightly-edited version of Jones 1988.

are not necessary at these points (1b). However, the text reads more naturally with them.

Discourse particles are often of this type. They are optional in the ways spelled out in (1). This is in contrast with obligatory elements, which may be defined as always occurring where they may. Examples of obligatory elements in English include subject of a clause, tense on the verb, and number marking on the subject.

The Berik particle *ga* is an excellent example of an optional discourse particle. In checking Berik texts with a native speaker, we found that it was quite acceptable to delete some of the occurrences of *ga*. Furthermore, it was acceptable to add *ga* in many places where it did not occur in the original texts. Thorough experimentation with adding and deleting *ga* led to fruitful hypotheses of how *ga* functions.

Example (3) is the first paragraph of a rather lengthy text in Berik in which *ga* appears frequently. Occurrences in parentheses may be acceptably deleted.

The opposite situation is seen in (4). Here we have the first paragraph of a text in which *ga* is used more sparingly. However, it is acceptable to add *ga* in all the places indicated by asterisk (\*). Note that a few of these are either-or situations, where the *ga* may be added either before a particular word or after, but not in both places. This is indicated by placing pairs of asterisks in parentheses on both sides of such a word.

It is clear that *ga* is optional in the sense of (1). The goal, then, is to frame an analysis that will fit the occurrences of *ga* which actually do occur as well as those potential occurrences that are discovered through experimentation like that just described. However, it is not the goal of the analysis to predict where *ga* will occur; this is an impossible goal since *ga* is optional. The analysis only predicts where *ga* may occur.

3. In analyzing a discourse particle, one of the first steps is to note its distributional privileges. Many discourse particles are confined to a single position in a structural unit, such as an affix to a verb or a particle that always follows the subject. Or perhaps it is a proclitic or enclitic that is not tied to a specific constituent but rather floats to a specific position in the sentence (first and second position are most common). When a particle is associated with a specific constituent, this may give important clues to its function.

- (3) 1. *Angtane' bosna Usafe je gatas tarnap ge nuin.*  
 person name Usafe he sago place dual live
2. *Tesa ga belim taban, ga jes talebowel.*  
 sago cut^down finished it pounded
3. *Ofo ga Jaume-mana, bosna ga Sebafe. 4. Ofo*  
 pig Jaume-POSS name Sebafe pig
- aiserem je (ga) tesa ga jes tumawel. 5. Usafe ga wini*  
 this it sago it ate Usafe woman
- naura gam tet. 6. Wi naurana aiserem je*  
 two had married woman two this they
- ga tesa ga je ge talebawel. 7. Tesa gam ge*  
 sago it dual pounded sago had dual
- wilni ofona gam fortia tesa gam tumili ga jeber*  
 pound pig would arrive sago would eat there
- ge nuin. 8. Jamare abaka tesa (ga)umef ga*  
 dual stay until long^time sago remainder
- nanki fal. 9. Ofo Sebafe gamjon ga forial, tas*  
 middle lies pig Sebafe again arrived sago
- nanki ga tuin.*  
 middle ate

1. There was once a person named Usafe who lived near the sago acreages. 2. Whenever he finished cutting down a sago tree, he pounded it. 3. There was also a pig belonging to Jaume, whose name was Sebafe. 4. This pig always ate the sago. 5. Usafe had married two women. 6. These two women often pounded sago there. 7. Whenever they had pounded sago, the pig would arrive, and would eat the sago, then stay there with them. 8. This continued for a long time so that (only) a little sago remained in the middle. 9. Sebafe the pig then arrived, then ate the middle part of the sago trunk.

- (4) 1. *Ir ai jafnant Muarbumwer.* 2. *Dewaf ai*  
 yesterday I went Muarbum matoa^nuts I
- jafnant jamerai aiya forotfant Toganfu, Munanton*  
 went until I arrived Toganfu Munanton
3. *Mutofo jeba ai \* fomant Habelem jinab* 4. *Dewana*  
 Mutof there I arrived Habel's house matoa^nuts
- (\*)*ai(\*) tombanant jamer taban.* 5. *Wina gwanan gol*  
 I ate until finished wife first married
- aiserem je (\*) fona (\*) daktanant tesado.* 6. \* *Aiya*  
 this she water hung sago^pudding I
- tumanant tiyon tul nanggal.*  
 ate sago^grubs fish tails

1. Yesterday I went to Muarbum. 2. I went in order to get matoa nuts, until I arrived at the village of Toganfu on Munanton peninsula. 3. There at Mutof (peninsula, however) I arrived at Habel's house. 4. I ate matoa nuts until (I was) finished. 5. This first wife (Habel) had married, she hung water (over the fire) for sago pudding. 6. I ate sago grubs and fish tails.

There are times, however, when a particle may have more than one distributional possibility. Berik *ga* is like that. It may occur sentence initially, following a noun phrase (usually subject), preceding the verb, and even occasionally sentence finally.<sup>3</sup> When a particle may occur in different environments, one should expect somewhat different meanings or functions in each different environment, but nonetheless one should also seek a common thread of meaning or function.

Analysis of Berik *ga* in its four different environments revealed the following functions (Westrum 1987):

Sentence initially or preceding a verb or verb phrase, *ga* indicates progression of time or logic. *ga* is used frequently in a narrative when events follow one another in chronological order. It simply indicates that

<sup>3</sup>Because Berik is an sov language, it is not always clear whether a particular occurrence of *ga* is to be considered as following a noun phrase or preceding the verb, especially when the object is not present. This leads to a certain arbitrariness in the analysis.

the tagged event follows the preceding event chronologically. In these positions it might be glossed 'and then'.

Following a subject or object noun phrase, *ga* indicates progression in topic.<sup>4</sup> It is very commonly used to signal a new topic, such as introducing an important new participant in a story. It is also commonly used for switching the spotlight back and forth between participants already on stage.

The particle *ga* may occur sentence finally when a subject or object noun phrase is postposed to the end of a sentence, in which case it appears to be clarifying the identification of the topic. It may also tag a time word or time phrase which occurs sentence finally (normal position is near the beginning of the sentence). Such occurrences are relatively rare but probably indicate progression on the time line.<sup>5</sup>

There are differences, then, in the functional meaning of *ga* which depend on the grammatical position in which it occurs. That is, the position itself has a component of meaning (Pike 1983:110). At the same time, however, there is a rather abstract lexical meaning for *ga* that can be deduced from meanings in specific environments—there is a thread of meaning common to all occurrences of *ga*. The generalized meaning of *ga* might be expressed in this way: *ga* signals progression in time (e.g., sequence of events), logic (e.g., ordering of ideas in logical sequence), or topic (e.g., succession of participant reference). It is a relatively low-level particle which marks a succession relationship between a pair of clauses (preceding and following). For example, the participant in the second clause or sentence succeeds the participant in the preceding one as being the topic ('what is being talked about') or the event described in the second one succeeds chronologically the event in the preceding one.

4. The most obvious task is to note where the discourse particle does occur. It is equally important, however, to note the environments in which a particle is NEVER permitted. This should include a systematic examination of the restrictions in distribution, both syntactically (sentence-level and below) and contextually (discourse-level).

There may be certain types of discourse (Longacre 1983, especially chapter 1) where the particle is never found. For example, a particle may occur only in narrative or procedural texts, but never in expository or hortatory ones. Such a situation might be a clue that the particle is associated with chronological movement or the marking of the eventline in some way. A further contextual restriction is the employment of a particle

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<sup>4</sup>By topic is meant the roughly sentential or intersentential notion of what is being talked about.

<sup>5</sup>The fact that a nominal or time expression is postposed undoubtedly adds a dimension of meaning which is not explored here.

in only certain styles; compare usage of the particle in written versus oral texts, monologue versus dialogue, formal versus informal, ritual versus ordinary, polite versus familiar, male versus female.

On the lower levels (e.g., sentence, clause, phrase), there may be rigid syntactic restrictions. These might include restrictions regarding the occurrence of the particle in a clause with certain tense or aspect marking, occurrence with a negative, occurrence with an imperative or interrogative, or occurrence with certain other particles.

As an example, in examining some of the restrictions governing the use of Berik *ga*, we found that it occurred in virtually all discourse types (hortatory, expository, procedural, narrative, conversational) except in songs. It may occur in the sentence initial position with only certain other conjunctions: *ane ga*, *jewer ga*, and *ga enggam* occur; however, *jengga*, *gamjon*, *jeuga* and *jamer* never occur with *ga*.<sup>6</sup>

Further, *ga* has not been found in sentences containing sentential negatives. Nor is it found in sentences expressing simultaneous activities. Both these last two restrictions are naturally explained by the analysis: *ga* marks progression of topic, event, or logic. When a sentential negative is used, there is no progress, but merely a description of what did not happen. Further, because *ga* is used with chronological succession of events, it is precluded from being used in simultaneous constructions. In fact, both the negative and simultaneous restrictions could be predicted from the analysis, and the fact that they are supported by the data is good evidence for the credibility of the analysis.

The restrictions just described for Berik illustrate the usefulness of studying restrictions in distribution of a discourse particle. While some restrictions may seem arbitrary (such as occurrence with some but not all conjunctions), other restrictions are helpful in corroborating the analysis (such as the restrictions about simultaneity and negation).

5. It is sometimes supposed that the analysis is not good until it accounts for one hundred percent of the occurrences of the particle in the data. But this is unrealistic. Certainly the analysis should account for ninety percent

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<sup>6</sup>Actually, some of these appear to originate from a morphological combination with *ga*, which explains why another *ga* is not permitted.

or more of the occurrences, but there may be many reasons why one hundred percent accountability is not possible.<sup>8</sup>

The optional nature of many discourse particles makes it more difficult to formulate rules that take care of every instance. Differences in individual styles are especially evident with optional particles, such as differences in frequency of use. Further, there may be a special extension of meaning that is almost idiomatic. A good analysis will at least capture the central core of meaning, the range of most common usage. Finally, some uses of the particle may be of marginal acceptability, but that is difficult to assess in the average field situation. This is especially a problem with oral texts.<sup>9</sup>

Even with extensively studied topics such as tense or pronouns in English, the best analyses that have been produced to date always leave a residue of data that does not fit. For some reason, however, I have found that when a fieldworker begins studying discourse matters in a language, he is more troubled by pieces of data that do not fit neatly. At first, of course, this means that he should scrutinize his hypotheses more closely, try to refine them to make a better fit, or propose altogether new ones. But I believe that there comes a point when no better analysis can be found and yet there is still a small residue, and I believe it is time to submit the analysis to the scholarly world and let time or other linguists improve the analysis if they may.

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<sup>8</sup>Perhaps even 90% is too high. Hopper (1979:221) suggests 80% in a relevant quote: "It should be noted at this point that in discourse work explanations and hypotheses are not obviously validated with every example. Apparent inconsistencies and irregularities often mean that a certain proportion of the data contradict the general hypothesis. As a rule of thumb, I take this proportion to be about 20%; that is, I expect my explanations to account for an obviously large majority of the data. The remainder are then assumed not to be contradictory or arbitrary but to REFLECT A SPECIFIC INTENTION OF THE AUTHOR. The exegesis of this remainder may be quite convincing, or it may be guesswork."

<sup>9</sup>Working with edited texts or getting the judgment of a second speaker may help correct this problem.



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## Language Typology in Relation to Narrative Texts of Indigenous Languages of Latin America

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The thesis of *The Grammar of Discourse* (Longacre 1983:xv) is that "language is language only in context." The purpose of this paper is to build on that statement and show correlations between language typology and organizational strategies in narrative texts, i.e., that some typological considerations are relevant only in the context of discourse.<sup>1</sup>

In recent years more and more linguists of almost all theoretical persuasions are giving attention to two topics: (a) typological studies and universals and (b) discourse, that is, text grammar. There is now quite widespread, although not universal, agreement that "phasocentric 'sentence-level or sentence-internal' accounts of morphosyntax can have only a provisional and incomplete validity, and that a fully coherent theory of language must begin at (and not merely include) the level of discourse MOTIVATION for individual sentences" (Hopper and Thompson 1980:295). Attention has more recently been given to possible correlations between the typological properties of a given language and the strategies for organizing texts in that language.

Beginning exploration of correlations between word order and participant identification strategies were described by Wise (1979, 1980a,

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1980b), Longacre (1982), and Jacobsen (1983).<sup>2</sup> A related theme, topic (or local theme) continuity in discourse, is explored in-depth by Givón (1983). Doris Payne (1985, 1987, 1990) and Givón (1990) describe in some detail the pragmatic functions of word order variations. Exposition of detailed research on another dimension—relations between transitivity and foregrounding in discourse—is given by Hopper and Thompson (1980). Various authors (Hopper 1982) analyze the discourse motivation for the use of perfective aspects, but little attention is paid to the possible correlation between use of perfective aspect as a foregrounding device and language typology.<sup>3</sup>

In this paper, I summarize data on these topics from a variety of indigenous languages of Latin America in a continuation of the explorations mentioned above and raise questions for further study. Some relations between typological properties and foregrounding are also pointed out, and some topicalization strategies are briefly discussed. No attempt is made to follow up proposals by Longacre (1982) and others that there is a small number of universal text types. Rather, I start with the assumption that narrative is among the universal text types and that the word orders and other typological properties posited are the basic ones, at least for narrative texts, in the languages considered.

The hypotheses presented are based primarily on studies of narrative texts in eighteen indigenous languages of Latin America, representing at least thirteen language families. The names of these languages and their linguistic affiliations are presented in (1). Supplementary data from other languages are also presented. Although these languages represent almost the full gamut of characteristics usually discussed in typological studies, almost all of them share the relatively infrequent occurrence of nouns and free pronouns in narrative texts and the frequent repetition of the last verb of the preceding sentence, or a pro-verb such as 'doing thus', as a sentence-initial connective.<sup>4</sup>

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<sup>2</sup>Although Wise 1979, 1980a, 1980b, Longacre 1982, Hopper and Thompson 1980, and Jacobsen 1983 were written almost simultaneously, each was done independently of the others.

<sup>3</sup>The works cited are illustrative only; scores of important works on these topics have appeared in the last decade.

<sup>4</sup>To my knowledge, only Tripp (1981) and Larson (1978) present data from written narrative texts. Hence, the discussion in this paper is primarily based on oral narrative texts. See Tripp [née Duff] (1974) for an exposition of contrasts between oral and written texts in Amuesha (Yanesha). Many colleagues of the Summer Institute of Linguistics checked much of the data presented in (2). I am especially indebted to Elizabeth Camp and Robert Dooley for data on Cavineña and Guaraní of Bolivia and Brazil, respectively. Unless otherwise indicated, the data on other languages are drawn from references listed at the end of the paper.

(1)	A. Capanhua	(Panoan)
	B. Aguaruna	(Jivaroan)
	C. Chayahuita	(Cahuapanan)
	D. Ancash Quechua	(Quechua)
	E. Guanano	(Tucanoan)
	F. Amarakaeri	(Harákmbet)
	G. Cavineña	(Tacanan)
	H. Candoshi	(Jivaroan?)
	I. Guarayu	(Guaraní)
	J. Guaymí	(Chibchan)
	K. Waunana	(Chocó)
	L. Paya Kuna	(Chibchan)
	M. Arabela	(Zaparoan)
	N. Amuesha	(Maipuran Arawakan)
	O. Nomatsiguenga Campa	(Maipuran Arawakan)
	P. Yagua	(Peba-Yaguan)
	Q. Chiquitano	(unclassified)
	R. Mbyá Guaraní	(Guaraní)

Data concerning the organizing strategies and typological properties of participant identification, foregrounding, and topicalization are summarized in (2), with the languages of (1) arranged by basic word order. The cells of (2) are encoded as follows: x = property occurs; / = property occurs but does not seem to be fully developed; - = property does not occur or is not used for the function indicated; ? = data are unavailable or unclear.

### 1. Referential coherence

Referential coherence is one of the most prominent STRANDS in the overall tapestry of thematic coherency in discourse (Givón 1990:851, 879).

The strategies for achieving referential coherence are, therefore, taken as the starting point for discussing correlations between typological properties and narrative organizational strategies.

Narrators avail themselves of a wide range of phonological, grammatical, lexical, semantic, and cultural resources for tracking the participants in a text.<sup>5</sup> One would not expect to find a language in which there is a single strategy for participant identification. Nevertheless, one might expect to find some strategies used more than others or to the exclusion of certain others. In this section, I explore a number of grammatical properties which

<sup>5</sup>See Wise 1971:217-19 for a summary of devices used in Nomatsiguenga Campa.

function in some languages of Latin America as important strategies for identification of participants, i.e., referential coherence, even in the absence of noun phrases. The first of these is SWITCH REFERENCE.

(2)	SOV													VSO			SVO		
	Participant identification	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
main vb person affixes	x	x	x	x	x	x	-	x	x	-	-	-	-	-	x	x	x	x	x
subord vb distinct form	x	x	x	x	x	x	x	x	x	/	x	x	-	-	-	-	-	x	x
subord vb SR suffixes	x	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	-	-	x
subord vb person affixes	-	x	x	x	x	/	-	x	-	-	-	-	-	-	-	-	-	x	x
gender	-	-	-	-	x	/	-	-	-	-	-	-	-	-	-	x	x	x	-
fourth person	-	-	-	-	-	/	-	x	x	-	-	-	-	-	-	-	x	-	-
S/O case markers	x	x	x	x	x	x	x	x	-	x	x	-	/	-	-	-	-	-	-
ergativity	x	-	x	-	-	-	x	-	-	x	x	-	-	-	/	/	/	-	/
use pronouns for contrast	-	x	x	-	x	x	-	x	-	-	-	-	-	-	x	x	x	?	x
incl/excl first person	-	x	x	x	-	-	-	-	x	-	-	x?	-	-	-	x	x	x	x
frequent use of NP	-	-	-	?	?	?	x	?	-	x	?	x	x	-	-	-	-	x	?
<b>Foregrounding</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>O</b>	<b>P</b>	<b>Q</b>	<b>R</b>	
tense-aspect	-	-	-	x	x	-	x	x	x	x	?	x	x	-	x	x	x	x	?
some subord vbs	x	x	x	-	?	x?	x	-	x	-	-	?	-	-	-	-	-	-	/
sentence particle	-	-	-	x	-	-	?	-	-	-	x	-	-	-	x	-	-	?	-
subord vb relation	x	x	x	x	x	x	x	x	-	-	x	?	-	-	-	-	-	-	x
<b>Topicalization</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>O</b>	<b>P</b>	<b>Q</b>	<b>R</b>	
fronting	?	?	?	-	?	?	?	?	?	x	-	x	x?	-	x	x	x	?	x
sentence particle	x	x?	x?	x	x?	?	?	?	?	-	x	x	x	-	x	-	-	?	/

**1.1. Switch reference.** An excerpt from a Yaminahua<sup>6</sup> text is presented in (3) to illustrate switch reference. The suffixes *-ta* and *-xo* in subordinate verbs indicate that the subject of the subordinate clause is coreferential with that of the matrix clause, while *-ken* indicates switch reference. The participants are thus identified even in the absence of a noun phrase.<sup>7</sup>

<sup>6</sup>A Panoan language spoken in Peru and Bolivia. This illustration is from Norma Faust (personal communication).

<sup>7</sup>Abbreviations used in this paper are: ABL ablative, AUX auxiliary, DS different subject, LOC locative, NEG negative, O object, PRF perfective, P plural, PROG progressive, PST past, PST1 immediate past, PST2 remote past, REFL reflexive, REG regressive, REP reportative, REPET repetitive, S subject, SEQ sequential, SS same subject, TOP topic, TR transitive, V verb, Ø zero morpheme, 3 third person.

(3) *Naska-ken*      *tikiricho non retetini.*      *Ninshi non*  
 do<sup>^</sup>thus-DS<sup>^</sup>PST      jaguar      we      kill<sup>^</sup>PST2      vine<sup>^</sup>with      we

*tedextini.*      *Ninshi*      *tedex-ta,*      *naba-ta,*  
 strangle<sup>^</sup>we<sup>^</sup>PST2      vine<sup>^</sup>with      strangle-SS<sup>^</sup>PST1      kill-SS<sup>^</sup>PST1

*askafa-xo,*      *fe-ta*      *kofiro fatini non.*  
 do<sup>^</sup>thus-SS<sup>^</sup>PST<sup>^</sup>TR      bring-SS<sup>^</sup>PST1      skin      do<sup>^</sup>we we

That having happened (jaguar sat in the trap), we killed the jaguar. We strangled (him) with vine. Having strangled (him) with vine, killing (him) right away, having done, having brought (him), we cured the skin.

In Panoan languages (of Bolivia, Brazil, and Peru) and Cahuapanan languages (of Peru), a fairly extensive set of suffixes indicates not only coreference or switch reference of agents but also the temporal or logical relation between the subordinate and matrix clauses. In other cases, such as Quechua languages (of Argentina, Bolivia, Colombia, Ecuador, and Peru) and Jivaroan languages (of Ecuador and Peru), there are only two or three suffixes which indicate switch reference, but in each case the grammatical markers explicitly track participants throughout a text.

What correlations can be established between switch-reference systems and other properties of a given language? By comparing the third row of (2) with the classification of languages by word order we see that, with a single exception, switch reference is present only in sov languages. In 1979 I proposed that sov word order is a necessary condition for a switch-reference system. That hypotheses is confirmed by the data presented here; thus, switch reference implies sov word order. However, this is apparently true only for Latin America. Some exceptions have been found in other parts of the world.<sup>8</sup>

Nevertheless, Brazilian Guaraní presents an apparent counter-example. Even in this case, however, the order is svo in independent clauses only, while it is sov in subordinate clauses (Robert Dooley, personal communication). Furthermore, other members of the Guaraní family, Guayayu and Sirionó of Bolivia, have sov word order.<sup>9</sup> We are probably justified, then, in

<sup>8</sup>Longacre (1982:473) also links clause chaining to word order types. Robert Conrad (personal communication) confirms that switch reference is found in Papua New Guinea only in sov languages. However, according to Longacre (1990), in some African languages with basic vso order there is an inverse left-chaining switch reference system, i.e., the subordinate clause follows the matrix clause and the switch-reference suffix indicates if the subject of the subordinate clause is the same or different from that of the preceding clause.

<sup>9</sup>The Sirionó word order was confirmed by Perry Priest (personal communication).

explaining the Guaraní exception as an example of a syntactic change still in process, since we would expect the change to occur first in the independent, i.e., main clause.<sup>10</sup> The hypothesis that Brazilian Guaraní is in the process of change is further supported by the fact that Guarayu and Sirionó do not have switch reference.

Another example of difference with regard to the presence or absence of switch reference in members of a single language family is exemplified in Tacanan languages. Ese-ejja (Bolivia and Peru) is an sov language but no trace of switch-reference meaning can be assigned to particles which are cognate with switch-reference particles in other Tacanan languages such as Cavineña. In fact, in all of the Tacanan languages, which form a branch of the larger Pano-Tacanan family, switch reference functions somewhat differently than it does in the other languages of our sample. The difference is probably another evidence of change in progress. In Cavineña and Araona (both Tacanan languages spoken in Bolivia), subordinate clauses with switch-reference suffixes occur almost exclusively as repetitions of old information which connect sentences rather than as an element in which new information can be introduced. See, for example, the contrast in Araona sentences (4a) and (4b).

In most of the other languages in our sample new information—and in some cases even foregrounded action—is frequently given in subordinate clauses with switch-reference markers.

- (4) a. *Jae lala-tso jolotaiqui.*  
 fish roast-after<sup>ss</sup> consume<sup>3</sup> PST1  
 After he<sub>x</sub> had roasted the fish, he<sub>x</sub> ate it all.
- b. *Jae lale-jao jolotaiqui.*  
 fish roast-after<sup>ds</sup> consume<sup>3</sup> PST1  
 After he<sub>x</sub> had roasted the fish, he<sub>y</sub> ate it all.

In Aguaruna (Jivaroan, Peru), for example, a story of 138 clauses was told with 137 subordinate clauses marked for coreference of subjects or switch reference; only the final clause included an independent verb (Mildred Larson, personal communication).

<sup>10</sup>Givón (1976:170) says that a change of agreement in main clauses but not relative clauses of Black English "is of course not surprising, since main clauses (and in particular declarative-affirmative ones) are the most progressive, innovative environment in language, where innovations are first introduced and from where they spread later on into other environments."



In some languages, e.g., Ancash Quechua and Aguaruna, a person-marking affix occurs in the subordinate verb if the subject of the clause is not coreferential with that of the matrix clause; in others, such as those of the Panoan family, person-marking affixes do not occur in subordinate verbs but do in independent verbs. As one might expect, person-marking affixes in independent verbs are a necessary condition for their occurrence in subordinate verbs. They are not, however, a condition for switch reference. There are no person-marking affixes in the Tacanan languages. Consequently, noun phrases and free pronouns occur much more frequently than in other languages with switch reference.<sup>11</sup>

**1.2. Noun phrases.** Noun phrases are, of course, a principal mechanism for identifying participants in every language. In some of the languages considered here, participants are almost always referred to by nouns or pronouns. F. Arosemena (1980:71–74) states that this is true of Guaymí (a Chibchan language of Costa Rica and Panama). In other cases, such as Guarayu, noun phrases are used to refer to the principal character at the beginning of the narration and afterwards only at the beginning of main sections if new participants have been introduced in intervening sections. In contrast, participants of lesser importance, and especially inanimate objects, are frequently referred to by noun phrases.

The question of frequency of noun phrases and free pronouns needs to be studied in more detail and some sort of ratio of nouns (or free pronouns) to verbs specified for each of the languages. In Ashéninka Campa (Maipuran Arawakan of Peru) narratives, the ratio of verbs to any sort of noun phrase is very high; “out of the first 180 words [of the Beetle legend] a full two-thirds of those words are verbs” (D. Payne 1981:9). A ratio of nouns to verbs has not been ascertained for most of the languages discussed in this paper.

**1.3. Gender.** Another important device for identifying participants is gender which occurs primarily in vso and svo languages; however, some sov languages, e.g., Piro (Maipuran Arawakan, Peru), also have gender. Lehmann (1974:199–200) proposed that gender originated in Indo-European languages as a result of change from sov to vo order. On the basis of other data, discussion of which is outside the scope of this paper, I agree with Keenan (1978:287) that verb-initial order in Maipuran Arawakan languages is probably a relatively recent innovation. Comparative studies

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<sup>11</sup>See Munro (1979) and Haiman and Munro (1983) for discussion of many other aspects of switch reference, most of which have not yet been fully explored in the languages treated here.

indicate, however, that gender was distinguished in proto-Maipuran Arawakan.<sup>12</sup> Furthermore, Ursula Wiesemann (personal communication) reports that Kaingang (Ge, Brazil) has gender, is clearly *sov*, and does not appear to be changing at all from *sov* order.

Culina (Arauan, Peru and Brazil) is clearly an *sov* language in which gender distinction is an important device for tracking referents and for marking the participant in focus. There thus appears to be little correlation between gender and word order in these languages of Latin America.

One might expect that at least gender and switch reference would be mutually exclusive. Nevertheless, the Guanano (Tucanoan, Colombia) and Amarakaeri (Harakmbet, Peru) data do not seem to support a universal such as: gender implies lack of switch reference (gender → switch reference). Note that in Chiquitano (unclassified, Bolivia) and the Maipuran Arawakan languages the gender distinction is masculine/feminine or masculine/non-masculine in third person. In Amarakaeri it is between human/nonhuman in third person, and in Yagua between animate and inanimate. In Guanano and at least some other Tucanoan languages, on the other hand, the distinction is between masculine/feminine in first and second person singular. Furthermore, the person-marking affixes occur on subordinate verbs only if the subject is coreferential with that of the matrix verb; if the subjects are different, only the switch-reference suffix occurs. The opposite is true in other switch-reference languages: if a person-marking affix occurs at all in subordinate verbs, it occurs when the subjects are different rather than when they are coreferential. Is there some correlation between these differences and the differences in gender in Guanano?

**1.4 Fourth person.** Fourth person—the distinction between proximate and obviative third person pronouns—is another strategy for participant identification. In the languages treated in this paper, Guarayu and Guaymí—*sov* languages which have neither switch reference nor gender—are the only ones which clearly have a fourth person in contrast to the third. Payne and Payne (1990:361) report for Yagua (Peba-Yaguan, Peru), a *vso* language, a pronoun which can be coreferential with any person other than first or second person singular. It would seem, therefore, that fourth person does not correlate with word order, but that it probably does not occur with switch reference.

**1.5. Case marking of *s/o*.** Case marking is, in general, a strategy for indicating the role of the participant rather than for participant identification. Case markers—whether in an *ergative* or *nonergative* system—seem

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<sup>12</sup>Although gender does not occur in Amuesha there are some vestiges of it.

to be a necessary condition for switch reference, although the converse is not true. Furthermore, in the data examined here case marking on subject and object occurs only in *sov* languages but not in all *sov* languages. I am uncertain, however, if data from other areas of the world permit a converse statement of Greenberg's Universal 41: "If in a language the verb follows both the nominal subject and nominal object . . . the language almost always has a case system" (1966:96). That is, is it also true that case marking on subject or object implies *sov* order?

In *Campa* languages (Maipuran Arawakan) where nouns are relatively infrequent and participants are usually referred to only by person-marking affixes in the verb, the role of participants other than agent or patient is indicated by valence-changing affixes in the verb, with the exception of a single oblique nominal suffix. This property merits further study in languages where subject and object cases are not marked and where there is a high ratio of verbs to nouns.

**1.6. Other related properties.** Other properties which help identify participants but do not appear to correlate with switch reference or word order include:

- a. Distinction between first person inclusive and exclusive.
- b. Use of free pronouns to contrast participants or their roles and as dummy elements to which enclitics required by the sentence or text structure may be attached. Note, for example, that this trait is found both in *Aguaruna* and *Amuesha*, *sov* and *vso* languages, respectively. On the other hand, free pronouns are not used to contrast participants in languages such as *Arabela* (*Zaparoan*, Peru) where person-marking affixes do not occur in independent verbs.

## 2. Prominence

**2.1. Foregrounding.** In all types of narrative the speaker (or writer) may choose to foreground certain events as the central core or backbone of the story and relegate others to a background function. One of the strategies for doing so is the choice of certain aspectual or tense suffixes on verbs in different parts of a text. This device is used in two-thirds of the languages of our sample.<sup>13</sup> In

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<sup>13</sup>See Hopper and Thompson (1980) for detailed discussion of this strategy. Hopper and Thompson were not, of course, the first to point out the correlation between tense or aspect and foregrounding. For example, in an analysis of the *Poema del Cid*, Gilman (1961:89) demonstrated that the Spanish preterite tense is used for actions and thoughts of the *Cid* and his band [main events] while the imperfect is used for the actions of less important characters.

Guaymí, for example, “the verbs of the central thread . . . are suffixed by *-ni* (perfect)” (M. Arosemena 1980:15), while verbs of background information are suffixed by *-bare*, *-mäne* (imperfect). In Amuesha (Maipuran Arawakan, Peru) either the perfective or regressive (resolved) aspect occurs in verbs on the main event line but also occurs in some backgrounded sentences; compare *esho'tena* and *eñchehto* in background sentence (5c).

Another strategy for foregrounding actions is the use of a sentence-qualifying particle. In Amuesha, *-ña* (sequential) occurs on the first element of sentences in the main sequence of events. Thus, it occurs in sentences (5a), (5b), and (5e), but not in (5c) or (5d), which are supplementary or background information telling what the people did while looking for Lizard.

- (5) a. *Allempo-ña-pa' ahuo' e'n-e:r-eh-t-a' allohuen-eh-t.*  
 Then-SEQ-TOP REP seek-REG<sup>3-3p</sup>-GO all-3p  
 Then they (the people) all went to look for him (Lizard).

- b. *All-ña-pa' ahuo' e'ñ-eh-t allohuen-eh-t; año'*  
 there-SEQ-TOP REP seek<sup>PRF</sup><sup>3-3p</sup> all-3p but<sup>no</sup>

*eñch-eh-t-o.*

find<sup>PRF</sup><sup>3-3p</sup>-NEG

There they all looked for him but they didn't find him.

- c. *Ahuo' pot-a't-n-e:n-eh-t yoncll-ech ña-ñña*  
 REP split-REPET-ABL-PROG-3p yonkell-tree it-also

*moncn-ach all-o-ïe' Ø-esho't-e:n-a*  
 monken-tree there-LOC-maybe 3-enter- PROG-REF

*año' ahuen eñch-eh-t-o.*

but<sup>no</sup> rapidly find<sup>PRF</sup><sup>3-3p</sup>-NEG

They split open the yonkell and monken trees in case he had entered one of them, but they didn't find him right away

- d. *Ahuo'to' Ø-esho't-os-Ø-a shocsh-ech-o.*  
 REP 3-enter-there-PRF-REFL shocosh-tree-LOC  
 because he had entered a shokosh tree,

- e. *Ñeñto-ña pot-err-eh-err ahuo' eñch-eh.*  
 which-SEQ split-REG-3p-REG REP find<sup>PRF</sup>3-3p  
 in which, when they split it open, there he was. (Tripp  
 1981:22)

Both of these strategies are also used in some other languages: in Ancash Quechua the sentence-qualifying particle *-na* (which may have been borrowed into Amuesha from Quechua) occurs on the first element of a sentence in the main event line and distinctive past tense verb forms occur on actions which are highlighted.

In languages where there are structurally distinct subordinate verbs, independent clauses are sometimes considered to carry the main sequence of information. In many cases, however, such as Aguaruna, much of the main event line is of necessity in the form of subordinate clauses and the independent verb may simply summarize a story or section with a verb such as 'do' and present no new information, much less a foregrounded event. In those cases, there is usually some device for distinguishing foregrounded from backgrounded actions in subordinate clauses. In Aguaruna, the subordinate verbs marked with the suffix *-k(a)* and some independent declarative verbs form the main event line, as in (6), in which the main events are bracketed. All but *pujau* 'he stayed' are subordinate verbs marked by *-k(a)*. The other verbs are attributive to these main events.

- (6) [*Nunik*] *wekaekamaa bachig yujaun*  
 doing<sup>thus</sup> after<sup>much</sup> hunting monkey those<sup>which</sup> walked<sup>o</sup>

[*wainak*], *uchigman diis [maak] uchigiin*  
 seeing baby<sup>owner</sup> looking<sup>at</sup> killing<sup>it</sup> its<sup>baby</sup>

*jujukii tagkumaa jukij jegaa itaa*  
 taking<sup>it</sup> after<sup>taming</sup> it taking<sup>it</sup> to<sup>house</sup> after<sup>bringing</sup> it

[*unuinak*] *apujus [pujau] tuwajame.*  
 teaching<sup>it</sup> causing<sup>it</sup> to<sup>live</sup> with<sup>him</sup> he<sup>stayed</sup> they<sup>say</sup>

Then, after much hunting, he saw a group of monkeys going by. Seeing one that had a baby with it, he killed that one. Taking the baby and taming it, he brought it to his house and, keeping it there, he taught it, they say. (Larson 1978:252,53,55)

In Cashinahua (Panoan, Peru and Brazil), on the other hand, those subordinate clauses in which the switch-reference rules are violated impart background as opposed to foreground information (Richard Montag,

personal communication). It is probably correct to say that where long chains of subordinate clauses are a frequent construction, foregrounded events are more likely to be indicated by some subordinate verbs than by certain tense or aspect suffixes in the independent verbs. At this point, however, it is not possible to establish this as a universal.

In languages where there is a split-ergative system, or a split *s*-marking system (T. Payne 1984), ABSOLUTIVE constructions may provide another strategy for foregrounding. For Pajonal Campa, Heitzman (1988) claims that absolutive constructions indicate a change of location or state of the participant referred to by the absolutive form or they indicate the climax of the narrative. That is, they appear to indicate a greater degree of foregrounding than the perfective aspect which marks the main line of events.<sup>14</sup>

In Guajiro (Maipuran Arawakan, Colombia and Venezuela), "when an active verb occurs on the prominent event line, that verb always has a person prefix" (Mansen and Mansen 1976:155). That is, the absolutive construction functions as a backgrounding device. In Yucuna (Maipuran Arawakan, Colombia), on the other hand, the absolutive form often occurs when events follow in close sequence on the main event line.

Study of split-ergativity or split *s*-marking and foregrounding strategies summarized in (2) has not so far led to any hypotheses regarding correlation with word order or other typological properties. This is very possibly due not only to the difficulty of interpreting varying usages of terms in the sources but also to the fact that there are varying levels or degrees of foregrounding. Perhaps in the languages where more than one strategy is indicated, main events, pivotal events, and the peak of the narrative are not clearly distinguished from each other in the descriptions; or background and significant background information may need to be distinguished.<sup>15</sup> This part of text organization and related topics such as coordination and subordination clearly merit more detailed analysis in a variety of languages.

**2.2. Topicalization and focus of attention.** The picture with regard to topicalization and focus is even more confusing because of inconsistency in the use of terms by different authors and in some cases the lack of attention given to these two organizing principles of discourse.

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<sup>14</sup>Absolutive in the Campa languages consists of the subject-marking verb suffix of an intransitive clause having the same form as the object marker of a transitive verb; there is no ergative case-marking.

<sup>15</sup>See Jones and Jones (1979), D. Payne (1983 and 1984), and Myhill and Hibiya (1988:362) for discussion.

In this study, the term TOPIC is used in a sense very close to that of Prague School THEME; it is used as the local theme or topic which may change from one sentence to the next and is the element about which the rest of the sentence is a comment. It is also quite close, but not quite the same as GIVEN information, as in GIVEN vs. NEW information.

The principal devices for indicating topic in our data are fronting, used in Ashéninka Campa (David Payne, personal communication), and a sentence-qualifying particle marking topic or most relevant information, used in Quechua languages and Waunana. Some languages, such as Paya Kuna (SOV) and Amuesha (VSO), utilize both devices. In the Amuesha example above, the enclitic *-pa'* indicates the topic in fronted position in (5a) and (5b); but, since there is neither change of participant, place, or time, the theme is marked only by fronting in (5c)–(5e). It may be that fronting in Amuesha should be considered the topicalization strategy and the particle *-pa'* as a topic-shifting device.

Focus is used by some authors, and in this study, to refer to the participant on whom the narrator focuses his attention throughout an episode or the whole narration, i.e., it refers to the globally important participant, whereas topic refers to the locally important participant, or other element, in the sentence.<sup>16</sup> One device for focusing attention on a participant is to make him the point of reference for the kinship terms chosen for other participants.<sup>17</sup> Another strategy for focusing on a participant is the Campa use of the singular for plural.<sup>18</sup> In Nomatsiguenga Campa (Wise 1971:94), gender may also be used to focus attention—feminine forms are used to refer to a mixed group if a woman is in focus and the masculine if a man is.<sup>19</sup>

In Amuesha, at least, focus of attention throughout an episode and local topic are clearly distinct: “Other participants can be marked as topic [by the enclitic *-pa'* or fronting] while focus is maintained on the main participant who is the point of reference [for the kinship terms]” (Tripp 1981:33).

Another type of focus varies from one sentence to another and is somewhat comparable to the Prague School RHEME. Sentence-final position is a very common strategy for indicating this type of focus in languages of

<sup>16</sup>Comparable data on focus are insufficient to indicate various strategies in (2).

<sup>17</sup>Described for Amuesha by Tripp (1981:31).

<sup>18</sup>See Wise 1971:68 for Nomatsiguenga; Judith Payne (personal communication) reports the same for Ashéninka. Gilman (1961:89) made a similar observation with regard to the Cid. He pointed out that the author refers to the Cid in the singular while less important characters always act in pairs, e.g., Raquel and Vida, and the daughters of the Cid.

<sup>19</sup>Wayne Snell (personal communication) reports the same for the closely-related Machiguenga.

sov order such as Paya Kuna but occurs also in vo languages. In Paya Kuna, a focal or emphatic enclitic may be added to the sentence-final element. On the other hand, a focal enclitic seems to be the only focus-marker in Chayahuita. Since there is undoubtedly confusion of terms, this kind of focus or emphasis needs much more study.<sup>20</sup> Consequently, we are left with many more questions than answers regarding correlations between typological properties such as word order and topicalization, focus, and emphasis.

### 3. Conclusions

In this paper, which is more a report than a conclusive study, my proposed universal regarding the correlation between switch-reference systems and word order appears to be confirmed for Latin American languages. The really interesting question of why switch reference should imply sov order is still unanswered. From the evidence presented here it may be possible to state also that switch reference usually implies case markers, but I have not been able to check this with data from languages of other parts of the world.

We have been able to discount other hypotheses such as the possibility that gender and switch reference are mutually exclusive. On the whole, however, much more work remains to be done, including more in-depth study of various functions of switch reference, possible correlations between pronominal systems and other participant identification strategies, possible function of directionals in participant identification, foregrounding, or both, and the functions of demonstratives in the various languages. I hope the data presented here have been sufficient to stimulate further study so that in the not-too-distant future it will be possible to show many more correlations between various strategies for organizing narrative texts and other grammatical properties of the indigenous languages of Latin America.

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<sup>20</sup>Givón (1990, ch. 17) gives a broad survey of phenomena related to topicalization and focus, i.e., locally and globally important referents.



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## **Expository Discourse**



## From Narrative toward Exposition: Materials and Methods Sections of Biomedical Journal Articles

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*[A] body of practices widely regarded by outsiders as well organized, logical, and coherent in fact consists of a disordered array of observations with which scientists struggle to produce order. (Latour and Woolgar 1979)*

Relying on shock value, as he admits, Medawar (1964) calls the scientific journal article a fraud—not, however, because its results are falsified.<sup>1</sup> He believes it fraudulent because it deliberately misrepresents the processes of scientific thought. The INTRODUCTION to such an article, which typically presents a highly selective review of literature designed to lead directly to

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the experiment to be reported, allows the misconception that scientific discovery is an inductive process. His solution? Abandon the misleading inductive format and begin with the **DISCUSSION**. During the intervening twenty-five years, there has been no hue and cry to take up the suggestion, the form of the scientific journal article seeming to have taken on a life of its own to become an integral component of the message. And not only in sciences. Sass (cited in Rosaldo 1989) reports the fear of an eminent anthropologist that tinkering with the form of the classic ethnography would undermine the discipline. Despite that warning, ethnographers, like sociologists of science, are becoming overtly reflexive (Clifford and Marcus 1986), applying to themselves the analytic tools used on their subjects, while scientists are holding firm.

**Truth value of Materials and Methods.** Few other than Medawar, even jokingly, would accuse the scientific community as a body of fraud, but some would readily call the **MATERIALS AND METHODS** section of their articles fiction, insofar as it abstracts from and sanitizes what really happens day by day at the bench. After nearly two years of full time participant observation in a prominent biomedical laboratory, Latour and Woolgar (1979) conclude that scientists systematically conceal the kind of activity which results in a research report, organizing what is essentially a craft practice into a polished article. Paulos (Turner 1989) asserts that mathematicians go beyond concealing "the dead ends, the false starts, the interesting sidelights" and are likely to assert that their hard-gained results are trivial or even obvious. Gilbert (1976) argues that the justification for the **TRUTH** of a scientific article lies in its use of correct, standardized, widely endorsed procedures, as reported in **Materials and Methods**. Gilbert and Mulkay (1984) find **Materials and Methods** to evidence the most obvious social accounting, with the actions of the laboratory not described, but given as instances of general formulas, even where somewhat modified, as are scientists' own innovations. The resulting script makes it appear that the person of the scientist is irrelevant, that rules can be applied unproblematically, and finally, that replication is easy for any competent scientist. Summing up the current consensus, Vergracht (1988:488) calls **Materials and Methods** a "rationally reconstructed account of past events."

In the same vein of rationality, Woodford (1968) finds the section easy to write, since the **LOGICAL SEQUENCE**—not real sequence—is fixed at the time of outlining (setting aside the question of how many writers in fact first outline in logical order). While being interviewed, Herman and Sengupta-Gopalan, first authors of papers in this study, each independently used the word **LOGICAL** with reference to the organization of **Methods and Materials**. Huth (1982) recognizes the fictional nature of **Materials and**



Methods by recommending that writing follow the sequence of research planning, all the while admitting that research is not executed as planned. The process of reconstituting and transforming actual experience for rhetorical purposes is documented (Bazerman 1988) as early as the era of Newton, who deliberately forged verbal means to disarm critics of his *Opticks* because “forceful criticism must be attended to with a compelling answer” and “the text must appear to be ‘the right answer.’”

Newton’s efforts were required after the fact of criticism; in the twentieth century, others hasten to forestall it. Among them, Bakhtine (1977) viewed text as potential dialog with the reader, each paragraph being written in answer to a question on the topic. Advancing on Bakhtine, Latour and Bastide (1988) analyzed one Materials and Methods section sentence by sentence, concluding that each could have been written in response to an objection put by an antagonist. They thus considered the clauses of Materials and Methods to be a series of responses abstracted from imagined dialog. The phenomenon is actually attested in DISCUSSIONS of medical journal articles (McKinlay 1983) in the optional writer strategy ANTICIPATING POSSIBLE OBJECTION. The querulous reader’s potential question is recast as declarative, in rhetorical dress which labels the objection as uninformed, premature, or misguided (*\*It might be objected that . . . \*It might appear at first glance that . . .*).

**Purpose of Materials and Methods.** It is widely believed by nonscientists that the Materials and Methods section is included in the scientific article for routine replication of the study. Among scientists themselves, however, distinctions are made. During the course of NORMAL SCIENCE (Kuhn 1970), when experimentalists are in effect just completing a puzzle whose outer edges are already in place, there is essentially little ACTUAL REPLICATION (Rubenstein et al. 1989). One reason is lack of time on the part of scientists pursuing their own goals: “I neglected those [relevant claims of another scientist], and it was not to check them, if you start checking that sort of thing you never do anything . . .” (Latour and Woolgar 1979:119). Another bar to routine replication is that it is ordinarily not fundable: big science demands big bucks.

As long as there is no serious theoretical disagreement, actual replication is replaced by THOUGHT REPLICATION. Huth (1982:53) advises the Materials and Methods writer to put down “exactly what you did and in enough detail” for the intended reader to judge whether the findings provide reliable support for the conclusion. Bernstein (personal communication) states it more directly; he tries to determine from his own laboratory experience whether the reported findings of an article are consonant with

the procedures. Clearly, a high degree of competence is required for accurate thought replication.

There are, of course, special circumstances which call for actual replication: results so startling that they demand outside confirmation. Replicative failure may be an indication of misconduct—fabrication or falsification—in the original work, as in the Slutsky affair, when a biomedical scientist published fabricated experiments (Engler et al. 1987), or of negligence or naiveté, as in the 1988 memory water incident (Davenas et al. 1988, Langane 1988). Furthermore, replication may be difficult, even impossible, not because of fraud or incompetence, but because experimental procedure is inadequately explained. In the 1989 sensational, perhaps revolutionary, certainly controversial, partially farcical cold fusion brouhaha, report of the alleged discovery was not made through the customary journal letter or article; rather, it came during a University of Utah press conference. Experimental details were withheld, nor did the customary preprint circulate, forcing angry scientists to get details of methodology from nonscientists (Elmer-Dewitt 1989), off computer networks (*All Things Considered*, National Public Radio, April 21, 1989), from television newscasts or blurred faxes (Lemonick 1989). A Massachusetts Institute of Technology nuclear engineer complained (*Morning Edition*, National Public Radio, April 25, 1989) that the initial journal article reporting cold fusion was hastily and poorly prepared. A second article was withdrawn from the prestigious journal *Nature*, which had earlier published the momentous letter announcing the Watson and Crick identification of the double helix, because the fusion claimants refused to amplify the methodology. Thus, as the MTR engineer pointed out, the cascade of experiments being urgently performed all over the world could not properly be called replication, since exact details of the methodology were not furnished. The incident is not without precedent in modern science. During the 1920s controversy over the cause of rickets, one scientist accused another of irresponsibility for making public only general summaries: “until his evidence has been published it is . . . impossible to estimate the value of the observations” (Smith and Nicolson 1989:201).

Even when all essential details of an experiment are apparently present, at least to the satisfaction of author, editor, and reviewer, replication may still be difficult for some and impossible for others. Kronick (1985:15) recalls oral transmission of knowledge, suggesting that “some of the technical aspects of the laboratory” are never reduced to writing. Furthermore, operating electronic gear and running assays are not to be equated with painting by number. Often they require, instead of a COMPETENT SCIENTIST (Day 1988), a highly proficient one. Informally, scientists stress the craft,

skills, judgment, and intuition required for compliance with another's methods (Gilbert and Mulkey 1984).

I once inquired—naively, as I now see it—of a very successful physiologist why she was troubling to spend her sabbatical in Sweden working in a laboratory, even that of a Nobel prize winner; I wondered why she couldn't just read his papers or give him a call. Her answer was that she was going partly to learn some new assays, which indicates, if nothing else does, that laboratory procedure involves far more than baking a cake from a recipe. What Latour and Woolgar (1979:65) say of one test is doubtless true of many: "On the whole, the assay is an idiosyncratic process in that it depends on the skills of individual technicians." Finally from the same source, replication may be forestalled by an unknown, uncontrolled factor, as in the famous Slovic case, when an experiment could not be replicated for a period of time because, unknown to everyone, the water at the original site unexpectedly contained a high proportion of the element selenium.

**Previous structural studies.** Division of the text of the experimental article into four sections (Introduction, Materials and Methods, Results, and Discussion/Conclusion) is now a well-established practice, so much so that even some purely descriptive and otherwise nonexperimental works follow its order, for example, in political science (Bazerman 1981). A number of works have elucidated the structure of Introductions and Discussions of written scientific genres: Introductions to journal articles (Swales 1981, Swales and Najjar 1987); Discussions in medical (McKinlay 1983), neuroscience (Belanger n.d.), and biomedical (Dubois to appear) journal articles; and both Introductions and Discussions in Chemical Engineering journal articles (Peng 1987) and in M.Sc. dissertations in Botany (Dudley-Evans 1986).

**Instruction for writing.** Assistance to the novice biomedical scientist for writing a journal article ranges from an immensely successful, broad scope textbook on scientific writing (Day 1988), to a style manual for all practitioners in the biomedical field (Neter et al. 1983), to a textbook for Medicine, a related, but different field (Huth 1982), to a textbook restricted to Biology and Biochemistry (Woodford 1968), all of which direct specific remarks to the Materials and Methods section. The scientist's minimal obligation in the section is generally agreed to be the provision of enough detail to permit replication by a competent worker. The recommended order of the section is chronological, with allowance for individual requirements which may on occasion dictate departure from strict chronology (Day 1988, Huth 1982, Neter et al. 1983, Woodford 1968).

Studies have shown that the necessarily brief coverage of particular sections in HOW TO books is not really adequate for inexperienced writers, especially for those whose first language is other than English (Dubois to appear, Swales 1990, Swales and Najjar 1987). Furthermore, it is not made clear whether textbook prescriptions for scientific writing have an empirical basis or merely represent personal preference. There appears to have been as yet no empirical structural study of Materials and Methods sections in any field, including the biomedical sciences, an absence verified by a March, 1989 search of the ERIC, Sociological Abstracts, Dissertation Abstracts, and Language and Language Behavior computerized data bases. The present study was therefore undertaken to investigate the structure of the Materials and Methods sections of journal articles in the biomedical sciences, with special attention to narrative art.

## 1. Materials and Methods

**1.1. Journal articles.** The twenty experimental or descriptive biomedical journal articles analyzed in the present work are those also used for Dubois (to appear) and also for Hogan (1990). Using them in three separate studies will, it is hoped, provide a comprehensive body of data. The articles have been of interest to faculty participants in the Minority Access to Research Careers-Honors Undergraduate Research Training Program, New Mexico State University, which assures that their scientific content makes them worthy of extended analysis. There was one overlap of author, without duplication of first author. The publication dates of the articles cover a period of twenty-two years (1966–1988); fourteen journals are represented in the sample, three published outside the United States. The specialist fields of the papers are Physiology, Plant Genetics, Molecular Biology, and Biochemistry. Eleven of the papers were either submitted from outside the United States and Canada or had first authors known not to have a variety of American or Canadian English as first language.

**1.2. Analytic framework.** Because Materials and Methods sections are supposed generally to be an account of events organized chronologically, as noted above, the sections were analyzed using the system of paragraph analysis (clause relations) of Longacre (1980), which makes explicit provision for sequence. The Longacre TEMPORAL PARAGRAPH can encode chronological sequence, e.g., narrative. In the uncomplicated, relatively straightforward TEMPORAL SEQUENCE PARAGRAPH presented in Longacre 1980 for purposes of illustration, there are two obligatory constituents:

SETTING—time, place, purpose, characters, materials

BUILD-UPS—reports of events sequenced in real time

In addition to sequence, the temporal paragraph can encode SIMULTANEITY, i.e., events which occur at the same time, and the paragraph may conclude with a TERMINUS, a closing remark. If a sequence in some way differentiates its last build-up from the others—by the use of an adverbial such as *finally* or by backreferencing the previous build-up—then that last build-up functions as the CLIMAX. Other types of sequence paragraph are possible, such as OVERLAP. For purposes of economy, the term STEP henceforth replaces BUILD-UP and may on occasion also include SIMULTANEOUS STEP; because of its polysemy (Dubois to appear, ch. 4), the term PARAGRAPH is replaced by EPISODE, which refers to units of (inter)action organized into sequences (van Dijk 1980).

In the early days of linguistics, indigenous texts were typically regarded as useful vehicles for the study of language and culture. Increasingly, linguists and literary critics regard the same texts as works of art, for example, Hymes (1981); in parallel with that shift, it is useful here to analyze the narratological skill of the biomedical writers. For this purpose, Genette (1980) is employed to discover ORDER (relation of the statement of content to the succession of events), ACHRONY (actual disengagement from dependence on chronological order), DURATION (relation of extent of event and extent of presentation), RHYTHM (alternation of scene and summary), and MOOD (narrative voice and distance).

**1.3. Procedure.** The independent clauses of each Materials and Methods section or subsection thereof were identified as to Longacre (1980) constituent described above. Although a clause might in fact present more than one step, it was counted as a single step in order to calculate the distribution of independent clauses. After the initial episode in a segment of the Materials and Methods section, the beginning of a new episode was considered initiated by a substantive change in a setting element in the thematic portion of a clause. Section subdivision and graphic paragraphing were also used as possible indicators of episode change. Episodes were numbered consecutively within an undivided section or consecutively within a subsection. Finally, the narrative art was analyzed in terms of Genette (1980).

## 2. Results and discussion

**2.1. Overall organization and location.** Realizing that the Materials and Methods section may in some sense be incomplete, for reasons given

above, and that Materials and Methods is probably the part most frequently skipped (Huth 1982), scientists nevertheless include in each article a Materials and Methods which contains sufficient detail to satisfy themselves, the reviewers, and the editorial staff of the journal which publishes the article. The title of the present work is justified in that of the twenty sections being analyzed, thirteen, or 65%, head the section *Materials and Methods*. Three, or 15%, use the shortened form *Methods*. The remaining four papers, all in the field of Biochemistry, use the heading *Experimental Procedures*. In Lindemann 1978, the section is found at the end of the text in small type, which is not unusual in Chemistry. In Altamirano, Mulliert, and Calgano 1987, the section is also presented in smaller type, yet still found in its customary place after the Introduction. Martínez (1989) reports one article in which the Materials and Methods section is printed as captions to pictures.

Only two of the Materials and Methods sections present continuous text undivided except by graphic paragraphs, leaving eighteen, or 90%, subdivided. The headings for subdivisions are not worded as actions (*\*The Animals Were Prepared, \*Motility Was Observed and Recorded*), but instead as topics in the form of nouns (*Animals* [Bouverot, Hildwein, and LeGoff 1974]) or deverbalized nominals (*Observation and Recording of Motility* [Lindemann 1978]). Following the counsel of Huth (1982), topical subheadings respond ad hoc to writers' own partitioning of content. An evident anomaly in Hochachka et al. (1975) is the loss of a second subheading, leaving *Treatment of the blood* and *Assay of metabolites* inappropriately as divisions of *Experimental Animals*. Display of headings—size, font, case, placement—is variable, in compliance with journal style requirements. Length of the Materials and Methods section varies by a factor of precisely eleven, from seven independent clauses (Aulie 1971) to seventy-seven (Iwanij 1977). Aulie can be brief, because in the field of avian respiratory physiology, the techniques and procedures he selects are fairly well routinized; he cites his methods of flight training to previously published papers of others. Sengupta-Gopalan remembers that she intentionally shortened her Materials and Methods section, because of the intended journal's strict space limitations, by citing previously published methods. On the other hand, Iwanij, as a biochemist, must describe much material preparation and many assays. Each of the twenty Materials and Methods sections contains more than one episode; some subsections likewise contain more than one episode.

**2.2. Examples of episodes.** In many cases, there is a one-to-one correspondence of episode to subsection.

- (1) **PLANT MATERIAL.** *Mature seeds from normal and transformed plants of *Nicotiana tabacum* var *Xanthi* were kindly supplied by T. C. Hall and J. D. Kemp, Agrigentic Advanced Research Division, Madison, WI. Transformed plants contain the gene for the bean seed protein phaseolin. The gene is maximally expressed in the developing tobacco seeds 15 to 31 d postanthesis, phaseolin accumulating in the seeds during this time (20, 28). The mature seeds from both transformed and normal tobacco plants were allowed to imbibe for 16h on moistened filter paper prior to fixation. (Greenwood and Chrispeels 1985:65)*

Some Materials and Methods sections display regular correspondence throughout (Herman and Martinez 1988, Abdalla and King 1975).

It can happen that a subsection contains more than one episode.

- (2) *Cell-free Preparation of Tumor Cells and Nontumorous Tissues. Tumor cells and nontumorous tissues that had been kept frozen at  $-20^{\circ}$  were homogenized in 2 to 4 volumes of 0.9% NaCl solution or 10 mM phosphate buffer (pH 7.4) containing 0.9% NaCl solution in a Waring Blendor or a Dounce homogenizer . . .*

*For subcellular fractionation, frozen tumor cells were thawed and centrifuged at  $8000 \times g$  for 10 min (Supernatant 1), the precipitate was homogenized in 10 . . .*

*All cell-free preparations were injected i.p. into the mice, and the doses injected are expressed in terms of protein. (Noguchi, Kashiwagi, and Tanaka 1976:4016)*

Since by convention each subsection begins an episode, episode #1 begins *Tumor cells and nontumorous tissues*. The beginning of episode #2 is indicated by a change in setting (purpose): *For subcellular fractionation*. The third and final episode of the subsection is identified by another change of setting (materials): *All cell-free preparations*, i.e., both tumorous and nontumorous. An additional cue to episode change here is graphic paragraphing, which coincides exactly with episode. The episodes of *Protein labeling* (Iwanij 1977) are similarly indicated by indentation. Materials and Methods can freely alternate between one-episode and multiple-episode subsections, as, for example, Sengupta-Gopalan et al. (1985).

It can also happen that two episodes are found within a single graphic paragraph.

- (3) *Cells were grown in 24-well Linbro plates to approximately 50–70 percent confluency. This resulted in a population of cells in the log phase of growth. These cells produced a more uniform response than did cells in the stationary phase (confluent) of growth (data not shown). The cells were rinsed twice with Puck's Saline F (Gibco, Grand Island, NY) containing 10mM HEPES and were incubated with potential inducers for 10 min at 37 [degrees]. Aliquots of the cell supernatant were assayed for the stable product of psotacyclin, 6-keto-PGF1a, using RIA procedure. To study the effects of metabolic inhibitors on the induction of prostaglandins, the cells were preincubated with the inhibitors for 10 min at . . . (Clarke et al. 1986:158)*

Episode #1 (*Cells were grown*) relates the preparation of cells and the first experimental treatment. Episode #2 is announced by a change in Setting (purpose) (*To study the effects of metabolic inhibitors*), but follows immediately in the same graphic paragraph. Similarly, the undivided Materials and Methods of Mamont et al. (1976) begins with two episodes contained in a single graphic paragraph; it continues with two more episodes, each of which begins with indentation.

The final sort of relation of episode to subsection is that in which a single episode can stretch across more than one graphic paragraph.

- (4) *Procedures. Oxygen consumption and rectal temperature were measured while animals rested quietly and while they ran on a treadmill at various speeds. All animals, including kangaroo rats, used all four legs during running. Air temperature was between 22 . . .*

*The treadmill for rodents was enclosed in a sealed Lucite chamber. Room air was pulled through the chamber at flow rates between 335 and 1,040 liters hr . . . (Taylor, Schmidt-Nielsen, and Raab 1970:1105)*

Episode #1, which is the only one in *Procedures*, explicitly concerns both rest and treadmill running, as indicated by the first sentence. The second paragraph continues with the treadmill and, lacking a change of some kind in setting, cannot constitute a new episode (see also the last subsection of Arad, Toledo, and Bernstein 1984). The reason for presenting two episodes in a single paragraph or for dividing a long episode into two paragraphs may be purely spatial, since there is evidence (Bond and Hayes 1984, Hartnett personal communication) that adult English writers recognize an ideal paragraph length.



**2.3. Examples of episode constituents.** Instances of the two major Longacre (1980) temporal sequence constituents abound in every Materials and Methods section examined. The **SETTING** in (5) and **STEP** in (6) are representative.

- (5) a. *Thirty birds of different breeds, ages and sexes were used.* (Abdalla and King 1975:268)  
 b. *Other biochemicals were from Sigma Chemical Co. (St. Louis, MO).* (Altamirano et al. 1987:96)
- (6) a. *Brain and body temperatures were recorded every 1 min.* (Arad et al. 1984:494)  
 b. *The cells were then incubated for an additional 10 min at 37 [degrees] . . .* (Clarke et al. 1986:158)

The **TERMINUS** constituent, on the other hand, was rare, only two being found in the entire group.

- (7) a. *Thus several measurements were obtained in a single animal at various flow directions and gas flow rates.* (Scheid and Piiper 1972:307)  
 b. *In this way, it was possible to determine that each compound, in its pure form, was an effective agent for stimulation.* (Lindemann 1978:18)

The terminus, as its name suggests, is identified by its location at the end of the section and distinguished from the climax by the fact that it contains no new action (step). The two examples are similar in that they both form a species of conclusion-generalization derived from a method applied repeatedly. It is not surprising that the Lindemann Materials and Methods section contains a rare constituent, since that writer has previously shown himself to be atypical: the Discussion of the same article presents the sole example of dialog paragraph in a group of biomedical journal articles (Dubois to appear). It is easy to understand why a fairy tale ends with "and they lived happily ever after" and why a Materials and Methods section typically exhibits no terminus. The fairy tale is complete, but the Materials and Methods section is only a portion of the whole work: while the section is ending, the larger entity continues.

Somewhat surprisingly, only a single simultaneous step clause was located (in the single *Coloured gelatin* episode).

- (8) *At the same time the tributaries of the pulmonary vein were examined in serial sections for the presence of any spores which might have passed through arteriovenous anastomoses.* (Abdalla and King 1975:270)

Simultaneity is conveyed by the marker phrase *at the same time*. On the other hand, six Materials and Methods sections contain a total of twelve ALTERNATE STEP clauses, a type not specifically presented by Longacre (1980), yet certainly one of the additions he predicts will be found. Two of them, combined with setting, occur in episode 5 of *Experimental* in a single paper.

- (9) *In one we measured brain and colonic temperatures in resting birds . . . In the second type, we continuously measured brain and colonic temperatures before, during, and immediately after flights . . .* (Bernstein, Curtis, and Hudson 1979:R59)

The remaining ten, the work of five authors, are simple steps.

- (10) a. *When the outer solution was used, each sample was dialyzed against an equal volume of the outer solution described above for 24 hr.* (Noguchi et al. 1976:4016)
- b. *(For preparative purposes, DNA fragments in agarose gels were electroeluted into hydroxylapatite (11)) or DNAs in polyacrylamide were eluted from immersions of crushed and ground gels.* (Ohmura et al. 1984:88)

As noted earlier, a last step specially marked in some way (the following two by *then*) becomes a narrative climax.

- (11) a. *Then cells were solubilized in 2% dodecylsulfate/10% 2-mercaptoethanol and subjected to electrophoresis.* (Iwanij 1977:361)
- b. *Birds then flew at these calculated angles throughout the study.* (Bernstein et al. 1979:R59)

During interview, Bernstein was unable to reconstruct his reason for using *then*—quite understandably after a ten year lapse—and suggested that it was unnecessary. However, he readily accepted a justification as climax marker. Another climax is marked by backreference to the preceding step.

- (12) *After each measurement, the mass spectrometer was calibrated using gas mixtures produced by precision gas mixing pumps . . .* (Scheid and Piiper 1972:307)

**2.4. Sequence markers.** All three climaxes presented immediately above contain sequence markers—that is, after all, how a climax is identified. As table (13) shows, a total of thirteen climactic steps are marked in the twenty Materials and Methods (markers of alternate and simultaneous steps are included in the table).

## (13) Number and distribution of sequence markers

Paper	Intraclause		Interclause			Climax		
	<i>then</i>	<i>then</i>	ADV	BACKREF	<i>then</i>	ADV	BACKREF	
Altamirano	0	0	0	0	0	0	0	
Aulie	0	0	0	0	0	0	0	
Bouverot	0	0	0	0	0	0	0	
Ohmura	0	0	0	0	0	0	0	
Taylor	0	0	0	0	0	0	0	
Arad	0	2	0	1	0	0	0	
Chen	0	1	0	0	0	0	0	
Clarke	0	1	0	0	0	0	0	
Greenwood	2	0	0	0	0	0	0	
Herman	0	0	0	2	0	0	0	
Mamont	0	1	0	1	0	0	0	
Sengupta	1	0	0	0	0	0	0	
Hart	0	0	0	0	0	1	0	
Abdalla	0	1	0	1	1	0	1	
Bernstein	1	1	0	0	1	0	1	
Hochachka	0	1	0	0	1	0	1	
Iwanij	0	0	0	5 <sup>2</sup>	1	0	0	
Lindemann	0	3	0	0	0	0	1	
Noguchi	0	3	0	1	1	0	0	
Scheid	0	0	0	1 <sup>3</sup>	0	0	3	
TOTAL	4	14	0	11	5	1	7	

Five are marked by *then*, one by another one-word adverb, seven by backreference. Twenty-five medial steps (see the INTERCLAUSAL column) display sequence markers which connect independent clauses. *Then* is used fourteen times.

- (14) a. *and did so after 50–60 sec; then the animal was forced to dive for 3–5 min . . .* (Hochachka et al. 1975:17)  
 b. *The cells were then incubated for an additional 10 min at 37°.* (Clarke et al. 1986:158)

There are eleven episode-medial interclausal backreferences.

<sup>2</sup>One reference is proleptic.

<sup>3</sup>One compound reference is both analeptic and proleptic.

- (15) a. *Following the preincubation, the tissues were transferred to new media and incubated...* (Herman and Martinez 1988:103)
- b. *After the placing of the catheters the windows in the dorsobronchi were sealed tightly.* (Scheid and Piiper 1972:305)

As noted in §1, a clause may contain more than one step, and four multistep clauses have sequence markers.

- (16) *Tissues for electron microscopic immunocytochemistry were fixed in 2% paraformaldehyde, 2.5% glutaraldehyde in 25 mM K-phosphate (pH 7.2), 0.5 M sucrose for 2 h at 22° then 14 h at 4° C* (Greenwood and Chrispeels 1985:66).

Except for the anomalous Hart, table (13) offers a clear implication: climax implies medial sequence marker. The privileged biomedical sequence marker is obviously *then*, which accounts for 96% of the tokens of one-word adverbials and for 55% of tokens of all sequence markers. Only 42 clauses display markers: just 6% of all independent clauses in the twenty Materials and Methods sections. More relevant, only 13% of the step clauses are marked, 9% of all pure and combined step clauses. The impression left on the reader is that biomedical narratives are spare, unadorned, cemented chiefly by simple juxtaposition (van Dijk 1980). Sparsity can be a deliberate strategy (Sengupta-Gopalan personal communication), given exigencies of journal space.

**2.5. Additional constituents.** In addition to setting, step, and climax, most—although not all—biomedical scientists intersperse COMMENTS in their narrative episodes.

- (17) a. *In this way, the dietary effect of enzyme activity in the livers of the mice was avoided.* (Noguchi et al. 1976:4016)
- b. *For these calculations, it was assumed the haploid petunia genome contained 1.55 pg of DNA (27).* (Chen, Schuler, and Beachy 1986:8561)

In contrast, for an experiment in which they were assigned the task of retelling the brief *Ice Cream Stories*, a group of adults did not make overt comments during the narration (Chaika and Alexander 1986). Perhaps the striking difference in amount of comment between the two groups results from the immense disparity in intellectual content between two tasks as well as from the scientists' intense personal involvement in theirs.

**2.6. Combined constituents.** A frequent occurrence is the combination, most often initial in an episode, of setting element and step.

- (18) a. *A glucagon solution (1–5 mg ml) was prepared in 0.005 M Tris-HCl, pH 9.5 . . .* (Iwanij 1977:360)  
 b. *Bullfrogs (Rana catesbeiana, 345 + 45.0 g (S.E.M.), N = 35) were collected locally from ponds in Dona Ana County, NM.* (Herman and Martinez 1988:102)

Van Dijk (1980) notes a similar compression in natural oral narratives, where setting can be brief if presumed known or readily grasped by the hearer. In cases of setting + first step, there follows the next step in the same sequence; or a structurally parallel setting two + step two; or else, in the case of a one step episode, an entirely new episode.

At first glance, combined setting and step may appear to be the same as setting alone with verb in the past tense—after all, a verb is required to make a clause—as in the pure setting clause *Radiotelemetry of heart beats and respiration was accomplished with a two-channel transmitter harnessed to the back of the bird (Fig. 1)* (Hart and Roy 1966:292). Here as in similar instances, compared to the true setting + step, the setting functions as a general introduction to a nontemporally ordered description of the experimental apparatus, rather than as a part of a temporal sequence. Pure setting clauses can also be followed by a step or an ordered sequence of steps (narration).

- (19) *The amount of water lost by respiratory evaporation . . . and respiratory gas exchange . . . were measured in series I and III by the open flow method. As shown in fig. 1, a compressor pump (P<sub>1</sub>) and a set of thermostatted absolute pressure and flow regulators (APR, FR) allowed dried air to circulate . . .* (Bouverot et al. 1974:258)

*The open flow method* is the setting for an episode whose first step begins *As shown in fig. 1* and which relates how water loss and gas exchange were measured.

A single Materials and Methods section gives an instance of setting combined with comment.

- (20) *During the experiment the duck stood upright in a metal framework to which it was attached by clamps at wings, feet and neck, apparently without causing much discomfort to the animal.* (Scheid and Piiper 1972:305)

The comment *without causing much discomfort*, like other similar ones, provides assurance of ethical treatment of the experimental subject, as urged by Day (1988) and Neter et al. (1983).

**2.7. Composite descriptive statistics.** Table (21) presents the overall distribution of episodes<sup>4</sup> in the group of twenty Materials and Methods sections:

(21) Number of episodes and clauses in twenty biomedical Materials and Methods

Element	Total	Average	Median	Range
Episodes	142	7.1	6.5	13 (2-15)
Clauses	749	37.5	32.5	71 (7-77)
per Episode	—	5.3	—	18 (1-19)

While the averages and medians of the totals of episodes and clauses are fairly close (a characteristic of regular distribution by measures of central tendency), they mask the extreme variation which is revealed by the ranges in each case. There is similar large variability in the range of clauses per episode. Although there are one simultaneous and twelve alternative steps<sup>5</sup> in the group of Materials and Methods sections, they are all constituents of sequence narratives, i.e., there are no entirely simultaneous or alternative episodes.

Table (22) presents the composite analysis of episode constituents:

(22) Distribution of paragraph constituents in twenty biomedical Materials and Methods

Element	Total	%	Average	Median	Range
Setting	199	27	10.0	9	34 (0-34)
Step	323	43	16.1	12	48 (2-50)
Comment	83	11	4.2	3.5	13 (0-13)
Terminus	2	00	0.1	0.1	1 (0-1)
Setting + Step	141	19	7.0	6	13 (2-15)
Setting + Comment	1	00	0.1	0.0	1 (0-1)

In order of frequency, the constituents occur as step, setting, setting + step, comment, and—with precipitate drop-off in number—terminus, and setting + comment, the latter unique to a single paper. The average and median of setting, comment, and setting + step are again fairly close, of step somewhat less. In the cases of all four frequent constituents, as of episodes and clauses (21), the ranges are great, evidencing quite wide variability in the Materials

<sup>4</sup>One is descriptive only.

<sup>5</sup>Includes sequence, alternate, and simultaneous steps.

and Methods sections. Without doubt, variability is partly idiosyncratic, as was length in narratives produced for a single experimental task by sixteen fully competent adults (Berman 1988); in addition, length may correlate to factors of academic specialty procedure or other feature of the research question not examined here.

**2.8. Narrative art.** With respect to the kind and quantity of sequence marker considered above, the biomedical Materials and Methods narrative was judged spare—it may be that no writer loses sight of severe space limitations. The qualification should not be understood to mean unskilled; after all, the stories of Hemingway shook the world with their austerity. In the present section, the Materials and Methods sections are treated as works of fiction—properly so in the estimation of some—and except as noted, the analysis relies on Genette (1980), a crucial work in narratology.

The concept ORDER refers to relations between narrative and story, i.e., the relations of the pseudotemporal order of the statement of content to the succession of the events of the content. Narrative time is pseudotime because although the narrative—here, the Materials and Methods section as vehicle for the story—exists in space, it does not exist in time, being instead actualized in individual reading time. Biomedical authors render story time, which is quite another matter, in three distinct ways: complete, episodic, and absent. A single Materials and Methods section explicitly frames its account (*All studies were carried out between May and October 1987* [Herman and Martinez 1988:102]), partly because of the necessity to emphasize parity of light and dark hours for the experimental animals. Seventeen accounts out of the twenty do not mention end points, but give time periods for steps or whole episodes, presumably where timing enters in.

- (23) a. *24 hours in each grade* (Abdalla and King 1975:269)  
 b. *between 0800 and 1800 hrs* (Arad, Toledo, and Bernstein 1984:494)  
 c. *equilibrate 1–2 hr* (Bouverot et al. 1974:258)  
 d. *imbibe for 16 h* (Greenwood and Chrispeels 1985:65)

A few of the time expressions are rather loose.<sup>6</sup>

- (24) a. *within a few hours of hatching* (Arad et al. 1984:494)  
 b. *overnight* (Altamirano et al. 1987:96)  
 c. *during the summer of 1977* (Bernstein et al. 1979:R58)  
 d. *several days prior to flight* (Hart and Roy 1966:292)  
 e. *varied from 24 to 36 hr* (Lindemann 1978:17)

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<sup>6</sup>For a study of imprecise numerical expressions in biomedical slide talks, see Dubois 1987.

Opposite from complete or partial time framing, Scheid and Piiper (1972) and Ohmura et al. (1984) lack specific time reference whatsoever, not limiting either the whole story or parts of it. Such lack of time reference may suggest eternal significance.

Although some come closer than others, no biomedical Materials and Methods section examined displays perfect temporally ordered match of narrative events and content events. ANACHRONIES can occur both within and between episodes. The more common anachrony is ANALEPSIS, the familiar narrative flashback. Within-episode analepsis can be INTERNAL, i.e., part of the experimental story being told.

- (25) a. *Preliminary studies had established that synthesis was linear during this time period.* (Herman and Martinez 1988:103)
- b. *Air and body (cloacal) temperatures were recorded every 40 min with copper thermocouples connected to a potentiometer with range of 0-50 [degrees] C (Brown Electronic 16). The cloacal thermocouple was inserted about 2 cm and taped to the tail.* (Aulie 1971:174)

Analepsis in the Herman and Martinez example is conveyed by past perfect tense; it must be deduced notionally in Aulie, since insertion and taping of the thermocouple necessarily precede measurement. Analepsis can also be EXTERNAL, not part of the story being recounted.

- (26) *The specificity of the antiserum has been described (2).* (Greenwood and Chrispeels 1985:65)

All external analepsis here has, by definition, a REACH beyond the story being recounted: it refers to methods presented in already published work. Neither internal nor external analepsis gives indication of EXTENT other than to the year of publication, in the case of the latter.

Between-episode analepsis is entirely INTERNAL. For example, the single episode of the subsection *Birds* recounts the removal of the hatchlings from their nest to be housed, fed, watered, and weighed. *Preparations*, which follows, reverts to the earlier removal from the nest recounted in the previous episode.



- (27) *After they were moved from their nest, a chronic, 10-mm tube was implanted in the brain . . .* (Arad et al. 1984:494)

In the twenty Materials and Methods sections, PROLEPSIS is found only between episodes and is entirely internal. Some of the instances constitute mere undetailed mention.

- (28) *After thermocouple implantation (see below), we transferred flight trained birds to large cages . . .* (Bernstein et al. 1979:R59)

Although he did not himself use the word *analepsis*, Bernstein recalled that when he was being taught scientific writing, he learned to finish one topic before undertaking another, as here, where he finishes ANIMAL CARE before taking up PREPARATION. Other prolepses constitute detailed NOTICE.

- (29) *The exact location of the mesobronchial and venous catheters was checked by dissection at the end of the experiments.* (Scheid and Piiper 1972:305)

Scheid and Piiper give notice of the end of the experiment in the first of their four episodes. In the only instance of proleptic repetition in the twenty Materials and Methods sections, Scheid and Piiper give another end-experiment prolepsis as the final sentence in that same first episode. Curiously enough, the second refers to an event which occurs before the first, i.e., it is analeptic to the first prolepsis.

- (30) *At the end of the experiment the animal was killed by an overdose of pentobarbital (60 mg/kg).* (Scheid and Piiper 1972:306)

Repeated prolepsis may be unusual, for Genette (1980) mentions repetition only with analepsis.

More than prolepsis or analepsis, the Materials and Methods sections evidence a tendency toward achrony—disengagement from dependence on chronological order. As for first order achrony, it is evident that analeptic and proleptic asynchronies could have been adjusted to conform to actual order. That they were not is another demonstration that strict temporal sequence has partially given way to topical organization. The scientist is not enslaved to real time order for several reasons. As in Aulie (1971), analepsis can reflect the order IMPORTANT EVENT (measurement) recounted before LESS-IMPORTANT EVENT (insertion and taping of thermocouple). Most-important-first is a pervasive sequence in science: Cremmins (1982) insists on it for results and conclusions in abstracts; Huth (1982) requires the central conclusion to be

stated in the first paragraph of the Discussion. At a second order, higher level of organization, the entire episode of acquisition of essential but routine chemicals, which actually must occur early, is on occasion relegated to afterthought position at the end of the Materials and Methods section (Ohmura et al. 1984; Lindemann 1978).

Far more often in the drift toward achrony, one Materials and Methods section recounts several episodes—preparation of various materials or discrete experimental treatments—whose order with respect to each other is immaterial.

- (31) *Two pigeons (Columba livia), weighing 350 and 400 g. were obtained commercially. They were trained to fly in a wind tunnel (described by Tucker & Parott, 1969) by giving them electrical shocks every time they tried to land on the floor of the test section; these shocks were given. . . Two budgerigars (Melopsittacus undulatus), weighing 33.5 g, were obtained commercially, trained to fly in a small wind tunnel (Tucker, 1968) and exercised daily until they were able to fly for more than 10 min. (Aulie 1971:173-74)*

It cannot matter whether pigeons or budgerigars were trained first or indeed whether they were trained simultaneously, since it appears that two kinds of tunnel were employed. Similarly, Abdalla and King (1975); Mamont et al. (1976); Hochachka et al. (1975). Herman and Martinez (1988) present animals, then chemicals, an order which Herman routinely follows. Within the chemicals episode, she first mentions radioactive, then nonradioactive chemicals, without reference to actual time of ordering or receipt. Noguchi et al. (1976) reverses the order, first chemicals, second animals. Biomedical scientists are not limited by pure and inessential chronology in ordering their material. However, Sengupta-Gopalan wrote up episodes in real order, although with hindsight, she would have performed them differently. Herman, on the other hand, first plans the presentation of results and then writes Materials and Methods and Discussion sections to fit.

Disparity between DURATION of narrative and of story also is a key feature of fiction. Genette (1980) finds that Proust spent 150 pages on a three-hour episode and, at another point, three lines on twelve years. That Proustian novelistic alteration between SCENE (detailed, dramatic, full of action, hence strong) and SUMMARY (abstract, nondramatic, full of inaction, hence weak) perfectly exemplifies the means for creating rhythm in fiction. The steps of biomedical narrative create scenes, with their action orientation and detail, although they do not, cannot contain the dialog of novelistic scenes. There is only one instance of alteration between scene and a

sort of summary (Hart and Roy 1966:293), where *II. Transmitter, receiving, and recording equipment*, sandwiched between episodes which contain steps, consists of four comment clauses and twelve setting clauses.

Most usually, the rhythm of Materials and Methods sections is created at the macrolevel (interclausal) by alternation of step and setting, as in (32), or of step and comment, as in (33).

- (32) *Following five hourly changes using the same buffer, the tissues were dehydrated through 10, 30, 50, 70, and 90% ethanol . . . The glycol methacrylate mixture contained 95% (v/v) hydroxyethyl methacrylate . . . Hydroxyl methacrylate was purified prior to use (17). After three further 2-h incubations . . . the endosperm and embryo tissue were placed in flat embedding molds with . . .* (Greenwood and Chrispeels 1985:66)
- (33) *The exact location of the mesobronchial and venous catheters was checked by dissection at the end of the experiments. During the surgical procedure the animals did not show any sign of discomfort which might have been attributed to pain.* (Scheid and Piiper 1972:305)

There is, in addition, a theoretically regular correspondence between action and expression, a technique which Genette (1980) found unnecessary to consider in such a skilled writer as Proust. Despite what a few may believe about scientific writing, biomedical Materials and Methods sections contain no example of isochrony, perfect steadiness in speed via a one-to-one relation of action to clause, as illustrated by the hypothetical example below, which is adapted—rather, distorted—from the single episode of the subsection *Radioimmunoassay of prostaglandins* (Herman and Martinez 1988:103).

- (34) *\*Prostaglandin standards were diluted to a final concentration. Prostaglandin standards were added in a volume of 0.1 ml. 3H tracer was added to standards or samples. 3H tracer and standards or samples were incubated with antisera. Dextrancoated charcoal was added to PBS buffer. 0.7 ml of dextrancoated charcoal in PBS buffer was added to each tube.*

No biomedical scientists wrote, or would write, such a boring, primer-style account of experiments, disposing instead of a range of devices to condense and focus their stories.

For discussion of creation of interclausal rhythm, it is first necessary to understand the ACTION CONCEPT (van Dijk 1980). From the stream of behavior in everyday life, certain action sequences are extracted, organized into coherent units at a higher level, and processed as discrete global actions. We find an action concept in the real Herman and Martinez

(1988:103) radioimmunoassay episode: *incubated with antisera*. Globalization of the complex sequence to incubation can be accomplished because, as van Dijk points out, actions are rendered at a **SOCIALLY RELEVANT LEVEL**, here, at the level of biomedical research. Social relevance also makes possible deletion of action concepts: in the genuine Herman and Martinez episode, there is no direct reference to the mixing of charcoal and buffer, which would be superfluous for the intended professional audience. The selection of action sequences for representation as action concepts is not directly accessible to textlinguistic study, but perhaps it is sufficient to say that the sequence of action concepts—with the varying duration which is read into them by scientists—helps to realize rhythmic changes in episodes.

More ordinary rhythmic changes, at least for the linguist, depend on punctuation and syntax; they will be treated below in order of increasing rapidity of rhythm. Insofar as terminal punctuation—via full stop alone in biomedical Materials and Methods sections—occasions a pause in reading, joining two independent clauses by less than a full stop decreases the pause and quickens the rhythm slightly. The use of the semicolon, however, is rare, only few examples being found.

- (35) *For the first four dives, the animal was free to terminate diving and did so after 50–60 sec; then the animal was forced to dive for 3–5 min, . . .* (Hochachka et al. 1975:17)

The amount of ordinary independent clause compounding with coordinate conjunction is palpably larger.

- (36) a. *Cell growth was measured by cell counting in a hemocytometer and viability was estimated by counting cells excluding trypan blue.* (Mamont et al. 1976:1627)
- b. *For subcellular fractionation, frozen tumor cells were thawed and centrifuged at 8000 x g for 10 min (Supernatant 1), the precipitate was homogenized in 10 mM Tris-HCl buffer in a Waring Blendor, as described above, and the homogenate was centrifuged . . .* (Noguchi et al. 1976:4016)

There might well be an increase in tempo with the omission of comma before coordinator, but that will not be considered, since it may result from individual style, journal style, or inattention on the part of the writer. Aulie (1971) sometimes uses the comma before coordinator, sometimes not.

A far more frequent speedup occurs with the deletion, in transformational terms, of repeated subject or copula.

- (37) a. *Proteins were extracted and quantitated as described (21) and analyzed . . .* (Chen et al. 1986:8561)  
 b. *the bird was placed on its back . . . and the heart lifted to reveal . . .* (Abdalla and King 1975:268)

In Sengupta-Gopalan et al. (1985), the RNA and DNA episodes have clauses with acceleration achieved by identical subject deletion: fractionated, transferred, and hybridized (RNA episode); digested, fractionated, transferred, and hybridized (DNA episode). It is at least plausible that quickened speed might signal a narrative peak or zone of turbulence of some kind (Longacre 1985), but the exact opposite is the case. According to the senior author, other writers might represent these common, everyday procedures in a single action concept (van Dijk 1980); she prefers a lower level of representation with several lower level action concepts, deliberately combined into one clause to get it over with in a hurry.

The greatest observed acceleration through deletion is one which omits four clause subjects and leaves five predicates.

- (38) *Lung tissue was [1] removed from warm- and cold-acclimated bullfrogs, [2] washed in amphibian Ringer's, [3] divided in half lengthwise, [4] blotted, and [5] weighed.* (Herman and Martinez 1988:102)

Like Sengupta-Gopalan, Herman condenses because of the conventional nature of the actions. But within this maximal speed up, differences in time required to accomplish action concepts create additional rhythmic variance: it requires much longer to remove lung tissue than to divide the washed tissue in half. Rhythmic variation between action sequences presented in separate clauses is also present, as Herman pointed out while being interviewed. Overall, the lay reader is left with an impression of quite varied rhythm in Materials and Methods sections; Herman, however, reports reading action sequences at such a high level of abstraction as to be unaware of rhythmic variation.

Incidentally, it is within clauses, and not between clauses, that the greatest number of alternate steps is presented, as in (39); although, as explained earlier, discrete alternate steps themselves are not common. Along with rhythmic changes, alternates increase the content complexity of the Materials and Methods section.

- (39) *Single or multiple casts of the pulmonary artery, vein and airways were made by injecting 10% red, blue, and yellow vinylite, respectively* (Tompsett 1970). (Abdalla and King 1975:269)

Aspects of narrative art grouped together as MOOD are less involved in Materials and Methods sections than in novels, which have more than one character, thus the possibility of narrator shift. The Materials and Methods section is uniformly a direct presentation, with rhythmic variety as detailed above. But flow of information is not varied for effect, as when detective fiction conceals essential facts until the denouement. The Materials and Methods section offers UNITARY FOCALIZATION, a single narrative voice at a single narrative distance. The narrator is removed, both omniscient—knowing the outcome of every episode—and omnitemporal—holding all time points together in mind at all moments, as is evident from the asynchronies detailed earlier. The narrator is HETERODIEGETIC, absent as a person, and transparent (one reads right through to the events), but paradoxically ubiquitous—someone has to be conducting the experiment. The narrator is only occasionally directive, as when the reader is ordered to “see below” (Bernstein et al. 1979).

**2.9. Placement of events on the storyline.** One concern in the analysis of folk monolog discourse has been to diagnose which events form the major sequence. It has been assumed that in English, the narrative backbone is ordinarily rendered in simple past in an independent clause, in appropriate tenses and clauses in other languages.<sup>7</sup> Hwang (1990) gives instances in which an event on the storyline appears in past progressive in a marginal dependent clause, but preserving iconic order. Presenting a mainline event in a final subordinate clause, although in simple past, also occurs in Materials and Methods sections, but so seldom as to make it appear a literary, not a biomedical, practice.

(40) *Reactions were started by addition of the enzyme, while the adsorbance was recorded at 412 nm with a Pye Unicam SP-1800 double beam spectrophotometer.* (Altamirano et al. 1987:96)

In (41), an event on the main storyline is presented as analepsis in a phrase following the major constituents of the independent clause.

- (41) a. *Therefore, the mice were killed by decapitation between 2 and 6 p.m., after having been starved for 4 to 6 hr before sacrifice.* (Noguchi et al. 1976:4016)
- b. *Antibody:antigen reactions were detected with 125I-labeled donkey antirabbit antibody, followed by radiography.* (Chen et al. 1986:8561)

<sup>7</sup>For a recent discussion of the problem, see Hwang 1990.

It is more common for a storyline event to be syntactically reduced to phrase or dependent clause and presented as initial constituent, maintaining actual sequence of events.

- (42) a. *Following five hourly changes using the same buffer, the tissues were dehydrated through...* (Greenwood and Chrispeels 1985:66)
- b. *After fastening the thermocouple leads to the outside of the skull with dental cement, we sutured the incision...* (Bernstein et al. 1979:R59)
- c. *After colonic and brain temperatures had stabilized (within about 5 min), we recorded these as postflight data.* (Bernstein et al. 1979:R59)

Reduction to phrases and dependent clauses also contributes to rhythmicity. In summary, although mainline events in sequence are found in initial or terminal subordinate constructions, the practice is not so common as perhaps in literature and is absent from some Materials and Methods sections. Where found, it acts to alter focus, tempo, and interest, thus providing variety.

**2.10. Discourse type of the experimental journal article.** By intuitive criterion, the Materials and Methods section of the biomedical experimental/descriptive article is a narrative: it tells a story. Further, as shown above, its structure and art can be analyzed via Longacre (1980) narrative paragraph apparatus and Genette (1980) narratology. At the higher level of whole discourse typology, it immediately exhibits one of four features of narrative discourse (Longacre 1983): the actions evidence (1) CONTINGENT SUCCESSION. They lack (2) PROJECTION forward in time, and thus are similar to Longacre's example of one type of narrative, the STORY. They are (3) AGENT ORIENTED, if only by indirection, if only in a roundabout way. At least since the time of Newton, the experimenter's own credibility as the major means of validating results has been replaced by REPRESENTATION, i.e., by detailed accounts of experiments (Bazerman 1988). The agent is no longer explicitly a party to the narration, for widely recognized requirements of thematization—but is certainly lurking about, since test tubes do not fill or empty themselves, nor do pigeons drill holes in their own skulls. Hanania and Akhtar (1985) point out the increased use—from 37% in other sections to 70%—of passive voice in a related written genre, the Biology thesis. A former Haverford College philosophy professor turned private investigator (Thompson 1988:113) notes the spread of the scientific style into the investigative report, which “put[s] the center of gravity out there in the world and [shrinks] the subject to a

vanishing still point. Its idea—unrealizable—was to make its author disappear altogether . . .”

Even an apparent exception to the disappeared scientist, the overall rare use of *we*, as in *We trapped five adult American kestrels . . .* (Bernstein et al. 1979:R58), is ambiguous between the investigators and the editorial use; furthermore, no one supposes that it was principal investigator himself who spent the summer on the riverbank catching all those birds.

Although they assuredly know better, some scientists repeat the canard that passive voice enables them to evade responsibility (Gilbert and Mulkay 1984), but absence of the agent in the Materials and Methods section does not loose the experiment to float on the anonymous sea of science: author names which appear immediately below the article title and technician and student names which appear in acknowledgments clarify perfectly well who the agents are—or at least who the scientifically responsible are. Informal shop talk confirms that scientists are constantly aware of each other as actors (Latour and Woolgar 1979); moreover, “the [scientific] insider identifies the *scientists* who were influential on him or her, not the *papers* which were influential” (Stokes and Hartley 1989:118). Finally, Materials and Methods sections are EPISODIC, and thus routinely lack (4) TENSION, which is nevertheless present in those few episodes whose last step is a climax cum sequence marker.

At the risk of erecting a straw person for demolition, it is crucial to raise the question whether the entire experimental journal article—not just a single section—should be classified as narrative, since “experimental reports tell a special kind of story” (Bazerman 1988:59). The word *story*, which Bazerman uses frequently, is ambiguous, as he recognizes. It may designate the narrative of textlinguists and narratologists; in the mouths of journalists and elementary school teachers, it may simply refer to connected prose. The article-as-story/narrative can easily be fit into the formula for a fairy tale: setting + body (one or more episodes) + conclusion. In this formulation, Introduction (with part of Materials and Methods) equals setting, Materials and Methods equals body, and Results and Discussion equal conclusion. Viewed thus, the biomedical journal article differs from the fairy tale only in relative proportion of its parts.

Indeed, a recent detailed history (Bazerman 1988) demonstrates that at its origin, the experimental journal article manifest in the *Philosophical Transactions of the Royal Society of London*, the oldest English language scientific journal, was a brief narrative, a rather informal account sent by personal letter to the editor, who reported it as a news story. By volume 30, five articles situated their experiments within extensive discussion of conflicts which the experiments were designed to resolve. Instead of news item, the article had become a discussion supported by a series of experi-



ments which were no longer the end, merely the means. Concomitantly, the purely experimental portion—our Materials and Methods section—gained in precision as it was subordinated to argumentation.

By the era of volume 40, the natural world no longer appeared so transparent as it once did. The writer was learning to set a problem and then “chronologically [describe] a series of experiments,” with transitions which drew conclusions and indicated a need for the next in the series. Over the course of many more years, introductory material and discussion were elaborated so that “finally, the claim or conclusion . . . becomes the central item to be constructed within the article” (Bazerman 1988:76-78). In other words, the phylogeny of the experimental journal article is essentially a trajectory from narrative to exposition. Its twentieth century biomedical reflex is not a narrative, but an exposition with an embedded narrative segment, a characterization which captures the relative emphasis of its divisions, a characterization which Longacre (1983) makes without comment. Each contains a narrative segment which can be deemphasized in Biochemistry by presentation in small type and placement at the end of the article, a quasi afterthought. For long medical narratives, Huth (1982) suggests a brief summary for the body of the article, with complete details given at the end. A similar natural history was traced by the written ethnography, one of whose amateur forbears, travel writing, had a strong narrative component, but shifted toward exposition when it became SCIENTIFIC (Pratt 1986). Clifford (1986) also points out an inverse ratio of science to narrative in the development of ethnography.

The DRANG NACH EXPOSITION evident in the three hundred year history of the experimental journal article of the *Philosophical Transactions of the Royal Society of London* still today occurs elsewhere, on a much reduced scale. Pettinari (1987) records how dictated narrative accounts of surgical operations are transcribed and finally edited into expository operative reports. Within the precise specialties under study, Dubois (1980) analyzes the papers read at professional biomedical meetings (now called SLIDE TALKS) to show that this stage in the production of science (Ziman 1968) is intermediate between laboratory and journal article, which is reflected by the fact that the talks are much closer to narratives than journal articles are. For example, one slide talk has nearly every verb in the past, the tense characteristic of English-language narrative. Moreover, it is common for slide talks to relate a chronological series of experiments with each (but the last) followed by a transition presenting a rationale for the following. The series expounds the EXPLORATORY mode once common in scientific writing, but no longer seen in experimental journal articles (Bazerman 1988). In a singularly appropriate way, then, the biogenetic law works itself

out in contemporary biomedical communication: the ontogeny recapitulates the phylogeny as exposition displaces narrative.

But the pull of exposition is stronger still, even in the section of the article most clearly narrative. As noted earlier, the Materials and Methods section is organized not by action, but by topic. Writer after writer interrupts strict chronology to round out the topic at hand, and some matters which must have occurred first are presented last in Materials and Methods. Finally, the strictly narrative Materials and Methods section can be reduced in type size and displaced from its customary second position, as if to say that discussion has triumphed at the expense of story.

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## A Tagmemic Analysis of Coherence in Writing

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Interdisciplinary concerns are increasingly of interest in academic circles today. Enkvist (1978:1) has observed that “in recent years, linguistics has been widening its scope to cover many of the problems traditionally dealt with under rhetoric rather than under grammar in the trivium of the seven liberal arts.” Linguists share this viewpoint, particularly in respect to the importance of higher-level textual concerns. Longacre (1983:xv) aptly states that “language is language only in context. For too long a time, linguistics has confined itself to the study of isolated sentences.” He goes on to say that “a discourse revolution . . . is shaping up in response to the demand for context.”

Regarding the current convergence of interest in context, Petrosky makes the following observations:

One of the most interesting results of connecting reading, literary, and composition theory and pedagogy is that they yield similar explanations of human understanding as a process rooted in the individual’s knowledge and feelings and characterized by the fundamental act of making meaning, whether it be through reading, responding, or writing. When we read, we comprehend by putting together impressions of the text with our personal, cultural, and contextual models of reality. When we write, we compose by making meaning from available information, our personal knowledge, and the cultural and contextual frames we happen to find ourselves in. (1982:26)

One result of this focus on higher level and extratextual features is a growing interest in coherence.

In addition to a cohesive unity, written texts must have a pragmatic unity, a unity of a text and the world of the reader. A description of the fit of a text to its context, as well as descriptions of what composition teachers call writing quality, must specify a variety of coherence conditions, many of them outside the text itself. (Witte and Faigley 1981:20)

The term COHERENCE is still in the process of being defined and few researchers have addressed it. The goal of this study is to make a contribution to this new and growing area by examining factors contributing to coherence in texts in an effort to apply recent linguistic findings to classroom pedagogy. An additional goal is to better understand Pike and Pike's (1983) referential hierarchy by applying it to a little-studied genre, that of DESCRIPTION.

Although linguists have been aware of the need for a focus on higher levels, Witte and Faigley (1981:201) contend that "in writing curricula, coherence is often ignored. A great portion of the advice in composition textbooks stops at sentence boundaries. Numerous exercises teach clause and sentence structure in isolation, ignoring the textual, and the situational, considerations for using that structure." Longacre (1983), Grimes (1975), and other linguists have made a vital contribution to what we now know about text structures. The time has come for teachers of writing to begin to apply this knowledge in the classroom.

### 1. Text production and processing

Until recently, reading (text processing) and writing (text production) were seen as opposite processes, with the former being considered passive and the latter active. It is now almost a given that both are constructive processes (Bracewell, Frederiksen, and Frederiksen 1982, Kucer 1985, Petrosky 1982, Squire 1983, Tierney and LaZansky 1980, and Wittrock 1983). Tierney and Pearson's view is indicative of this position:

We believe that at the heart of understanding reading and writing connections one must begin to view reading and writing as essentially similar processes of meaning construction. Both are acts of composing. From a reader's perspective, meaning is created as a reader uses his background of experience together with the author's cues to come to grips both with what the writer is getting him to do or think and what the reader decides and creates for



himself. As a writer writes, she uses her own background of experience to generate ideas. (1984:33)

From a background in composition instruction, Dillon expresses a concern that since reading and writing are similar processes, writing instructors, especially at the college level, should learn from recent developments in the field of reading and adapt a more holistic view of the process involved.

The meaning of the text is not on the page to be extracted by readers; rather, it is what results when they engage... texts for whatever purposes they may have and with whatever knowledge, values, and preoccupations they bring to it. Thus the written marks on the page more resemble a musical score than a computer program; they are marks cuing or prompting an enactment or realization by the reader rather than a code requiring deciphering. This view has already begun to prove fruitful both in literary criticism and in the study of reading. THE PREVAILING UNDERSTANDING OF COMPOSITION, HOWEVER, HAS NOT UNDERGONE A COMPARABLE OR PARALLEL REORIENTATION [emphasis added]: textbooks and teachers still speak in terms of getting the meaning down on the page, saying what one means, and so on. It seems that some of what we have learned, or at least hypothesized, about constructing texts from the reader's end ought to have implications for the way we think about and teach writing. (1981:xi)

This current focus on the interactive nature of text production and processing leads to a consideration of textual coherence which includes both approaches to texts.

**1.1. Coherence versus cohesion.** There seems to be considerable fuzziness in the use of the terms COHERENCE and COHESION. In fact, Winterowd now admits that his classic work, *The Grammar of Coherence*, should have been entitled *The Grammar of Cohesion*. He states that "a text can be cohesive without being coherent or coherent without being cohesive, depending to a great extent, of course, on the reader" (1985:100).

It was only about a decade ago that coherence began to be separated from cohesion (Enkvist 1978, Moe 1979). Cohesion is now thought of as being limited to textual features, while coherence is thought of as including those features which give unity and flow, not only within the text, but beyond it—those features which aid in the choice and instantiation of appropriate schemata by the reader (Carrell 1982, Beaugrande and Dressler 1981, Phelps 1985, Tierney and Mosenthal 1983, Werth 1984, Winterowd 1985).

Coherence, although a vague term in much of the literature, is a major concern in text production. The explicit or implicit goal of most writers is to produce a coherent text which communicates to the reader. When discussing those factors which contribute to the perception of a text as coherent, many researchers have focused on only those features within the text usually referred to as cohesion. Mosenal and Tierney (1984) and Witte and Faigley (1981) have shown, however, that while cohesion may contribute to coherence, the two are not the same. Werth (1984) suggests that coherence should be viewed as a more generic term which encompasses the sub-categories of cohesion, collocation, and connectors. Beaugrande and Dressler (1981:6) note that "coherence is clearly not a mere feature of texts, but rather the outcome of cognitive processes among text users."<sup>1</sup>

The reason most researchers have looked at cohesion instead of coherence (no matter which term they use) is no doubt because, as Moe (1979:18) observes, "Linguists consider cohesion to be a measurable linguistic phenomenon, whereas coherence is considered to be more global and is not as directly amenable to evaluation." A very different position is held by Beaugrande and Dressler (1981:7), who see coherence and cohesion as both being "text-centered notions, designating operations directed at the text materials."

Bamberg has addressed the evaluation of the coherence of texts. She suggests that based on recent research in reading it is clear that

Meaning and coherence are not inscribed in the text . . . but arise from readers' efforts to construct meaning and to integrate the details in the text into a coherent whole. Although readers are guided by textual cues, they also draw on their own knowledge and expectations to bridge gaps and to fill in assumed information. (1983:419-20)

Foster (1984) found deictic references more important to textual coherence than was the use of cohesive ties. This may be because deixis takes us beyond the written text to the text world. Building on the work of Kintsch and van Dijk (1978), Marzano (1983) proposes that coherence be analyzed by identifying macropatterns—a rather complex task which entails first dividing the text into predication units. A great deal more work remains to be done in the understanding of coherence.

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<sup>1</sup>Most of the work on cohesion dates from the mid-seventies. Since that time, various scholars (e.g., Fahnestock 1983, Markels 1984, and Stotsky 1983) have addressed the issue, although sometimes calling it coherence. Although little research has been done with coherence, Bamberg (1983:417) has noted that "interest in this topic has intensified during the last five years."

Enkvist (1978:16) has observed that "one basic difficulty in cognitive text modelling is that coherence is not an inherent quality of a text. Coherence is rather a function of the text and of the equipment the hearer or reader brings to its interpretation." Because of this, he goes on to say that "Connexity is . . . a matter of an interaction between the text and the receptor's knowledge base, and when we operate cognitive text models we must know whose knowledge base we are trying to describe." This leads to an examination of what writers know about their potential audiences.

**1.2. Audience awareness.** Coherence and audience awareness are closely related topics, since reader-related phenomena which are highly important to coherence are often triggered by the author's sense of audience (Baker 1985, Crowhurst and Piche 1979, Flower 1979, Kroll 1978, 1985, Rose 1980, and Wagoner 1983).

Walvoord (1982:30) notes the correlation between audience and coherence by observing "that in all cases the test of whether or not a paragraph is coherent is how easily the reader can follow the thought progression." Similarly, Ede and Lunsford (1984:169-70) observe that "a fully elaborated view of audience . . . must balance the creativity of the writer with the different, but equally important, creativity of the reader . . . It must relate the matrix created by the intricate relationship of writer and audience to all elements in the rhetorical situation."

**1.3. Product versus process.** From the study of coherence one acquires insights into the ongoing debate which has surrounded the issue of whether texts should be studied by looking at products or at the process of production. Probably the most definitive work on coherence is Phelps' 1985 essay, in which she seeks to posit an integrative theory of text production as both process and product. Broadly speaking, the product is the text as it appears on paper, while the process is the interaction between that text and the world of the reader/analyst. She suggests the need to change "the root metaphor of composition from that of creation to one of symbolic interaction" (14). She distinguishes coherence and cohesion by observing that "just as coherence is the semantic and pragmatic integrity discovered by readers in textual meanings, cohesion is broadly the verbal relatedness of the text as a cuing system" (24). She further states that "after great early confusion between the notions of coherence and cohesion, a distinction between them is beginning to firm up along the lines I have suggested, although the distinction remains rather vague and inconsistent" (24).

**1.4. Decontextualization versus context.** In spite of the current trend toward a more holistic view of text production and processing, many books still being used in classrooms focus on teaching lower level writing skills (e.g., Adelstein and Pival 1980). Common sense suggests that focus on lower level decontextualized tasks does not develop mature writers who can produce coherent texts.

One cannot consider the importance of the writing context without addressing insights from schema theory in the field of reading. Schemata are the organized conceptual systems which are the basis for understanding. As D'Angelo (1986:436) has observed, "research in schema theory demonstrates the importance of verbal schemata and macropropositions in organizing complete texts." These "verbal schemata and macropropositions" are important factors in the development of coherent texts.

**1.5. Description as a genre.** The original impetus for this study came from the work of Allen (1982), who strongly encourages the use of the five senses, with a concomitant focus on detail. Following her methodology for teaching writing results in texts that are descriptive in nature. In the field of linguistics, it is not clear whether or not description is a separate discourse genre. It is definitely a type of writing that is pervasive throughout virtually all genres, but whether or not it is a genre in its own right is still open to question. For example, Longacre (1983:10) observes "It may be that descriptive discourse, in which we simply are describing something which we see, is essentially different from expository discourse." Jones is more explicit in her comments regarding description as a genre although she is still unwilling to make a definitive statement:

I have classed descriptive discourses . . . with expository discourse, although sometimes I lean instead towards classing descriptive as a separate type, on [a] par with narrative and expository discourse. (1977:126)

Since most textual or discourse analysis being done in linguistic circles today focuses on narrative texts, there is very little in the linguistic literature which gives insights into descriptive texts.

In the field of rhetoric, however, the seeds of modern descriptive writing go back to 1866 when Alexander Bain's landmark textbook *English Composition and Rhetoric* came out asserting that all texts could be categorized under one of five types or modes of discourse: description, narration, exposition, persuasion, or poetry. Bain contended in an 1849 essay that he was the first to separate description into a distinct genre (Harned 1985). Whether or not this is true, many of the current writing heuristics still can

be traced back to Bain. Because of his influence, description is here considered a genre in its own right.

**1.6. Linguistic perspectives.** An early major contribution to the work on cohesion and coherence was Halliday and Hasan's (1976) work, *Cohesion in English*. Although they do not even use the term coherence, they refer to EXOPHORIC REFERENCE which "takes us outside the text altogether" (18). They contend that "The significance of the exophoric potential is that, in instances where the key to the interpretation is not ready to hand, in text or situation, the hearer or reader CONSTRUCTS a context of situation in order to supply it for himself" (18). About the same time, Grimes (1975) made a significant contribution to discourse analysis and an understanding of texts with his *The Thread of Discourse*. Beaugrande (1980, 1984) has done comprehensive work on text production and discourse processing.

Gutwinski cautions us not to confuse the terms coherence and cohesion and contends that

The rhetoric textbooks define COHERENCE rather vaguely, dealing under that heading with phenomena which, from a linguistic point of view, cannot be treated on a single level of analysis and some of which are not open to linguistic investigation at all. (1976:26)

He prefers to avoid the term "because of the vagueness that accompanies the popular use of [it], and the indiscriminate application of it to a wide range of linguistic and nonlinguistic phenomena" (27).

Pike (1981), on the other hand, in a view shared by Grimes (1975), insists that nonlinguistic phenomena are an appropriate domain for linguistic analysis and observes that

Until recently, most linguists in the United States have confined their attention to sentences and their included parts. Gradually they are extending their analyses to larger units—paragraphs, monologues, and conversations. With this new focus, linguists may hope to integrate their work with that of literary scholars. (1981:63)

According to Enkvist (1978), there are four basic theoretical models espoused by various textlinguists: (a) sentence-based, (b) predication-based, (c) cognition-based, and (d) social-interaction-based text models. Similarly, in the field of composition, Faigley, Cherry, Jolliffe, and Skinner (1985) contend that there are three basic contemporary views of composing: (a) the literary, (b) the cognitive, and (c) the social. One can see that the last two categories in both disciplines are the same. Faigley et al. go

on to state regarding the cognitive tradition "some of Aristotle's categories have carried through a 2,400-year-old tradition of teaching rhetoric to become useful for discourse linguists such as Pike and Grimes" (1985:16).

While acknowledging a debt to numerous other linguists for their insights regarding text analysis, the linguistics model of tagmemics as developed by Pike was chosen for this study because of the way it handles coherence-related factors. A further reason for this choice was the fact that, as Witte and Faigley (1981:189) have observed, transformational grammar has "not provided specific directions for the teaching of writing."

In an early article, Pike (1959) provides a basic introduction to language from the perspectives of PARTICLE, WAVE, and FIELD (terms borrowed from physics). These concepts were later applied to the writing process by Young, Becker, and Pike (1970). For this current study Pike and Pike's (1983) referential hierarchy was found to be a better tool for discovering how students build coherence into their texts.

The most comprehensive presentation of tagmemics is found in Pike (1967), which presents a strong emphasis on language in context; in fact, Pike and Pike (1983) define the TAGMEME as a UNIT-IN-CONTEXT. They see language as composed of three interlocking hierarchies: PHONOLOGICAL, GRAMMATICAL, and REFERENTIAL. The referential hierarchy was the main tool for the analysis of the texts in this study. It "is by far the largest and most complex of the three hierarchies . . . It concerns that to which speech refers, the communication referents" (35). Although Longacre has expressed some hesitation regarding the hierarchical nature of referential information, he concedes that "It seems . . . more and more feasible that some sort of hierarchical arrangement is required if we keep track of information as we do in the human brain" (1983:334).

According to Pike and Pike,

Reference has to do with what a stream of speech refers to—what it is talking about. It refers to qualities, identities, events, and purposeful sequences of events which make up the total macro-event. If these events were historical they could have been photographed, or if imaginary could have been drawn; in both cases they can be talked about. (1983:6)

The referential hierarchy is a relatively recent addition to their theory and thus has not been fully developed for all genres, although Poythress (1978, 1982a, 1982b) has applied it to the analysis of New Testament Greek and Howland (1981) has used it for a very thorough analysis of a story in the Carib language of Central America. This current work seeks to further its development.

## 2. Procedures and findings

A total of fifty students from two universities were asked to compose two descriptive paragraphs during one writing session: first, one of a general nature on the topic of fall (or autumn) and then, following an intervention taken from Allen (1982) regarding the use of the five senses, they were each given a packet containing five to ten leaves and asked to use their senses to describe them. Students spent ten to twelve minutes writing each text.

A MANOVA was used to determine the homogeneity of the texts from the two groups of students. Results ( $F(2,47) = .406$ ) indicate no significant difference between the texts produced by the two groups. Texts were evaluated holistically and then examined in order to identify the factors which differentiate quality (high- versus low-coherence texts) and topic (general versus specific texts).

The topics were chosen because of their ambient nature—all subjects were experiencing them to a greater or lesser degree depending on their awareness of the environment at the time the texts were written. The intent here was to utilize what Goffman (1974) terms the natural frame. Jones (1983) specifies *autumn* as an example of a natural frame.

**2.1. Holistic scoring.** It seems philosophically difficult to evaluate a holistic concept such as coherence by recourse to lower level phenomena such as analytic scoring of various subskills which are thought to relate to the process of text production. Therefore, texts were graded holistically following White (1985), who presents quite a detailed description of the training, organization, and management of a holistic essay reading session.

Two linguists who have worked within the tagmemic model and have had extensive experience in writing and editing were trained as evaluators using Bamberg's rubric (cf. Appendix A). Once the two linguists had developed what White (1985) terms a COMMUNITY OF ASSENT using sample texts, they discussed the rubric and, after gaining permission from the analyst, they adapted Bamberg's four point scale to a seven point scale. Their decision was quite appropriate in that White (1985:164) states that "readers must have the opportunity . . . even to make changes in the scoring guide if they agree to do so." Once these decisions had been agreed upon, they graded the actual texts. Scores were interpreted in light of White (1984:405): "The two scores should be added together to create a full-range distribution of scores. A one-point difference is allowable . . . An excellent reading on a six-point scale will have 5% or fewer discrepant scores; an average reading will have 7-10% of its scores more than one point apart." The interrater reliability of the holistic scores assigned was 100% for the fall texts and

94% for the leaves texts. According to White, this is well within an acceptable range.

**2.2. The four-cell tagmeme.** Once the texts were graded for coherence, five each of the high- and low-coherence texts on both topics making a total of twenty texts were analyzed for reference to the real world. The basis for this analysis was the procedure outlined in Pike and Pike (1983:35-73). As they themselves readily admit, however, the theory and thus the procedures are still in the process of formation. Note their comment (1983:66) that "each factor we have spoken of, especially role and cohesion, merits considerably more study—and in some instance very extensive studies."

Within Pike's theory of tagmemics, a linguistic unit is described by four cells: (1) slot, (2) class, (3) role, and (4) cohesion. Each of the twenty texts was analyzed in terms of Pike and Pike's referential hierarchy for these four cells (Appendix B). Basic to the referential hierarchy is the idea of ITEM-IN-CONTEXT. Thus Pike (1982) contends, in contrast to many other linguists, that we must not be limited to the text itself, but must go beyond the text both to understand and to analyze it.

*Slot.* The four-cell tagmeme begins with the first cell entitled SLOT. This contains the dynamic wave perspective and in the referential hierarchy is concerned with spatiotemporal references and relative prominence; that is, whether the event is nuclear or marginal to the larger text, although notation of relative prominence is found under class.

In terms of procedure, the class elements (events or states) are determined first. Then, secondly, where possible, they are placed in chronological order under slot. For some texts or genres where chronology is either not recorded or cannot be reconstructed, the events are placed according to their location in space. For some texts neither location in time nor space can be determined.

Regarding temporal references, there is a tendency for the better texts to keep a chronology moving through the text and to include references to at least three if not all four seasons. An interesting example is found in one text where we find *previous falls, summer, fall, and winter* all explicitly mentioned. In fact, sentence four of this text serves as a transition between a personal description and a factual description: *These colors seem to be a last glow before the green of summer fades into the black and white scheme of winter.* Here we see what seems to be a very deliberate attempt on the part of the author to make the time frame explicit by fitting fall into its immediately preceding and succeeding context.

On the other hand, two of the low-coherence texts show no spatiotemporal reference whatsoever. Others mention only the fall season. In another text, the last part of its final sentence of *life gradually preparing to sleep* may be a



veiled reference to winter, but it is not explicit enough to state unequivocally. These are extreme examples, but they show the kinds of difference found between the two sets of texts. The presence or absence of temporal reference is an important factor differentiating high- and low-coherence texts.

Both the high- and low-coherence fall texts had an equal number of references to location; that is, only two of the high-coherence texts and two of the low-coherence texts had references to location. As the statesman Henry Clay is quoted as having said, however, "Statistics are no substitute for judgment." An examination of references to location in the high-coherence texts reveals that location is clearly stated early in the text—in the first or second sentence. On the other hand, in one low-coherence text we are given the vague location in the title *I [sic] least where I come from* and we are not told until next to the last sentence that it is probably Indiana. Even then it is not clear if Indiana is the location for the whole text. So there is a qualitative difference in the way locations are stated which is not reflected in the statistics.

Since the focus of this study is the higher-level features which are evident in coherent texts, only higher-level or geographic locations have been noted above, thus locations such as sitting *around the crackling fire* or raking the leaves *into a big pile* were not considered to be locations on this level.

In the leaves texts, there are no references to higher-level locations in either the high- or low-coherence texts. In one text we find the leaves on the tree and then on the ground. It may be that such lower-level locations may have to suffice. For this study, however, it was decided that since only geographical locations were included under slot for the fall texts, the same should hold true for the leaves texts with the result that no locations were found.

Although relative prominence is a feature of slot, it is noted under class. For this study prominence was not addressed since I prefer to consider the top two cells (slot and class) as being more text related while the bottom two cells (role and cohesion) are more related to the larger context. According to Jones (1977), prominence or judgments of nuclearity may be determined more by the reader's purpose than by purely textual concerns. Because of this, I contend that it is inappropriate to include such reader-related concerns under the more strictly textual orientation of slot and class.

*Class.* The second cell is entitled CLASS and contains the more static particle perspective. It contains the "substance of reference: the events, identities, attribute relations, and place relations" (Pike and Pike 1983:35-36). In the referential hierarchy this cell contains the actual events as set forth in the text.

According to Pike and Pike (1983:37), the first step in analyzing the referential hierarchy is to "list in chronological order the smallest events that we understand to have happened as communicated to us by the stream of speech." Because it is the most substantive of the four cells, it was used to

calculate the proportion scores for the other cells, thus it has no proportion score itself and no transformations were involved. As a result, discussions of class incorporate the actual number of references to events and states.

It must be noted that while it is appropriate when working with narrative texts to focus on events, it is much more appropriate to look at states when working with descriptive texts. It was decided to keep the focus on states where that was what the authors chose to write about, since observer viewpoint is significant to tagmemic analysis (Pike and Pike 1977). In terms of procedures, both events and states are always expressed in present tense under class. Any reference to tense is recorded under slot.

*Role.* The third cell is entitled **ROLE** and is a relatively new and important addition to the theory (i.e., it was not included in earlier versions which only dealt with particle, wave, and field). For the referential hierarchy, this cell contains the purpose or reason for each event listed under class.

In analyzing role, "purpose takes precedence over reason and is introduced by *to*, whereas reason is introduced by *because*" (Pike and Pike 1983:37). Note the Pikes' earlier observation (1976:348) that "the addition of purpose [role] as such a feature . . . has been a crucial turning point in the development of this approach."

The referential role may or may not actually be found in the text itself, but is often deduced by the reader (or analyst) and thus may differ from reader to reader. When role is deduced by the reader it appears in square brackets.

Authors of high-coherence texts supplied an average of 5.3 reasons or purposes as opposed to only 1.8 for the low-coherence texts. In terms of quality, role was much easier to analyze in the high-coherence texts than in the low-coherence texts. In the latter, spelling or grammar can make the assignment of purpose or reason difficult. For example, one low-coherence text states: *Their intricate shapes with never one exactly the same, could only be formed by nature.* One must first determine what possible meanings the writer might have had in mind and then, based on that guess, determine what the role might be. Similarly, spelling problems can so obscure the meaning that it is very difficult to determine the role as in another text where we find: *The simbol type tinker of leaves rubbing against leaves is dull, but still orchastrate a synthphony that is nice to here.*

Another problem encountered in the analysis of role was the need to form a dichotomy from what may more properly be thought of as a continuum. Each item under role was marked as being either in the text or supplied by the analyst. It was actually very difficult to make role assignments which necessitated a choice between only two options. It may have been more useful to borrow at least a three-way option such as that proposed by Pearson and Johnson (1978), who suggest that information can be textually explicit, textually implicit, or scriptually implicit.

Another concern when dealing with role is the possibility of different perspectives. These are permitted and even encouraged by Pike; but they can result in a less than elegant analysis. As an example, when stating a reason for why leaves change color, should the explanation be the popular one that it depends on cool temperatures, or a more technical one, such as that given by Brackman (1987) that a decrease in daylight, as well as temperature, leads to the buildup of the abscission layer which causes chlorophyll production to cease? Other reasons can be given, such as *it's because of the variety of the tree* or *God/nature made them that way*. Any of these reasons would be acceptable under role, but could lead to a lack of agreement between various analysts.

*Cohesion*. The fourth column contains the referential COHESION with the relational or field perspective. In the referential hierarchy, it is concerned with the larger sociocultural system against which the events may be interpreted. According to Pike, "We specify in these cells factors of background situations, background beliefs, implicit assumptions, attitudes, and truth-versus-falsehood" (1981:57). For this study, the cohesion cell was deduced by the analyst, almost without exception.

Typical types of cohesion found in more than one text included those of (1). There seems to be a tendency for the high-coherence texts to have a wide variety of items under cohesion, while the low-coherence texts seem to be more limited.

(1)	High-coherence fall texts	Low-coherence fall texts
nature	22	11
author evaluation	9	5
typical human activity	5	
	High-coherence leaves texts	Low-coherence leaves texts
sight	12	27
touch	8	10
personification	8	
smell	6	5
nature	6	
author evaluation	5	

In terms of cohesion, one text is of interest because the author chose to write about fall on the beach in southern California. There is something jarring about this topic—even to someone from southern California, since for most of us, our schema for fall does not include beaches and surfing.

**2.3. The significance of tagmemic analysis.** Once the twenty texts had been analyzed for the dependent variables of slot, class, role, and cohesion

for the referential hierarchy, scores were then calculated for each. The number of events/states found under class for each text was the basis for computing the proportion scores for the other three dependent variables: for slot, the total number of references to time and location for each text was divided by the total number of event/states for that text; role was determined by dividing the number of times the author of the text supplied a purpose/reason by the total number of event/states for that text; and cohesion scores were obtained by counting the number of separate topics in the cohesion column and dividing by the number of event/states. An arcsine transformation was used to accommodate for the use of proportion scores. These transformed proportion scores for four-cell analysis are presented in (2). Means (M) and standard deviations (SD) using the transformed scores are presented in (3).

(2) Fall texts with high-coherence				Fall texts with low-coherence			
text	slot	role	cohesion	text	slot	role	cohesion
101	1.47	1.67	1.85	121	1.45	1.45	2.16
111	2.00	1.43	1.43	125	1.45	.98	2.46
232	1.12	1.20	1.45	137	1.05	.00	1.57
248	1.22	1.22	1.92	212	1.05	.74	1.05
254	1.18	1.81	1.49	222	.88	.61	1.47

Leaves texts with high-coherence				Leaves texts with low-coherence			
text	slot	role	cohesion	text	slot	role	cohesion
301	1.05	1.41	1.57	319	.85	1.22	1.41
311	1.14	2.37	1.71	337	.98	.98	1.22
404	1.57	1.92	2.29	436	.00	.85	1.05
442	.95	1.43	1.57	444	.00	.77	1.71
448	.74	1.57	2.09	458	.74	.74	1.33

(3) High-coherence fall texts				Low-coherence fall texts			
	slot	role	cohesion		slot	role	cohesion
M	1.398	1.466	1.628	M	1.176	.756	1.742
SD	.362	.270	.237	SD	.260	.530	.564

High-coherence leaves texts				Low-coherence leaves texts			
	slot	role	cohesion		slot	role	cohesion
M	1.090	1.740	1.846	M	.514	.912	1.344
SD	.307	.407	.327	SD	.477	.196	.245

A two-by-two MANOVA was then computed based on the transformed scores for the independent variables of topic (fall and leaves) and quality (high and low, as determined by trained raters using the criteria in Appendix A) and the three dependent variables of slot, role, and cohesion. This was followed by univariate and discriminant analyses. These addressed the issue of variation across text topic and quality conditions. The MANOVA indicated a nonsignificant interaction effect for the product of quality and topic,  $F(3,14) = 1.235$ ,  $p = .334$ . However, significant main effects were found both for quality,  $F(3,14) = 6.374$ ,  $p = .006$  and for topic,  $F(3,14) = 4.875$ ,  $p = .016$ .

Of the three dependent variables, only slot revealed significant main effects for both quality ( $F = 6.124$ ,  $p = .025$ ) and topic ( $F = 9.048$ ,  $p = .008$ ). Role proved to be significant for quality ( $F = 21.179$ ,  $p = .001$ ) but not for topic ( $F = 1.656$ ,  $p = .217$ ). Cohesion was found to be nonsignificant for both quality and topic.

### 3. Summary and conclusions

The analysis of the referential hierarchy revealed various factors which contribute to the differences between high- and low-coherence texts on both of the topics used in this study. Use of reference to persons or personification is probably the most distinguishing factor of high-coherence texts. Related to this is the use of objects as metaphor to explain the human condition. The use of metaphor is no doubt effective because it serves to expand the referential cohesion of a text.

On the other hand, the low-coherence texts are distinguished by a certain vagueness. Analyzing either role or cohesion for these texts involves a great deal of uncertainty, since the authors have not supplied enough purpose or context. For instance, the low-coherence leaves texts contained a great deal of detail; however, this detail was not placed in a larger context so it was up to the reader or analyst to decide why these particular details were incorporated.

Referential slot seems to be the most significant factor which enables a reader to picture the scene, or as Pike and Pike (1983:6) suggest "If these events were historical they could have been photographed, or if imaginary could have been drawn." The better texts have more spatiotemporal references which help to develop a real world context for the text which, in turn, leads to better coherence for the reader.

Referential role helps the reader to understand the purpose/reason why an author chose a certain perspective for focus or prominence. The better texts give more purposes/reasons for the statements made under class.

Although the texts used in this study were descriptive in nature, similar work needs to be done for other genres. Pike and Pike (1983), and Howland (1981) have applied the study of the referential hierarchy to narrative texts. Pike (in press) has recently done an analysis of hortatory texts using the referential hierarchy. Much more work needs to be done on a variety of text types.

Evelyn Pike (personal communication) is currently refining the kind of time under slot to accommodate possible future time such as is found in one text where we are told that *Perhaps some children will gather them together into a big pile and jump into their midst with cries of delight* and *Perhaps someone will put them into a big pile and set them on fire*. These events are hoped for, but their realization may be thwarted. Contrast this with another text which states regarding the similarities between fall and sunset that *Color flares briefly and then recedes to rest and wait for a fresh burst of life in the spring like a new dawn*. There is a much greater degree of certainty that these latter events will actually come to pass than there is that some children will play in the particular leaves described in the previous text. These different types of time may need to be accounted for in the analysis.

There may be a number of reasons that cohesion failed to show a significant effect. A major reason may be, however, that cohesion is a factor related to the society as a whole and should be measured by the amount of agreement between various readers/analysts. It is probably not a factor that can be measured quantitatively by any one person's reaction to a given text.

Regarding the referential hierarchy, students should be encouraged to locate their texts in both time and space in order to develop an adequate context for their readers. They should also be encouraged to include purposes and reasons for the statements they make about events or states. In light of current trends in reading and writing, those features which are outside the text cannot and should not be ignored, especially if we are to learn more about text production and those factors which enhance coherence. In spite of those who would suggest otherwise, extratextual concerns are an appropriate and viable domain for linguistic study.

Phelps has made a major contribution to what is known about coherence with her suggestion that texts should not be analyzed in terms of either process or product, but should be seen as both. This study has examined text production considering both the existing documents, and the process the reader or analyst may be going through to reconstruct or re-create the meaning of the text.

A further focus of this study has been the application of Pike and Pike's referential hierarchy to an analysis of a genre previously unanalyzed in this model, that of description. The referential hierarchy, and the tagmemic theory of linguistics from which it comes, have been shown to be appropriate

tools for the analysis of writing. As Pike has observed regarding the application of tagmemic theory to composition instruction:

If tagmemic formulas can help students learning to write expository prose in English, we regard that outcome as an incidental but appropriate outcome of the very different purpose for which they were developed: to provide a generally useful scheme for studying the structures of the languages of the world. (Pike 1981:64)

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### Appendix A: Measures of coherence

Essays meeting the following criteria will be rated FULLY COHERENT (4) on the four point holistic coherence rubric:

- identifies topic
- does not shift topics or digress
- orients the reader by describing the context or situation
- organizes details according to a discernible plan that is sustained throughout the essay
- skillfully uses cohesive ties such as lexical cohesion, conjunction, and reference to link sentences and paragraphs together
- concludes with a statement that gives the reader a definite sense of closure
- makes few or no grammatical or mechanical errors that interrupt the discourse flow or the reading process

Essays that are PARTIALLY COHERENT (3) will meet enough of the criteria above so that a reader will be able to make at least a partial integration of the text.

Essays will be rated INCOHERENT (2) when some of the following prevent a reader from integrating the text into a coherent whole:

- does not identify the topic and the reader would be unlikely to infer or guess the topic from the details provided
- shifts topics or digresses frequently from the topic
- assumes the reader shares his/her context and provides little or no orientation
- has no organizational plan in most of the text and frequently relies on listing
- uses few cohesive ties such as lexical cohesion, conjunction, or reference to link sentences and paragraphs
- creates no sense of closure
- makes numerous mechanical or grammatical errors resulting in a rough or irregular discourse flow.

Essays receiving the lowest score (1) will be literally INCOMPREHENSIBLE because of missing or misleading cues which prevent readers from making sense of the text (Bamberg 1983:428).

**Appendix B: A four-cell referential event tagmeme**

**1. Slot**

Where the subevent occurred [in time or space], as nuclear or marginal to the including event

**2. Class**

What happened, emically defined as being members of the paraphrase set acceptable to the narrator

**3. Role**

Why the actor performed the event—or the cause deduced by the narrator

**4. Cohesion**

How the event coheres with the underlying belief system of the hearer as expected or reported of him by the narrator (or with truth as seen by the OUTSIDE analyst in relation to some other frame of reference)

Adapted from Pike (1982:101)

## English Expository Discourse

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Students of discourse seem to have given us conflicting testimony about expository discourse: it does and does not exist as a legitimate category, and we all agree and do not agree about what texts belong in the category. John B. Black has called expository texts "the meat and potatoes of the textual world," for "expository texts are the ones that convey new information and explain new topics to people" (1985:249). Matthiessen and Thompson allude to their having examined "small written expository texts in English" (1988:287) yet, like Black, never discuss how they decided which texts are expository and which are not. Other students, especially rhetoricians, have denied such apparently distinctive status to expository discourse. James L. Kinneavy subsumes it under the general category of REFERENCE DISCOURSE, all discourse whose goal is to foreground reality by making assertions about it (1971). Katherine E. Rowan, working within the framework provided by Kinneavy, separates discourse which conveys new information from discourse which explains new topics by defining EXPLANATORY writing as "discourse primarily designed to promote understanding by lay readers of some phenomenon" (1988:29). Walter Beale refers to exposition as a quasi-genre (1989:20), and Timothy W. Crusius refers to it as a catch-all category (1989:4). Such conflicting testimony quite naturally raises questions about the nature of expository discourse. It is the purpose of this paper to articulate a conception of English expository discourse that might help answer such questions.

What is striking about those who take the existence of expository discourse for granted is the extent to which they assume their conception of it to be widespread. Britton and Black's 1985 collection of articles on the analysis of expository text omits the initial working definition of the object

to be analyzed that we might expect; that is, the collection takes it for granted that everyone consulting it already agrees about the existence of the category and already shares an understanding of the features that define that category and therefore knows what texts are to be included. Its editors and contributors as well are so confident of that prior understanding that none of them offers a definition any more explicit than Black's analogy. Matthiessen and Thompson share that confidence. Longacre includes the expository within his notional typology of discourse (1983:2-14), and although the parameters of that typology do produce a skeletal definition for each type, in the case of expository discourse, the definition is a negative one; that is, expository discourse is defined in terms of what it lacks. Thus, like Black and Matthiessen and Thompson, Longacre takes it for granted that his readers operate from the same conception of expository discourse as he does.

This assumption of widespread agreement about the nature of the expository category does suggest that the category exists, for regardless of where its boundaries are drawn, to assume that widespread agreement is to acknowledge the existence of a tacit consensus on the existence of the category. Categories of discourse exist if native users of the language, however implicitly, acknowledge their existence. To question the existence of the category in print, in the way Beale and Crusius have, is to acknowledge the same tacit consensus. Questioning its existence is a consequence not of a conviction that a category is absent from the inventory of categories, but of a conviction that the categories ought to be defined in one way rather than another. Thus Kinneavy chooses to differentiate all discourse which foregrounds reality from discourse which foregrounds the writer or the language (though separating reality, writer, and language is problematic) and thereby grants to reference discourse what Black grants to expository discourse. Rowan chooses to exclude discourse which is merely informative from the category of discourse that explains (though each of her subcategories of explanatory discourse requires the presence of the informative). Beale and Crusius are thinking of the inconsistent use of the label *expository* within rhetorical studies over a long period of time. It is not, finally, the existence of a category that is in dispute, but the nature of that category.

While the rhetoricians cited above, among others, concern themselves with classifying discourse according to goal, textlinguists generally concern themselves with classifying according to formal or structural features. Longacre has proposed a set of NOTIONAL STRUCTURES, as well as a set of surface structure features, as a means of classifying and thereby identifying discourse types, particular configurations of surface features presumably manifesting particular notional structures. Matthiessen and Thompson

have identified for themselves “twenty or so relations” between components of texts that can be used “to describe the relational structure of any coherent text” (290–91). In principle, these different approaches to discourse—the goal approach and the formal/structural approach—complement one another, given the assumption that recognizing goal depends upon recognizing formal or structural features that are associated with a particular goal. This assumption underlies the work of the textlinguists.

Given the assumption that literate users of English possess an inventory of discourse categories, when they set out to compose a text that manifests a particular category, how do they enable an interpreter to recognize the category? Conversely, how do they recognize an instance of a particular category when they encounter it? Since composers are always interpreters as well, these two questions are essentially the same. While it is possible to read without comprehending, to comprehend is to interpret. Contemporary reading theory (see especially McCormick 1988) recognizes that interpreting is interactive; that is, that interpreting requires us to continually move back and forth between details of the text and a developing hypothesis about (or mental representation of) the text as a whole. Of course that hypothesis cannot be derived solely from the details of the text, but details of the text (as well as other clues) are used to develop that hypothesis (or mental representation) and to alter, confirm, or deny it subsequently. Thus it must be the case that recognizing expository discourse depends upon the existence, within the mind of the literate language user, of particular associations between formal or structural features and the category itself. Longacre’s NOTIONAL STRUCTURES—not found in the text but presumably manifested there—must exist in the minds of native users of the language in order for them to be recognized, and thus we should examine users of the language as well as texts themselves (cf. Reddick 1986). This is not to say that all literate users of the language possess the same set of associations, or that particular formal or structural features will always be unambiguous, but it is to say that a particular text is recognized as an expository text because literate language users have decided that it is. Given the assumption that all formal or structural features are potentially ambiguous, no text can announce its own category membership. In brief, if the category has its own goal, recognizing formal or structural features associated with that category is simultaneously recognizing its goal.

What is the goal of expository discourse? By subsuming it under the category of reference discourse, Kinneavy gives it the goal of foregrounding reality. Rowan makes the goal of explanatory discourse the explaining of “some phenomenon,” stated alternatively as “technical or scientific ideas” (50). Both of these conceptions of goal, however, are problematic,

and the problem reveals itself in Rowan's implicit equating of a phenomenon and our idea of it. Nothing guarantees an identity between SOME PHENOMENON and TECHNICAL AND SCIENTIFIC IDEAS about it. If SOME PHENOMENON is something that has an existence independently of perceivers of it, our ideas about that phenomenon might or might not be accurate. For a long time we thought that the earth was flat and that illness was caused by an excess of bodily fluids. Technical and scientific ideas are accurate representations of reality only if the means by which they are derived are infallible. They are not. We cannot foreground reality in discourse unless we have unmediated access to it, and we never do. Our perceptions are always mediated by our assumptions, our beliefs, and, in fact, by the language we speak. The paradigm shifts described by Kuhn (1970) reveal the pervasive role that assumptions and beliefs play in mediating our perceptions. It is not reality that we can foreground but our perception of it.

We can in fact compose expository discourse about what does not and never did exist. It would require only a little imagination to produce an expository text explaining how an excess of bodily fluids causes illness. More generally, expository discourse can consist entirely of assertions about abstractions, about the negative, about absences, about that which has no immediate connection to our everyday sensual world (which we tend to think of as reality). Consider the following footnote, chosen at random from an article (Coopmans 1989:737) appearing in a recent issue of *Language*:

For universal statements to this effect, see e.g. Chomsky 1986b and Rizzi 1982. Safir 1985 proposes to derive this from  $\theta$ -theory and Binding theory. This problem could be easily circumvented if COMP indexing and 'pro' licensing were done via co-superscripting, which is not very attractive. For general arguments against such an approach, see Safir (1985), who proposes to rule this out via his Unity of Indexing Constraint.

Leaving aside the proper names, the referring expressions in this footnote do not refer to anything one might hear discussed at a neighborhood saloon but to concepts and procedures that exist only inside a particular theory of grammar. If those expressions do refer to anything outside that theory, to anything with an existence independent of that theory, it is several layers removed from that independent reality. It is not reality that is being foregrounded here but that which exists only by virtue of being required by internal circumstances within a theory of grammar. This is not to say that the assertions within the footnote are false or misguided assertions about reality, though they might be, but it is to say that they are



assertions about something that has no immediate connection to ordinary sensual reality and therefore, if we agree that the footnote is expository, that expository discourse need not make assertions about that reality in order to be expository discourse. If expository discourse can make assertions about that which exists only within some theoretical or hypothetical framework, then it can make assertions about anything any composer of such discourse perceives to be reality. It is more accurate to think of the goal of expository discourse as foregrounding or explaining some perceived reality.

In one sense, narrative discourse foregrounds some perceived reality as well, though that reality is not explained. Even if the composer "tells it as it happened," rather than making it all up, the characters and action constitute a perceived reality. Yet that reality is an unanalyzed one: the composer presents it without making overt assertions about it. Narrative is presented for the sake of the narrative; that is, the goal of the composer is to enable the interpreter to enter the world implied by the narrative in order to experience whatever can be experienced therein (see Ricoeur 1982). It is the interpreter of the narrative, not its composer, who may be moved to make overt assertions about the world implied by the narrative, and for that interpreter, that world is a perceived reality. Thus the interpreter who has experienced the world of Dickens' *Hard Times*, for example, might assert that its utilitarian school system can serve only itself. What the composer of narrative discourse does is put the interpreter in the same position as the composer of expository discourse: both observe some world and make assertions about it.

Similarly, argumentative discourse foregrounds some perceived reality and makes assertions about that reality. We might express the hoary argument about Socrates and his mortality in a variety of ways, but it will remain an argument as long as its conclusion is accompanied by at least one of the premises on which it depends, as in (1).

(1) *Because Socrates is a man, he is mortal.*

If that conclusion appears by itself, as in (2), what is expressed is not an argument.

(2) *Socrates is mortal.*

If (1) is taken as an assertion, rather than, say, as an example of a certain kind of elliptical argument, it is asserted in anticipation of dissent from its auditors. (2), on the other hand, is asserted in anticipation of assent from its auditors. Whenever an assertion is accompanied by other assertions

taken as grounds for accepting or believing that assertion, as in (1), the composer is simultaneously taken to anticipate the absence of assent and to be attempting to gain that assent from auditors. Ambiguity arises whenever the relation between two assertions might be the relation between grounds and conclusion, as in (3), but need not be.

(3) *Socrates is a man, and he is mortal.*

Since modern English *and* can signal a number of relations, including both logical consequence and conceptual equivalence, (3) might or might not anticipate assent. If it is taken to anticipate assent, (3) is an expository text. Few expository texts of any length are purely expository (contain no argumentative components) because all but the most naive of composers recognize that assent cannot be anticipated indefinitely. At least some assertions will trigger dissent. In short, what differentiates expository discourse from argumentative is the anticipation of assent from its auditors.

Conceiving of expository discourse as discourse that makes assertions about some perceived reality and anticipates assent from its auditors differentiates it from Kinneavy's subcategory of scientific discourse, which requires proof, but does not differentiate it from his subcategory of informative discourse. Rowan identifies explanatory discourse as a subcategory of Kinneavy's informative discourse and differentiates it from its sister subcategory of informatory discourse as follows (33–35): the primary goal of informatory discourse is to increase "the reader's awareness of some phenomenon," while the primary goal of explanatory discourse is to enhance "the reader's understanding of some phenomenon." While informatory discourse assumes that the reader has little or no awareness of that phenomenon and therefore needs information about it, explanatory discourse assumes that the reader already has sufficient awareness of it so that understanding can be enhanced. Thus informatory discourse should be recognizably different from explanatory discourse in that the informatory contains information about the phenomenon that the explanatory takes for granted. How do we recognize the difference in primary goal? If we take the amount of information overtly provided to be what differentiates the two goals, we are compelled to identify a particular text as a member of either subcategory on the basis of an information-count and would have to decide that every brief informative text is explanatory. At the same time, enhancing understanding of any given phenomenon must require either more or less information than enhancing understanding of some other one. Surely they cannot all be the same in regard to the amount of information required. More importantly, how is it possible for understanding to be enhanced without information being provided by the text?

Kinneavy identifies the essential components of informative discourse as “factuality, content comprehensiveness, and informative surprise value” (129), and he identifies the types of “explanatory assertions” as explanation “by indication of cause or agency . . . by categorization or classification . . . by purpose,” and “by description” (84–85). In Kinneavy’s terms, a discourse is not informative simply because it provides information. Yet even if we accept these identifications as accurate and exhaustive, how are we to distinguish the essential components from the explanatory assertions when we encounter them? If we assume that each manifestation of an explanation type in some text manifests an unimpeachable representation of reality, each will simultaneously be informative, in Kinneavy’s sense, for those readers who did not already possess that representation. To indicate cause or agency, to categorize or classify, to identify purpose, and to describe, given the assumption of unimpeachability, are all to be informative as well. Rowan herself claims that “informative discourse represents reality by showing its significance to lay readers” (32–33), but the difference between “showing its significance” and promoting or enhancing understanding of it is undetectable.

What both Kinneavy and Rowan overlook is the diversity among readers. Kinneavy postulates the AVERAGE READER for informative discourse, while Rowan postulates the LAY READER for explanatory discourse. Since the average reader never exists, we cannot determine whether any discourse exhibits informative surprise value unless it exhibits information that, prior to composition, was known only by its composer. Lay readers, those who do not yet understand some phenomenon, do exist, but the set of phenomena they already understand is unknowable and thus what it would take to promote or enhance their understanding of some new phenomenon is also unknowable. Since interpretation is necessarily interactive, since it depends crucially upon what the interpreter brings to the text, whether or not any particular text will actually promote or enhance understanding for any particular lay reader will depend upon whether or not that reader interprets it in a particular way, and that, in turn, will depend upon what that lay reader brings to it. No doubt composers like to think that their text will promote or enhance understanding for every reader, but what will promote or enhance understanding for any one lay reader may not for another. Since the analyst’s judgment about the subcategory membership of any particular text is an interpretive judgment about primary goal, it too will be based upon what is brought to that text. Rowan asserts that explanatory discourse “presents concepts that are not, for most lay readers, understandable when simply asserted” (34), but the fact is that, by definition, lay readers can understand no concept from a mere assertion of it.

Since lay readers do not already possess the concept, they could understand it from a mere assertion of it only if language functions like a conduit; that is, only if what is in the mind of the composer can be transported to the mind of the reader via the language of the text. If language functions like a conduit, all the concepts named in the Coopmans footnote above would now exist in all our minds. Of course they do not, for as Reddy (1979) and Sperber and Wilson (1986) have shown, language cannot function like a conduit. It is not possible to transport ideas from the mind of the composer to the mind of the reader. What we mistakenly judge to be clarity within a particular text is a consequence of what happens between that text and its interpreter, which, in turn, depends upon what the interpreter brings to that text. If the ideas are already familiar to the interpreter, they are part of what that interpreter brings to the text. What the text then does is trigger what is already in the mind of that interpreter, and thus the text will automatically seem clear. If they are not already familiar, all that the text can do is trigger inferences in the interpreter's mind that might enable that interpreter to construct those ideas, provided that what is in the text triggers the right inferences from the interpreter's preexisting ideas. It is easy for us to assume, erroneously, that everyone brings the same ideas to any particular text, and this assumption blinds us to the diversity among readers.

If some expository text seems clear to us, it is because the perceived reality the composer makes assertions about is a reality we also perceive. Those assertions, however, need have no relation to ordinary sensual reality or to anything we have ever considered. How many of us have considered the Subjacency Principle, the work of the Early Roman Baroque poet Marcello Giovanetti, Postpatristic Exegesis, or a Phase Field Model in Moving Boundary Problems? Gayatri Chakravorty Spivak, in expository discourse, makes assertions about Derrida making assertions about Lacan making assertions about Freud making assertions about the human psyche (1976). If we are already familiar with everything in this chain, Spivak's assertions will seem clear to us; otherwise they will seem unintelligible. More generally, to understand deconstruction, Chomskyan linguistics, or any other specialized intellectual activity is to occupy an intellectual space that is occupied by very few. Whatever ideas exist within that intellectual space exist for those who occupy that space but have no existence at all for anyone outside because those ideas come into being as a consequence of the labors of those inside and would have no existence at all without them. Chomsky created the Subjacency Principle, he and his adherents discuss it, and without them, the idea would go the way of the pet rock. To use an example cited by Rowan (34), recognizing an attempt at enhancing our understanding of the properties of light is relatively

simple, and that recognition is relatively simple because light is already familiar to us, but the same cannot be said about recognizing an attempt at enhancing our understanding of the Subjacency Principle.

Whatever promotes or enhances understanding must be an explanation, but just what does so never gets identified. Ordinarily, what we find cited as examples of expository discourse are textbooks intended for public school students or college undergraduates, though Matthiessen and Thompson, for example, cite printed announcements as well. One thing all such examples have in common is conventionality; that is, they all make familiar assertions about the familiar: the reflective properties of light (Rowan 34), an upcoming scholarly conference (Matthiessen and Thompson 287), the supertanker (Meyer 1985:283–84). While these may not be conventional for the student, they are for the analyst. Another thing such examples have in common is that they are presumed, by the analyst, to be designed to promote or enhance understanding; that is, the analyst takes it for granted that the example contains an explanation. Because the examples are conventional and because they are presumed to contain an explanation, the question of what counts as an explanation does not get addressed.

What counts as an explanation varies because it depends upon the interpreter. All explanations are situated, embedded within some intellectual space. In the intellectual space occupied by Kinneavy and Rowan, a category system counts as an explanation, but in the space occupied by Spivak, it does not. What counts as an explanation within Bloomfieldian linguistics does not count as one within Chomskyan linguistics because the two branches of linguistics are seeking to answer different questions about language. To master some academic (sub)discipline is to learn what its questions are and therefore to recognize an answer to one when it appears. That mastery puts one inside a particular intellectual space, and that, in turn, enables one to recognize what counts as an explanation within that space. Textbook writers, publishers, and the teachers who adopt textbooks generally presume that those textbooks explain something, but generally their intended student audience does not, for that audience does not bring to the textbooks the set of questions that the assertions within the textbooks answer. If it is assumed that light rays exist, the question of their properties can be raised; if their existence is not assumed, the question cannot be raised. An explanation of the reflective properties of light rays will be perceived as an explanation only by those readers who, at some level, have raised the question the explanation answers. As Kinneavy says of informative discourse (89), expository discourse answers a question. It is not the presence of an explanation that allows interpreters to recognize expository discourse as expository, but it is the perception that

the assertions being made constitute an answer to some question that has arisen within some intellectual space. That perception, in turn, requires that the interpreter occupy, at least partially, the same intellectual space that gave rise to the question. Otherwise the discourse will be unintelligible.

To examine expository discourse by means of conventional examples, as most analysts do, is to oversimplify the category and overlook the crucial role played by the interpreter, for in such cases, the analyst at least partially occupies the same intellectual space as the composer of the conventional examples. Graesser and Goodman (1985), for example, while acknowledging that they have textbooks in mind as well as "other written documents," claim that the "purpose of expository prose is to update the comprehender's general knowledge of well-accepted truths" (143), that expository prose "often has a pyramid development" (144), and that "the writer gets to the main point as soon as possible" (145). These are reasonably accurate claims about conventional textbooks, and in fact they are derivable from virtually any traditional handbook for inexperienced writers. If indeed the discourse contains representations of well-accepted truths, all the interpreter need do is recognize those representations, for the requirements of those truths themselves will provide recognizable structure within the (presumed) pyramid.

Robin Bell Markels, in order to illustrate the double series expository paragraph, uses the following (constructed) example (1984:62):

John likes Columbus. He likes its low inflation rate and its very low crime rate. He enjoys its many foreign food stores. He likes the city's extensive park system. Finally, he likes the cultural and sporting events that the city provides.

Markels' paragraph is conventional in at least two ways. Its opening sentence suggests a familiar general assumption ("there are reasons for someone liking something"), an assumption readily divisible into more specific assumptions corresponding to an inventory stored in the memory of any literate interpreter, and some of those specific assumptions are indeed triggered by the subsequent sentences. In addition, because it is a double series paragraph, the two linked terms in its opening sentence, *John* and *Columbus*, reappear in each subsequent sentence and reappear in the appropriate slots: anaphoric *he* always a subject, anaphoric *its* or *the city* always part of an object. For literate interpreters, the structure of the paragraph is predictable from its opening sentence, and therefore the relations among its constituents are apprehensible almost automatically. They probably would be so even without the explicit back references. In

short, because the paragraph is conventional, interpreting it gives us no pause.

It is only when an expository text is unconventional that interpreting it gives us pause, for it is then that we cannot easily match the features of the text with the assumptions we bring to it. Spivak begins a paper as follows (1989:206):

*Argument.* It is not just that deconstruction cannot found a politics, while other ways of thinking can. It is that deconstruction can make founded political programs more useful by making their in-built problems more visible. To act is therefore not to ignore deconstruction, but actively to transgress it without giving it up . . .

This Argument begins her exposition of the paper which follows it, and thus it is not an argument at all. This use of the expression Argument, at least as old as Milton's *Paradise Lost*, derives from the material crowding the intellectual space Spivak inhabits. Several other expressions in these three sentences derive from the same material, but merely elucidating those expressions would not be sufficient for the masses of interpreters who do not occupy the same intellectual space, for even the sequencing within those three sentences derives from the same material, from the perceived need to force the language out of its predictable grooves in order to alter ways of perceiving. At the beginning of conventional prose with predictable sequencing, a negative/positive alternative pair must be preceded by some immediately relevant sentence, or its corresponding assumption must reside in the forefront of the interpreter's consciousness prior to the encounter with the alternative pair. Neither is the case for the vast majority of those who might engage Spivak's Argument. While its first two sentences do resemble a double series paragraph, apprehending its structure without hesitation depends upon assumptions that are not widely shared.

Most of us will agree about the structure (and interpretation) of the Markels paragraph, but we will do so because we will bring essentially the same assumptions to it. If we take the trouble to work our way into the Spivak paragraph, we will disagree about its structure (and interpretation), and we will do so because we will bring different assumptions to it. Conventional texts rely upon the existence of widely shared assumptions, for what we perceive to be the structure (and meaning) of such texts is determined by such assumptions. If we do not occupy the intellectual space occupied by Spivak, the assumptions we will bring to her Argument will come from some other space, and those assumptions will transform that Argument into something she might not recognize as hers. Since language cannot function like a conduit, since all it can do is trigger assumptions

within the mind of the interpreter, assumptions which make the text coherent, whatever assumptions the language of the text triggers will determine what the interpreter takes the structure (and meaning) of the text to be. In Reddy's terms (292-97), the written text is a blueprint for making some tool: there are useful hints in the blueprint but no specifications about materials, assembly, or use. They come from the interpreter. If the written text is conventional, those specifications are known beforehand; if it is unconventional, those specifications must be pieced together from whatever assumptions the interpreter happens to bring to the text. To borrow from Wordsworth, expository discourse, like all the mighty world, is half perceived and half created by its interpreter. Interpreters have no alternative, and sophisticated composers know they do not.

Both the Markels paragraph and the Spivak paragraph are expository. Both make assertions about some perceived reality, anticipate assent, and, if their interpreters occupy the appropriate intellectual space, answer a question. Both are consistent with Longacre's notional typology (5); that is, both lack agent orientation and contingent temporal succession. Both exhibit some of what Longacre identifies (7-8) as characteristic expository surface structure features: parallelism, nominalization, and logical/topical/thematic linkage. What is striking about these two paragraphs, however, is the extent to which they differ. As Voss and Bisanz suggest (1985:190), no "generalized expository text structure" exists. If we ignore the recommendations about global structure made in every writing handbook, as we ought to, we cannot identify a single global structure (or overall composer's strategy) that all expository discourse exhibits. Even handbook notions like thesis statement and topic sentence do not fit existing expository discourse well at all. In the Markels paragraph, literate interpreters will identify the opening sentence as its topic sentence for the reasons suggested above, but what will such interpreters identify as the topic sentence in the Spivak paragraph? If it contains one, it does not (and cannot) announce itself. If we decide that it contains one, or if we decide that its topic sentence must be inferred, we will identify it on the basis of the assumptions we bring to the paragraph. In the absence of "generalized expository text structure," it must be local, intersentential relations that make expository discourse cohesive, relations of the sort being examined by Matthiessen and Thompson, and it must be the perception of those relations that enables interpreters to recognize (or create) the coherence of expository discourse.

Because language cannot function like a conduit, no thesis statement can clarify itself or make itself compelling. Given the linear nature of language, every composer of expository discourse must unpack his or her answer to the question being answered by laying it out in a sequence of sentences that will both do justice to that answer and enable interpreters to grasp it.



What every interpreter must then do is reconstruct, on the basis of the sequence, that answer. Longacre has identified some of the surface structure features of expository discourse that assist in that act of reconstruction, whether the text is conventional or unconventional, for those features provide clues to inferring intersentential relations. At the same time, if expository discourse made assertions about reality, or simply updated our knowledge of well-accepted truths, all of us would, in principle, have independent access to that reality or those truths, and therefore all expository texts would be conventional, for all would consist of familiar assertions about the familiar. All of the intersentential relations within any expository text would then be predictable from our independent knowledge of that reality or those truths. Such is not the case. We do not have independent access to any particular composer's perceived reality, for we may not occupy that particular intellectual space, and when we do not, our decisions about the intersentential relations in that composer's text will be different from those of someone who does occupy that intellectual space. The ideal case, the case in which the interpreter/analyst occupies the same intellectual space as the composer, is probably rare. Because perceptions of intersentential relations are necessarily the result of interpretive decisions, constrained but not determined by clues within the text, students of discourse should expect expository texts to be structurally ambiguous. No matter how much we might regret that ambiguity, it will not go away.

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## **Verbs of Speech**



## Reported Speech in Obolo Narrative Discourse

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Whereas languages are usually described as having two types of reported speech—direct quotations and indirect quotations—Obolo<sup>1</sup> is here considered to have two additional types—semidirect and semi-indirect—which differ in both form and function from the others and which range along a continuum between the two prototypes, as indicated in (1).

(1) direct — semidirect — semi-indirect — indirect

This analysis is based on four Obolo texts, each of a different type of narrative. In these texts, it was found that, of sixty-nine instances of reported speech, only two were in the form of a direct quotation (under 3%), eight (11.5%) were of each of the two intermediate types (semidirect and semi-indirect), and fifty-one (almost 74%) were of the indirect type. This indicates that direct quotation is used very sparingly in Obolo, a very useful insight for Bible translation.

This presentation proceeds by first introducing the formal differences between the four types of reported speech and then by discussing the ways they are used within the language.

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<sup>1</sup>The Obolo language is spoken by about 100,000 people in the riverine area of the southeastern coast of Nigeria, both in Rivers State and in Akawa Ibom State. It belongs to the Niger-Kordofanian phylum, Niger-Congo, Benue-Congo, Cross River, Delta-Cross, Lower Cross group (Hansford, Bendor-Samuel, and Stanford 1976:16-17, 138).

### 1. The direct quotation

The direct quotation comprises the exact words of the quoted speaker. The speech complementizer *ké* 'that' and the sentence-final question word *yé* (interrogative) are not present. The ideophones of response *iiñ* 'yes' and *iiñ-iiñ* 'no' are always quoted directly, never indirectly.

The speaker is referred to in the first person, the addressee in second person. These personal pronouns are listed in (2).

(2)	interlocutor	possessor	interlocutor	possessor
	(1s) <i>èmì, ñ-</i>	<i>ñà</i>	(1p) <i>èjì</i>	<i>kijì</i>
	(2s) <i>òwù, ó-</i>	<i>kwùñ</i>	(2p) <i>ènyì</i>	<i>kìnyì</i>

The setting (time, location, circumstance, manner) and the topic of the address are referred to by the proximal demonstrative pronouns and adjectives listed in (3).

(3)	<i>yì</i>	'this...'
	<i>éyí</i>	'this one'
	<i>kèyí</i>	'this very...'
	<i>ìkéyì</i>	'this way'

Typical instances of reported speech in the form of direct quotations are presented in (4)–(7).

(4)	<i>èmá</i>	<i>énónó</i>	<i>énênwàañ</i>	<i>gê</i>	<i>ókibé</i>	<i>iiñ</i>	<i>gwùñ</i>	<i>ñá</i>	<i>íkó</i>	<i>yì</i>
	3p	heard	woman	one	say	yes	child	1s	word	this

*ntùmùbé* *ínyí* *òwù*, *ñkábátùmù* *ínyí* *òfifí* *énê*  
 1s^speak give 2s 1s^will^not^speak give other person

They heard a woman saying, "Yes my child, this thing I have told you, I will not tell it to another person."

(5)	<i>mbè</i>	<i>jéi</i> ,	<i>irè</i>	<i>kpàsí</i>	<i>órùkán</i>	<i>iré</i>	<i>éyí</i>	<i>irè</i>	<i>èjì</i>
	1s^said	wow	be	what?	illness	be	this	be	1p

*ébêrò* *ngbò* *kèyí* *ìkpòkò* *kijì* *ótábé* *ísáná*  
 how?^do time this money 1p finish finish

I said, "Wow! What type of illness is this? What shall we do now that our money is completely finished?"

- (6) *énêníḍó òmó íbé, írîñ òmó mé újí kwùñ?*  
 3p^asked 3s say fish 3s in canoe 2s?  
 Then they asked him, "Is there any fish in your canoe?"
- (7) *íbèbè íîñ*  
 3s^said yes  
 He said, "Yes."

## 2. The semidirect quotation

The semidirect quotation is like the direct quotation in most respects. The speaker is referred to by first-person pronouns; the addressee, by second-person pronouns; and setting and topic are referenced by the proximal demonstratives of (2). It differs from the direct quotation, however, in occurring with the complementizer *ké* 'that' or the question word *yé* (interrogative), as illustrated in (8)–(11).

- (8) *íbèbè íîñ ké ìtá*  
 3s^said yes that finished  
 He said, "Yes, it is finished."
- (9) *ńbè òmó ìyàk ñgwáñ ñá, órùkàñ kèyí ìjéjé*  
 1s^said 3s wow sibling 1s illness this how?  
  
*író òwù ìkèyì yé*  
 make 2s this ?  
 I said to him, "My goodness, brother, how did this illness develop so far?"
- (10) *gwúñ yí ótótùmù ìnyí ñkònkò íbé úné kwùñ kpó-nù*  
 child this spoke give Nkonko say friend 2s look-!  
  
*ìrè inú yì ìgbè èmi yé*  
 be thing this fit 1s ?  
 The boy told Nkonko, "Friend, please see whether these clothes suit me."
- (11) *mè íbé, íré ìkàré ìkèyì-o ké kè ñkpáñ owu*  
 and said if not^be like^this that that 1s^kill 2s  
 ... and (he) said, "But for this reason, I should have killed you."

Whereas the direct form of reported speech may be taken to represent the exact words of a speaker, the semidirect form slightly modifies those words by specifically adding the complementizer *and*, in the case of interrogatives, the question word.

**Semidirect commands.** The semidirect form of a command is in every way like semidirect indicative forms in terms of the features defined above, except that the vocative form used for the addressee is skewed—a third-person possessive pronoun is used rather than a second-person pronoun. Furthermore, since a command is usually emphatic, reduplication of the introductory phrase is frequently found in semidirect commands, this reduplication always requiring *ké* ‘that’ in the body of the quotation. Typical semidirect commands are presented in (12)–(14).

- (12) *íbèbè èmì ògwáñ kàñ síkí kwéek*  
 3s<sup>^</sup>said 1s brother 3s sit down  
 He said to me, “Brother, sit down!”

- (13) *énèrièèñ yà óbèbè ògwú gwúñ gwúñ kàñ ké òmô íbé*  
 man that 3s<sup>^</sup>said this child child 3s that 3s said  
  
*òwù jê nà-nǔ*  
 2s walk come-!  
 The man said to his son, “Son, I am telling you to come!”

- (14) *énèrièèñ yà mè ògwù nwâ ébèbè èjì, èbi mèlék kibàñ*  
 man that and this wife said 1p these with 3p  
  
*ìnín újì mè èmâ ékóp éfô*  
 2p<sup>^</sup>enter canoe and 3p row go<sup>^</sup>home  
 The man and his wife said to us, “Neighbors, get into the canoe!  
 Let us row home.”

### 3. The indirect quotation

I return in §4 to the third type of reported speech along the continuum presented in (1)—the semi-indirect quotation—but must here first lay a foundation by presenting the characteristics of the fourth type—the indirect quotation—which are as follows:

The speaker is referenced not by first-person pronouns but by the third-person pronouns listed in (2), while the addressee is referenced by a special set of third-person demonstrative pronouns, listed in (15). The



latter may be reduplicated for emphasis. Third-person possessive pronouns may reference either speaker or addressee, or the addressee may be referenced by the genitive word *kè* followed by one of the addressee demonstratives.

(15)	speaker	addressee	possessor
(3s)	<i>òmô</i>	<i>ógwú, ógwúgwú</i>	<i>kàñ</i>
(3p)	<i>èmâ</i>	<i>ébí, ébíbí</i>	<i>kìbàñ</i>

Whereas the setting and topic of direct quotations are marked by the proximal demonstratives listed in (3), they are marked by distal demonstratives listed in (16) in indirect quotations. (The proximal forms are repeated in (16) for convenient reference.)

(16)	proximal	distal
	<i>yì</i> 'this ...'	<i>yà</i> 'that ...'
	<i>éyí</i> 'this one'	<i>éyâ</i> 'that one'
	<i>kèyí</i> 'this very ...'	<i>kèyâ</i> 'that very ...'
	<i>ikéyì</i> 'this way'	<i>ikéyâ</i> 'that way'

Typical examples of indirect quotations are presented in (17)–(20).

- (17) *ibêbè èmi, èmì òtáp ubok ònyí òmô*  
 3s^said 3s 3s put hand 1s^give 3s  
 He asked me to help him.

- (18) *òkèkìdó íbé mē lék kè ógwúgwú ònyè yè*  
 1s^asked say and body of this^very strong ?  
 I was asking whether he was well.

- (19) *ébêbè ké ógwú òkwù ké mífúuñ ógwú ísáñá ákàrà úsèn*  
 said that this died that buried this finish since days  
 They said that he had died and was buried many days ago.

- (20) *gwúñ yà ótútùmù ònyí ógwú útê íbé ké úsèn*  
 child that spoke give this father say that day

*yà èmâ ésíbé érè yà ké éné yà ókwú*  
 that 3p 3p went that that person that died  
 The boy told his father that it was on that day when they went to the place that the man died.

## 4. The semi-indirect quotation

We can now return to the third type of quotation in the reported-speech continuum—the semi-indirect quotation. This type of reported speech is primarily indirect in the sense that the speaker is referred to by third-person pronouns and the complementizer *ké* ‘that’ or the question word *yê* (interrogative) may be present. The addressee, however, is referenced by second-person pronouns, which are key elements of direct speech. Setting and topic are also of the form that prevails in direct quotations. Semi-indirect quotations are illustrated in (21)–(24).

- (21) *mè íbé jéi, áwàjì kàñ, ìrè kpàsí ìnyòñ ké*  
and 3s^said wow God 3s be what? world that

*òwù óròm òmó ísìbí ikéyì yê*  
2s 2s^created 3s come^out like^this ?  
and she said, “My God, why have you brought me into a world like this?”

- (22) *ògwú úgá ókèkító ító ikíbé gwúñ kàñ, òmó ikátùmú*  
this mother was^crying cry say child 3s 3s not^told

*ìnyí òwù yê íbé òwù kàgǒk ìfít ìfít yì*  
give 2s ? say 2s not^follow! play play this  
The mother was crying, saying, “My child, did I not tell you not to join in this dance group?”

- (23) *ògwú énérièèñ òbê, òwù ñga kàñ, ñgbò kèyí ìrè*  
this man said 2s mother 3s time this be

*mbùbàn, tǎp nyí òmó...*  
curse put! give! 3s  
The man said, “Mother, this time (even if) you curse me...”

- (24) *ògwú énénwàañ yà óbèbè ògwú ólóm ké ìrè*  
this woman that said this husband that be

*ère kèyí ké èmâ élùk bènè mé íbèbènè*  
place this^very that 3p lived beginning in beginning  
The woman said to her husband, “It is at this place that we have lived right from the beginning.”

## 5. Quotation formulas

Like Hebrew, Obolo uses the double-barreled quotation formula in which every quotation contains a formular verb as well as the 'say' verb. Several typical formular expressions are listed in (25).

(25)	<i>bèbè</i>	'said'	<i>riṣṣṓñ íbé</i>	'knew saying'
	<i>tùmú íbé</i>	'spoke saying'	<i>kéek íbé</i>	'remembered saying'
	<i>gàná, ráamá íbé</i>	'yelled saying'	<i>wũuk íbé</i>	'forgot saying'
	<i>dò íbé</i>	'ask saying'	<i>mṓnṓ íbé</i>	'took it saying'
	<i>kpà íbé</i>	'broadcast saying'	<i>wěek íbé</i>	'want saying'
	<i>lṓok íbé</i>	'messed saying'	<i>chiěek íbé</i>	'agreed saying'
	<i>nṓ íbé</i>	'heard saying'		

Of these, only speech verbs are found in direct and semidirect speech quotations, but all of them are used in indirect and semi-indirect quotations. In these latter types, the formula is obligatorily followed by the complementizer *ké* 'that' unless the quotation is a command or a question. This is illustrated in (26)–(28).

(26) *ítùmú íbé ké òmṓ mṓnù*  
 3s<sup>^</sup> spoke say that 3s will<sup>^</sup> come  
 He said he will come.

(27) *èmá égàgàná ìnyí gwũñ kibàñ íbé ísì úwù íkpá*  
 3p yelled give child 3p say go house book  
 They yelled at their son (asking) him to go to school.

(28) *èmá édòdò òmṓ íbé irè irĩñ mé újí kè ógwú yé*  
 3p asked 3s say be fish in canoe of this ?  
 They asked him whether there were any fish in his canoe.

(29) *íkèyà ké íbè èmì ikéyì ké ikáyáká irě èyí*  
 that<sup>^</sup> way that 3s<sup>^</sup> said 1s this<sup>^</sup> way that no<sup>^</sup> more be one

*sṓntíik iré éyí-o, ké mgbṓ yì, ké múñ ígàk újí-o,*  
 small be this that time this that water pass canoe

*ké òmṓ ikáyáká iriṣṣṓñ úbók òmṓ óbòrṓ-o*  
 that 3s no<sup>^</sup> more know hand 3s will<sup>^</sup> do

Then he told me that (the sickness) was no more little, that it had gone beyond control, and that he did not know what to do anymore.

In long quotations—which are very normal in Obolo—the complementizer *ké* ‘that’ is repeated before every main clause and also before major temporal settings, as illustrated in (29).

The addressee may be mentioned both in the introductory phrase and addressed vocatively in the body of the quotation, as in (30)–(33).

- (30) *íbèbè èmì, èmì nítáp ubók ònyí òmó*  
 3s<sup>^</sup>said 1s 1s put hand 1s<sup>^</sup>give 3s  
 He asked me to help him.

- (31) *ídòdò ògwu ògwáñ íbé, ògwáñ kàñ, ínù ikwèkwèek yé*  
 3s<sup>^</sup>ask this brother say brother 3s thing remain ?  
 He asked his brother, “My brother, how are things?”

- (32) *íbèbè èmì, èmì ògwáñ kàñ ké ínù ìyòt-o*  
 3s<sup>^</sup>said 1s 1s brother 3s that thing difficult  
 He said to me, “My brother, things are very difficult.”

- (33) *ónónò éné ókítáañ úkpó íbòńs áwàjì ikíbé,*  
 1s<sup>^</sup>heard person shout shout call God say

*áwàjì nǎ íkwú-o. áwàjì nànyáñà èmì-ei*  
 God 1s 1s<sup>^</sup>die God come<sup>^</sup>rescue 1s

I heard someone calling loudly on God, “My God, I am dying. God, come and rescue me.”

To emphasize a speech, the introductory phrase may be repeated in the quotation, as in (34) and (35).

- (34) *íbé ògwú ògwáñ ké òmó íbé òwù sibi mé úwù kàñ*  
 said this brother that 3s say 2s go<sup>^</sup>out in house 3s  
 He told his brother that he was asking him to get out of his house.

- (35) *ikwút ótútùmù ìnyí égbè íbé ké òmó íbé*  
 tortoise spoke give leopard say that 3s say

*ké íkô yà ógwúgwú ótùmúbé ìlô*  
 that word that this<sup>^</sup>very spoke is<sup>^</sup>wrong

Tortoise said to the leopard (emphatically) that what he said was wrong.

## 6. Quotations within quotations

Embedded quotations—even multiple embedded quotations—are not rare in Obolo. Where they occur, pronominal references are ambiguous. The embedded quotations are usually indirect and, within narrative discourse, are usually found near the peak. A typical instance of an embedded quotation is presented in (36). The fifth and sixth occurrences of *òmô* (third singular) refer to the man's brother. Except for the context, there is no formal difference between them and the rest, which refer to the man himself.

(36) *gwúñ yà ósìsì, mè iká, mè íbé, Pàpá, ñsí ígwén*  
 child that went and returned and said Dad 1s<sup>^</sup>went call

*íbé ké òmô gwá òkínú, mè òwù òkékè òbân*  
 said that 3s there is<sup>^</sup>coming and 2s stand await

*òmô, ké ñgwáñ káñ óriá íkwàañ ígwén òmô íbé*  
 3s that sibling 3s sent message call 3s say

*mè òmô ínù ínítáp úbók ínýí òmô mé lék*  
 and 3s come put hand give 3s in body

*íkwàañ úwù òmô ókísí*  
 work house 3s is<sup>^</sup>doing

The child went and came back and said, "Dad, I went and called him. He said he is coming and that you should wait for him, because his brother had sent for him to come and help him in the work he is doing on his house."

Similarly in (37), the possessive pronouns *ògwú* 'this one' can refer both to the man Ene and to his brother. This means that the references 'his wife' and 'his child' are ambiguous, and can be in relation either to Ene or to his brother.

- (37) *ébé mè ilòok éné ibé itúmù inyi ògwú ñgwáñ ibé*  
 3s^said and inform Ene say tell give this sibling say

*ké ògwú nwá ibé mè ógwúgwú ínù ké lék*  
 that this wife say and this^very come that body

*ògwú gwúñ ikányé*  
 this child not^well

They said he should inform Ene to tell his brother that his wife said he should come (home), that his child is not well.

### 7. Participant reference in indirect quotations

Obolo has means to reduce some of the ambiguities of pronominal reference in indirect quotations, but not all of them. For example, the third-person pronoun in the quotation always refers back to the speaker, as in (38) and (39).

- (38) *ikwút ónèñibé ké òmò mógòók ísì ikpò*  
 Tortoise then^said that 3s will^follow go look  
 Tortoise then said that he too would go and see.

- (39) *ibé ké èbí ifè chà ébé ké èmà mîrà írié ínòriè*  
 3s^say that these people those said that 3p have eaten food  
 He said that the people said they had already eaten.

In addition, the special pronominal references *ògwú* 'this one', *ògwúgwú* 'this very one', *ébi* 'these ones', and *ébi bí* 'these very ones', help to disambiguate some of the pronominal references in indirect quotations. In indirect quotations of the form 'A to B about B', for example, these special forms are used to refer to the second party, as in (40).

- (40) *ògwú ènèrièèñ yà óbèbè ògwú nwá ñgwá ógwúgwú*  
 this man that said this wife now this^very

*ísá ínòriè ínù*  
 take food come

The man said to his wife, "Now bring the food."

In indirect quotations of the form 'A to B about C', on the other hand, these same special forms refer to the third party, as in (41).

- (41) *énê yà ìtùmú íbé ké inú òkpàkpàñ ébíbí*  
 person that spoke say that thing killed these^very

*ké mîwá*  
 that many

The person said that many things were responsible for their deaths.

### 8. The status and use of the four types of quotation

The use of each type of quotation depends upon its semantic weight and whether or not it is embedded within another quotation. It does not depend upon the status of the speaker. Direct speech generally has more semantic weight and, consequently, more status than the indirect. In Obolo narratives, the preferred (normal) quotation is indirect. The indirect quotation may, therefore, be said to be the dominant type.

Important information is couched within direct or semidirect quotations to give it prominence. The more important the information is, the more directly it is put. The more direct a quotation is, the more rhetorical effect it has on the listener.

- (42) *ínèntùmú ínyí ògwú ólóm íbé, ñlóm ñá,*  
 then^3s^spoke give this husband say husband 1s

*m̀kpàk̀t íbát òwù. èmì irè gwúñ íbòt gè ñté ñá*  
 1s^not^able marry 2s 1s be child head one father 1s

*mè ñgá ñá ékáañ. èmì m̀kpàk̀t ínísíbí ìnyòñ*  
 and mother 1s have 1s not^able come^out world

*èyí m̀kpàk̀kàañ gwúñ òbòrè ñgwáñ ínyí èmì.*  
 which 1s^not^have child will^be sibling give 1s

*Mànjíit òwù*  
 1s^will^divorce 2s

She said to her husband, "My husband, I will not be able to marry you. I am an only child of my father and mother. I will not be able to live in the world without a child of my own who will be like a sibling to me. I am going to divorce you."

The main reason that few instances of direct quotation occur in Obolo narrative is due to the problem of pronominal reference to the speaker. A first-person pronoun in speaker reference position, refers primarily to the

reporter. It is this confusion that the Obolo speaker tries to avoid. But when information is very important, this rule is broken in favor of that importance, and the information is given in the form of a direct quotation. This normally occurs at turning points of a narrative, as in (42).

Important information is sometimes only a part of a statement. This important information is presented in direct quotation, while the rest of the statement is left nondirect. In (43), the speaker continues in the direct up to the word *ákóń* 'battle', and then switches to semidirect. The most important information is here put in the direct and the less important is put in semidirect in the same breath. Example (43) follows immediately after (42).

(43) *ògwú énerièeń yà óbèbè, irè òkpá, irè úgwém, òté ñá*  
 this man that said be death be life father 1s

*mè ñgá ñá, ínù gèelék ènyì éró mé lék ñá,*  
 and mother 1s thing any 2s do on body 1s

*mâsì ákóń. òwù ñgá kàń, irè òbùbàn, tǎp nyì ńmó*  
 1s go battle 2s mother 3s be curse put give 3s

That man said, "Whether death or life, my father and my mother, whatever you do to (deter) me, I will go to war. You, my mother, even if it is a curse, place it on me."

The general rule is that ordinary information is left in the indirect. If the information is 'somewhat important', it is put in the semi-indirect. If it is 'more important', it is put in the semidirect. If it is considered to be 'very important', it is put in the direct. The onus of the determination of the degree of importance lies with the speaker. The ability to do this most proficiently is the special gift of an expert orator.

The result of this rule is that direct quotations are usually kept as brief as possible because not much information is allowed to filter through to this rhetorical form. It is, therefore, not natural for a speaker to carry on quoting directly for a long time as if he is the original speaker. To break up a direct quotation, a few indirect speech forms, such as *ké* 'that', are interjected into it. This also shows the strong preference for indirect speech.

Because of their semantic weight, direct and semidirect quotations are found at turning points and at the peak of a narrative, while indirect and semi-indirect quotations are found elsewhere. Exclamations and ideophones are usually found in direct quotations.



### 9. Implications for translation

In translating reported speech, the translator must watch out for what the author considers to be important. This he must highlight using the two more-direct quotational forms. If he does not, he will hide the prominence of the utterance, and thereby reduce both the meaning and the effect of it on the reader. On the other hand, because of the dominance of the indirect quotation in natural speech, translating all direct quotations in the source text with direct quotations in Obolo will make the translation unnatural.

When only a part of the utterance is important, only that part should be highlighted. Highlighting the unimportant part also may cause confusion in the mind of the reader. This means that in long speeches of Jesus, for example, it may be necessary to render some parts in semidirect and some even in semi-indirect or indirect form.

Because of these facts, proper care needs to be taken in testing a translation. Translations are not natural texts. The translator may have put too much or too little information in direct and semidirect form. Either way can make the translation unnatural and less meaningful. However, the testing should be carefully monitored because, often apart from a few places, people cannot precisely tell when a speech should be nonindirect. It seems to me that there are no concrete parameters for determining this, and that it is mostly subjective and stylistic. But we have observed that when it is done right, people enjoy the effect.

In our Obolo translation of the Gospel of Mark, we made almost all speeches indirect, and many people, especially those who are literate in English complained. So we had to make adjustments. Another compelling reason for making such adjustments was the special nature of the Bible. When readers read the words of Jesus, especially, they want to claim them for themselves directly. The indirect speech creates a distance, and makes this impossible. This was pointed out by one of the readers.

In the New Testament, the main problem is in the Gospels and Acts where the authors are reporting what other people said and did. There is not much of a problem in the Epistles, where the author is the speaker. Reported speech forms here are, therefore, naturally left as direct quotations.

In using quotation marks, we have decided only to put pure direct speeches within quotes. This means that in some long speeches of Jesus, only parts are in quotes. This does not pose any problem to the hearer since quotation marks are not read aloud.

### 10. Conclusion

Like other languages, Obolo is unique in its own right. A complex speech quotation system is only one of the factors that contribute to this uniqueness. The reasons for the complexity can only be conjectured; but certainly it adds to the rhetorical tools available to a good speaker of the language for effectively communicating his message to his hearers and for obtaining the desired response from them.

In natural texts, oral or written, good mother-tongue speakers automatically know when to make a speech direct, semidirect, semi-indirect, and when to leave it in the indirect form. Effective handling of it enhances comprehension and helps to obtain the desired effects upon listeners.

In translating the Bible, the translator is sometimes influenced by the style of the source text. Therefore, the translation needs to be carefully tested for speech quotations.

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## Speech Act Verbs and the Words of Jesus

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Speech act verbs (SAV's) are well recognized in languages and an interest in them is conspicuous in the linguistics literature.<sup>1</sup> SAV's can be described in this way: certain verbs have the verb say as their underlying basis. Verbs of this type are used in sentences which also TELL the listener how to interpret what the speaker wishes to happen. Generally, linguists have grouped SAV's into certain sets, depending upon the particular force of the SA.<sup>2</sup> The English verb *order*, for example, tells the listener that the speaker wants something to happen and that the speaker believes that he can make the listener do what he commands. If the speaker says, "Close the window," he is issuing an order which he expects will be followed. A third person, witnessing the event, can say: "Jill ordered Jack to close the window," and in such cases, the SAV is classified as an ORDER. There are a number of verbs, in addition to orders or commands, which are of this type, e.g., *demand, tell, direct, instruct, require, prescribe* (Wierzbicka 1987:33). According to the intention of the speaker and the interpretation of the third person, any one of these could be appropriate and each of them would be in the semantic group called ORDER.

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<sup>1</sup>The literature on speech acts (SA) is voluminous, but the seminal works are by Austin (1962) and Searle (1969, 1971). Throughout this study I have gained insights from Wierzbicka's (1987) classification of English SAV's, as well as other writings. I am grateful to Bob Bugenhagen for detailed comments on an earlier draft of this paper.

<sup>2</sup>Fraser (1974) discusses the nature of what he calls VERNACULAR PERFORMATIVE VERBS, which are claimed to be quite different from ceremonial performative verbs (1974:140). The former include acts of asserting, evaluating, reflecting attitude, stipulating, requesting, suggesting, legitimatizing, and committing (1974:141). Other classifications have been proposed as well.

For any speech act (SA) which encompasses such verbs there are generally two discernable parts, the dictum and the illocutionary purpose.<sup>3</sup> In a sentence such as *I am asking you to go*, the dictum is the verb ask with the prototypical SAY component underlying it. The purpose of the statement is to cause you to leave. Of course the purported purpose may not be the same as the real purpose (I may in fact not like you).

There are also some SA's in which the act of saying the words causes something to happen. In such cases, the statement has a particular force about it, called the perlocutionary effect (Austin 1962:101). For example, when a preacher says *I now pronounce you man and wife*, there is not only a dictum (*I say formally that . . .*) and a purpose (to marry the couple), but there is also a concluding effect (that they are then legally married). Sometimes the preacher will add a caveat, such as, *by the powers invested in me by the State of . . .* as a further signal of the force of the sentence.<sup>4</sup>

Every language has SAV's, although they differ in their semantic and syntactic structures. In this article, I examine a number of English verbs from the New International Version of the New Testament, particularly those which translate certain words used by Jesus in the Gospel according to Mark. I believe that this can provide insights into his messages, as well as an illustration to Bible translators that SAV's, as a distinct semantic category, require careful consideration.<sup>5</sup>

### 1. The problem

In most instances of the recorded words of Jesus in the New Testament, the Gospel writer simply reports that Jesus *said* something, or that he *replied*, *answered*, *called*, or *told* the people, the disciples, or the religious leaders something. Other SAV's are occasionally translated such that we learn something of their semantic basis, e.g., *warned*, *instructed*, *declared*,

<sup>3</sup>This two-part division follows Wierzbicka (1987:18), in particular.

<sup>4</sup>There are also legal, nonlinguistic requirements such as the physical examination, the marriage license, the signing of appropriate forms, the payment of a fee, and so on. In some cultures there are nonverbal exchanges and rituals that take the place of or accompany the speech act.

<sup>5</sup>The NIV reflects the Greek accurately and is readily available on a computer program called Godspeed (Copyright, 1988, Bryan G. Moore, Kingdom Age Software, and distributed by Intelligence Inc., Richardson, TX). In an extensive semantic classification of the Greek lexicon written from a linguistic viewpoint (Louw and Nida 1988), SAV's are included in a number of domains, but mainly under COMMUNICATION. As the authors admit (1988:388), the order and arrangement of their subdomains (some fifty-six of them) is "somewhat artificial and arbitrary."

*prayed, commanded, rebuked, or even testified.* Upon examining the illocutionary force or purpose of the particular SA, however, it is apparent that a much fuller semantic explication and, therefore, a richer range of SAV's underlie those which are usually translated simply as *said, told, asked, or answered.* By postulating extended or underlying semantics of SAV's, I am guided by several principles, offered here for verification.

a. Sometimes an SA is understood by bystanders in such a way that the underlying and illocutionary meaning of SAY or TELL seems apparent. If we read that *Jesus said x to y*, and others interpret *x* as a particular SA, then we can be reasonably certain that *x* can be further represented with a particular SAV. On one occasion, for example, onlookers claimed that Jesus was insulting the religious leaders by what he said. The SAV INSULT then underlies the surface verb *say*. In Wierzbicka's (1987:139–49) examination of English SAV's, which I discuss in more detail below, *insult* is included in the REPRIMAND group.

b. Often, when Jesus is reported by the Gospel writer as *answering* a question he does not do so directly, at least in the sense of the expected reply. Rather, we suggest that he often DECLARES something else to be the case. We know this because of the SA formula I HEREBY TELL YOU THE TRUTH . . . (i.e., *truly, truly* or *verily, verily*). In a literal sense, the declaration is an answer, but it is also meant to be a revelation to the persons concerned, a proclamation of who Jesus is or what the Kingdom or his Father is all about.

c. When Jesus *tells* the disciples or the people something, what follows is often a parable. A parable has its own internal structure and overall style, and it is at once mysterious and challenging to the mind. In telling a parable, did Jesus EXPLAIN a principle, WARN about attitudes or actions, PROCLAIM a message, REPRIMAND listeners, or did he intend some combination of these? In lengthy parables, all of these features may occur in one account or in a series of accounts related by the author. I try to specify the linguistic or sociolinguistic clues that help to indicate what underlies an explication not directly revealed by the English verbs *say* or *tell*.

d. Jesus *taught* disciples and people; we sometimes read that *he taught saying*, much like the formula *he spoke saying*. It seems obvious that he could not speak without saying or talking, nor could he teach without speaking. And yet *teach*, like *preach*, is not recognized or listed by Wierzbicka as a SAV in English. I consider both to be SAV's because they have a dictum, i.e., *say*, which is implicit, and an illocutionary purpose, i.e., Jesus had something which he wanted people to know or understand. This consideration leads me to consider *teach* as a SAV, much like others in Wierzbicka's (1987:286–301) TELL-1 group. I will return to this later.

e. SAV's are often signalled lexically by certain adjectives or modals which accompany them. The problem is complex because surface verbs, such as *say*, *tell*, *ask*, or *answer*, sometimes represent only part of the story. Deciding how to deal with such embedding is an important part of this study. Several conventions adopted to help with such decisions are explained in §2.

f. Commands given by Jesus are usually obvious from the imperative structure of sentences and from the effect his words had on hearers. Commands, however, are not always directly expressed by simple imperatives. Jesus says, "follow me," and the disciples leave their nets and follow him. We can interpret what he says as a CALL, and not a suggestion, giving advise, or just telling them something. He is, in effect, summoning them for a particular purpose, to be his followers.

g. The SAV *ask* is sometimes used to interrogate, but more often the illocutionary purpose is to ARGUE, EXPLAIN, or even REPRIMAND. Jesus actually asks very little that can be considered a request of other people. He does appeal to God, his Father, but in such instances he *prays*. I consider the verb *pray* to be a member of Wierzbicka's ASK-1 group (1987:49-66).

Having outlined the general nature of the problem, I now turn in more detail to methodology.

## 2. Methodology

As I have indicated, the study by Wierzbicka (1987) on English SAV's has provided a general stimulus for this study. In her work, she classifies the verbs of English into 37 separate sets, each containing from one to eleven individual verbs, for a total of almost 200 SAV's. These sets include verbs which are defined using a metalexicon, as well as by syntactic frames. Her explications of the verbs are not short, concise definitions, but are as long as necessary to delineate their essential semantic features. The metalexicon (i.e., the interpreting set of words) numbers about 150. To give some idea of how the metalexicon is used, her explication of *ask-1*, a SAV from the ASK-1 group (1987:49), is presented in (1).

- (1) I say: I want you to do *x*.  
 I think of it as something that will be good for me.  
 I assume that you do not have to do it.

Each explication is preceded by citations from English literature as a context to illustrate the semantic analysis and is followed by a discussion. Wierzbicka takes into account collocations, as well as pragmatic and syntactic properties of the verbs.

I base my analysis in the following discussion upon the basic frame presented in (2).

(2) Jesus [ ]-ed (that) *x* (should) do *y*.

In using this frame I write SAV's from the Gospel of Mark in the square brackets. The ordering of verbs is not significant, but they are generally listed according to frequency. Each verb which translates what Jesus said is described within the general semantic class of the SAV it manifests. In §§3–10, instances of the use of SAV's are grouped according to Wierzbicka's major classes. Within these classes, individual specimens are subclassified according to their more specific meanings. Each subclass of specimens is preceded by a heading which indicates (a) the major category, (b) the minor category (in parenthesis), and (c) the lexical items that encode the speech act [in square brackets].

### 3. ORDER-1 group

In the most general terms, the ORDER-1 group can be divided into three subclasses: (a) COMMANDS, in which Jesus demonstrates or authenticates his authority and power by publicly telling someone to do something; (b) REPRIMANDS, in which he addresses someone or something with a degree of correction or scolding; and (c) INSTRUCTIONS, where a particular action or series of actions is spelled out for hearers to follow.

The basic and essential semantic components which underlie each of these subclasses may be expressed as in (3).

(3) I assume that I can cause *x*.  
 I say: I want you to do *x* now.  
 I say this because I want someone to know something about me and God.

#### 3.1 ORDER-1 (COMMAND) [*say, answer*]

An additional semantic component which underlies the COMMANDS subclass is, in most general terms, expressible as in (4). Typical command SAV's from the Gospel of Mark include those of (5).

- (4) I say this so that something will be different.
- (5) He SAID to the paralytic, "I tell you, get up, take your mat, and go home." (Mk. 2:11)

*Jesus SAID to the man with the shriveled hand, "Stand up in front of everyone." (Mk. 3:3)*

*He looked around at them in anger and . . . SAID to the man, "Stretch out your hand." He stretched it out, and his hand was completely restored. (Mk. 3:5)*

*He . . . SAID to her, "Talitha kourm!" (which means 'Little girl, I say to you, get up!'). (Mk. 5:41)*

*But he ANSWERED, "You give them something to eat." They said to him, "That would take eight months of a man's wages! Are we to go and spend that much on bread and give it to them to eat?" (Mk. 6:7)*

### 3.2 ORDER-1 + REPRIMAND (REBUKE) [say, rebuke]

Additional semantic components can be postulated which underlie REPRIMANDS, if what Jesus says functions as a REBUKE. These can be represented as in (6). Examples from the Gospel of Mark include those of (7).

- (6) I say: you have done something bad.  
I want you to understand.  
You should not do/say this.
- (7) *He got up, REBUKED the wind and said to the waves, "Quiet! Be still!" (Mk. 4:39)*

*For Jesus was SAYING to him, "Come out of this man, you evil spirit!" (Mk. 5:8)*

*But when Jesus turned and looked at his disciples, he REBUKED Peter. "Out of my sight, Satan!" he SAID. "You do not have in mind the things of God, but the things of men." (Mk. 8:33)*

*When Jesus saw that a crowd was running to the scene, he REBUKED the evil spirit. "You deaf and mute spirit," he SAID, "I command you, come out of him and never enter him again." (Mk. 9:25)*



*When Jesus saw this, he was indignant. He SAID to them, "Let the little children come to me, and do not hinder them, for the kingdom of God belongs to such as these . . ." (Mk. 10:14,15)*

### 3.3 ORDER-1 (INSTRUCT, DIRECT) [*instruct, say, tell*]

The additional semantic component which underlies INSTRUCTIONS can be represented as in (8). Examples are presented in (9).

(8) I want you to do this in a certain way.

(9) *That day when evening came, he SAID to the disciples, "Let us go over to the other side." (Mk. 4:35)*

*Jesus did not let him, but SAID, "Go home to your family and tell them how much the Lord has done for you, and how he has had mercy on you." (Mk. 5:19)*

*These were his INSTRUCTIONS: Take nothing for the journey except a staff . . ." (Mk. 6:8)*

*Jesus sent him home, SAYING, "Don't go into the village." (Mk. 8:26)*

*As they approached Jerusalem . . . Jesus SENT two of his disciples, SAYING to them, "Go to the village ahead of you, and just as you enter it, you will find . . . Untie it and bring it here . . ." (Mk. 11:1,2)*

*Then Jesus SAID to them, "Give to Caesar what is Caesar's and to God what is God's." And they were amazed at him. (Mk. 12:17)*

*So he sent two of his disciples, TELLING them, "Go into the city, and a man carrying a jar of water will meet you. Follow him . . . Make preparations for us there." (Mk. 14:13-15)*

*. . . Jesus SAID to his disciples, "Sit here while I pray." (Mk. 14:32)*

*. . . he SAID to them. "Stay here and keep watch." (Mk. 14:34b)*

*[" . . . Simon," he SAID] " . . . Watch and pray so that you will not fall into temptation." (Mk. 14:[37],38)*

*[ . . . he SAID] "Rise! Let us go!" (Mk. 14:42)*

#### 4. The ASK-2 group

On the basis of contrastive semantic components, the ASK-2 group can be subdivided into SAV's of (a) INQUIRY, where Jesus is soliciting factual information; (b) ADMONITION, where Jesus exhorts or warns his listeners of a danger or a fault; (c) REBUKE, where Jesus questions the motivation or lack of knowledge of the hearers; and (d) REFUTATION, in which Jesus counters with an argument or counter evidence. At the most basic and common level, each of these SAV's contains the semantic information in (10).

- (10) I say: I want you to think differently.  
I say this because I want you and others to know the truth.

##### 4.1 ASK-2 (INQUIRE) [*ask*]

In many instances, Jesus asks a question because he appears to be seeking factual information. Even in such cases, it would be possible to postulate that the effect of his question is to TEACH because he is adding to the knowledge of the hearers or revealing some new truth to them. The additional semantic components in (11) are postulated for these cases of Jesus asking for factual information. In the examples of (12), the most straightforward and prototypical verse is Mk. 10:36.

- (11) I say: I want you to say something to me.  
I say this because I want to know something.
- (12) *Then Jesus ASKED him, "What is your name?" "My name is Legion," he replied, "for we are many." (Mk. 5:9)*

*At once Jesus realized that power had gone out from him. He turned around in the crowd and ASKED, "Who touched my clothes?" (Mk. 5:30)*

*"How many loaves do you have?" Jesus ASKED. "Seven," they replied. (Mk. 8:5)*

*He took the blind man by the hand and led him outside the village. When he had spit on the man's eyes and put his hands on him, Jesus ASKED, "Do you see anything?" (Mk. 8:23)*

*Jesus and his disciples went on to the villages around Caesarea Philippi. On the way he ASKED them, "Who do people say I am?" (Mk. 8:27)*

*"But what about you?" he ASKED. "Who do you say I am?" Peter answered, "You are the Christ." (Mk. 8:29)*

*Jesus ASKED the boy's father, "How long has he been like this?" "From childhood," he answered. (Mk. 9:21)*

*"What do you want me to do for you?" he ASKED. (Mk. 10:36)*

*"What do you want me to do for you?" Jesus ASKED him. The blind man said, "Rabbi, I want to see." (Mk. 10:51)*

#### 4.2 ASK-2 + REPRIMAND (ADMONISH) [*ask, answer, reply, say*]

When Jesus REPRIMANDS, he often is questioning the attitude or motivation of his hearers. He is contradicting their perception of God. The distinction between being ADMONISHED, REBUKED, or REPROACHED is a fine line in SAV's, with only minimal semantic components in focus. I include them all in this section.

For cases in which a question serves as a general ADMONITION, the semantic components in (13) are suggested. Examples follow in (14).

- (13) I say: I know what you are thinking.  
I know that what you are thinking is bad.  
I say this because I am not feeling good about what you are doing.

- (14) *Immediately Jesus knew in his spirit that this was what they were thinking in their hearts, and he SAID to them, "Why are you thinking these things?" (Mk. 2:8)*

*Then Jesus SAID to them, "Don't you understand this parable? How then will you understand any parable?" (Mk. 4:13)*

*He SAID to his disciples, "Why are you so afraid? Do you still have no faith?" (Mk. 4:40)*

*"Are you so dull?" he ASKED. "Don't you see that nothing that enters a man from the outside can make him 'unclean'?" (Mk. 7:18)*

*He sighed deeply and SAID, "Why does this generation ask for a miraculous sign? I tell you the truth, no sign will be given to it." (Mk. 8:12)*

*Aware of their discussion, Jesus ASKED them "Why are you talking about having no bread? Do you still not see or understand? Are your hearts hardened? . . . Do you still not understand?" (Mk. 8:17-21)*

*"What are you arguing with them about?" he ASKED. (Mk. 9:6)*

*"O unbelieving generation," Jesus REPLIED, "how long shall I stay with you? How long shall I put up with you? Bring the boy to me." (Mk. 9:19)*

*They came to Capernaum. When he was in the house, he ASKED them, "What were you arguing about on the road?" (Mk. 9:33)*

*Why do you call me good?" Jesus ANSWERED. "No one is good—except God alone." (Mk. 10:18)*

*Then he returned to his disciples and found them sleeping. "Simon," he SAID to Peter, "are you asleep? Could you not keep watch for one hour?" (Mk. 14:37)*

*Returning the third time, he SAID to them, "Are you still sleeping and resting? Enough! The hour has come. Look, the Son of Man is betrayed into the hands of sinners." (Mk. 14:41)*

*"Am I leading a rebellion," SAID Jesus, "that you have come out with swords and clubs to capture me?" (Mk. 14:48)*

#### **4.3 ASK-2 + ARGUE (REFUTE) [answer, say]**

Jesus' questions also REFUTE certain teachings or attitudes, generally of the Pharisees or teachers of the law. Such questions are in the form of an ARGUMENT which implies the additional semantic components of (15), as illustrated in (16).

- (15) I say this because it is different than what you are thinking.  
I want you to think about something.

- (16) *JESUS ANSWERED, "How can the guests of the bridegroom fast while he is with them? They cannot, so long as they have him with them."* (Mk. 2:19)

*He ANSWERED, "Have you never read what David did when he and his companions were hungry and in need?"* (Mk. 2:25)

*He SAID to them, "Do you bring in a lamp to put it under a bowl or a bed? Instead, don't you put it on its stand?"* (Mk. 4:21)

### 5. The ASK-1 group

I include a full explication of pray in (17). We have a direct REQUEST, but not in the form of a question, so the major group is ASK-1. An example of praying is given in (18), but a discourse-level example, with a number of such requests, is found in John 17.

(REQUEST) [*say*]

- (17) I say I want God to do *x*.  
 I assume that God does not have to do it.  
 I think that God will do it.  
 I think that this would be good for someone.  
 I say this because I want to cause God to do it.  
 I want people to understand that God can do it.
- (18) *"Abba, father," he SAID, "everything is possible for you. Take this cup from me. Yet not what I will, but what you will."* (Mk. 14:36)

### 6. The ANSWER group.

Jesus was often asked questions. He then sometimes answers them directly, but more often he answers by means of further TEACHINGS, ADMONISHMENTS, ARGUMENTS, OR WARNINGS.

#### 6.1 ANSWER (TEACH) [*tell, reply*]

Answers are often in the form of sayings meant to TEACH. It is in this area that the explication of TEACH reveals a number of important semantic components.

- (19) I say *x*. I say this because I want to cause people to know this about *y*.  
I assume that you will think about these things.  
I assume that you understand what you should do.

There are of course many instances in the New Testament where we read that Jesus began to TEACH them by *saying*, e.g., the beatitudes, parables on salt and light, on the fulfillment of the law, on giving to the poor and needy, on prayer and fasting, about judging others, and so on. Note the example in (20).

- (20) *"First let the children eat all they want," he TOLD her, "for it is not right to take the children's bread and toss it to their dogs."* (Mk. 7:27)

Immediately after this, we read that the crowds were amazed at his teaching "because he taught as one who had authority, and not as their teachers of the law." There seems to be no doubt that when Jesus related this maxim to the woman that onlookers understood it to be a TEACHING. Additional examples are listed in (21).

- (21) *JESUS REPLIED, "To be sure, Elijah does come first, and restores all things. Why then is it written that the Son of Man must suffer much and be rejected."* (Mk. 9:12)

*He REPLIED, "This kind can come out only by prayer."* (Mk. 9:29)

*"What did Moses command you?" he REPLIED.* (Mk. 10:3)

*"It was because your hearts were hard that Moses wrote you this law," JESUS REPLIED.* (Mk. 10:5)

*While Jesus was teaching in the temple courts, he ASKED, "How is it that the teachers of the law say that the Christ is the son of David?"* (Mk. 12:35)

## 6.2 ANSWER (ADMONISH) [*say, reply*]

There are many instances of Jesus' replying serving as a REBUKE or ADMONISHMENT. In such cases, a strong semantic component such as that of (22) can be postulated. Note the examples in (23).

- (22) I say this because you do not understand.  
I do not feel good about this.  
I want you to know something about God.
- (23) *On hearing this, Jesus SAID to them, "It is not the healthy who need a doctor, but the sick. I have not come to call the righteous, but sinners."* (Mk. 2:17)

*He REPLIED, "Isaiah was right when he prophesied about you hypocrites; as it is written. 'These people honor me with their lips, but their hearts are far from me.'" (Mk. 7:6)*

*And he SAID to them. "You have a fine way of setting aside the commands of God in order to observe your own traditions . . . And you do many things like that." (Mk. 7:9ff)*

*The disciples were amazed at his words. But Jesus SAID again, "Children, how hard it is to enter the kingdom of God!" (Mk. 10:24)*

*Jesus looked at them and SAID, "With man this is impossible, but not with God; all things are possible with God." (Mk. 10:27)*

### 6.3 ANSWER + ARGUE (DISAGREE) [*ask, say*]

Other answers take the syntactic form of questions, but DISAGREEMENT underlies them. In such cases, the semantic component in (24) is implied.

- (24) I want you to think about what you said.  
I say this because it will make you think.
- (25) *Then Jesus ASKED them, "Which is lawful on the Sabbath. to do good or to do evil, to save life or to kill?" But they remained silent. (Mk. 3:4)*

*"You don't know what you are asking," Jesus SAID. "Can you drink the cup I drink or be baptized with the baptism I am baptized with?" (Mk. 10:38)*

*Jesus REPLIED, "I will ask you one question. Answer me, and I will tell you by what authority I am doing these things." (Mk. 11:29)*

6.4 ANSWER + WARN (WARN) [*reply, say*]

Still other answers by Jesus are in fact stern WARNINGS, for which the semantic components of (26) are suggested.

- (26) I say this because I want you to be thinking about what can happen to you.  
I do not want you to become bad.
- (27) *Jesus SAID to them. "Watch out that no one deceives you . . ."*  
(Mk. 13:5ff)

*"It is one of the Twelve," he REPLIED, "one who dips bread into the bowl with me."* (Mk. 14:20)

## 7. The TELL-1 group

In this group there are two primary components:

- (28) I assume<sub>3</sub> that you can understand.  
I say: I want you to know something different.

7.1 TELL-1 (EXPLAIN) [*say, answer, reply, tell*]

There are many instances of Jesus telling others something in such a way that it is clearly an EXPLANATION of the Kingdom of God or of his own or his father's character. The further semantic components added in such cases are those of (29). What follows such SAV's is often in the form of a parable or a statement with symbolic meaning, as in (30).

- (29) I want you to understand what I am saying.  
I am saying this so that you will really understand.
- (30) *He TOLD them, "The secret of the kingdom of God has been given to you. But to those on the outside everything is said in parable."* (Mk. 4:11)

*He also SAID, "This is what the kingdom of God is like. A man scatters seed on the ground."* (Mk. 4:26)



*They were on their way up to Jerusalem, with Jesus leading the way, and the disciples were astonished, while those who followed were afraid. Again he took the Twelve aside and TOLD them what was going to happen to him. (Mk. 10:32)*

*"We are going up to Jerusalem," he SAID, "and the Son of Man will be betrayed to the chief priests and teachers of the law. They will condemn him to death and will hand him over to the Gentiles." (Mk. 10:33)*

*"We can," they answered. Jesus SAID to them, "You will drink the cup I drink and be baptized with the baptism I am baptized with." (Mk. 10:39)*

## 7.2 TELL-1 + WARN (WARN) [*teach, say*]

When Jesus WARNS his hearers, the semantic components of (31) are in focus.

- (31) I say this so that you will really listen to me.  
If you don't listen something bad will happen to you.
- (32) *He TAUGHT them many things by parables, and in his TEACHING SAID: Listen! A farmer went out to sow seed." (Mk. 4:2,3)*

*Because he was teaching his disciples. He SAID to them, "The Son of Man is going to be betrayed into the hands of men. They will kill him, and after three days he will rise." (Mk. 9:31)*

*As he taught, Jesus SAID, "Watch out for the teachers of the law. They like to walk around in flowing robes and be greeted in the marketplaces." (Mk. 12:38)*

## 8. The DECLARE group

### 8.1 DECLARE (PRONOUNCE) [*say, tell (truth), reply, answer*]

When Jesus PRONOUNCED something to be true, he often DECLARED it to be the case by using a particular SA formula, such as "I tell you the truth." In other instances, he simply states something or replies in such a way that

the DECLARATION comes into focus. For these, I postulate the semantic components of (33).

(33) I say this because it is true.  
I say this so that you can know who I am and who God is.

(34) *He SAID to her, "Daughter, your faith has healed you. Go in peace and be freed from your suffering. (Mk. 5:34)*

*And he SAID to them, "I tell you the truth, some who are standing here will not taste death before they see the kingdom of God come with power." (Mk. 9:1)*

*"I tell you the truth," Jesus REPLIED, "no one who has left home or brothers or sisters or mother or father or children or fields for me and the gospel." (Mk. 10:29)*

*I TELL you the TRUTH, wherever the gospel is preached throughout the world, what she has done will also be told, in memory of her." (Mk. 14:9)*

*While they were reclining at the table eating, he SAID, "I tell you the truth, one of you will betray me—one who is eating with me." (Mk. 14:18)*

*"This is my blood of the covenant, which is poured out for many," he SAID to them. (Mk. 14:24)*

*"I TELL you the truth, I will not drink again of the fruit of the vine until that day when I drink it anew in the kingdom of God." (Mk. 14:25)*

*"I TELL you the truth," Jesus answered, "today—yes, tonight—before the rooster crows twice you yourself will disown me three times." (Mk. 14:30)*

*"I am," SAID Jesus. "And you will see the Son of Man sitting at the right hand of the Mighty One and coming on the clouds of heaven." (Mk. 14:62)*

## 8.2 DECLARE (PROCLAIM) [*reply, say*]

DECLARATIONS can also be in the form of PROCLAMATIONS. These are noted for their perlocutionary effect. I add the component in (35).

- (35) I say this so that it will happen.
- (36) *Filled with compassion, Jesus reached out his hand and touched the man. "I am willing," he SAID. "Be clean!"* (Mk. 1:41)

*When Jesus saw their faith, he SAID to the paralytic, "Son, your sins are forgiven."* (Mk. 2:5)

*"Do you see all these great buildings?" REPLIED Jesus. "Not one stone here will be left on another; every one will be thrown down."* (Mk. 13:2)

## 9. The CALL group

### CALL + TELL-1 (TEACH) [*call + say, speak*]

When Jesus is reported to have called his hearers to him we can be sure that he is going to TEACH them something. The components already explicated in TEACH therefore supplement those of (37). The examples in (38) illustrate these features.

- (37) I say I want to talk to you alone.  
I want to say something that will help you.
- (38) *So Jesus CALLED them and SPOKE to them in parables. "How can Satan drive out Satan? If a kingdom is divided against itself . . ."* (Mk. 3:23,24)

*Again Jesus CALLED the crowd to him and SAID, "Listen to me, everyone, and understand this. Nothing outside a man can make him 'unclean' by going into him . . ."* (Mk. 7:14,15)

*During those days another large crowd gathered. Since they had nothing to eat, Jesus CALLED his disciples to him and SAID, "I have compassion for these people; they have already been with me three days and have nothing to eat . . ."* (Mk. 8:1ff)

*Then he CALLED the crowd to him along with his disciples and SAID, "If anyone would come after me, he must deny himself and take up his cross and follow me . . ." (Mk. 8:34ff)*

*Sitting down, JESUS CALLED the Twelve and SAID, "If anyone wants to be first, he must be the very last, and the servant of all." (Mk. 9:35)*

*JESUS CALLED them together and SAID, "You know that those who are regarded as rulers of the Gentiles lord it over them, and their high officials exercise authority over them." (Mk. 10:42)*

*CALLING his disciples to him, Jesus SAID, "I tell you the truth, this poor widow has put more into the treasury than all the others." (Mk. 12:43)*

## 10. The warn group

### 10.1 WARN + ORDER-1 (COMMAND) [*warn*]

The word *warn* usually occurs to remind us that the semantic components in (39) are in focus.

(39) I say: I want you to hear this.  
I want you to know something.  
I want you to do what I say.

(40) *Jesus sent him away at once with a strong WARNING: "See that you don't tell this to anyone . . ." (Mk. 1:43ff)*

*"Be careful," Jesus WARNED them. "Watch out for the yeast of the Pharisees and that of Herod." (Mk. 8:15)*

*Jesus WARNED them not to tell anyone about him. (Mk. 8:30)*

### 10.2 WARN + DECLARE (PROCLAIM) [*tell*]

Here I add the component in (41).

(41) I say that this will happen.

- (42) *"You will all fall away," Jesus TOLD them, "for it is written. 'I will strike the shepherd, and the sheep will be scattered.' "* (Mk. 14:27)

### 11. The COMPLAIN group

#### COMPLAIN (PROTEST) [say, cry out]

Within this group are SAV's which imply (43). Examples are given in (44).

- (43) I want to say this.  
I want you to know that I feel badly.
- (44) *Jesus SAID to them, "Only in his hometown, among his relatives and in his own house is a prophet without honor."* (Mk. 6:4)

*He took Peter, James and John along with him, and he began to be deeply distressed and troubled. "My soul is overwhelmed with sorrow to the point of death," he SAID to them . . .* (Mk. 14:33,34a)

*And at the ninth hour Jesus CRIED OUT in a loud voice, "Eloi, Eloi, lama sabachthani?"—which means, "My God, my God, why have you forsaken me?"* (Mk. 15:34)

*Then he SAID to the tree, "May no one ever eat fruit from you again." And his disciples heard him say it.* (Mk. 11:14)

### 12. Discussion and conclusion

One of the primary tests of meaning is in its translatability (Wierzbicka 1987). As Bible translators and linguists, we assume that what is said in language A can be translated into language B. We further claim that the basic and essential meanings which are present in original text(s) are preserved and accurate in translations into any other language. We realize that the process is complex; meanings are not represented by exact lexical correspondences, but by one-to-one, one-to-many, and many-to-one mappings of the lexical EQUIVALENTS, as well as by morphological, semantic, and pragmatic adjustments.

In this study, SAV's are interpreted pragmatically, i.e., within speech situations, but with syntactic constraints. We want to know what Jesus meant when he SAID something, but there are clues to this—we note what

he did, or what other people said or did in response to his actions. The translator must therefore consider the syntax and the discourse carefully before making a translation decision which seems purely lexical. The underlying form of *say* is itself quite neutral in semantic terms, and yet it is the most frequently used in translation.

I have suggested that the semantic information that underlies a basic verb like *say* can be accounted for by examining the SA itself. It may turn out that the translator should use quite different SAV's to translate *say* in different contexts. I have shown, for example, different underlying SAV's for Mark 2:11 and Mark 5:8, as indicated in (45). These two verses are, therefore, open to different translations in other languages.

- (45) ORDER-1 (COMMAND) [*say*] (Mk. 2:11)  
 ORDER-1 + REPRIMAND (REBUKE) [*say, rebuke*] (Mk. 5:8)

Examples (46) and (47) contrast how these verses are now translated into Tok Pisin (Papua New Guinea) and how they would be, by supplying the appropriate SAV.

- (46) a. *Mi TOKIM yu, yu sanap na lusim bet bilong yu,*  
 I say you you get^up and leave bed of you

*na yu go long haus bilong yu.*  
 and you go to house of you

I SAY to you, you get up and leave your bed (there) and you go to your house. (Mk. 2:11)

- b. *Jisas TOKSAVE long em, "Yu sanap na lusim*  
 Jesus order to him you get^up and leave

*bet bilong yu, na . . ."*  
 bed of you and

Jesus ORDERED him, "You get up, leave your bed (there), and . . ." (Mk. 2:11, with SAV supplied)

- (47) a. *Long wanem Jisas i bin TOKIM em, "Yu spirit nogut,*  
 for what Jesus PST say him you spirit bad

*yu mas lusim dispela man."*  
 you must leave this man

Because Jesus had SAID to him, "You evil spirit, you must leave this man." (Mk. 5:8)

b. *Long wanem Jisas i bin TOK STRONG long em,*  
 for what Jesus PST say hard to him

“*Yu spirit nogut, yu mas . . .*”

you spirit bad you must

Because Jesus had COMMANDED him, “You evil spirit,  
 you must . . .” (Mk. 5:8, with SAV supplied)

One difficulty with this type of analysis and resulting translations is that the translator must thoroughly analyze the SAV's in the receptor language. A native speaker must be consulted to suggest the meaning of the SAV (or other lexemes). Wierzbicka provides a methodology for translators to use, if they wish to know what the native speaker actually understands and are interested in a verification process for the analysis.

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# A Note on the Text Structure of the *Odyssey*

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In recent years, linguists interested in discourse analysis have increasingly pushed to work with larger corpora of textual data, based on the valid assumption that statements regarding the discourse function of a construction or morpheme in a given language are more likely to be true if they can be shown to hold true for a large body of text data in that language. It is also true, however, that the methodology of discourse analysis can successfully be used to analyze the function of constructions or expressions in a single literary text in order to elucidate aspects of the literary structure of that text.

In this paper, the function of an unusual construction in Homer's *Odyssey*, the second-person quotation formula (henceforth 2QF), is analyzed using discourse analysis procedures, shedding light on a little-studied aspect of this classical epic poem.

## 1. Definition of the problem

A casual reading of the *Odyssey* reveals that a major juncture in the poem's plot line occurs between books 13 and 14. Preceding this juncture lies the account of Odysseus' long journey from the ruins of Troy to Ithaca, his island home. Following the juncture is the story of Odysseus' revenge on the suitors who have ravaged his house and property in his absence. A key character in this latter part of the poem is Eumaios, a swineherd bound to Odysseus' household, who is the first person whom Odysseus meets upon his return to Ithaca. Much of Eumaios' participation in the

narrative is in dialogue with Odysseus and others, and it is in these contexts that a series of 2QF's occurs.

The quotation formulas which introduce the reported speeches of Eumaios appear in two distinct forms. The first refers to Eumaios in the third person, as would be expected in a third-person narrative (1).<sup>1</sup>

- (1) *He shouted at the dogs and scared them in every direction with volleyed showers of stones, and spoke then to his own master:* (14:35)

This type of quotation formula will henceforth be referred to as a third-person quotation formula or 3QF.

The second type of quotation formula refers to Eumaios in the second person, as in (2).

- (2) *Then, O swineherd Eumaios, you said to him in answer:* (14:55)

The 2QF is unusual in third-person narratives, in general, and is also rare in the *Odyssey*. It occurs only in the latter part, after Odysseus arrives in Ithaca and begins to plot revenge on the suitors, and it only occurs in reference to Eumaios.<sup>2</sup> In reflecting on the meaning or function of an unusual expression such as this, a number of questions come to mind.

*Why do the 2QF's only occur in the latter portion of the Odyssey, from book 14 onward?* Longacre (1983:29) posits as a linguistic generality that shifts to A MORE SPECIFIC PERSON—i.e., from third person to second person to first person—create a heightened vividness which is frequently a feature of the peak of a narrative. Longacre (1983:24) defines the peak of a narrative as “any episode-like unit set apart by special surface structure features and corresponding to the climax or denouement” of a narrative. This observation could explain the phenomenon under consideration in this paper. Odysseus' revenge on the suitors in book 22 certainly must be considered the climax in the plot structure of the narrative. All of the events recounted in books 14–24 either build up toward or descend from that violent culmination. As Longacre notes, the surface structure features which mark the peak of a narrative can often spill over to highlight the preclimactic episodes as well. Thus the occurrence of 2QF's only in the latter portion of the *Odyssey* can be adequately explained as a rhetorical

<sup>1</sup>For the reader's convenience, all quotations from the *Odyssey* are in English, from Richmond Lattimore's translation (1965). The details of the original Greek are irrelevant to this study.

<sup>2</sup>2QF's occasionally occur referring to Menelaus in the *Iliad*. These have not been analyzed, being beyond the scope of the present study.

means of heightening the vividness of the narrative, building toward the vengeful battle in book 22.

*Why are the 2QF's only used with reference to Eumaios' words?* In other words, why is Eumaios the only character in the *Odyssey* referred to by a 2QF? In answer, it should be noted that Eumaios, as he is described in the *Odyssey*, exhibits many of the sterling qualities of classical Greek manhood. He is kind, hospitable, and generous to Odysseus when he returns disguised as a wandering beggar. His love and loyalty to his master are undiminished by Odysseus' long absence. He faithfully protects the interests of his master's house, long after he personally has given up hope that Odysseus will ever return. He bravely fights at his master's side in the battle against the suitors in book 22. It could hardly be expected that the average Greek audience listening to the poem would have identified with a legendary hero such as Odysseus, or even his son Telemachus, and they certainly would not have consciously identified with the suitors. However, Eumaios, as a common swineherd who exhibits outstanding Greek character qualities, is one whose role could have been filled by many a Greek listener of the poem. As a simple man, unashamed to do a menial task, whose words and actions reflect qualities of character which were highly valued in the ancient Greek world, Eumaios is the participant of the epic who typifies the self-image of most of the Greek listeners of the poem. The use of 2QF's to refer exclusively to Eumaios may thus serve to involve the audience more deeply in the narrative by identifying them with this ideal Greek Everyman.

## 2. Distribution of 2QF's in the *Odyssey*

*Why are some of the quotation formulas referring to Eumaios in third person and others in second person?* Expressed in another way, what are the principles governing the occurrence of the 2QF in the *Odyssey*? The answer to this question forms the core of this paper.

Of the thirty-two quotation formulas introducing Eumaios' words which occur in the *Odyssey*, fifteen occur with second-person subjects and seventeen occur with third-person subjects. These quotation formulas are listed in (3) and (4), respectively, where the reference number appears first for each quotation, followed by an encoded designator for the addressee and by a designator for the conversational type of the utterance.<sup>3</sup>

<sup>3</sup>The names of addressees are encoded as follows: A = Antinoos, E = Eurykleia, M = Melanthios, O = Odysseus, P = Penelope, S = fellow swineherds, T = Telemachus. The type of utterance is encoded as follows: RU = resolving utterance, IU = initiating utterance, CU = continuing utterance.

- (3) Second-person quotation formulas in the *Odyssey* referring to the speech of Eumaios
- |        |   |    |   |
|--------|---|----|---|
| 14:55  | o | RU | Evaluation of o's comment. Hospitality is an obligation on every man. Grieves the frustrated homecoming of his master.                  |
| 14:165 | o | RU | Evaluation of o's comment, iu: Question. Doubts his master's return. Asks the beggar's story.   |
| 14:360 | o | RU | Evaluation of o's story. Sadness at the beggar's suffering as recounted in his story. Continued doubt that his master will ever return. |
| 14:442 | o | iu | Proposal. Urges o to eat the special meal prepared for him.   |
| 14:507 | o | RU | Response. Offers the beggar o his mantle as a night covering.   |
| 15:325 | o | RU | Response to proposal. Urges the beggar o to stay with him, warning to stay away from the suitors.                                       |
| 16:60  | T | RU | Answer to Question. Introduces disguised o to T.  |
| 16:135 | T | RU | Response to Proposal. Agrees to inform P of T's return.   |
| 16:464 | T | RU | Answer to Question. Reports that he saw the suitor's ship entering the harbor.  |
| 17:272 | o | RU | Evaluation and iu: Proposal. Shows disguised o his own house, proposes they enter separately.   |
| 17:311 | o | RU | Answer to Question. Explains about Argos, o's dog.  |
| 17:380 | A | RU | Evaluation of A's remark. Rebukes A for being cruel to the servants of o.   |
| 17:512 | P | CU | Counter-remark. Informs P of the disguised o's background and his stories about her husband's imminent return.                          |
| 17:579 | P | RU | Answer to Question and iu: Proposal. Delivers Beggar o's message to P to wait until evening for an interview.                           |
| 22:194 | M | iu | Remark. Jeers at the final fate of M, an unfaithful servant.  |

- (4) Third-person quotation formulas in the *Odyssey* referring to the speech of Eumaios
- |        |   |    |  |
|--------|---|----|--|
| 14:35  | o | IU | Initial greeting   |
| 14:79  | o | IU | Proposal. Urges o to eat, describes the abuses of the suitors.   |
| 14:121 | o | RU | Answer to Question. Reveals that o is his lost master.   |
| 14:401 | o | RU | Response to Proposal and IU: Proposal. Confident assertion that o will not return. Proposal to prepare meal. |
| 14:413 | s | IU | Proposal. Command to slaughter best pig.   |
| 15:351 | o | RU | Answer to Question. Tells about Laertes, o's father.   |
| 15:389 | o | RU | Answer to Question. Eumaios tells his own life's story.  |
| 16:22  | T | IU | Greeting   |
| 16:36  | T | RU | Answer to Question. Reports about P and state of household.  |
| 17:184 | o | IU | Proposal. proposes to lead o to town.  |
| 17:239 | M | RU | Evaluation of M's remark. Curses M, prays for his demise.  |
| 17:349 | o | IU | Proposal. Tells o T's instructions to beg among the suitors.   |
| 17:552 | o | IU | Proposal. Summons o to P, as per P's request.  |
| 17:591 | T | IU | Proposal. Warns T to be careful.   |
| 20:165 | o | IU | Question. How are you?   |
| 21:380 | E | IU | Proposal. Command to confine servant girls to their quarters as per o's command.                             |
| 22:163 | o | IU | Remark and Proposal. Reports that M has brought weapons to the suitors.                                      |

There are no readily apparent differences between the two lists of quotation formulas. Odysseus, Telemachus, and Melanthios occur as addressees in both lists. It is thus unlikely that the identity of the addressee conditions the occurrence of the 2QF. Likewise, initiating utterances in an exchange occur in both lists (22:194 in (3) and 14:35 in (4), for example) Resolving utterances in an exchange are found in 14:55 in (3), and in 14:401 in (4). Further the conversational roles of Eumaios' reported speeches, such as Proposal, Remark, Answer to a Question, Response to a Proposal, and Evaluation of a Remark (Longacre 1984:48) also occur in both (3) and (4). Some speeches having each of these conversational roles occur with 3QF and some occur with

2QF. Thus it is clear that none of the above features can explain the relative distribution of 2QF's and 3QF's in the *Odyssey*.<sup>4</sup>

A more plausible hypothesis is that the 2QF's are used to highlight some specific type of information in the *Odyssey* narrative. Several studies on non-Indoeuropean languages, under the guidance of Longacre or inspired by his work, have identified various constructions or particles—such as tense, aspect, or mode morphemes, word order, and mystery particles—whose discourse functions are to highlight significant information in narratives (Longacre and Woods 1976, Jones 1979). The term SIGNIFICANT INFORMATION here refers to that information which, when taken together, forms a reasonable summary of the narrative, the principal events which carry a story forward. Longacre calls this the BACKBONE information in a narrative. Hopper (1979) refers to it as FOREGROUNDED INFORMATION and van Dijk (1980) discusses these concepts in terms of semantic MACROSTRUCTURES. Further, several of the studies in Jones 1979 identify constructions whose discourse function is to mark the background information in a text. In other words, these morphemes or grammatical constructions were seen to be associated with information in a narrative which does not move the storyline forward, but instead filled in details regarding the setting of events, the emotions or thoughts of the participants, and so forth.

Thus, based on the fact that many languages have constructions or morphemes whose discourse function is to mark certain types of information in texts, the hypothesis that 2QF's in the *Odyssey* perform such a function merits further consideration.

In seeking to identify the type of information which 2QF's might be highlighting in the *Odyssey*, the categories of SIGNIFICANT VERSUS BACKGROUND information do not seem applicable. None of the reported speeches of Eumaios are particularly significant to the story line. In fact, most of these speeches, both those marked with 2QF's and those marked with 3QF's, would, in van Dijk's (1980:47) terms, be deleted in the process of constructing a summary or macrostructure for the *Odyssey*. In other words, the content of these quotations probably would not figure in any summary of books 14–24 of the *Odyssey*.

If 2QF's in the *Odyssey* mark some particular kind of information, it must be information that has a unifying principle which does not refer to the

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<sup>4</sup>There is one continuing utterance, in which the second speaker does not accept the dialogue on the terms suggested by the first speaker (Longacre 1983:51) among the reported speeches of Eumaios in the *Odyssey*, in 17:51 (3). In this case, Eumaios does not respond immediately to Penelope's proposal to summon the beggar Odysseus to her. Rather he makes a counterremark, informing her of the fantastic stories which the beggar has told him concerning Odysseus' fate.

relative significance of the information to the progression of the story. It is the central thesis of this paper that the principle which unifies the reported speeches of Eumaios marked by 2QF's, as opposed to those marked by 3QF's, is the notion of DRAMATIC MOMENT. Each time one of Eumaios' speeches is marked by a 2QF, it is in the context of a dramatic, poignant moment in the record of Odysseus' return to Ithaca. Many of these moments involve Odysseus' first encounters with beloved people or places in Ithaca since his departure for Troy twenty years before. Others mark dramatic points in the development of Odysseus' plan for revenge on the suitors. In the paragraphs that follow, each of the *Odyssey* 2QF's is discussed and the dramatic aspects of the surrounding contexts are in each case explained.

The first six 2QF's mark speeches whose addressee is Odysseus, and they all occur during the initial meeting of Odysseus and Eumaios. This meeting constitutes a dramatic moment in the narrative. After twenty long years, Odysseus has finally returned to Ithaca, his home, and the burning questions in his mind are: What changes have taken place in his absence? Who has remained faithful to him and his interests? Who has lapsed, siding with the suitors who were ravaging his estate? Athene had supernaturally disguised Odysseus as a beggar and, in this guise, the first person he meets is Eumaios. Besides gathering information about the state of things in his home, Odysseus is vitally concerned to establish the character of Eumaios, whether he has faithfully guarded his master's interests in his absence, or if he has sided with the evil suitors. It is in this context that the quotations marked with 2QF's attain their unity. Books 14 and 15, which recount Odysseus' interactions with Eumaios, have six quotations marked with 2QF's, all of which uniquely reveal to Odysseus Eumaios' faithful, pious, virtuous character. The seven other speeches by Eumaios in these books, marked with 3QF's, give Odysseus information about the state of affairs in his home, but do not offer him crucial insight into the character of Eumaios. Each of the speeches marked by a 2QF in books 14 and 15 is discussed below, with special attention to the aspects of Eumaios' character which are reflected in each speech.

In 14:55, Eumaios responds to the beggar Odysseus' thanks for receiving him by noting that hospitality to strangers is an obligation before Zeus, certainly a pious sentiment. Further he grieves the frustrated homecoming of his master.

In 14:165 and 360, Eumaios expresses his conviction that Odysseus will never return. While this conviction is shared by the evil suitors, on Eumaios' lips it serves to highlight his virtue and faithfulness to his master, in that, in spite of his own belief that Odysseus would never return, he continued to remain faithful in guarding the interests of the estate against the ravages of the suitors and continued to long and pray for the homecoming of his master (14:424).

In 14:442 Eumaios urges the beggar Odysseus to eat the food set before him. In 14:79 Eumaios serves Odysseus young pork, noting that it is only the young pigs which the servants are allowed to eat, while the best ones are always taken by the suitors. This speech is introduced with a 30F. In contrast, the speech in 14:442 is introduced with a 20F, although the content of the two quotations is very similar. The crucial difference between these two quotations lies in their contexts. In 14:79, Eumaios serves the beggar Odysseus young pork, servants' food, noting that the best pigs always go to the suitors. In 14:442, Eumaios has slain the finest, fattest pig in the herd, and given the tender chine portion to the beggar Odysseus, "and so exalted the heart of his master" (14:438). In flaunting the wishes of the suitors by butchering the finest pig for his guest and himself, and in generously giving the best to the vagabond, Eumaios showed himself to be bold, hospitable, and kind.

At the end of book 14, the beggar Odysseus tells a tale about his adventures before the walls of Troy, and hints for a mantle to cover himself for the night. 14:459–61 reads as in (5).

- (5) *Odysseus spoke among them. He was trying it out on the swineherd, to see if he might take off his mantle and give it to him, or tell one of his men to do it, since he cared for him so greatly.*

In 14:507, after hearing Odysseus' tale, Eumaios' responds, in a speech marked with a 20F, that he would give the beggar a mantle for the night. Here again the swineherd's words call attention to his outstanding character qualities of generosity, hospitality, and kindness, which endear him all the more to his disguised master. In light of all these indications of Eumaios' loyalty and pious character, book 14 closes with the statement in (6).

- (6) *Odysseus was happy that his livelihood was so well cared for while he was absent. (14:526–27)*

The two major speeches by Eumaios in book 15, both introduced with 30F's, give the disguised Odysseus information regarding his father Laertes and about Eumaios' own life story. One short speech marked with a 20F, however, occurs in 15:325. This speech is a response to the disguised Odysseus' proposal to go to the manor of the estate to beg among the evil suitors. book 15:304–6 notes:

- (7) *Odysseus spoke to them, making trial of the swineherd, to see if he was truly his friend, and would invite him to stay on in his stead-  
ing as he was, or would urge him to go to the city.*



Odysseus again tests Eumaios' character, and in 15:325, Eumaios again shows his virtue and good heart by urging the beggar Odysseus to stay with him as long as need be, until the current master of the household, Telemachus, should return. In this speech, marked by a 2QF, Eumaios strongly rejects Odysseus' proposal to go beg among the suitors as foolish and suicidal in light of the known character of the suitors.

We thus see that the six speeches mentioned above, all marked by 2QF's, affirm to Odysseus the loyalty, faithfulness, and pious character of Eumaios the swineherd, who is the first person Odysseus encounters in his homeland after his long absence. Cumulatively, these speeches mark a dramatic moment in the record of Odysseus' return because they give promise of a hero's welcome when he reveals his true identity and also hope for much needed support in the pending confrontation with the suitors.

In the eight speeches of Eumaios marked by 2QF's in books 16 and 17, all are associated with other dramatic poignant moments in the story of Odysseus' return to Ithaca. These events would not necessarily be considered significant in the sense of being included in a summary of the major events surrounding Odysseus' return. They do, however, represent moments of special drama and poignance in this story. In 16:60, for example, Eumaios' speech introducing the disguised Odysseus to Telemachus is marked by a 2QF. This quotation marks the first time Odysseus has seen his son in twenty years. Likewise, in 16:135, Eumaios agrees to go to the manor and inform Penelope of Telemachus' return, thus setting the stage for Odysseus to reveal his true identity privately to his son. In this case it is not what Eumaios says that is highlighted per se, but rather the dramatic situation that his agreement to depart sets up which is highlighted by the use of a 2QF in Eumaios' speech.

During Eumaios' absence, Odysseus reveals himself to Telemachus and together they plot the destruction of the suitors. In 16:464, Eumaios returns from his errand to the manor where he informed Penelope of Telemachus' return. In response to Telemachus' questions about a ship of suitors who had sought his life, Eumaios, in a speech marked by a 2QF, reports that he saw a ship entering the city harbor which he presumed to carry the murderous suitors. Eumaios' words gain their dramatic effect, for which they are highlighted by a 2QF, from the fact that they come on the heels of Telemachus' and Odysseus' counsels regarding the destruction of the suitors. Upon hearing the news of the return of the suitors vessel to Ithaca, Telemachus, like a hidden predator watching the approach of his prey, *smiled as he caught his father's eye, but avoided the eyes of the swineherd* (16:476).

In book 17, at Telemachus' request, Eumaios leads the beggar Odysseus to town. The first two speeches in the book which are introduced by 2QF's highlight moments of quiet drama in the narrative. In the first speech,

beginning in 17:272, unaware of the true identity of his vagabond companion, Eumaios shows Odysseus his own manor, which he had not seen for twenty years. Then again in 17:311, Eumaios introduces the disguised Odysseus to his own aged dog Argos, who had been just a puppy when Odysseus had left Ithaca twenty years earlier. Neither of these moments would prove to be major events in the *Odyssey*, but their drama and poignance is undeniable, and it is this dramatic effect that is highlighted by the 2QF's used to introduce these two speeches.

Odysseus enters his own house disguised as a beggar and begins to visit each suitor in turn, seeking some gift of food. At this, Antinoos, a leader of the suitors, begrudges a gift to a beggar and rebukes Eumaios for having led him to the house. In a speech introduced by a 2QF, Eumaios denies responsibility for bringing the beggar (he did so at the request of Telemachus) and, more importantly, he remarks on the cruel, hard usage he and others of Odysseus' servants have received at Antinoos' hands and affirms that in spite of this he will remain loyal to Penelope and Telemachus. The drama of the moment is captured in the fact that Eumaios, a simple servant swineherd, stands up and answers back to one of the leaders of the wealthy, powerful suitors. Eumaios' courage and plain speaking about Antinoos' cruelty foreshadow the doom of all the suitors, which fast approached.

After the disguised Odysseus has made his way among the suitors, Penelope hears of the arrival of a stranger and asks Eumaios to summon him to her, that she may inquire of him concerning the fate of her long absent husband. Eumaios responds with a description of the beggar and his tales concerning Odysseus' return, introduced with a 2QF (17:512). In response to Penelope's summons, the disguised Odysseus sends word via Eumaios to wait until evening, when the suitors have gone. At that time he would come and talk with the mistress of the house. When Penelope questions why the beggar refused to visit her, in a speech marked by a 2QF, Eumaios relays the beggar's message to wait until evening, lest he suffer ill use at the hands of the suitors (17:579). The drama of these two quotations lies in the fact that together they constitute the first communication between Odysseus and his wife Penelope in twenty years. In his capacity as message bearer, Eumaios unknowingly participated in this poignant exchange, and Homer highlights the dramatic moment by using 2QF's to introduce Eumaios' relays of Odysseus' words to Penelope.

Shortly after the promised interview between the disguised Odysseus and Penelope, the final violent confrontation between Odysseus and the suitors begins. In the midst of the battle with the suitors, in which Eumaios participates at the side of Odysseus, Melanthios—an unfaithful servant goatherd—goes to the manor's armory and brings weapons to the suitors for them to defend themselves against Odysseus' onslaught. Eumaios sees

him and, at Odysseus' command, captures Melanthios at the armory and suspends him from the ceiling to await his fate at the close of the battle. Then in book 22:194, in his final speech highlighted by a 2QF, Eumaios jeers at Melanthios because he had sided with the suitors against his own master. Eumaios' caustic remark, while only addressed to the unfaithful goatherd Melanthios, is nonetheless reflective of Homer's evaluation of the fate of all the suitors and unfaithful servants in Odysseus' household, and is thus marked with a 2QF.

### 3. Conclusion

The 2QF constructions in the *Odyssey* serve to highlight particularly dramatic moments in the story of Odysseus, leading up to his vengeance on the suitors in book 22.

This is not the sort of information that is normally marked by unique constructions in languages around the world. Indeed, it would be improper to say, on the basis of the present study, that 2QF's normally marked such information in Homeric Greek. Rather, what we have seen here is a feature unique to the literary structure of the *Odyssey* itself, a feature whose patterns of distribution was a problem solved by the analytical procedures of linguistic discourse analysis. We thus see that the methodology of discourse analysis can be profitably used in analyzing aspects of the literary structure of a single text.

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## Forms of Speech: Linguistic Worlds and Goffman's Embedded Footings

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To caricature a particular range of opinion, discourse is often viewed as a kind of leech growing and sustaining itself on the nonlinguistic fodder of pragmatic and general cognitive substances, and owing its very existence to those alien factors.<sup>1</sup> While discourse can undoubtedly interact with every realm of action and cognition imaginable, I maintain that discourse at its heart is governed by specifically discursive mental principles. The universality and early onset of literary competence in children is highly suggestive of this point of view. In fact, it is the linguistics of literary language (fictional and nonfictional) that most strongly encourages me in this way of thinking, in particular the linguistics of INDIRECT FIRST-PERSON SPEECH (Palacas to appear), also known as quasi-direct speech (Kuno 1987), and in literary research as free indirect style or the style of represented speech and thought (Banfield 1982).

In this paper, I will suggest that the variety of speech types—including direct speech, direct quotation, indirect speech, indirect first-person speech, and irony (as a form of indirect speech)—owe their existence to certain universals of discourse structure embodied in LINGUISTIC WORLDS

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<sup>1</sup>I am grateful to Robert Longacre for encouraging me in my investigation of linguistic worlds. I also appreciate the helpful comments of James McCawley on a previous version of my ideas, and the help of William McMahon and Lawrence Martin.

(LW).<sup>2</sup> More concretely, I will suggest that the descriptive categories in Goffman's *FORMS OF TALK* (1981) for analyzing the notion *SPEAKER* can be insightfully formalized in a linguistic worlds approach to discourse structure and that such formalization gives a principled characterization of speech types, as well, including indirect first-person speech. The salient observation about indirect first-person speech is that it is a purely linguistic phenomenon, suggesting its purely linguistic and mental origins.

In his perceptive sociorhetorical explorations, Goffman (1981) introduces the informal notion of speaker and listener footings.<sup>3</sup> A speaker's footing is defined as the speaker's "alignment, or set, or stance, or posture, or projected self" (128). The description of speaker footings involves the analysis of *SPEAKER* into three separate functions: animator, author, and principal—the one who utters, the one who selects the sentiments that are expressed and drafts the wording, and the one "who is committed to what the words say" (144). Also introduced but not developed are the notions of embedded speaker footings and functions—embedded animator, embedded principal, and embedded author. By embedding is meant linguistic embedding, which has the reportive effect of displacing speech in time and place (148), as distinct from the social embedding of one (linguistically unembedded) speech event within another (155).

The purpose of Goffman's analysis is to facilitate the structural description of changes in footing (146). A speaker is on a different footing when speaking in an official capacity as opposed to an informal one, for example, or when reciting lines as an actor. A wide variety of footings is possible because of the configurations the three speaker functions can take, as elaborated in McCawley 1984; there, the independence of the functions is illustrated by the invented example of a speech written by a ghost writer (author) for President Reagan (principal) and delivered in the president's absence by then Attorney General Meese (animator). In light of Goffman's insights about different speaker functions, McCawley (1984:264) counsels linguists to reexamine their use of the term *speaker* (and the term *hearer*) "to identify which notion of speaker . . . is relevant" to generalizations involving speakerhood.

<sup>2</sup>This paper is based on a fuller exposition of LW's in Palacas (to appear). Van Dijk (1977:48–49) saw the need for taking point of view into account in a worlds analysis. LW's are distinct from possible worlds, however, in being not logical but linguistic constructs, in the sense that LW's are a level of textual representation. LW's bear similarities to Kamp's (1981, 1985) discourse representations, McCawley's (1986) contextual domains, Seuren's (1985) discourse domains, and Barwise and Perry's (1983) situations. LW's are distinct in being representations of text, and not purely of meaning, and in their treatment of indexicality.

<sup>3</sup>Discussion in this paper is limited to speaker footings.

In ordinary direct speech, all three speaker functions fall together: I speak, composing my own words, and am committed to what I say. Other apparently clear applications of the categories also occur, as in McCawley's example mentioned above. Issues concerning the categories arise almost immediately, however, even in McCawley's example. In a footnote (1986, fn. 1), McCawley states that though the president's speech is written by a ghost writer, the president must be considered a coauthor, since he undoubtedly selected the sentiments expressed, thus tending to blur the clearcut distinction between principal and author in such a case.

Nor is the notion of footing, itself, always clearly dependent on the speaker functions. Goffman's article-opening example describes a shift in footing from formal to informal in the speech of former president Nixon, and a second example describes a codeswitch from standard to dialectal Norwegian corresponding to a social role switch from familiar to formal. In neither case is there a change in the three speaker functions; it seems no matter what the social role, the speaker authors, animates, and is committed to what the words say. As in the Norwegian example, and as Goffman states, such shifts in a speaker's social role are usually accompanied by linguistic cues, such as intonation shifts and code switches, or by paralinguistic cues, such as a change in posture or the wink of an eye. Perhaps there is a sense in which a switch in social roles accompanied by linguistic or paralinguistic cues corresponds to the embedding of speaker functions. In any case, it seems necessary to differentiate between social footings and linguistic footings.

McCawley also raises the issue of a vagueness in the notion of principal relative to the footing of an imposter. Who is principal—the imposter or the person being impersonated? Suppose, pretends McCawley, Crazy Horse poses as Noam Chomsky and says,<sup>4</sup> "I've decided to resign from my chair at MIT." Who, in such a case, is the principal; is it the speaker Crazy Horse, or is it Chomsky, the individual "purportedly committed to what the words say"? (1986:261) Because of the reference of pronouns (presumably the reference of the first-person pronoun to Chomsky), McCawley opts for Chomsky, not Crazy Horse. The claim that Chomsky is the principal, however, seems to vitiate the possibility of describing imposter speech itself. It seems necessary to make a distinction between principal and purported principal. In the example, it seems clear that Chomsky is the purported principal and that no one can be held to the sentiments expressed, but that the imposter is responsible for expressing them.

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<sup>4</sup>This example is drawn from material in two separate places in McCawley's article; I believe in keeping with the spirit of the article.

The terminological issues raised by the speaker functions are many, often subtle, and difficult to resolve—apart from explicit formulation in an appropriate theoretical framework, such as the linguistic worlds approach to discourse semantics and attribution<sup>5</sup> alluded to earlier. Linguistic worlds analysis gives explicit shape to speech types and, by equation of speech types with linguistic footings, gives insight into the latter. In this approach, speech types are treated preeminently as matters of discourse structure.

**Linguistic worlds.** In a linguistic worlds approach to discourse structure and semantics, rules of world creation (in the spirit of Morgan 1969, 1973) assign spans of text, and hence their associated meanings, to LW's (linguistic worlds). Each LW is defined by the values of three variables—a source, a mentality (approx. = propositional attitude), and a reference time. The constructed LW's account for perceived attributions of a text's meanings to their (purported) sources, e.g., of indirect quotation to the indirectly quoted party, ironical expression to an ironic mentality—with attribution to the speaker-as-speaker being the default case. LW's may be hierarchically arranged and are not necessarily in a one-to-one relationship with sentence boundaries; in fact, often are not.

Crucial to characterizing the range of speech and attribution types is the notion of an INDEXICAL LW—the theory's special way of capturing the sense of a linguistic consciousness, that is, the sense of someone expressing himself. An indexical LW is a LW whose defining source, mentality, and reference time are the inherently unindexed and entirely relativistic values: SELF,<sup>6</sup> FACTIVAL,<sup>7</sup> and CONTEMPORARY.<sup>8</sup> As elaborated below, these values receive their identity not merely from context, but more specifically from the values defining the

<sup>5</sup>Longacre (1983:129–33) raised the issue of attribution as an important area for investigation. Mildred Larson, Longacre's student, pursues the topic in an enlightening investigation of reported speech in Aguaruna (Larson 1978).

<sup>6</sup>This value is equivalent to Banfield's (1982) SELF.

<sup>7</sup>The factival mentality is to be distinguished from real-world factuality, or real-world relevance, which is not truly a mentality. The factival mentality refers to a state of mind in which beliefs are REGARDED factually and may thus be viewed as a propositional attitude. The two qualities meet when real-world factuality is the interpretive value given to the factival mentality by Indexical Interpretation, a rule introduced in (4). Propositions in a factival LW may be only locally factual, that is, they may be hypothesized facts, dream facts, imaginary or other sorts of local facts. Factual is also to be distinguished from factive, the term designating verbs that take a complement clause whose truth is presupposed (in a LW; Palacas to appear).

<sup>8</sup>CONTEMPORARY is to be distinguished from present time, the latter being a pragmatic understanding of time contemporary with the actual speech event. Contemporary time seems equivalent to Banfield's (1982) NOW.



world in which they are immediately embedded or ANCHORED. The initial and topmost LW governing a text is a linguistically unembedded indexical LW. Because unembedded (representing the standard speech act context), this LW's indexical defining values are identified by default with the speaker-animator, real-world factuality, and present time, respectively.

In the analysis of a text, LW's other than the topmost indexical LW come into play by application of the following generalized and informally stated rule (clearly the success of this enterprise depends on the ability to completely formalize):

- (1) **Generalized World Creation.** A textual or pragmatic world marker—including explicit WORLD-CREATING PREDICATES (WCP's; Morgan 1969, 1973), temporal shifts, logical contradictions, stylistic shifts (code switching), intonational shifts, and parentheticals—signals the creation of a subordinate LW. In the absence of an explicit WCP, the LW is governed by an implicit WCP and its contents are fully contained in another, immediately subordinate indexical LW.<sup>9</sup>

The values defining each LW so constructed are determined in largely mechanical ways based on the structure and content of the text. In the case of the LW signaled by an explicit WCP, the LW source is the subject of the WCP (discussion will be limited to verbs), the mentality is determined from the meaning of the verb, and the reference time is the time of the verb.<sup>10</sup> In the implicit cases, the source is identified with the current topic or focus of empathy (Kuno 1987:210), the time is determined from the time of the governing verb, and the mentality is an abstract logophoric predicate of speech or thought (108), to be specified pragmatically.

Also relevant are the rules of WORLD PERSISTENCE, INDEXICAL-WORLD ASSIGNMENT, and INDEXICAL INTERPRETATION. World persistence guarantees the discursive scope of LW's:

- (2) **World Persistence.** A LW extends indefinitely to the RIGHT through text (across s boundaries) until interrupted.

The next rule, Indexical-world Assignment, associates root syntactic structures (Emonds 1976) with indexical LW's. This association carries with

<sup>9</sup>A WCP is a nonfactive logophoric predicate (Kuno 1987:108)—a nonfactive predicate of communication or cognition taking a sentential complement.

<sup>10</sup>Issues of time and tense will not be discussed since they do not affect the point of the paper.

it the claim that one purpose of the grammatically independent units of direct discourse is to give the sense of someone expressing a speech act—the sense of a self, speaking factually, in the contemporary time:

- (3) **Indexical-world Assignment.** Grammatically independent, root structures (e.g., sentences, fragments, parentheticals; McCawley 1982, Palacas 1989) are assigned to an indexical LW—LW(self,fac-tival,contemporary).

The power of this simple claim becomes evident in association with the rule of Indexical Interpretation, which assigns stable values to the relativistic values defining an indexical LW:

- (4) **Indexical Interpretation.** The indexical values of an indexical or partly indexical LW are identified with the source, mentality, and reference time of the matrix LW. In the absence of a matrix LW (i.e., in the case of the indexical LW governing the entire text), pragmatically determined values are assigned—speaker, real-world factuality, present.<sup>11</sup>

This rule means that indexical values are relative, not just to the real world or to some world outside the text, but more basically to whatever LW they occur in; the rule allows speech-act-like linguistic events in linguistically embedded contexts. What is especially exciting about this idea is the larger claim inherent in it that the pragmatic use of indexical terms is a special, default case of a more general usage that belongs to the given mental nature of discourse. In this view, the pragmatic usage depends on the availability of the linguistic usage, not the other way around.

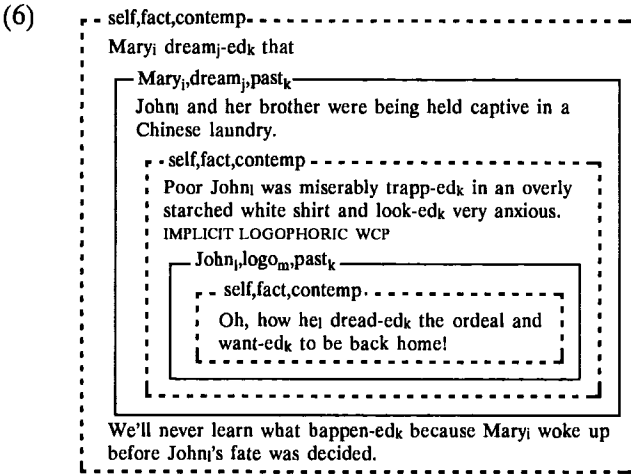
These rules can be illustrated by applying them to the discourse portion in (5), the result (on one reading) being the diagram in (6)—indexical LW's have broken-line borders, signifying their relativity, and nonindexical LW's have solid borders.

- (5) *Mary dreamed (or said, or claimed) that John and her brother were being held captive in a Chinese laundry. Poor John was miserably trapped in an overly-starched white shirt and looked very anxious. Oh, how he wanted to be back home! We'll never learn what happened because Mary woke up before John's fate was decided.*

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<sup>11</sup>Speaker here means the normal speaker: animator, author, principal.

The outer box—LW (self,factual,contemporary)—is the indexical LW governing the entire passage and is called into play by Indexical-world Assignment. Because this indexical LW is unembedded, Indexical Interpretation associates its defining values with the pragmatic values given by the speech act situation: speaker, factual (real) world, present. The content of this LW is the entire text.



The next box—LW (Mary<sub>i</sub>,dream<sub>j</sub>,past<sub>k</sub>)—is an embedded LW representing the report of a past dream of Mary's; this is an instance of indirect speech, by which term I mean to include the language syntactically subordinate to any reportive (nondirect-quotational) wcp, not only the complement clause of verbs of saying in their nonquotational reportive sense but also verbs such as *dream*, *think*, *imagine*, and *suppose*.<sup>12</sup> This LW is constructed by Generalized World Creation, as triggered by the presence of the explicit wcp *dreamed* in the past tense with subject *Mary*. The content of this LW begins with the sentential complement of the wcp.

The third box—LW (self,factual,contemporary)—contains the second text sentence, which remains within the dream by World Persistence. As an independent grammatical unit, this sentence triggers Indexical-world Assignment, resulting in an indexical LW embedded within the dream LW. Because it is indexical, this LW carries with it the claim that a consciousness, someone's cognitive point of view, is being expressed. Indexical Interpretation clarifies whose point of view; it identifies the indexical LW's self with Mary, its factual mentality with the dream (making propositions expressed

<sup>12</sup>See Larson 1978 on cognitive verbs as verbs of saying in the Aguaruna language.

in the dream LW into dream facts), and its contemporary time with the past. That is, the diagram makes the claim that this portion of text reconstructs, or simulates, the telling of the dream as if it were Mary herself telling it. Direct discourse is being attributed—indirectly—to Mary, in a case of indirect first-person speech, the speaker's simulation and projection of another's point of view. And indeed, this claim corresponds exactly to the reader's perceptions.

The footing represented by this type of speech, in which the speaker takes the part of another by simulating the other's words or thoughts, is a remarkable linguistic and cognitive phenomenon. It is the curiously subjective feature of linguistic expression that has caught the attention of investigators such as Kuroda, Banfield, and Kuno. Note especially in this regard the title of Banfield's *Unspeakable Sentences*, which refers specifically to the method popular in literature of expressing the inner thoughts of a character directly, but paradoxically through a form of indirect speech. This form of speech is predicted by the rules of LW construction.

The fourth and fifth boxes represent another, more deeply embedded level of indirect first-person speech, this time attributing the content, indirectly, to John-in-the-dream, as if John-in-the-dream were expressing himself. The shift in attribution is triggered by a stylistic shift, prompting attribution to *he* = *John*, as the focus of empathy. The representation in the resulting diagram exactly mirrors the reader's perception that the characterized speech is in some sense John's as if John were projecting from the dream. This second instance of indirect first-person speech in the example is again predicted by LW analysis, supporting the reality of indexical LW's.

Finally, elements of the last sentence (the first-person plural pronoun, the verb *awoke*) and its plain style take us from the dream back into the factual—pragmatically real—world of the primary speaker.

**Direct quotation.** The representation of direct quotation requires the concept of a ROOT LW, a LW triggered by a verb of linguistic animation—a verb of speech (or writing or signing) representing an act of uttering (or writing or signing). A root LW is normally embedded as the semantic argument of an explicit verb of linguistic animation. In English, verbs of saying (to focus on speech) are typically ambiguous between verbs of direct or indirect quotation—verbs of linguistic animation that report the form of an utterance, and reportive verbs that report the content of something that has been uttered; they optionally trigger either a root LW or an ordinary LW. In the latter capacity, the verb *say*, for example, does not mean 'utter' but 'reveal, maintain, hold, believe', or some such meaning, with the understanding that the reported beliefs were revealed linguistically.

Unlike indirect quotation, where the initial clause is ordinarily grammatically dependent and a member of an ordinary, nonroot LW, the initial clause of an embedded root LW of direct quotation is an independent grammatical unit (hence, its inability in English to be headed by a complementizer). The entire contents of direct quotation, then, will be members of an indexical LW immediately contained in the embedded root LW.

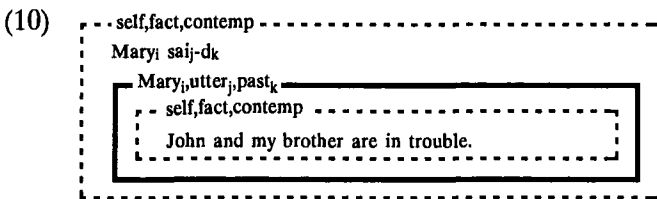
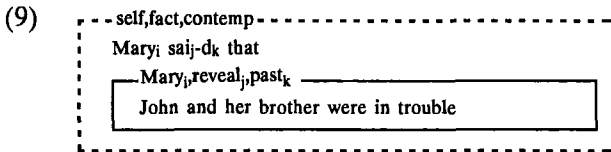
A root LW, we might assume, may also be linguistically unembedded, with a pragmatically implied, abstract existence. The indexical LW associated with the discourse as a whole may be thought of as immediately contained in such a pragmatically implied unembedded root LW corresponding to the speaker's actual speaking (in line with Ross 1970).

Root LW's can be said to have strong LW boundaries (shown by heavy LW borders), which act as barriers to anaphoric reference and presuppositions and determine limits on the interpretation of first- and second-person pronouns. Anaphors cannot refer across strong LW boundaries; presuppositions arising from text associated with a root LW are strictly relegated to that root LW; and first- and second-person pronouns are strictly associated with the agent and the addressee(s) of the verb of saying governing the root LW.

In LW terms, the difference between indirect and direct quotation, as illustrated in (7) and (8), is shown in their respective LW diagrams (9) and (10).

(7) *Mary said that John and her brother were in trouble.*

(8) *Mary said, "John and my brother are in trouble."*



**Goffman-type speaker-function LW analogs.** The explicitness of LW's allows precise descriptions of linguistic footings in ways that begin to formalize Goffman's speaker functions, or a modified version of them. A text in its

entirety is contained in an indexical LW whose source is identified pragmatically with a real-world actual speaker, who is minimally the animator of the whole, as subject of an abstract verb of linguistic animation that governs the text. The normal speaker is also author (or coauthor, at least) of all text not enclosed in a subordinate root LW, and is also principal of the content of all text immediately contained in the topmost indexical LW.

The LW source of an embedded root LW is an embedded speaker—an embedded animator—as subject of an embedded verb of linguistic animation. In parallel with the actual speaker, the embedded speaker is also embedded author and embedded principal of all text immediately contained in the topmost indexical LW within the root LW. An embedded animator is a purported animator. Likewise, we cannot know whether this embedded speaker-animator is actually the author and principal of the quoted material; he is the purported author and purported principal.

Hence, in general terms, the source of the immediate contents of a root LW is animator, author, and principal of that LW, which may be embedded or unembedded. The source of a root LW containing another root LW is simply an animator of the contents of the contained root LW. All embedded speaker functions are purported functions.<sup>13</sup>

The LW source of an embedded nonroot LW of indirect speech is an embedded, or purported principal, but is neither embedded animator nor embedded author. This is so because the LW source is the subject of a verb of saying used reportively. The subordinate LW in (9)—LW (Mary<sub>i</sub>, reveal<sub>j</sub>, -past<sub>k</sub>)—governed by the WCP *say*, represents the actual speaker's secondhand presentation of the content of Mary's dream. Since the content of the dream is in a subordinate LW, the speaker is not principal of the sentiments expressed in that LW. Nor can we know that Mary is principal; instead, Mary is the purported principal of the dream's LW contents. There may remain a sense in which the actual speaker is principal—not as one committed to what the dream content says but as one committed to having made an accurate report. The fact that the subject of the reportive verb of saying is neither animator nor author is captured very plainly in LW structural terms by the distinction between regular and root LW's. An ordinary LW therefore signals a shift in principal to a purported principal, but no change in animator or author.

The indirect first-person speech captured in (6) involves a speech type and a speaker category not specifically alluded to by Goffman. As with all indirect speech, the LW source is an embedded (i.e., purported) principal and is neither embedded animator nor embedded author. Nevertheless,

<sup>13</sup>A doubly embedded function, say animator, would be a purportedly purported animator.

unlike purely indirect speech, this form of speech is constituted of independent grammatical units and shows constructions characteristic of direct speech (e.g., main clause phenomena; Emonds 1976, Hooper and Thompson 1973), thus giving the sense of someone expressing himself. This suggests that the LW source of indirect first-person speech is, in Goffman-type terms, an indirect embedded animator. Again, the LW diagram captures the distinction clearly by the embedding of an indexical LW in a regular, nonroot LW. Even more importantly, LW analysis predicts this form of speech as a natural consequence of the system that, by hypothesis, underlies the attribution structure of discourse.

Table (11) summarizes the roles of a LW source in relation to the four basic speech types and the variety of Goffman-type speaker functions that have been discussed.<sup>14</sup>

(11)	Unembedded LW Source			Embedded LW Source			
	animator	author	principal	emb'd animator	emb'd author	emb'd principal	indirect emb'd animator
direct speech	+	+	+	0	0	0	0
direct quotation	+	-	-	+	+	+	0
indirect speech	+	+	-	-	-	+	-
indirect 1p speech	+	+	-	-	-	+	+

In LW structural terms, the speech types and the variety of speaker functions depend on the existence of three types of LW's—root, nonroot, and indexical—and whether they are embedded or not, as in (12).

(12)	Root LW	Non-Root LW	Indexical LW
direct speech	-	0	-
direct quotation	+	0	+
indirect speech	0	+	0
indirect 1p speech	0	+	+

(+ embedded; - unembedded; 0 not applicable)

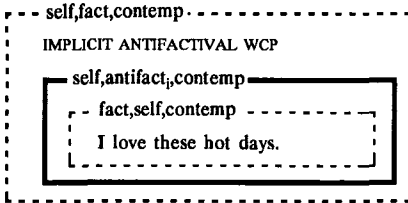
An embedded root LW immediately contains an embedded indexical LW; an unembedded root LW is abstract so that the indexical LW it contains is

<sup>14</sup>Embedded (emb'd) in table = purported.

linguistically unembedded. A nonroot LW is embedded and contains no indexical LW when it represents ordinary indirect speech.

**Irony.** But what of the special problems posed by imposter speech, and other footings, such as the speaker's footing as a stage actor? Imposter speech is perhaps best understood as a form of irony. In one type of irony, the inherent pragmatic contradiction between what someone says and what it is known they believe triggers the Generalized World Creation rule and creates irony by forming an abstract subordinate LW with an antifactual mentality directly opposing the unmarked factual mentality of the topmost LW; this created LW immediately contains a subordinate indexical LW. Thus, when on one of a series of stifflingly hot days a person, who is clearly suffering, slowly and with extra emphasis on *love* says, "*I love these hot days,*" the implied contradiction triggers the construction represented in (13), which shows the embedded content as a form of indirect first-person speech, making the source of the embedded antifactual LW an indirect embedded animator.

(13) Pragmatically implied: I DO NOT LOVE THESE HOT DAYS.



Because this source is an indexical self, the transitive operation of Indexical Interpretation equates this self with the actual speaker, who is thus seen simultaneously as both animator and indirect embedded animator.

As in any indirect speech, the actual speaker animates, authors, and though taking responsibility for saying what is said, does not take direct responsibility for the content of what is said; the animator is not the principal since the contents are not contained in the highest indexical LW. Who is the principal? According to the analysis, there is only a purported principal, the embedded LW source, and this purported principal is the antifactual altercast self of the actual speaker. Given the identity of the speaker-animator and the purported principal, one could say that the principal is the actual speaker-animator speaking in a particular antifactual mental frame, as the LW diagram shows. The speaker-animator is not

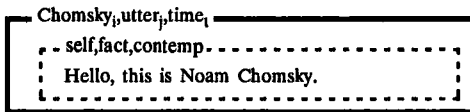


committed to what the words say, but is responsible for saying them—for their intended effect, and for the pragmatic inference.

This sort of irony and other speech types such as imposter speech and stage acting speech, to be discussed below, are different from the four basic types in that their LW superstructure is triggered by pragmatic rather than purely textual factors. Each type is nevertheless based on the four basic speech types, the point being that these structures are pragmatic projections of structural types which have a linguistic basis. This equation formalizes the speaker's altercasting of himself as an antifactual (ironical) self, and correlates well with the perception attending the language of the example.

Imposter speech is similar to irony, it would seem, except that the speaker-animator purposely deceives the listener, who is not made privy to the information that would allow him to draw the implication of irony. Thus, in McCawley's impersonation-of-Chomsky example, the speaker and the listener speak and hear two different discourses, representable by two different LW diagrams. The listener falsely attributes the content to Chomsky as principal, as represented in the following construct:

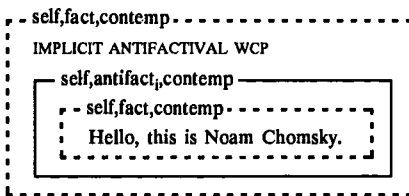
(14) LISTENER'S CONSTRUCT:



The speaker, on the other hand (whether lying or joking), is responsible for saying what he says, even as he pawns off the content on a purported other, by equating the purported other with himself through the power of Indexical Interpretation. This suggests a speaker's construct as in (15).

(15) SPEAKER'S CONSTRUCT:

Pragmatic knowledge: THIS IS NOT NOAM CHOMSKY.



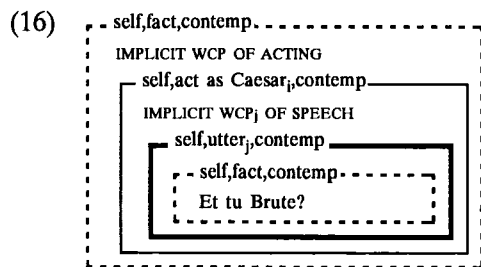
Here, the imposter is not himself principal; there is only the purported principal represented by the indirect embedded animator. But the imposter

can feign being principal because of the identification of the indirect embedded animator with himself.

Thus, the question of principal needs to be answered from both points of view, the listener's and the speaker's. As implied by Goffman, conversation is clearly not simply a matter of building common ground, but of two (or more) separate constructions, which may only partly overlap, as hearer and listener alternately keep track of what they say and have heard. Dialogical discourse requires an integration of multiple sets of diagrams; speakers and hearers track their own and each other's speech and construct the discourse accordingly. LW analysis, then, provides a satisfying characterization of various forms of speech and speaker footings, capturing sometimes subtle perceptions that can be translated into Goffman-type speaker-function terms.

On a more speculative note, LW analysis suggests how to characterize the footing associated with stage acting as a form of speech. McCawley notes a technical problem with the notion of animator. Who animates? Is it the actor or the character being portrayed? McCawley claims that, in some sense, both are animators, suggesting that this is what it means for the actor to ENACT the part; and there is truth to the claim. But how exactly is the claim to be understood?

This footing is like irony in equating the source of a subordinate LW with the actual speaker, but differs in that acting is a form of direct quotation; whereas irony is normally spontaneous and nonfictional, acting is normally planned and fictional, its materials prearranged and quoted.<sup>15</sup> The context of acting, it appears, universally triggers an implicit WCP of acting, which carries with it the further implied and embedded WCP of linguistic animation to give the construct represented in (16), as a first approximation.<sup>16</sup>



By Indexical Interpretation, this representation correctly identifies the embedded animator (the self of the embedded root LW) with the actual

<sup>15</sup>I omit discussion of spontaneous acting and the problem of the fictional context.

<sup>16</sup>Because it is pragmatically triggered, the LW superstructure is of course abstract.

animator, partly formalizing the notion of ENACTING a character, although much is temporized in the implicit ACT-AS-CHARACTER WCP.

Similar speculation also suggests a lexical way to accommodate the switches in footing corresponding to switches in social roles, as triggered by code switching, stylistic shifts (see Palacas to appear on style shift), and paralinguistic cues. Goffman gives the example of a change in footing between a doctor and patient (1981:142). Normally implicit and delivered pragmatically, social roles may also be made explicit: a doctor responding to the question *What do you think of mineral supplementation?* replies, *SPEAKING AS A DOCTOR, Jane, I do not prescribe them; but SPEAKING AS A FRIEND, I think they could help you out.*

It may be that verbs of speech as a rule inherently imply an associated social role, such as SPEAK-AS-DOCTOR, SPEAK-AS-FRIEND, SPEAK CASUALLY, OR SPEAK FORMALLY. Capturing the social roles of speech in a LW diagram would require an adjustment in representation of wcp's of speech to make them more socially specific, but would not change the essential nature of the diagrams. In regard to unembedded speech, a switch of social roles does not affect the status of the speaker as animator, author, and principal.

**Conclusion: linguistic worlds and footings.** LW analysis has the power to define various speech types, and to capture and predict some subtle perceptions of attribution. All speech types appear to be variations of direct speech and indirect speech, the full range being captured in LW analysis by the interplay of three LW types: root, nonroot, and indexical, and the lexical requirements of logophoric verbs calling for root or nonroot LW's as arguments. In capturing the forms of speech, LW diagrams, as sometimes triggered by pragmatic factors or modified by sociolinguistic input, begin to formalize the linguistically relevant aspects of Goffman's speaker footings. Each LW projected by a text (sometimes through interaction with pragmatic factors) can be viewed as a footing, each embedded LW an embedded footing. And each LW source fulfills a different speaker function depending on the particular LW structure.

The linguistic footings associated with the various speech types are characterized explicitly and plainly in a linguistic worlds model of discourse structure, as are Goffman's speaker functions. Of special interest, the linguistic worlds model captures, through the power of embedded indexical LW's, the subtle and fascinating subjective form of indirect first-person speech. The purely linguistic nature of this form of speech and the fact that it is captured by this abstract model of discourse structure, suggests the existence of mental universals, as embodied in the model, specifically designed for the construction of discourse and with the capacity to present speech on a multifaceted and variegated range of footings.

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## **Pragmatic Functions**





## **A Typology of Causatives, Pragmatically Speaking**

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The purpose of this paper is to give a brief overview of the typology of causative constructions and to suggest that, in addition to the syntactic and semantic factors governing causative constructions, explicit pragmatic explanations are needed to give an adequate account of their behavior. Let us first examine a brief summary of linguistic typologies, specifically of causative constructions, then some of the pragmatic considerations involved in languages' usage of causative construction.

Linguistic typologies are the classification of languages into different types on the basis of their variation from one another. More than just a simple taxonomy of languages, typologies serve to explain the nature of languages as well as provide proof of language universals.

Not all typologies are of great interest or significance, but those that interact with implicational universals usually are. For example, Greenberg (1966) found a number of implicational universals stemming from word-order typology. He found correlates in the order of the genitive constituent as well as adjectives following the noun it modifies, and the existence of prepositions within the basic word order of VO languages.

The particular causative typology described here is based upon PROTOTYPES, suggested by Givón (1984). He proposes that languages fall along a continuum, with no discrete boundaries existing between actual types. The prototypes can be determined by a bell curve where the most typical qualities and the most frequent occurrence of those qualities occur. As a result, the prototypes are sometimes more ideal than real, but serve as a basic model of a given type.

Causality presupposes two conditions: the dependency of the effect event on the causing event and the required sharing of certain referential points, such as time, space, and agency. The scope of causality in this paper does not include interclausal constructions, instrumental causatives, or permissive cause *per se*.

Comrie (1981) and Shibatani (1975) have extensively described the typology of causative constructions. To a lesser extent, Syeed (1985) has also described causative typology in terms of affectivity. My work has simply been to combine all three of these descriptions, to test their validity on a wide sample of languages taken from secondary sources, and to introduce the pragmatic considerations which are necessary to explain the patterns found.

### 1. Causative prototypes

Languages typically use one or more of three causative prototypes: morphological, analytical, and lexical causatives. An example of each type is presented in (1).

- (1) a. MORPHOLOGICAL [Kewa, Papua New Guinea (Franklin 1971:73)]

*nipú-mí onaa ma-píraa-ria*  
 3s<sup>^</sup> AG people CAUSE-sit<sup>^</sup> 3s-PST  
 He made the people sit down.

- b. ANALYTICAL [Thai (Vichit-Vadakan 1976:468)]

*sàákhàá tham deen roóhháày*  
 Saka cause Daeng cry  
 Saka caused Daeng to cry.

- c. LEXICAL [English]

*She shoved her sister off the cliff.*

Causative typology interrelates with two other typologies, morphological and word order. Morphological typology divides languages into isolating, agglutinating, inflecting, and polysynthetic types. A language's morphological type will govern in part the type of causative construction most favored. A continuum can be made with isolating languages to the left while polysynthetic ones are to the right. Analytical and lexical causatives occur in isolating languages while morphological causatives occur in polysynthetic languages:

isolating	agglutinating	inflecting	polysynthetic
lexical-analytical	analytical-morphological	morphological	

Word-order typology is concerned with the normal order of subject (s), verb (v), and object (o) constituents. It has been found that vo languages are usually more isolating, and that they, therefore, usually use analytical causatives. ov languages are generally more agglutinating, so that morphological causatives are more prevalent. This is explained on the premise that causative constructions are underlyingly made up of two predicates, which in surface structure come into close proximity bringing about agglutination in the case of ov languages.

## 2. Semantic factors

In addition to interaction with other typologies, causative constructions are sensitive to a number of semantic contexts. Shibatani (1975) presents four pairs of semantic factors that determine the use of a language's causatives in specific contexts. These pairs are referred to as: COERCIVE VERSUS NONCOERCIVE, DIRECTIVE VERSUS MANIPULATIVE, DIRECT VERSUS INDIRECT, and BALLISTIC VERSUS CONTROLLED.

COERCIVE causation has to do with the amount of (physical) force exerted by the causer on the causee. It implies resistance on the part of the causee, which usually requires the causee to be animate. NONCOERCIVE causation is oftentimes permissive in nature.

(2) a. COERCIVE [English (Shibatani 1975:41)]

*I made the doctor come.*

b. NONCOERCIVE

*I had the doctor come.*

DIRECTIVE causation implies the submissive volition of causee. Directives are frequently verbal instructions or demands, so that an animate causee is required that can volitionally and physically respond. MANIPULATIVE causation frequently involves inanimate causees which must be physically manipulated and cannot volitionally resist. If a language can use more than one strategy, it generally uses the lexical form to express manipulation while the morphological form is used for directive causation. Sentence (3b) becomes ungrammatical if 'child' is substituted for 'stick'.

- (3) a. DIRECTIVE [Japanese (Shibatani 1975:55)]  
*Boku wa kodomo ni tat-ase-ta*  
 1s NOM child DAT stand<sup>^</sup>up-CAUSE-TNS  
 I had the child stand up.
- b. MANIPULATIVE  
*Boku ga boo o tate-ta*  
 1s NOM stick ACC stand up-TNS  
 I stood the stick up.

DIRECT causation implies a straightforward means of bringing about the effect event, while INDIRECT causation makes use of a secondary or intermediary means. Both direct and indirect causation can be accomplished by physical or verbal acts. Direct causation is frequently expressed by lexical causatives; there is some evidence that the lexical form represents the perception of the speaker of the caused event. That is, lexical causatives represent only one event in the speaker's mind, rather than two. Indirect causation entails a secondary means of achieving the effect event, usually a human causee who retains a degree of control. Analytical causatives are generally used to express indirect causation.

- (4) a. DIRECT [Blackfoot, U.S. & Canada (Frantz 1971:65f)]  
*nitsiikstakiipiaawa nitana mamiiksi*  
 1s<sup>^</sup>COUNT<sup>^</sup>INTR<sup>^</sup>CAUSE<sup>^</sup>3 1s<sup>^</sup>daughter<sup>^</sup>3 fish<sup>^</sup>PL  
 I made my daughter count the fish.
- b. INDIRECT  
*nitsiikstakiattsawa nitana mamiiksi*  
 1s<sup>^</sup>COUNT<sup>^</sup>INTR<sup>^</sup>CAUSE<sup>^</sup>3 1s<sup>^</sup>daughter<sup>^</sup>3 fish<sup>^</sup>PL  
 I had my daughter count the fish (by some intermediary means).

BALLISTIC and CONTROLLED causation might better be understood as instigating and accompanying causation. The implication is that in ballistic causation the causer instigates a cause event which will bring about the effect event, but the causer is not involved beyond the initial control of the causee. In controlled causation, there is accompaniment or continuous control exerted by the causer from the moment of inception until the final effect event is accomplished.

- (5) a. BALLISTIC [English (McCawley 1976:117, 119)]  
*The explosion made the building shake.*
- b. CONTROLLED  
*John dressed the child in five minutes.*

The correspondence of the three types of causative constructions with the four pairs of semantic factors can be summarized by saying that lexical causatives generally convey the meaning of manipulation, directness, coercion, and—at least in English—ballisticness. Analytical and morphological causatives generally express the meanings of directive, indirect, noncoercive, and permissive causation. These semantic features overlap in almost every example; e.g., if there is direct causation, there is likely to be manipulation and coercion as well.

Lastly, the impact of affectivity on the choice of causative constructions should be given a cursory examination. Affective causative verbs are ones that have a benefactive effect on the causee, such as receiving or benefiting from the action of the verb. Examples in (6) demonstrate affective-noncausative, affective-causative and nonaffective-noncausative constructions:

- (6) a. AFFECTIVE-NONCAUSATIVE [Kashmiri (Syed 1985:57f)]  
*me h'očh aribī tas niš*  
 1s learn Arabic 3s near  
 I learned Arabic from him.
- b. AFFECTIVE-CAUSATIVE  
*təm' hechinōvus bi aribī*  
 3s learn-CAUS 1s Arabic  
 He taught me Arabic.
- c. NONAFFECTIVE-NONCAUSATIVE  
*me tsot kul tas niš*  
 1s cut tree 3s near  
 I cut the tree near him.

### 3. Pragmatic conditions

So far only the briefest of sketches has been given to describe causative typology and factors which govern its usage. Now, we turn to pragmatic conditions which may also regulate a speaker's choice of causative

constructions. Pragmatics is defined in accordance with *International Pragmatics Association working document 1*, which posits that it is a perspective on language, rather than a separate discipline or theory, that examines the objects, levels, stages, degrees, and functions of adaptation that are made by speakers (Verschueren 1987).

First, the INTENT OF THE SPEAKER of a causative construction would seem to be of tremendous significance in determining the strategy used. What the speaker is trying to accomplish through his statement of causality affects the way in which he will express it. Specifically, it seems that causative statements are frequently used for one of two speech events. One event or purpose is the speaker's desire to boast or take the credit for an action; in that situation, the speaker is the causer and, via the expressive means available to him in a specific language, he emphasizes his own role in causing an event (or state). A possible English example is presented in (7), with emphatic stress on the subject pronoun.

(7) *I defeated the incumbent candidate by a landslide vote.*

English relies on both the fronting of the causer and the intonation pattern to place emphasis on the speaker. Note that a lexical causative construction is used to express an event which is noncoercive, more directive than manipulative, and indirect in nature.

The second common event or purpose of causative constructions is evaluation, specifically shifting the blame for something onto someone else. Franklin (personal communication) comments that the morphological causative construction is only used in Kewa when the speaker intends to emphasize the causer's responsibility for bringing about something. This is illustrated by English again, as in (8).

(8) *He made me flunk the test.*

The speaker's intent in constructions similar to (8) is to express, however metaphorically, the coercion, manipulation, and directness of the causer's actions upon the causee. Note that the causee is animate, retaining control and volition. A lexical causative could be substituted in this construction, but only if the causer has the authority to carry out the action, as in *He flunked me on the test*. The implication of the analytical causative in (8), however, is that the causer's action is unjust and demands restitution. The blame or responsibility is clearly placed on the causer. The parallel lexical causative can have two interpretations, one of blame and injustice or another of factivity—implying that the causer's action was probably warranted, although not desired.

The importance of these observations is that the typology of causatives would not explain the occurrences of lexical and analytical causatives in these sentences. The reason appears to be that the choice of causative constructions in these two situations is pragmatically determined, rather than solely syntactically and semantically determined.

A second pragmatic factor to consider is the SOCIAL SETTING in which the causative statement is being made. Within my own Western culture, unless the intention of the speaker is to defame someone, he uses an indirect means to express causation when he is in a public social setting. Figurative speech such as the use of innuendos, euphemisms, passive constructions, and unspecified causers is prevalent, as in (9).

- (9) *They heavily encouraged me to find another job.  
I was fired from my job last week.  
Someone revealed my 'mid-morning cocktails' to my boss.*

In contrast to the public setting, the speaker may use more overt expressions of causality in a private setting, such as in his home or among his closest companions. Contrast the examples of (9) with those of (10).

- (10) *Bob (my boss) sacked me yesterday.  
Bob fired me last week.  
That goodie-two-shoes Sally squealed to my boss that I drink on the job.*

The social setting, whether public or private, plays a role in determining how a speaker will express causation, especially for the purpose of shifting responsibilities. How much of this difference is due to a public versus private setting as compared to shared referential information is difficult to ascertain. Either motivation could prompt the same type of results in English.

A third pragmatic consideration is the SOCIAL RELATIONSHIP OF THE SPEAKER TO THE HEARER. Constructions that parallel those used in different social settings are used in formal and informal social relationships. The more indirect expressions of causality are normally used in English if speaking to someone of a higher rank or of a greater social distance. In social relationships that are more intimate, the direct means of causal expression are frequently used; likewise, if the social rank of the hearer is equivalent to or lower than the speaker's, the normative expression is similar to those found in (10).

Another factor to be considered is the CULTURAL OR REFERENTIAL FRAMEWORK OF THE SPEAKER. The existence of cause and effect is a universal quality of man, but its perception, scope, and conditions are culturally

based. What can cause what is defined by a culture's worldview. The animacy of something, which relates to its ability to be a causer and a causee, is specific to the culture of the speaker. Franklin (personal communication) notes that animacy is attributed to ambient entities or forces by the Kewa. To some degree, English allows elements, such as the wind or rain, to function as causer, but it seems it is more figurative than literal in meaning.

What is considered coercion or manipulation is also a culturally defined quality. In English, we imply coercion in statements like (9). Coercion, as well as manipulation, have extended their meanings in English to include situations in which the speaker FEELS as though he is being physically coerced or manipulated. This extended meaning is not necessarily universally held; Shibatani (1975) demonstrates that a cultural expression of manipulation may exclusively refer to an inanimate causee being physically acted upon by an agentive causer, as illustrated in (3).

These pragmatic factors may help to explain some language data that otherwise seem inconsistent with the typology. For example, the use of two different instigative causatives in Blackfoot (4) could possibly be attributed to social setting or relationship factors, as much as to direct or indirect causation.

Both Hawaiian and Ponapean utilize stative verbs extensively; when the causative affix is added, the verbs become inchoative. However, they are understood to be causative. Cultural perception of causality is probably being expressed in that type of construction.

(11) Ponape, Micronesia (Rehg 1981:216)

Adjective	<i>ketiket</i>	'be numb'	<i>mer</i>	'be rusty'
Intransitive	<i>kaketiket</i>	'become numb'	<i>kamer</i>	'become rusty'
		'cause numbness?'		'cause to rust?'
Transitive	<i>kaketiketih</i>	'cause numbness?'	<i>kamere</i>	'cause to rust?'

Angas is a Chadic language that is similar to Hausa, both languages using an analytical causative. Angas, however, always employs the subjunctive mood (Burquest personal communication). It would seem that this expresses something about the culture's concept of causality, perhaps its uncertainty.

Finally, in his description of Yidj, Dixon's decision to label the *-al* controlling construction as CONTROLLING probably reflects the speaker's purpose or something about the culture's perception of causality and animacy. Dixon states:



The important point here is that the only way a man can 'control' a woman's coming (from point A to point B) is to come with her: the semantic structuring . . . is, in essence 'the man controls (the woman comes)'. That is, a *-ŋa-l* form in Yidjɪn cannot mean that someone made someone do something by telling them to do it. The sense of *-ŋa-l* involves control of a physical nature. (Dixon 1977:316)

Specifically in Yidjɪn, the obligatory controlling of a woman's travels by another human agent to ensure her arrival at a destination is a very different cultural view than that of the West, at least among women.

In conclusion, I suggest that the above pragmatic parameters be considered within the framework of causative typology in order to make that typology truly integrated. It goes without saying that further cross-linguistic research is needed to validate these suggestions. Certainly other factors remain to be unearthed.

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## Speaker Vantagepoint and the Cora Verb

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Concepts such as the narrator's vantagepoint for expressing linguistic messages and the viewpoint of the observer have long been an important facet of both Kenneth L. Pike's (1967) theory of Tagmemics and Robert E. Longacre's (1983) approach to discourse. Closely associated are the two additional concepts of SETTING (Longacre 1983:79, 306-7) and LOCATION (Longacre 1983:276, 314). In this paper I draw on data from an Amerindian language to underscore the importance of these notions to a descriptively adequate account of grammatical structure.

The data consist of locative prefix combinations + verb stem constructions that occur in Cora, a Southern Uto-Aztecan language spoken in the state of Nayarit, Mexico. I relate these constructions informally to Cora clause structure, describing them in terms of an extended version of Ronald W. Langacker's model of CANONICAL EVENT STRUCTURE (Langacker 1990).<sup>1</sup> Cora locative prefix combinations specify the spatial settings in which events are realized and states occur. The speaker's vantagepoint for viewing such situations is crucial to an adequate characterization of the meanings of these constructions. In order to show this in a particularly highlighted manner, I have selected Cora data that show the prefix combinations in their directional usages such that the notions of PATH, SOURCE,

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<sup>1</sup>The data on which this paper is based were collected during the period beginning February, 1971, under the auspices of the Summer Institute of Linguistics. They are culled from elicited materials such as word lists, texts, and conversations with Cora speakers from the Jesús María dialect. I would like to thank these people, who continue to be my teachers in their language. Finally, I would like to thank Barbara Hollenbach, Ronald W. Langacker, and Thomas Willett for their help on the paper from which this one derives.

and GOAL are especially prominent aspects of the meanings of these constructions.<sup>2</sup>

Given that the typical means of locomotion for the Coras has been on foot or by burro or horseback until the last two or three decades and that the Coras have lived in rugged mountainous terrain for hundreds of years, the topography has been the background to much of their daily life and it should be no surprise to find a highly developed conceptualization of spatial notions realized in the Cora language as elaborate morphological sets of adverbs and prefixes which are intricately related to one another (Casad 1977:239, Geeraerts 1988:222, Dirven and Taylor 1988:381).

Locational and directional elements are typically realized in language structures as adverbials and are generally perceived in linguistic theory as being peripheral elements in clause structure. The prefixes that occur in construction with Cora verb, adjective, an incorporated noun stems, however, are highly relevant to Cora verb structure. The prefixes of location and direction occur closer to verb stems than do subject and object prefixes. Furthermore, they are not separable as are the verbal prefixes of Indo-European languages. The elaborateness of locative marking on the verb is typologically odd for Uto-Aztecan, a feature Cora shares with Huichol. In turn, both of these languages reflect a preoccupation with space that is similar in many ways to that displayed by Tarascan (Casad 1982:14-22) but which is very different from the body-part systems of Oto-Manguan or the suffixal systems of Mixe-Zoque. In this paper, I show this by examining the relation between the global setting of events and the particular locational constituents of the Cora verb in terms of Langacker's model of the canonical event.

### 1. The cognitive framework

COGNITIVE GRAMMAR views the meanings of lexical units as conventionalized conceptual structure (Jackendoff 1978, 1983). Recognizing that language use is grounded in cognitive processing in general, cognitive grammar attempts to characterize the kinds of cognitive events that constitute mental experience (Langacker 1986a:3, Lamb 1971:101, 120,<sup>3</sup> Jongen

<sup>2</sup>A considerably longer version appears as Casad 1991.

<sup>3</sup>Lamb (1971) expressed a very similar point of view when he stated that the purpose of his theory was "to provide a model of the information system that enables a person to speak his language" (1971:99). Lamb also outlines in this paper what such a theory must contain, i.e., what a person knows about his environment, his culture, his own personal history, in short, his encyclopedic knowledge (1971:119).

1985:124, Paprotté 1988:447). Informally, the most salient aspects of meanings can be modelled as contextually defined configurations organized into networks in semantic space.

**1.1. On the nature of grammar.** Langacker views grammar as a structured inventory of conventionalized units, by which he means that most, if not all, members of a speech community use the linguistic units in the grammar in essentially the same way. Grammar itself consists of ways for combining simpler symbolic units into more complex ones (1986a:16, 1987:82). Syntax, morphology, and lexicon all consist of kinds of symbolic units forming a continuum without any rigid distinctions between them (1986a:17).

Cognitive grammar views all grammatical structure as a set of symbolic units, each of which pairs a semantic representation with a phonological one (1987:76). This view is thoroughly compatible with Longacre's statement that "every linguistic unit is a form-meaning composite" (Longacre 1983:322). Grammatical constructions are therefore meaningful and their meanings can be characterized in much the same terms as the meanings of individual lexical items, e.g., as complex symbols forming a categorizing network, the nodes of which differ in cognitive salience, some being more schematic than the rest, others representing prototypical values. The values in such a network are both distinct and interrelated (Langacker 1986a:17, 1987:382). This network nature of lexical items and grammatical constructions is also what underlies Longacre's observation that when one begins assembling a set of case frames, he finds himself dealing with intersecting parameters that are related in some systematic way (Longacre 1983:171).

Regarding linguistic units in general, Langacker suggests that a grammatical unit could easily have several variant meanings which can best be related in a network (Langacker 1986b:5). Of these meanings, one might be prototypical, providing the ground for related extended meanings. Certain other ones might be schematic for distinct subparts of the network. The schematic ones summarize the commonalities that speakers perceive to exist among semantically related sets of words (1987:371, 411).

Although such a position may appear to represent a radical departure from established modes of thought (Langacker 1988:4), observations of Stockwell et al. (1968), Anderson (1971), and Grimes (1975) all suggest that there is nothing counterintuitive or unscientific about the claim that grammatical notions usually held to be primitive are semantically complex. Both Fries and Pike also noted the multiple functions of subjects

(Pike 1967:196, 246; Grimes 1975:116), as does Longacre (1983:152–3).<sup>4</sup> Longacre's discussion of the types of instrument is another example (1983:159–61).

Cognitive grammar holds that almost all grammatical units are relational and that these relations can be modeled to a significant degree as configurations in semantic space, which we can equate with our field of mental activity. To be more precise, Langacker holds that there are three basic kinds of semantic units: THINGS, STATIVE RELATIONS, and PROCESSES. This categorization, of course, is fully compatible with Longacre's view of NOTIONAL STRUCTURE (Longacre 1983:246).

THINGS are bounded entities occurring in three dimensional space; STATIVE RELATIONS represent a kind of configuration that holds between two things within a given domain, which is a cognitively salient context that serves to define the particular relation. The relation itself is structured in that one of the related entities is prominent within the configuration, whereas the other entity is backgrounded and serves to locate the prominent entity in some way within the domain. The distinction between the prominent entity in a relation and the backgrounded one is a kind of figure-ground organization.

The most prominent entity of a relationship is called the TRAJECTOR. The backgrounded entity of the relationship, which serves to locate the trajector is called the LANDMARK. Typical domains include time, three-dimensional space, the calendar year, a kinship system, and the conversational schema. Finally, the particular configuration that characterizes a given stative relation is atemporal, it does not change through time.

The third basic semantic entity posited by cognitive grammar is the class of PROCESSES. PROCESSES are dynamic interactions and consist of relations of two or more entities in which the configuration of the relationship does change through time. For example, processes arise, develop, degrade, and terminate. It is thus natural to characterize the evolution of a process as a series of distinct states that can be charted through a period of time.

**1.2. A cognitive model of the canonical event.** Langacker's characterization of the structure of a canonical event, an important aspect of clause structure, is particularly relevant at this point. The conceptual framework includes the viewer of an event, the participants in that event, the setting within which the event unfolds and the interactions highlighted by the event. He sets up an IDEALIZED COGNITIVE MODEL which can be construed

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<sup>4</sup>Janda (1988:343) reiterates this precise point. For a more general critique of the primitiveness and universality of semantic features, cf. Casad 1982:37–41, Svorou 1987:86–90, Lakoff 1987:115–6, Langacker 1987:19–22, and Dirven and Taylor 1988:394.

as a representation for prototypical events. This model implies a “chunking into discrete events of temporally contiguous clusters of interactions observed within a setting” (Langacker 1986b:6). In the typical unmarked third-person case, the viewer is positioned outside the setting and is thus not necessarily a participant himself in the event, although his perspective on the scene is crucial—another point at which Langacker and Longacre fundamentally agree (Longacre 1983:19). A major point of this paper, in fact, is that the speaker’s vantagepoint on the situation he is describing is an integral part of the semantic structure of the particular sentence he is using and is not to be confined to an autonomous module called PRAGMATICS that is held to be of only secondary interest to the concerns of syntax.

The model makes a clear distinction between the setting for an event and the participants in it. The setting encompasses sufficient area to take in the participants, but is not itself essentially involved in the interactions among the participants.

Setting elements are usually peripheral to clause structure (Longacre 1983:109–10); but, in the Cora data that I discuss here, the setting has taken on special salience so that it is often essential to the interactions and relationships specified by a given verb. Cora LOCATIVE PREFIX + STEM constructions are thus nonprototypical in terms of Langacker’s characterization of the canonical event. In short, the locative prefix + stem combinations fit well into the structure of Langacker’s idealized cognitive model of the canonical event, at the same time that they represent an explicit modified version of it.<sup>5</sup>

In particular, the function of the locative prefixes is to specify in schematic (underspecified) terms the setting within which events transpire or qualities exist, a function important to language in general (Grimes 1975:122, Longacre 1983:79, 306–7, Rudzka-Ostyn 1985:211, Langacker 1986b:6–7, 1987:212, Janda 1988:327, Talmy 1988:188). This role is carried out jointly by as many as four locative prefixes, although, more commonly, a sequence consists of just two or three prefixes. These relate as a unit to verb stems, incorporated noun roots, or adjective stems, forming a unit that internally is like a serial verb in which a pair of subprocesses is strung together as a single event which has the same trajector all the way through. The one event is schematic and is elaborated in various ways by the other event.

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<sup>5</sup>The nonprototypicality of the Cora clause structure I discuss here is neither a surprise nor a problem for cognitive grammar. Langacker (1990:211) notes that there can be many versions based on the model of the canonical clause, both because speakers can construe situations in alternate ways and because they have various grammatical devices for expressing their thoughts (Langacker 1988:36).

Each prefix represents a stative relation between two entities that remains unchanged through time. Each stative relation is invariably grounded in a distinct cognitive domain or subdomain and represents a distinct structuring of semantic space. The vast majority of Cora verbs are structured in this way.

The prototypical linguistic relation is asymmetric (Langacker 1987:231). This is represented in semantic representations by foregrounding one of the relevant entities as the most salient entity in a linguistic relationship which is the trajector of that relation. Typical trajectors are the subjects of transitive and intransitive clauses and the objects of prepositions. The other entity in the relationship, which is backgrounded and functions to locate the trajector in some way within a given cognitive domain, is called the landmark (Langacker 1987:217). Typical landmarks include the direct objects of transitive clauses, prepositions in prepositional phrases, and points of reference relative to the use of adverbials and tense-aspect markers.

The entire string of prefixes in a sequence within a Cora verb functions as a LOCATION constituent and is set off from the more general SETTING appropriate to the entire clause. This distinction is needed because other adverbial elements can occur elsewhere in the sentence which elaborate in one way or another the locative prefix sequence that occurs with the verb stem.

With this preliminary introduction into both the notions of cognitive grammar and the complexities of the linguistic structure of the Cora locative prefix + stem combinations, we can now move on to a more detailed analysis of the data, focusing on how the speaker's vantagepoint relates to the semantic structure of these constructions.

## 2. Location versus setting

To begin discussing the justification for the distinctions between the global setting for events and the locative constituent that provides a schematic characterization of the specific locational setting for those events, I give the examples in (1), in which an adverb occurs in construction with locative prefix + stem sequences.<sup>6</sup>

The overall setting of the scene that (1a) describes is specified by the topographic adverb *antan* 'off there on top across the river'. The line of footprints described at the far side of the river opposite the speaker's viewing point is neutral with respect to the directionality of the river's flow; it merely follows along the river's edge.

<sup>6</sup>The following abbreviations are used: ART article, CAUS causative, DIST distal, S singular, STA stative, SUBJ subject.



- (1) a. *án-tan*                      *pu*    *tá-č'ap<sup>w</sup>a*  
 top-across<sup>^</sup>river    it    straight-footprint  
 There is a line of footprints on the far side, following the river.
- b. *ú*        *nú*    *aʔ-a-raa-me*  
 there I        DIST-outside-face-go<sup>^</sup>s  
 I am going to come back down river from there.

The role of *antan* to locate *ta-č'ap<sup>w</sup>a* within a larger global setting suggests strongly that the LOCATION component of this construction is indeed distinct from the SETTING.<sup>7</sup> It also suggests that the structure of the LOCATION element itself may include an E-SITE.<sup>8</sup> However, since this construction includes only a single locative prefix, there is insufficient evidence to demonstrate this clearly.

On the other hand, the multiplicity of locative markers in (1b) does lend support to this. The speaker uses *u* 'there' to designate a particular location where he will be at some time in the future. He situates this location at a distal location upriver from the location where he is found at the time of speaking. The prefix *aʔ-* (distal) references a distal location from which he begins his return trip back to his present location, whereas the prefix sequence *a-raa-* 'outside-face' anchors his path to the natural direction of the flow of the river. The role of the prefix *a-* 'outside' in this is likely to represent the future motion along the path back to where the speaker is at the moment of speaking. In summary, the sentence-initial adverb *u* 'there' establishes the most remote location within the setting for the event, whereas the prefix sequence *aʔ-a-raa* 'DIST-outside-face' specifies the shape of the path the trajector follows in returning to his location occupied as speaker. This same functional relationship will be observed in other examples that follow.

In the following sections, I illustrate some of the more obvious relationships that occur between the role of the location constituent and the global setting.

<sup>7</sup>Grimes expresses an identical point of view when he categorizes notions such as SOURCE, GOAL, and RANGE as orientational roles that help establish settings for events (1975:120–22).

<sup>8</sup>The notion E-SITE is based on the assumption that semantic units combine in pairs such that one member is autonomous, whereas the other is dependent. The dependent one is said to make inherent internal reference to the autonomous unit via the e-site, which is actually a substructure within the dependent unit that corresponds to the profile of the autonomous unit. In turn, the autonomous unit elaborates the e-site in detail (Langacker 1987:304). Notice that the individual prefixes, however, contain no e-sites. They thus represent nonprototypical semantic structures (Casad 1982:86, Langacker 1987:304).

**2.1. Setting is coextensive with location.** There are certain uses of prefix sequences in which the location they designate is equivalent to the global setting for the event expressed by the verb stem. This is especially easy to see when locational prefixes designate areas or configurations on a discrete object such as a clay pot, as in (2).

- (2) *a-uu-tá-tap<sup>w</sup>a*    *mi*      *ša?ari*  
 outside-that<sup>^</sup>way-across/straight-broken    ART      pot  
 The clay pot is broken in half.

The situation in view in (2) is that of a cooking pot that has gotten broken into roughly two equal parts. As the multiple morphemic gloss for *-ta* 'across/straight' suggests, it can appropriately designate two possible resultant states. The line of fracture could either have been oriented horizontally with respect to the natural sitting position of the pot, or it could have divided the pot into halves along a line going from top to bottom. This double possibility is based on the indeterminacy of the meaning of the prefix *ta-* with respect to any particular orientation to the fracture line. The prefix *a-* 'outside' places the fracture on a visually accessible surface of the pot, the prefix *u(u)-* 'that way' designates the path that the fracture line follows, and *ta-* 'across/straight' contributes the notion that the fracture line cuts clean across the physical expanse of the pot. To conclude, the location designated by *a-uu-ta-* is coextensive with the setting for *tap<sup>w</sup>a* 'broken.'

A more abstract version of coextensive location and setting is illustrated in (3), taken from a folklore text in which the narrator views the scene as though looking on from a distance. Both of the locations designated by the locative prefix strings *a?-i-re?e-* and *a?-u-re?e-* are defined in terms of the same global base which is needed for defining the adverb *á* (distal).

- (3) a. *á*      *á?-i-ré?e-n'áa*  
        DIST DIST-path-corner-arrive  
        He arrived back at the primary center of activity.
- b. *á*      *á?-u-ré?e-n'áa*  
        DIST DIST-that<sup>^</sup>way-corner-arrive  
        He arrived back at the place he had left earlier.

The adverb and prefix sequence *á a?-i-re?e-* of (3a) designates a textually-defined spatial setting for the arrival event. In this case, the proclitic adverb *a* (distal) designates a primary point of reference as defined by the narrative text—the place where the initiating events are staged. The

sequence is conventionally construed as meaning that the named participant has followed a path that earlier led away from that primary point and later turned back to it. The locative prefix *aʔ-* (distal) specifies the location reached by the trajector that is most removed from the primary reference point. In other words, the adverb *a* (distal) anchors the most salient end of the complex path that the trajector follows, whereas the prefix *aʔ-* (distal) anchors the other end of that path. Put another way, the adverb schematically specifies the spatial range that the prefixes collectively and anaphorically characterize in more detail.

The contrastive movement of (3b) *vis-à-vis* (3a) is indicated by the locative prefix *u(u)-* 'that way'. In this case, the trajector's movement is away from the primary narrative vantagepoint towards the distal area from where the trajector was summoned to come to the stated center of activity mentioned in the text. In both cases, the trajector is viewed as completing a round trip. In both cases also, the entire movement designated by the prefix sequences encompasses the entire area taken in by the global setting. This notion of a mutually-shared base is a common feature of many of the constructions I examine in this paper.

**2.2. Location is only a part of the setting.** The LOCATION constituent may also reference only a portion of the global setting. The examples in (4) show that the speaker has options for characterizing motion upwards even within the same domain. In (4a), the sequence *u-h* 'inside-slope' designates upward motion within the subdomain of a hill, whereas in (4b) *a-uu-ta-* designates upward motion within the subdomain of a river. These two domains, in turn, are subsumed in a more generalized topographic domain or base (Casad 1982:135; 1988:349).

- (4) a. *án-tʷi*                      *áʔ-u-h-ru-pi*  
       top-up-uphill        DIST-inside-slope-enter-PAST  
       He went off to the top of the hill.
- b. *á-h-tʷapʷa*                      *aʔ-u-tá-ru-pi*  
       outside-slope-upriver        DIST-that-way-straight-enter-PAST  
       He went off somewhere upriver.

In (4a), the end of the path located within the topographic domain is indicated by the adverb *án-tʷi* 'up at the top of the hill', whereas the prefix sequence *u-h-* 'inside-slope' on the verb contrasts with the *a-h-* 'outside-slope' of (4b). This contrast is based on the notion of a canonical viewer's position at the foot of a hill. The viewer typically is facing toward the slope of the hill. The distinction between *u-* 'inside' and *a-* 'outside' is

determined with respect to a line of sight that follows the vertical axis of the hill up to its uppermost extremity. Locations that lie along this line of sight are 'inside', whereas those that lie perceptibly off to one side are characterized as 'outside' locations (Casad 1982:101, Casad and Langacker 1985:261-63). In general, within the domain of the hill, locations that are straight upslope from the viewer are *u-h-* 'inside slope', whereas those that are oblique to the slope are *a-h-* 'outside slope'.

In (4a), the prefix *aʔ-* (distal) locates the trajector at a point out of the immediate vicinity of the viewer, *u(u)-* 'that way' traces the viewer's line of sight upslope, crossing the horizontal long axis of the hill or range, *h-* 'slope' places the motion of the trajector within the slope, and the past-tense form *rupi* 'he entered into X' places the end of the motion within a circumscribed area which is elaborated by the adverb *an-ʔi* 'up at the top of the hill', which takes the entire domain of the hill as its base. In summary, the adverb *an-ʔi* designates the endpoint of the path within the domain of the hill, whereas the prefix sequence *u-h-* designates the shape of the path within that domain. The two grammatical elements thus fill in complementary aspects of the conceptual scene, but they both have the same global setting in terms of which they are defined. This is the prototypical use of the LOCATION constituent in its relation to both the global setting and an accompanying adverb.

The same relationship between adverb and prefix sequence is illustrated by (4b). In this example, the scene is localized within the river subdomain of topographic space. The adverb *ahʔapʷa* 'outside-upriver' designates the end or goal of the trajector's path, which runs counter to the natural direction of the river's flow, and provides a finer specification of the point designated by the prefix *aʔ-* (distal). It designates an upriver location that is out in the slope that parallels the river. On the other hand, the prefix sequence *u-ta-* 'that way-upstream' details the directionality of the trajector's movement within the river domain (in contrast with *u-ra-* 'that way-downstream').

### 3. Speaker's vantagepoint relative to setting

The model of the canonical event explicitly includes an observer and his VANTAGEPOINT. In its prototypical sense, the observer's vantagepoint is a specific location in space from which he looks out over a developing situation located within his field of vision. In the section that follows, I present an analysis which strongly suggests that the speaker's vantagepoint is a crucial aspect of the semantic structure of Cora locative prefix + stem constructions.

Cora employs a set of orientational prefix sequences *i(i)*- 'this way' and *u(u)*- 'that way' to locate a path with respect to a speaker's conceptual primary reference point or DEICTIC CENTER (Serzisko 1988:433). This reference point is, in many cases, the viewer's actual position when he comments on a situation that he is observing. When motion is involved, the path can be construed as coming toward the primary point, as in (5), where orientation towards the speaker's location is determined by the prefix *i(i)*- 'this way'.

- (5) a. *a-ii-ká-suuna* *háih hece*  
 outside-this^way-down-pour cliff at  
 Water is pouring down the cliff facing the observer.
- b. *a-n-ká-suuna*  
 outside-top-down-pour  
 Water is pouring down over the edge of the cliff.
- c. *a-í-h-n'eeri-?i*  
 outside-this^way-slope-visible-STA  
 From a source at the foot of the slope, it is all lit up  
 along the slope coming up this way to the top.
- d. *a-ii-tá-?ee* *ayún hece*  
 outside-this^way-across-long back^here to  
 It is a long ways across the river to back on this side.

A waterfall is in view in both (5a) and (5b). In (5b), the speaker views the situation from the top of the cliff over which the waterfall spills. This usage of *a-n-* 'outside-top' is close to its prototypical topographically based version in which it designates the region at the head of a slope. The prefix *ka-* 'down', then, designates the natural downward flow of water toward the base of that cliff. The speaker's vantagepoint is at the top of the cliff over which the water pours and he is typically close enough to the edge of the cliff to see the downward flow of the water.

In the contrasting situation of (5a), the viewer is spatially removed from the foot of the waterfall. He may even be clear across the canyon from it, as I was when my language associate first used the term in my presence. The important aspect of this scene to keep in mind is that his viewing point for appropriately using *a-ii-ka-suuna* is clearly distinct from his viewing point for appropriately using *an-ka-suuna*, in which he must be near the top of the fall.

In (5a), the prefix *a-* 'outside' places the entire scene within the scope of the viewer's visual field, whereas the prefix *ii-* 'this way' traces the water's trajectory along a path basically oriented toward the viewer's vantagepoint. Pragmatically, this allows the viewer's visual field to take in a perceptible stretch of the river above the fall or, at least, the perceived motion of the water gives the orientation of the path in this scene.

The role of the prefix *i(i)-* 'this way' to determine a marked vantagepoint is also evident in (5c). In this case, the situation concerns the effects of some source of illumination located at or near the foot of a hill. This source is lighting up the hillside with a distinct orientation coming from the foot of the hill all the way up to near the top of that hill at the viewer's position. Once again, the use of *a-* 'outside' places the entire scene within the scope of the viewer's visual field, whereas *i(i)-* 'this way' signals the orientation of the trajector (illumination) toward the viewer's position. Finally, the prefix *h-* 'slope' places the entire path within the face of the slope.

Example (5d) provides a third example in which *i(i)-* 'this way' allows us to see a clear contrast in vantagepoint with that associated with another prefix sequence. The relevant situation in this case finds the speaker looking across a river and gauging its width as substantial. The use of *a-* 'outside' places this point within his visual field. The use of *i(i)-* 'this way' shows that the speaker is calculating the extension (distance) of the trajector along a path that starts at the far side of the river and ends at the viewer's position. The prefix *ta-* traces the extension totally across the width of the river.

On the other hand, motion away from the speaker's position is indicated by the use of the prefix *u(u)-* 'that way', as illustrated by (6).

- (6) a. *y-áa*                    *pú*    *úu-č<sup>y</sup>ap<sup>w</sup>a*  
          here-outside    it    that^way-footprint  
          From here, there is a string of footprints leading off  
          yonder.
- b. *á-úu-na?a-ra*  
          DIST-that^way-burn-CAUS  
          Go and make a fire!

The scene related to (6a) finds the speaker looking at a string of footprints in the ground that leads off from his position to some point an unspecified distance away. The adverb *y-aa* 'here outside' locates the entire scene within an unenclosed area anchored to the speaker's position, indicated by the initial *y-* 'here' of the locative adverb. The subject

pronoun *pu* is the topic pivot for the fronted locative adverb. The nominal *čʷap<sup>w</sup>ari* 'footprint' appears here in its incorporated form without the absolutive suffix *-ri*, and the prefix *u(u)-* 'that way' indicates that the line of footprints follows a path leading directly away from the speaker's position.

The use of *u(u)-* 'that way' in (6b) also indicates movement along a path from the speaker's location to an unspecified goal, yet the use of *a-* 'outside' probably limits the extension of the path to a location within eyeshot of the speaker. The fact that this form is an imperative and designates a common domestic activity lends support to this interpretation of *a-*.

To summarize, in this section I have discussed several prefix sequences that fall into contrastive pairs with other prefixes in which they are distinguished by the speaker's vantagepoint for viewing a conceptual scene. This suggests that an explicit mention must be made of this vantagepoint if one is to formulate a descriptively credible cognitive model of Cora locative prefix + stem constructions.

## 5. Conclusion

In this paper, I have considered the semantic structure of finite clauses in Cora that consist of a sequence of locative adverbs and directional prefixes in construction with verb stems, adjective stems, and incorporated nouns. The prototypical usage of these constructions is to orient the interlocutors of the speech event to the physical settings in which events are realized. The adverbs select particular domains for discussion, whereas the prefixes specify the shape or orientation of the path or location within that domain. A careful examination of the semantics of these constructions shows that the speaker's vantagepoint for viewing a given scene is directly relevant in accounting for many of the contrastive usages of these constructions. Thus pragmatic considerations are the warp and woof of the meanings of these complex grammatical units.

My analysis suggests that Langacker's model of the finite clause (or event structure) is essentially correct in insisting that both the settings for events and the speaker's vantagepoint for viewing them are relevant and crucial for accounting for the forms and usages of Cora locative prefix + stem constructions.

A final implication is that, in order to provide a descriptively adequate account of these Cora data, it is necessary to include in a model of the Cora finite clause a locative constituent which provides a schematic characterization of the spatial framework within which events transpire and

states occur. This locative constituent is distinct from the global setting of the event but is not autonomous from it (Langacker 1990:230). In fact, its relationship to it is organic and variable. The prototypical topographic use, for example, pairs either a topographic or locative adverb with a verb construction that includes one of six conventionally established prefix sequences. In this construction, the external adverb designates a location within a specific domain, whereas the prefix sequence designates the shape of the trajector's path within that domain. The semantics of both the adverb and the prefix sequence is defined within a common base. In other versions, the area designated by the prefixes may be only a subpart of the entire global setting that the path covers.

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## The Functions of Negation in Narration

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This paper does not describe the morphosyntactic structure of negative forms in an individual language or across languages (as in Payne 1985, Dryer 1987, Horn 1978, Song 1973, 1988, and Kim 1967). Neither does it argue for truth values in logical forms, the scope of negation, or interaction of negatives with quantifiers (as in Klima 1964, Kuno 1980, and Cho 1975). Nor does it measure the effects of negation during language processing, either in production or comprehension (as in MacDonald and Just 1989, Just and Carpenter 1971). In short, this is not a study of negation from purely syntactic, semantic, or psycholinguistic perspective. Rather, this paper is concerned with discourse and pragmatic functions of negation in communication, following the earlier sporadic studies included in Labov 1972, Givón 1984, 1989, Grimes 1975, and Longacre 1983, 1989. This study assumes a social act orientation, involving both speaker and hearer, asking questions like "Why is the negative used?"<sup>1</sup>

The purpose of this paper is, thus, to explore the functions of negation in narrative discourse. I claim that the functions not only include providing background information in discourse (Hopper and Thompson 1980, 1984) or denying an expectation at the local context of a discourse (Givón 1984), but also marking a turning point or a high tension point at the global level. The macrostructure, the germinal idea of the whole discourse, has some control over the use of negatives—as it does over other grammatical

<sup>1</sup>Mann and Thompson (1992) describe semantic orientation (having to do with propositions in a text and their truth values) as inner circle; speech act orientation (adding the component of speaker, as asserting, questioning, or commanding) as the next circle out; and social act orientation as outer circle.

features like tense-aspect in the text—especially in some texts where negation features prominently in relation to the plot structure.

In §1, studies on negation in relation to discourse context are discussed to provide general background to the present paper; §§2–4 focus on specific functions of negation in narrative, namely marking turning points and high tension points and giving some explanation. The final section presents concluding remarks.

### 1. Studies on the use of negation

In his study of narrative syntax, Labov says:

The use of negatives in accounts of past events is not at all obvious, since negation is not something that happens: rather it expresses the defeat of an expectation that something would happen. Negative sentences draw upon a cognitive background considerably richer than the set of events which were observed. They provide a way of evaluating events by placing them against the background of other events which might have happened, but which did not. (1972:380–81)

In the same chapter, he considers negatives as a device by which a narrator may make an EVALUATION concerning the point of a story. It is evaluation that relates to the question *so WHAT?*—Why is the story told (its *raison d'être*)? He treats negatives as part of COMPARATORS,<sup>2</sup> one of the four types of evaluative elements in texts, which depart from basic narrative syntax.<sup>3</sup>

In her book *Telling the American Story*, Livia Polanyi (1989:97–98) explains similarly the use of a negative proposition as an evaluative device in the example reproduced here as (1).

- (1) *I FAINTED on the subway . . . It was very um . . . uh . . . FRIGHTENING experience . . . I had DON't even remember FAINTING before in my life let alone on the subway.*

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<sup>2</sup>According to Labov, comparators include: negatives, futures, modals, quasimodals, questions (especially those addressed to the listener), imperatives, *or*-clauses, and grammatical comparative and superlative in clauses with *as*, prepositional phrases with *like*, and other metaphors and similes.

<sup>3</sup>The other three are explained as intensifiers, correlatives, and explicatives.

She says that the negative here functions "to impress upon her audience both the uniqueness of the event in her life and its frightening quality" (1989:98).

Grimes (1975) recognizes a special type of information that is usually encoded in negatives and questions and calls it *COLLATERAL INFORMATION*. He says that collateral information relates nonevents to events, i.e., "by providing a range of nonevents that might take place, it heightens the significance of the real events" (1975:65). He states that almost all negatives are collateral and function to highlight events by telling the listener what did not happen.

Hopper and Thompson (1980) present the affirmative-negative consideration as one of the ten components of high transitivity that correlate with foreground information in discourse. They propose that clauses marked by negative would occur in the background portion of discourse. In another article (1984), they show how the verbs in negative clauses are not prototypical event-reporting verbs, inasmuch as negative clauses deny the affirmative state of affairs.

In several of his writings, Givón (1979, 1984, 1989) gives an overview of negation as a propositional modality. In terms of truth value scales, he notes that NEG-assertion is lowest, following presupposition, realis-assertion, and irrealis-assertion. In terms of subjective certainty, or strength of belief, NEG-assertion is equal to realis-assertion and weaker than presupposition, but it is stronger than irrealis-assertion. In discourse-pragmatic use in communication, he says, NEG-assertion, like presupposition, has shared backgroundness, unlike realis-assertion or irrealis-assertion. He describes negation as a speech act of denial in such discourse context as "when the corresponding affirmative has been discussed, contemplated, or is otherwise familiar to the hearer... [It is] not used to introduce new propositional information into the discourse, but to deny the truth of already-introduced propositions" (Givón 1984:333).

Givón (1979:139) explains that "affirmatives are used to convey new information on the background of assuming the hearer's ignorance," while "negatives are used to correct misguided belief on the background of assuming the hearer's error."

He also points out that "the number of tense-aspects in the affirmative paradigm is almost always larger but never smaller than the negative" (Givón 1979:121-2). Contini-Morava (1989), in her book on discourse pragmatics and semantic categorization, reports the case in Swahili: the asymmetry between affirmation and negation in relation to its tense-aspect system.

Longacre (1983, 1989) has further developed the idea and established the irrealis band in his verb rank scheme as those verbs and clauses with

negatives and modals.<sup>4</sup> Modals such as *could*, *would*, *might*, *should* are similar to negatives in that they do not report events or happenings but describe what might have, could have, or should have happened. *Could* may report an event as in *He could draw a picture of the attacker*, but focusing more on ability than on the event as it would in *He drew a picture of the attacker*. In general, information in the irrealis band includes possible and hypothetical events in an alternative world which contrasts with those in the text world.

In Longacre's (1989) verb rank scheme for English narrative, the irrealis band ranks after storyline (usually encoded in simple past tense), background activities (in past progressive), flashback (in pluperfect), and setting (information on time, location, and circumstance encoded in stative verbs and *be* or *have* clauses). The irrealis band is in turn ranked before the evaluation band (author intrusion) and the cohesive band (verbs in adverbial clauses), which are lowest in salience as far as the narrative world happenings are concerned. He does, however, note that some information reported in negatives may be promoted to the storyline band, labelling them as MOMENTOUS NEGATION, in that they encode crucial information relative to the unfolding plot structure. When a negative reports a change of condition as in *Suddenly, I couldn't see a thing*, it is an event, although nonvolitional, and is promoted to the storyline.

In my paper dealing with foreground information (Hwang 1990), I have briefly touched on the topic of negation. While most negatives encode background information, I have pointed out that there are some (which may be momentous negation) that report information crucial enough to be included in summaries and macrostructures.

## 2. Marking turning points in the plot

We expect a story to report a sequence of events, which is the *sine qua non* of narratives along with agent orientation. Why then does it also include negatives that say what did not happen? Negatives are not used in narratives unless there is a certain kind of textual, contextual, or cultural expectation. The expectation may be due to a FRAME—a break from related items that normally exist together (e.g., *The classroom didn't have a blackboard or chalk*)—or it may be due to a SCRIPT—a break from a normal sequence of events (e.g., *We waited for 30 minutes after we sat down in the restaurant, but the waitress didn't come*). An event might be expected to occur, but the author explicitly states that it did not.

<sup>4</sup>Earlier (1981) he used the metaphor SPECTRUM for the rank scheme for narratives.

Negatives generally report explanatory background information. When looked at from the point of view of an overall discourse (i.e., from its syntagmatic structure), however, negatives have additional functions such as marking a turning point or a high tension point (e.g., notional climax) of a story. At a high tension point such as the peak, there may be repetitive occurrences of negatives which scarcely add any new information. To illustrate these functions, specific examples of negation from English and Korean texts are considered.

In *The Three Little Pigs* (as retold in Southgate 1965), the following negative sentences occur in the narration proper, excluding the quoted (reported) speech:

- (2) *But the house of bricks did not fall down.*
- (3) *The wolf was very angry, but he pretended not to be.*
- (4) *The little pig was very frightened, but he pretended not to be.*
- (5) *The little pig was very frightened, but he said nothing.*

In (3) and (4), the scope of negation is limited to the embedded clause, that is, the wolf and pig each did something—they each pretended. In (5), although a negative nominal *nothing* is used, it is a negative proposition equivalent to *he did not say anything*. The following sentence goes on to report his action: *He put a big pot of water on the fire, to boil*. Sentences (3)-(5) report nonevent, background information. Example (2), however, together with the contrastive or, more specifically, counter-expectation conjunction *but* (cf. Mann and Thompson 1992) encodes a significant piece of information. There is a strong expectation (SHARED BACKGROUNDNESS similar to presupposition, according to Givón) that is established in previous episodes, after the houses of the first and second little pigs fell down through the same ritual process performed by the wolf, as described in (6).

- (6) *"Then I'll huff, and I'll puff, and I'll blow your house in," said the wolf. So he huffed and he puffed and he huffed and he puffed.*

This is an example of counter-expectation based on a break from the norm of a script. Yet the script is not of the usual cultural type but of the type established in the story itself (textual expectation). Compare this with (3)-(5), where the expectation is not necessarily built up in the event sequence of the text but based on knowledge of generic human nature or

culture (cultural expectation). When you are angry or frightened, you are (especially in Western culture) expected to show it in some way. Hence, the use of *but* (sentence-medially) and the use of negatives. The author presumes that the reader would have the corresponding affirmative expectation, so explicitly denies it as an expression of expectancy reversal.

Researchers in the field of artificial intelligence and cognitive psychology have noticed that there are two modes of processing in the comprehension of stories: (a) processing based on the information given in the plot and general knowledge of human behavior and interaction (which help the readers to expect or anticipate which actions are likely to occur), and (b) processing based on the application of a story schema, incorporating knowledge about prototypical sequences of character interaction (Bisanz 1982). Some have referred to these as the bottom-up and top-down processes, both of which are usually involved in story comprehension (van Dijk and Kintsch 1983, Hwang 1984).

We may ask a question regarding the use of negatives as follows: Is the denial of expectation of a particular negative based on a schema (global to the whole discourse structure) or one based on the common-sense theory of human social interaction (which is local in its scope)? These two types of knowledge and expectation no doubt overlap in many instances, but there are some cases in which we are able to pinpoint only one type.

Given different types of expectation in a story, there might be different degrees of saliency of the counter-expectation information. Denial of textual expectation is perhaps more salient than that of cultural expectation. It also depends on how great or surprising a particular break is from the norm. Example (2) is a surprise to the reader, who has had a strong expectation established by the sequential happenings so far given in the story. Notice that the entire sentence, with its sentence-initial conjunction *but*, is devoted to the reversal of expectation, unlike other examples from the same text, which state both the normal condition and the unusual result within the boundary of a single ANTI-THETICAL sentence. In fact, (2) provides the turning point of the story. It is the first indication that the wolf will no longer get his way.

A very similar example occurs in the beginning portion of C. S. Lewis' (1950) *The Lion, the Witch and the Wardrobe*, which contains some negatives that depend largely upon cultural expectation, based on both frames and scripts.

- (7) *They were sent to the house of an old professor . . . He had no wife and he lived in a very large house . . .*
- (8) *. . . said Edmund, who was tired and pretending not to be tired*



- (9) . . . *you could see neither the mountain nor the woods nor even the stream in the garden*
- (10) *It was the sort of house that you never seem to come to the end of, and it was full of unexpected places.*
- (11) *There was nothing else in the room at all except a dead blue-bottle on the window-sill.*
- (12) *There was nothing Lucy liked so much as the smell and feel of fur.*
- (13) . . . *she kept her arms stretched out in front of her so as not to bump her face into the back of the wardrobe. She took a step further in—then two or three steps—always expecting to feel woodwork against the tips of her fingers. But she could not feel it.*
- (14) *“This must be a simply enormous wardrobe!” thought Lucy, going still further in and pushing the soft folds of the coats aside to make room for her. Then she noticed that there was something crunching under her feet.*

The negatives in this text are used to describe participants—an old professor with no wife in (7), and Edmund’s character in (8), which relates crucially to the overall plot; to describe setting—general locational setting in (9), the house in (10), the room in (11); to provide more intense expression than the affirmative counterpart would in (12)—where *Lucy likes the smell and feel of fur* would be weaker—which provides new, but background, information leading to the next action; and to mark the turning point of the story in the sentence *but she could not feel it* in (13), which denies both cultural and textual expectation in that the previous text sets up the expectation.

The last sentence *but she could not feel it* in (13) is particularly interesting. It is a NEG-assertion in a separate sentence by itself with *but*; it is the turning point in that section of the story. Lucy begins to notice coldness, snow, and so on; she becomes aware of being in a different world from that of inside a wardrobe. The negative states nonevent (collateral) information, but marks the end of one phase (the wardrobe world) and literally opens up a completely new world (Narnia).

Next is the story of *The Closed Door* (Gee 1955:190–91):

- (15) a. *Often in his later years Charles Haddon Spurgeon used to tell the story of the closed door, and he would chuckle as he did so.*
- b. *It seems that after he had been preaching in the famous Tabernacle, somebody told him about a poor woman who could do with a little encouragement and some practical help.*
- c. **Nothing** *appealed more to Spurgeon's warm heart than sharing in a friendly conspiracy behind somebody's back.*
- d. *He listened carefully, made a note of the particulars, and promised that something should be done.*
- e. *He was as good as his word.*
- f. *Only a few days later he hurried along a street of wretched houses, came to a door, and knocked.*
- g. **But the door did not open.**
- h. *He knocked again; still the door remained closed, though Spurgeon knew very well that there was almost certainly somebody at home.*
- i. *A third time he knocked.*
- j. *Then he went off; but later in the day he approached the house again, walked briskly to the door, gave one resounding knock, and opened it.*
- k. *"Well, what do you want?" gasped a nervous and surprised little woman.*
- l. *"Want?" repeated Spurgeon.*
- m. *"I don't want anything except to make you happy, my dear.*
- n. *I've come with a small gift—and I've reason to think it will be enough to pay what you owe in rent; and I hope there'll be something left over for yourself."*
- o. *At this news the woman sank into a chair, and wept.*
- p. *"Oh," said she between sobs, "you've come as an answer to prayer; and to think that when I caught sight of you from the window this afternoon I daren't open the door because I thought you'd come for the rent."*

In this story there is a pivotal example similar to (13), *but the door did not open* (15g), which is a single-clause sentence with *but* and a negation of the proposition. In this case, it is a denial of cultural expectation: if someone knocks on a door and there is a person inside, we expect the

door to be opened. Spurgeon knocks three times and we are told about the nonresponse in three different ways:

- (16) *But the door did not open.*  
 (17) *still the door remained closed*  
 (18)  $\emptyset$

In both (16) and (17), there are counter-expectation conjunctions (*but* and *still*), and the two sentences are in fact paraphrastically related as negated antonyms, i.e., *open* is an antonym of *remain closed*. The same real world situation is stated once in the negative and another time in an affirmative way. Interestingly, after Spurgeon had knocked the third time, the author did not even state the nonhappening result. He apparently considers that the reader's expectation has by now been established in the opposite way—that the door would not open. Why do we have three different ways of stating the same situation? It may be partially to avoid boring verbatim repetition in discourse. More importantly, however, there is a different degree of expectation at each moment in the story as the result of even the same repeated action. Furthermore, what the reader expects to happen is not the same at each moment: after the first and second knock, the door might be expected to open, but after the third knock, it is not expected to open.

Negation in this story is a significant nonevent, upon which plot structure hinges. Although this is a brief story with not much happening until the negative occurs, perhaps we could also call the point at which it does occur to be the turning point of the narrative. Certainly, it is the inciting incident, the most crucial information (although nonhappening) in the episode. The very last sentence of the story explains in quoted speech form why the door did not open (or remained closed)—the woman had thought that Spurgeon must have come to collect the rent.

In order to test the saliency of the use of negative, I conducted a SUMMARY EXPERIMENT, in which I read the story in (15) to the twelve students and asked them to write down a brief summary of it. Excluding two summaries that did not include the plot structure, nine out of ten used some form of negation, as shown in (19)–(24).

- (19) *no one answered (the door)*  
 (20) *no one would come to (answer) the door*

- (21) *she did not answer*
- (22) *she would not open the door*
- (23) *found no response*
- (24) *there was no answer*

One summary, however, used an affirmative form (but notice the mention of *three times*):<sup>5</sup>

- (25) *but after knocking three times the door remained closed*

All summaries included the conjunction *but* before the negative clause, except one which used *when* in the first clause: *When he went to deliver his gift to her, she would not open the door*. The idea of knocking three times was included in five summaries, one wrote *repeatedly*, and four did not mention it.

In this example, the reversal of expectancy is so crucial to the plot structure that the idea is included in all of the summaries, and in all but one it is given in some form of negation.

*The Frog Prince* (Hall 1981:102) has three occurrences of negatives in narration, which are given below with some surrounding sentences to provide context.

- (26) *Everyday . . . the Princess would sit on the cool stones of the palace well, tossing a golden ball high in the air . . . But one day she accidentally tossed her ball too high, and when it came down, she could not catch it.*
- (27) *"Wait! Wait for me!" croaked the frog. But the princess did not listen and quite forgot her promise to the frog.*
- (28) *The next morning, the frog slid off her pillow and onto the floor. But as soon as his feet touched the floor, he was no longer a frog. He had become a handsome prince.*

All three negative sentences start with *but*, each one showing the counter-expectation relationship with the previous sentence in the text; (26) marks the inciting incident on the storyline; but why didn't the author write *she failed to catch it* (using lexical negation) or *it fell in the well* (using

<sup>5</sup>This particular summary was made by a nonnative but fluent speaker of English, the significance of which is unclear to me at this point.

an affirmative statement)? Example (27) describes the cold reaction of the princess to the frog once she retrieved her ball; (28) reports a happening—but using a sort of delay tactic, perhaps to highlight the change in the frog as he turns into a prince.

### 3. Cluster of negatives marking high tension points

Negatives may be used in a cluster to help mark a high tension point such as the peak of a story. This is shown in the following section, which is the peak of the story of *Hans* (Gee 1955:106–7):

- (29)
- a. *Only vaguely could he understand the service, but it was wonderful.*
  - b. *He loved the singing, the colour, the warmth.*
  - c. *Then something terrible happened.*
  - d. *Before he realized it, dignified men coming down the aisles were taking up the collection, and Hans—poor Hans—had **nothing** to give.*
  - e. *He would have run out had he not been too frightened to move.*
  - f. *What was he to do?*
  - g. *Others were giving money—he could hear it.*
  - h. *He had **nothing . . . nothing** to give God except his apple, and he could not give that.*
  - i. *He dare not.*
  - j. *What would all the people say?*
  - k. *What would the man in the fine clothes say—the one standing on the steps amid all the bright candles at the far end?*
  - l. *And wouldn't God be angry, too?*

In this peak episode, where poor Hans is in agony, seven negative forms occur, and there is only one other sentence in the whole text which has any negative:

- (30) *He held his breath, but **no one** spoke, and the man who took the apple did not frown.*

Unlike the use of negatives for marking turning points, the multiple occurrence of negatives in a cluster at peak here adds no new information

or a decisive turn, but it helps to build tension. In addition to having a cluster of negatives, this episode is marked as the peak by several other features, such as the tense shift to present, more use of modals, change in vantage point from a third-person perspective to the description of the internal thoughts of the poor beggar boy, and the use of rhetorical questions.

In the Korean story *The Hat Seller*,<sup>6</sup> the following sentences occur with negatives, including lexically (inherent) negative verbs such as *øps* 'not exist' and *molu* 'not know', which are frequent in Korean texts.

- (31) *there was not even one person who bought a hat* (*øps* 'not exist')
- (32) a. *seeing that there were not many hats in the box* (*manjhi an* 'not be many')
- b. *(He) did not know what happened* (*molu* 'not know')
- c. *But not a single hat was visible* (*poiji an* 'not seen')
- d. *The hat seller did not know what to do* (*molu* 'not know')
- e. *At that time the hat seller was not able to say even a word* (*mot ha* 'unable to do')
- f. *It was because all the monkeys on the tree were wearing hats.*
- (33) *But the monkeys neither gave (him) the hats nor any word existed* (*juji an* 'not give'; *øps* 'not exist')
- (34) *The monkeys . . . did not wait* (*kitaliji an* 'not wait')

Let us first look at the negatives in (31), (33), and (34), since all the rest occur in one episode (32). The negation in (31) is considered background information that is to some extent unexpected due to the break from the script; that is, when a hat seller goes out to sell hats, it is unusual for him not to sell even a single hat. Sentence (33) reports the nonresponse of the monkeys to the hat seller's plea to return the hats (Why would they?). The negative clause in (34) is incidental (which is equivalent to *without hesitation*), leading up to the event when the monkeys threw the hats to the ground mimicking the hat seller. The negatives in (31), (33), and (34) occur scattered around the text, providing background explanatory information.

<sup>6</sup>See Hwang 1987 for a detailed discussion and analysis of this story.

The sentences with negatives in (32) all cluster together in one episode of only six sentences. In this episode, the hat seller is frustrated, not knowing where his hats have gone, but finally discovers that the monkeys in the tree are wearing them, as reported in (32e) and (32f). This episode displays a high level of tension from the hat seller's perspective, but not for the reader, because the previous episode reports the monkeys taking the hats while the hat seller is asleep. The use of negatives in this episode clearly heightens the tension from the point of view of the hat seller.

In both the *Hans* story in English and the *Hat Seller* story in Korean, the unusual clustering of negatives in an episode heightens the tension at that point of the story.

#### 4. Providing explanation

In *The Story about Ping* (Flack and Wiese 1961), we find different functions of the negative.

(35) *Ping was always careful, very very careful not to be last, because the last duck to cross over the bridge always got a spank on the back. But one afternoon . . . Ping did not hear the call because . . .*

(36) *Ping did not want to be spanked. So he hid.*

The first example in (35) is an embedded negative whose scope is restricted. What is the function of the negative in the sentence *Ping did not hear the call . . .*? The affirmative counterpart is weakly assumed to be background, that Ping would listen to and hear the call to return to the boathouse quickly so that he wouldn't be spanked. This background, however, is never overtly stated in the text. I feel that the statement that Ping did not hear the call is a significant nonevent, perhaps a momentous negation, on which further development of the plot hinges. Again at the turning point, the negative occurs with the sentence-initial conjunction *but*. This is similar in function to the earlier examples *but the house of bricks did not fall down* (2) and *but the door did not open* (15g).

The next negative occurs in *Ping did not want to be spanked* (36). Is this statement a speech act of denial from expectation? Who would like to be spanked? In this case, the negative is used to give an EXPECTED explanation (by human nature), which leads to an event: *So he hid*. This event may have been quasi-expected: we generally expect him to return home at the end of each day, but in order to avoid the spank he did not return to the boat; instead, he hid. There is tension in the reader's mind at this point

between the general expectation and the specific expectation. It is noteworthy that *so he hid* is the very first sentence in this text to be on the storyline. Twenty-one sentences up to that point are off the storyline, having verbal features like descriptive *be* verbs, negatives, or modals. Of course, although it is the very first event in the story, hiding makes sense only in the context that is built up against the setting and background of that particular situation. For example, can we give a summary of this story without giving the reason why he hid? I don't think so. Thus, the negatives (*not hear the call, not want to be spanked*) are used to provide the crucial explanatory nonevents that lead to events.

### 5. Concluding remarks

We have seen various uses of negatives in some English and Korean narratives. Their functions seem to range from incidental setting or background remarks to momentous negation which is a significant nonevent on its own or which leads to a crucial event.

While all events are dynamic, some events may be highly predictable, especially those component actions of a superordinate action, or preliminary actions leading to the main action. In the same way, while all information marked by negation is nondynamic and nonevent, some may be highly unexpected new information, which is in fact quite salient. Therefore, the functions of the negative in narration are not found simply by focusing on one type only. Negation is apparently utilized to encode a range of information types in narration. A summary of these varying functions of negation in narration follows:

**1. Explanation.** Negatives provide explanatory statements of more intensity than affirmative counterparts, using forms like *nothing but, not only . . . but also, or nothing*. For example, *There was nothing Lucy liked so much as the smell and feel of fur* (12) and *Nothing appealed more to Spurgeon's warm heart than sharing in a friendly conspiracy behind somebody's back* (15c). The explanation might be EXPECTED (which may lead to an unexpected event), as in *Ping did not want to be spanked. So he hid* (36).

**2. Denial of expectation from the FRAME.** Negatives are used to show a break from related items that normally exist together. They provide background explanation or description of a participant, prop, place, or time, as in *He had no wife* (7) and *There was nothing else in the room* (11).



**3. Denial of expectation from the SCRIPT.** This use of the negative, often coupled with the conjunction *but*, presents a break from the normal sequence of events, as in *The wolf was very angry, but he pretended not to be* (3), and “*Wait! Wait for me!*” *croaked the frog. But the princess did not listen and quite forgot her promise to the frog* (27). Some negatives with this function overlap with the following function of marking a turning point.

**4. Turning point of a narrative.** Some negatives lead to a change in the plot structure. They may involve a promotion from the irrealis band to the storyline band in SPECTRUM (the vertical prominence, relative to the verb ranking system), e.g., momentous negation, or happening (*Suddenly, I couldn't see a thing*). Examples from our texts are *but the house of bricks did not fall down* (2), and *but she [Lucy] could not feel it* (13).

**5. High tension point of a narrative.** Negatives may occur in a cluster to create an atmosphere of high tension and help to mark the peak as a zone of turbulence in the PROFILE (the horizontal prominence, corresponding to the notional climax or denouement). Examples are given in (29) and (32). This function is related to Labov's concepts of EVALUATION and SUSPENSION POINT, where the eventline is suspended and some evaluative comments are made.

In summary, negation is found to be basically an expository device, explaining what did not happen contrary to the readers' expectation (a break from a frame or a script), which may be based on shared information in the culture or in the development of the plot in the text. Against this basic function, which is primarily relevant to local context, there are other functions of negation relevant to global context: (a) marking turning points leading to a change in the plot, and (b) marking high tension points, such as the peak. These functions of negation at the global level are closely tied to what Longacre (1981, 1983) has developed under the metaphorical terms, SPECTRUM (vertical prominence) and PROFILE (horizontal prominence).

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## Conditional Clauses: Their Information Status and Discourse Function

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I am convinced that conditional clauses need to be studied from a discourse standpoint.<sup>1</sup> Haiman's landmark paper *Conditionals are topics* (1978) pointed strongly in this direction because topics are best viewed as discourse entities. Akatsuka (1986) argues that conditionals belong in the domain of discourse, and many of her arguments in her 1985 paper are based on discourse considerations.

If conditionals really are topics, as Haiman (1978) asserts and Akatsuka (1986) disputes to some degree, then discourse considerations are important. Now topics are understood by many to be given information. So in order to get started at all, I propose here a working definition of GIVEN INFORMATION as information that is retrievable from the preceding linguistic context.<sup>2</sup> With

<sup>1</sup>I would like to thank Bob Dooley, Austin Hale, Stephen Levinsohn, and Greg Thomson for helpful discussions on various aspects of this paper.

<sup>2</sup>I am aware that this definition of given information is nowhere near as intuitively satisfying as those that are more psychologically oriented such as "information which the addressor believes is known to the addressee" (Brown and Yule 1983:154) or "that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance" (Chafe 1976:30). The advantage of the rather crude definition chosen here, however, is that it allows the information in the conditional to be checked against the information in the preceding linguistic context, whereas the more psychologically oriented definitions do not seem to allow this. In this definition, the term RETRIEVABLE needs careful attention. The clearest case of retrievable is when the conditional clause information has all been previously mentioned in the preceding context. Sometimes, retrievability can be justified on the grounds of a reasonable paraphrase relation existing between the conditional and the preceding context. It becomes doubtful, however, when some process of inference is involved, because inference is certain to depend on the presuppositions of the reader.

this definition in hand it is then possible to relate the information in the conditional clause to that in the preceding context. Ford and Thompson (1986) have already analyzed the conditionals in a corpus of both oral and written English by relating the conditional clause information to the information in the preceding linguistic context. The present paper will also relate the conditional clause information to the information in the preceding linguistic context, but I will do it from a rather different standpoint, that of POSSIBLE WORLDS.<sup>3</sup>

If the conditional is a topic in the sense that a topic is traditionally understood (Gundel 1974, Chafe 1976), we would then expect the conditional clause information to be given information and this—according to our definition just proposed—is completely retrievable from the preceding linguistic context. Nothing in Haiman's treatment of conditionals as topics, however, forces us to the conclusion that the conditional topic must be exactly the same kind of topic as the kind that is found in a simple subject-predicate sentence like *John ate the cake*.<sup>4</sup> In particular, this property of a topic being given information, which was first thought of in connection with the topic of simple indicative sentences, needs to be checked again for conditionals.

Let us then begin by looking at the information in the preceding linguistic context. This can be information entirely in the ACTUAL WORLD of the story as would often be the case with a narrative built up event by event. Or, the information in the preceding linguistic context can already have possible world information in it, as often occurs in texts that present an argument. Examples will be given to illustrate this.

Now either conditional clauses consist of information that is completely retrievable from the preceding linguistic context or they do not. Let us consider the two options in turn.

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<sup>3</sup>Stalnaker (1981a) deals with conditional clauses by constructing a possible world in which the information of the conditional clause is true but which otherwise differs minimally from the actual world. Then he asks whether the main clause is true in this possible world just constructed.

<sup>4</sup>Some of the ways in which there is a difference: In the case of a simple indicative sentence like *John ate the cake*, both the speaker and the addressee must have the same identification for the same individual referred to as John. In the case of a conditional like *If John eats the cake he will get sick*, however, what both the speaker and addressee need to do is "to take the truth of the conditional for granted and to assume that others involved in the context do the same" (Stalnaker 1972:387). The same idea can be alternatively expressed as "unchallengeably shared by speaker and hearer for the subsequent discourse." This is rather different from the property of the topic in the simple indicative sentence.

If a conditional clause contains nothing but retrievable information in relation to possible worlds, such a conditional clause will have possible world information only if the preceding linguistic context has possible world information. Otherwise, if the preceding linguistic context has only actual world information, then the conditional clause can contain only actual world information.

If, however, a conditional clause contains any information which is not completely retrievable from the preceding linguistic context, then clearly it is possible for such a conditional to express possible world information even though there is only actual world information in the preceding linguistic context.

The various possibilities just discussed are summarized in (1).

(1)

	Preceding linguistic context contains	
	possible world	only actual world
<i>if</i> -clause information is completely retrievable information	possible world (unmarked)	actual world (marked)
<i>if</i> -clause information is not completely retrievable, so contains new information	no data found	possible world (unmarked)

The folk linguistic view of a conditional clause is that it introduces a possible world. This is also the view which is principally taken by logicians like Stalnaker (1981a, 1981b). But there are also a considerable number of conditional clauses in the data which consist entirely of actual world information and whose contents are directly retrievable from the preceding linguistic content. They are the marked usages, it is true, but nevertheless they need to be dealt with. I am not aware of any detailed treatment of such conditionals in the literature.

This paper is therefore divided into three sections. The first two sections deal with conditionals which contain possible world information, §1 dealing with the cases when the preceding context already contains possible world information and §2 with those where the preceding context does not. Section 3 deals with those conditionals which contain only actual world information and, for all such examples, it will be found that the information is already present in the preceding context.

The data for this study are all from written English and come from three sources: first, Winston Churchill's *A History of the English-speaking Peoples*, volume 3, *The Age of Revolution* (referred to as AR), volume 4, and *The Great Democracies* (referred to as GD); second, Irving Stone's *Those Who Love*, a historical novel on the lives of John and Abigail Adams (referred to as TWL); and third, *The Memoirs of Field-Marshal the Viscount Montgomery of Alamein* (referred to as MFMM). The first two sources are both historical in nature, and both are some kind of narrative. Concerning the third, only one example has been taken from the Montgomery source which is an argumentative text rather than a narrative.

### 1. Completely retrievable possible world conditionals

In the examples of this section the conditional contains possible world information and this information is completely retrievable from the preceding linguistic context. The question at once arises, how did the possible world information get into the preceding context? The data show that this can happen in various ways. The preceding context can contain

- a. modals that suggest possibilities,
- b. vocabulary that suggests options,
- c. maxims or ideals that suggest possibilities,
- d. plans that suggest things that might come to pass,
- e. purposes that suggest things that might be achieved, or
- f. expressions of willingness that suggest things that could be done.

**1.1. Modals in the preceding context mark some information there as possible world information.** Example (2) is from a text in which Field Marshal Montgomery sets out his opinion of how to be a successful Commander-in-Chief.

- (2) *<sup>1</sup>On the operational side a C-in-C must draw up a master plan for the campaign he envisages and he must always think and plan two battles ahead—the one he is preparing to fight and the next one—so that success gained in one battle can be used as a spring board for the next. <sup>2</sup>He has got to strive to read the mind of his opponent, to anticipate enemy reactions to his own moves and to take quick steps to prevent enemy interference with his own plans. <sup>3</sup>He has got to be a very clear thinker and able to sort out the essentials from the mass of factors which bear on every problem. <sup>4</sup>IF HE IS TO DO THESE THINGS he must be*



*abstemious and not be a heavy smoker, or drink much or sit up at night.* <sup>5</sup>*He must have an ice-clear brain at all times.* <sup>6</sup>*For myself, I do not smoke and I drink no alcohol of any sort; this is purely because I dislike both tobacco and alcohol, and therein I am lucky because I believe one is in far better health without them.* <sup>7</sup>*In general, I consider that excessive smoking and drinking tend to cloud the brain; when men's lives are at stake this must never be allowed to happen, and it does happen too often.* <sup>8</sup>*You cannot win battles unless you are feeling well and full of energy.* (MFMM 87)

In s2.1-3,<sup>5</sup> which precede the conditional sentence s2.4, the author sets out various things which a Commander-in-Chief should do if he is to be successful. These desiderata which are introduced by the modals *must* (s2.1), *has got to* (s2.2,3) are what Montgomery would like to see happen. But clearly these things would not necessarily happen in any specific situation. Thus they are possible world information and the conditional of sentence s2.4 relates back to these.

**1.2. Some kinds of vocabulary item in the preceding context suggest uncertainty and possible world information.** The context of example (3) is the American War of Independence.

- (3) <sup>1</sup>*All this time the British had remained at Halifax awaiting reinforcements from England and meditating their strategy.* <sup>2</sup>*Military success hinged on control of the Hudson valley.* <sup>3</sup>*IF THEY COULD SEIZE AND HOLD THE WATERWAY, AND THE FORTS WHICH GUARDED IT, New England would be sundered from the Middle and Southern colonies which contained two-thirds of the population and most of the food and wealth.* (AR 157)

The vocabulary item *hinged on* suggests uncertainty and the possibility of different outcomes. Note also the item *control* in s3.2, in the context preceding the *if*-clause in s3.3, needs to be thought of as synonymous with *seize* and *hold* in the *if*-clause.

**1.3. Maxims or ideals occurring in the preceding context are other world information.** The context of example (4) is the American War of Independence.

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<sup>5</sup>Read sentences 1 to 3 of example (2), and so forth throughout the paper.

- (4) <sup>1</sup>*Rarely has British strategy fallen into such a multitude of errors.* <sup>2</sup>*Every maxim and principle of war was either violated or disregarded.* <sup>3</sup>*“Seek out and destroy the enemy” is a sound rule.* <sup>4</sup>*“Concentrate your force” is a sound method.* <sup>5</sup>*“Maintain your objective” is common sense.* <sup>6</sup>*The enemy was Washington’s army.* <sup>7</sup>*The force consisted of Howe’s troops in New York and Burgoyne’s columns now assembled in Montreal.* <sup>8</sup>*The objective was to destroy Washington’s army and kill or capture Washington.* <sup>9</sup>*IF HE COULD BE BROUGHT TO BATTLE AND EVERY MAN AND GUN TURNED AGAINST HIM, a British victory was almost certain.* (AR 160)

Note the correspondence between the maxims given in the preceding context and the content of the conditional clause. *Seek out (and destroy) your enemy* in the preceding context corresponds to *if he could be brought to battle* in the *if*-clause. *Concentrate your force* in the preceding context corresponds to *every man and gun turned against him* in the *if*-clause. The maxims themselves are principles or ideals and they are not necessarily observed. They belong to a possible world of ideals, not necessarily the actual world.

**1.4. Plans reported in the preceding context describe a possible world, not the actual world.** This is illustrated in (5).

- (5) <sup>1</sup>*Marlborough now schemed to march across Europe with about twenty-five thousand British and British-paid troops by Coblenz, Stuttgart, and Ulm, through the passes of the Alps to join Eugene in Northern Italy.* <sup>2</sup>*There amid the vineyards and olive trees the two great captains would gain another Blenheim and strike into France from the south.* <sup>3</sup>*The States-General showed much more imagination and confidence than they had done in 1704.* <sup>4</sup>*IF MARLBOROUGH WENT, he must take no Dutch troops.* (AR 47)

The word *schemed* in s5.1 shows that the content of s5.1 and s5.2 are plan information and therefore possible world information rather than actual world information. Then the information in the *if*-clause of s5.4 refers to information within the plan and is therefore possible world information.

**1.5. A purpose reported in the preceding context contains possible world information.** The context in example (6) is “During the War of Independence, with the French Navy joining in.”

- (6) *<sup>1</sup>In April 1778 twelve French ships of the line, mounting with their attendant frigates, over eight hundred guns, set sail from Toulon. <sup>2</sup>Four thousand soldiers were on board. <sup>3</sup>News of their approach reached Clinton and it became his immediate and vital task to stop them seizing his main base at New York. <sup>4</sup>IF THEY CAPTURED THE PORT OR EVEN BLOCKADED THE MOUTH OF THE HUDSON, his whole position on the Continent would be imperiled. (AR 166)*

In s6.3 *his immediate and vital task to* tells us that Clinton's purpose at this time was to stop the French seizing his main base at New York. Thus the *if*-clause content links up directly with this information and so it is given possible world information.

1.6. A willingness to do something reported in the preceding context again contains possible world information, because that willingness does not of itself guarantee that what is willed will be accomplished. Thus the alternatives of accomplishment or nonaccomplishment are possible, as in (7).

- (7) *<sup>1</sup>The Union with Scotland was approaching its closing stages. <sup>2</sup>It had been debated, sometimes acrimoniously, ever since the Queen's accession. <sup>3</sup>At last England was prepared to show some financial generosity to the Scots, and they in turn were willing to accept the Hanoverian succession. <sup>4</sup>Marlborough who was one of the commissioners concerned regarded the measure as vital to the strength of the realm. <sup>5</sup>IF SCOTLAND ON THE DEATH OF QUEEN ANNE WERE TO CHOOSE A DIFFERENT DYNASTY FROM ENGLAND, all the old enmities of the Middle ages might revive. (AR 54)*

In s7.3 of the preceding context it says that the Scots were willing to accept the Hanoverian succession. The Hanoverian succession was in fact the succession that England was already committed to having when Queen Anne of England (who was childless) died. The content of the *if*-clause in s7.5 expresses the opposite possibility, i.e. if the Scots had not been willing to accept the Hanoverian succession and had opted for something else (i.e., had chosen a different dynasty).

## 2. Incompletely retrievable possible world conditionals

In these cases, there is information in the conditional which did not come from the preceding linguistic context, so clearly some new information has been introduced into the conditional.

The most common examples of this are those in which the conditional clause is found in a DIRECT SPEECH QUOTE.

When the conditional clause is within a direct speech quote, the speaker of that quote has the responsibility of providing his addressees with given information in the conditional clause, but it is given information within the situation of the reported speech act. The speaker of the quote is often able to assume that a certain piece of information is in his addressee's consciousness, even though that information has not been explicitly set out in the preceding linguistic context in the written story. In other words, the participants in the reported speech act have access to knowledge that the reader of the text may not be able to access by simply reading it. Thus if the reader is not familiar with the type of situation that obtains in the reported speech act, there may be new information in the conditional that he will have to accept on trust from the writer, i.e., as new but unchallengeable. This could well be the case in both (8) and (9).

In (8), the time is just before the start of the American revolution. There has been a shooting incident in the streets of Boston and four people were shot by British soldiers. Patrick Carr was one of them and was wounded.

- (8) *John Adams: "IF THAT INJURED MAN PATRICK CARR DIES, I'm afraid the sermons on Sunday will be an incitation to riot." Carr died that night. (TWL 185)*

The circumstances have been reported that Patrick Carr had been shot and hospitalized; all the information in the *if*-clause is given except *dies*. However, the options in the situation are that he would either live or die; both are probable. This much is clear to the addressees of the speech act and easily inferable by the readers. So the whole of the conditional clause is good possible world information.

In (9), the American brig Pitt was on a return journey from Europe. Six or seven leagues from her home anchorage she was stopped and boarded by an armed party from the HMS Rose led by Lieutenant Henry Panton. The Lieutenant demanded that the crew line up on deck. Michael Corbet a sailor recognized the action as IMPRESSMENT under which they would be forced to serve in the British Navy. He and three of his companions holed up in the forepeak. Lieutenant Panton found them there.

- (9) "Come out ye dogs" he cried.

*Corbet replied "You are come to deprive me of my liberty. I and my companions are determined to stand on our defense."*

*A British midshipman fired his pistol into the forepeak shattering a bone in the arm of one of the sailors. "Corbet stood at the entrance holding a harpoon and marked a line in the ship's cargo of salt. "IF YOU STEP OVER THAT LINE, I shall consider it proof that you are determined to impress me and by the Eternal God you are a dead man." Lieutenant Panton took a pinch of snuff, then crossed the line. Corbet threw the harpoon straight into Lieutenant Panton's jugular vein. He died instantly. Reinforcements from the Rose boarded the Pitt, arrested the four sailors to the Sheriff in Boston under the charge of first degree murder. (TWL 172)*

When Corbet said *If you step over that line* he knew from what had happened on previous raids that his addressee (Lieutenant Panton) intended to step over the line. So also does his addressee.

The reader of the story also knows that Lieutenant Panton intended to step over the line and therefore the conditional clause information is good possible world information both to the addressee in the reported speech act and to the reader himself. However, the reader cannot retrieve the conditional clause information directly from the preceding linguistic context; rather he needs to appeal to what usually happens in the kind of situation reported, i.e., from some kind of RAIDING SCRIPT. In the event that the reader has no previous knowledge of what happens in such impressment raids, he needs to take it on trust from the author that the conditional really is possible world information. That is, he needs to accept the conditional information as being new and unchallengeable.

In (10), a crime committed by some American sailors in connection with an attempt by a British warship to forcibly *impress* (essentially kidnap) them into compulsory service in the British Navy. John is an American lawyer who has been called upon to defend the sailors, Abigail is his wife. (For details of the crime itself see the last example.)

The first *if*-clause in (10) has two constituents connected by *and*. The first constituent *if I fail* is easily understandable by both the addressee and the reader; if a lawyer demands a jury trial, such a demand can either be acceded to or refused. However, the second constituent *and it goes to an Admiralty Court* may have been known to all of John's addressees. If so, then the whole *if*-clause is possible world information which an addressee can relate to his own knowledge.

- (10) *John: "Precisely. Impressment of sailors is the vilest crime being practiced by any government today. It has been illegal for 60 years. Yet the English carry on this practice. Perhaps we have a chance to put an end to it."*

*Abigail: "How John?"*

*John: "I'll demand a jury trial. IF I FAIL AND IT GOES TO AN ADMIRALTY COURT, my first question will be whether impressment is ever legal. Corbet and the others had a right to resist and were within the law to take his life." (TWL 173)*

But there will be those who have to process this conditional who know nothing about Admiralty Courts. This could apply to many readers of the story and possibly even to some of John's addressees. For such, the constituent introduced by the *and* is new information which they would most likely accept without challenge as possible world information. However, an addressee in the original speech situation could directly ask, "*What's an Admiralty Court?*" while a twentieth century reader who was puzzled could look up the item in an encyclopedia which would be the next best thing he could do to actually challenging.

### 3. Actual world or factual conditionals

I shall call **FACTUAL CONDITIONALS** those which consist entirely of actual world information. Thus such conditionals consist entirely of information which has been previously asserted (nonmodally) in the preceding linguistic context and therefore clearly retrievable from that context.

Now conditional clauses are normally expected to contain **POSSIBLE-WORLD** information; this is also the folk linguistic view of *if*-clauses. Thus factual conditionals are clearly a departure from the norm. Moreover, if one takes a wide sample of data on factual conditionals and looks carefully at the logical connection between the propositions of the conditional and of the main clause, one notices a rather surprising variety of logical relations that can obtain between them, ranging from causality at the one extreme to contrast or concession at the other. In other words, if we concentrate primarily on preserving the logical connection between the clauses, we could achieve this by replacing the *if* at times by *since* (for the causals) and at times by *although* (for the concessional). By using an *if*, the distinction between the various logical connections has been neutralized in the surface forms. And yet in the data the author has chosen to

use an *if* instead of one of the other connectives mentioned. What is the relationship that the *if* expresses that the other connectives do not; why has the author chosen to use an *if*?

Clues as to what is happening are found in both the work of Ford and Thompson (1986) and of Akatsuka (1985). Akatsuka says that some of the attitudes that a conditional expresses include uncertainty, lack of positive conviction, surprise. Ford and Thompson mention in connection with some of their examples that the idea of an option is present with an *if*-clause. This latter idea of an option is also suggested in the work of Haiman (1978), who points out the overlap between conditionals and interrogatives in many languages.

If we hypothesize that, with an *if*-clause, there is always an option involved somewhere along the line, either in the actual speech situation of the *if*-clause or somewhere in its contextual history, then it should be possible to connect the uncertainty, lack of positive conviction, or surprise with the option. Because an option is or was present, there is or has been an uncertainty in choosing between the options. Thus the speaker has not yet settled firmly for one option as against the other(s).

It should be clear of course that all the possible world conditionals of §1 present options, simply the option of the possible world versus the actual world in each case.

Data will now be presented to illustrate such options. The presentation is subdivided according to the logical connection between the conditional and the main clauses. If in fact options can be established for each case of the factual conditionals, then this is the common bridge that we are seeking between the possible world conditionals and the factuais.

### **3.1. Premise-conclusion connection between conditional and main.**

In the examples of this subsection the conditional is factual and there is a PREMISE-CONCLUSION relationship between the *if*-clause and the main clause. Thus both the *if*-clause and the main clause are known to be true. But the *if* means that there is an option present somewhere.

In examples (11) and (12) to be presented immediately, the participants under attention accept that the conditional clause information is factual but do not approve of the situation that the conditional describes. They desire that another option were true instead. This is the option in these examples.

In (11), the place is England in the 1820s, during the Industrial Revolution. Many social problems had arisen which the English Parliament had done nothing to solve. All this had already been reported in the previous context. The example text reports the English people's reaction to the situation.

- (11) *English political tradition centred in Parliament and men still looked to Parliament to cure the evils of the day. IF PARLIAMENT DID NOTHING the structure of Parliament must be changed.* (GD 9)

The first sentence of the example text suggests that an option was possible. In the text *men looked to Parliament to cure the ills of the day*, the participants under attention are the people of England, here referred to by men. These people expect that Parliament would do something but there is also the possibility that Parliament would not. The *if*-clause deals with the option that they did not; this was both the option taken historically and the option that the English people found undesirable and did not identify with. (A *since* instead of the *if* would not have expressed such an option.)

In (12), the British government passed the repressive Townshend Acts. John Hancock, a Patriot, is on trial for transgressing the Acts. Jonathan, a Loyalist, is the Crown prosecutor.

- (12) *Jonathan rose to present the opening for the Crown. IF MASSACHUSETTS DID NOT APPROVE THE TOWNSHEND ACTS, he argued, then the colony must work to have them repealed, as Englishmen had since the Magna Carta.* (TWL 165)

It has been frequently mentioned in the preceding context that Massachusetts did not approve the Townshend Acts, so the *if*-clause information is easily retrievable from the preceding context. The point here, however, is that the *if*-clause is within a speech quote, and the participant under attention is the speaker Jonathan. Jonathan is a loyalist and definitely does approve the Townshend Acts, even though Massachusetts has taken the other option. Thus in the viewpoint of the speaker, there is both an option, and the option that has actually been taken is the one that he does not identify with. He expresses this in his use of an *if*-clause. A *since* would not have raised the question of an option at all.

In (13), the context is the mid 1780s, a few years after the United States had successfully broken away from England. The place is France. Ideas of revolution were rife among the French people many of whom wanted to follow the American example and break away from their own government.

- (13) *'The birth of the American republic had none the less inspired Frenchmen with a new taste for liberty. <sup>2</sup>IF THE UNITED STATES COULD ACHIEVE IT, why not they?* (AR 223)



This example shows that at times it is necessary to look at the contextual history of a sentence in order to understand the function of a conditional. The conditional is factual because the fact that the United States had achieved independence has been amply reported in the preceding context. On one hand, the Frenchmen are comparing themselves with the U.S.; the U.S. could do it, so they could too. On the other hand, the possibility of failure definitely faced the French at the current point of time in the discourse. And looking back into the contextual history of the sentence, there was a time at the beginning of the American revolution when the possibility of failure had also faced the Americans. The use of the *if* shows that there were options of success and failure in both the earlier and the later situations. Replacing the *if* with a *since* would make it sound more certain.

*Unlikely premise - strong conclusion.* In the examples of this subsection, the *if*-clause information is again clearly factual, i.e., actual world information. What is distinctive in them, however, is the speaker's attitude to the *if*-clause information. The speaker regards the information as surprising, incredible or as outrageous, unreasonable—i.e., in some sense as far-out. Because he regards the information as far-out, the speaker has difficulty in accepting it as part of his world as he knows it; hence the use of the *if*. In the examples of this section, there is a premise-conclusion logical connection between the content of the conditional and that of the main clause. Note that a *since* replacing the *if* would preserve the logical connection but would obscure the speaker attitude.

In (14), Benedict Arnold, commander of West Point had defected to the British during the War of Independence. His act of betrayal had caused a great deal of conflict and distrust among the Patriots. The example sentence reports their fears at the time.

- (14) *IF THE COMMANDER OF WESTPOINT WAS A TRAITOR, who could be trusted?* (AR 170)

In other words, if such an unlikely person as the commander of West Point had turned traitor and thus become untrustworthy, then no one could be trusted. And yet it was true that he had turned traitor. The *if* shows that the speaker regards the conditional clause as expressing a far-out option that he does not like to accept as part of his actual world. A *since* would not communicate the same attitude.

In (15), the time is 1774, just prior to the War of Independence. The British Parliament had just passed an unreasonable, autocratic act that made the content of the *if*-clause in the example sentence true. All the verbs in the conditional clause report already realized events.

- (15) *John returned hurriedly from circuit. He was trembling with rage. (He told Abigail, his wife) "IF THEY (the British Parliament) CAN TAX US (Americans) TO RAISE MONEY TO PAY THE WAGES OF THEIR OFFICERS, IF THEY CAN CONTROL OUR TRADE AND DEPRIVE US OF OUR TRIAL BY JURY, IF PARLLAMENT CAN DO ALL THIS, what can they not do to us? We are not allowed to elect representatives to that Parliament. How then can we allow it to pass regulations against us?"*  
(TWL 140)

The speaker here regards the conditional clauses as expressing far-out options which he does not like to accept as part of his real world. In fact, the second sentence in the excerpt begins with *he was trembling with rage* and shows his emotional attitude and thus supports this hypothesis.

**3.2. Proportionality connection between conditional and main clauses.** In the examples of this subsection, there is some possibility, if rather remote that the reader may not regard the conditional clause information as factual, even though the writer or some third party does believe that it is fact. In (16), this is because the content of the conditional is freshly learned information in the sense of Akatsuka (1986), i.e., information that has been newly introduced in the immediately preceding context and is therefore so new and fresh to the reader that there is still room for uncertainty about this information in his mind. In (17), it is because the conditional clause information is regarded as fact by some historians but is not information that the reader necessarily has to agree with.

Concerning the logical connection between the conditional and main clauses, in these examples it is one of proportionality. Two entities are treated, one in the conditional, the other in the main clause. Both entities possess one common property in some proportion to each other. The proportionality can either be equal or unequal. In (16), the two entities possess the same property but in widely different (or unequal) degrees, while in (17), both entities are reported as possessing the one property to the same degree.

The conditional sentence also forms a kind of WATERSHED in the text. All the preceding linguistic context of the sentence connects up with the conditional clause, while all the following context connects up with the main clause. The conditional clause is retrospective information while the main clause is prospective information.

- (16) *IF SCIENTISTS KNEW LITTLE ABOUT NEPTUNE BEFORE THE VOYAGER II FLYBY, they knew even less about its largest moon Triton.*  
(Kinoshita 1989:65)

This example is found in the middle of a *Scientific American* article about the findings of Voyager II. The first three or so pages of the article are about what the flyby found out about Neptune, the rest of the article is about what the flyby found out about Triton. In between we have the conditional sentence. Thus the conditional sentence is a watershed in the text.

It is quite clear from the content of the first part of the article that little was known about Neptune before the flyby, so there is no doubt that the *if*-clause is given information. What the sentence as a whole says is something like: 'Inasmuch as we knew little about Neptune, we knew even less about Triton.' Thus here, the two entities are Neptune and Triton, and the common property is what (little) we know about them. There is an UNEQUAL PROPORTIONALITY asserted between what little we know about Neptune and what even less we know about Triton.

The *if* is there to indicate freshly learned information, 'You didn't know how little we knew about Neptune until you had seen how much the Voyager flyby was able to find out about it.' If *although* were put in place of *if*, the freshly learned information flavor would be absent.

In (17), William Pitt had just resigned as Prime Minister and Minister of War for England during the war against Napoleon (1803).

- (17) *<sup>1</sup>Pitt was worn and weary, and perplexed by the uncongenial task of organising England for war. <sup>2</sup>He has been blamed by later historians for his incapacity in directing an extensive war, and for his methods of finance, in which he preferred loans to increased taxation, thereby burdening posterity, as others have done since. <sup>3</sup>He chose to incur gigantic debts, and to struggle haphazardly through each year until the dismal close of the campaigning season, living from day to day and hoping for the best. <sup>4</sup>BUT IF PITT WAS AN INDIFFERENT WAR MINISTER, his successors were no improvement. (AR 241)*

In the preceding linguistic context (S17.1-3), we read the opinions of historians about Pitt's conduct of the war. The content of the conditional, that Pitt was an indifferent War Minister, is a reasonable conclusion from the information in the preceding context, but it nevertheless is a conclusion. The reader may choose to infer differently from the opinions of some historians, and in fact the author Churchill himself does not agree with these opinions as can be seen by reading a little further on in the book.

As far as the logical connection between the conditional and main clauses is concerned, the two entities dealt with are Pitt and his successors, and the property by which they are being compared is their (mediocre) performance in the conduct of the war. The proportionality asserted is equal.

The conditional sentence again has a watershed function; the preceding context given here shows that the conditional itself is retrospective, while referring to the book soon shows that a considerable part of the following context deals with the shortcomings of Pitt's successors.

**3.3. A contrast-concession connection between conditional and main clauses.** In examples with a CONTRAST-CONCESSION connection between the conditional and main clauses, the *if* can be replaced by *even if* without changing the discourse function of the conditional sentence. The conditional itself again expresses an option for the same reasons as already given.

Concerning the logical connection between conditional and main, Harris (1988:73) has pointed out the similarities and differences between *even if* and *although*. Given two sentences whose antecedents have the same lexical content and whose main clauses also have the same lexical content, then when the antecedent is introduced with *although*, both the antecedent and the main clauses are entailed, whereas when the antecedent is introduced by *even if*, only the main clause is entailed. In fact, I have examined all the *although* antecedents in volume 3 of Churchill's history (about 10) and find that all of them consist entirely of new information, not retrievable from the preceding linguistic context. By contrast, the *if*-clauses and the *even-if*-clauses were all retrievable at least to some extent.

Konig (1986) points out that concessives imply if  $p$  then normally not  $q$ , where  $p$  and  $q$  are the propositions of the antecedent and main clauses, respectively. I agree with this but would extend his definition to include the contrastive relationship defined in the following sense. Two entities are treated in the antecedent and main clauses, respectively; the one entity is described as having one property in the antecedent, while the other entity is described as having a contrasting property in the main. In other words, there are two entities possessing opposite or contrasting properties.

In (18), the time is the last quarter of the 19th century and the place is the United States.

- (18) *IF THE POLITICS OF THE PERIOD WERE INSIGNIFICANT, its economic developments were of the first importance.* (GD 242-19)

Despite having a different logical connection, (18) again illustrates the option that comes with freshly learned information. The immediately preceding context has talked about the politics of the U.S. during the

period; mediocre presidents, uninteresting legislation, etc. The *if*-clause is therefore freshly learned information in the sense of Akatsuka (1986); there had been no mention of such information prior to the preceding paragraph. And an option is present in the sense that freshly learned information presents an option.

With regard to the logical connection between the conditional and the main clause, note that *politics* in the conditional contrasts with *economic developments* in the main clause, and *insignificant* contrasts similarly with *first importance*. This establishes a contrastive relationship between the two clauses, and in fact an *even if* could be exchanged for the *if*.

As far as the discourse function of the conditional sentence is concerned, we have already seen that the immediately preceding context is summed up in the conditional clause. The immediately following context talks about economic developments during the same period; these were swift, radical, and important. So the main clause is PROSPECTIVE, and the watershed function of the sentence is clear. The sentence even comes at the beginning of an orthographic paragraph.

The context of (19) is the end of 1812, the aftermath of Napoleon's disastrous retreat from Moscow. The example text reports Napoleon's thinking and planning for the future.

- (19) *Napoleon himself was insensitive to disaster. IF HE HAD FAILED TO EXTEND HIS EMPIRE TO THE EAST, he could yet preserve it in the West. (AR 275)*

First, there is an option involved in this example. Napoleon had expected to succeed in extending his empire to the East as a result of his Russian campaign, but in fact he had failed. The option is therefore between success and failure.

Second, there is a contrast between *fail to extend his empire in the East* in the conditional, and *preserve it in the West* in the main clause. This contrast puts the logical connection between the two clauses as contrast-concession and allows a substitution of *even if* for *if* without changing the discourse function of the sentence.

The preceding context had talked about Napoleon's failure in Russia (East) so the conditional clause is factual. Then in the first four sentences of the following context it talks about what Napoleon planned and did to preserve his empire in the West. Thus the watershed function of the sentence is again present, and the antecedent-retrospective and consequent-prospective relationship holds.

It is to be noticed that all the factual conditionals that do not have a premise-conclusion connection between the conditional and the main, do have a watershed function.

#### 4. Summary and conclusion

Conditional clauses in English have been investigated in regard to the relation between their information content and that of the preceding linguistic context.

When the conditional clause consists of possible world information, one important question is whether that information is completely retrievable from the preceding linguistic context or not. In the case that it is (§1), there will be possible world information in the preceding context, the presence of such possible world information being shown by modals, maxims, plans, purposes, expressions of willingness, etc. In the case that it is not (§2), the conditional is usually found within a direct speech quote, in which case the speaker of the quote is assuming that his addressee's knowledge will make it possible for both of them to take the conditional for granted and understand it in the same way. The reader of the story, on the other hand, will be able to take the information in the conditional for granted if he has access to an appropriate script covering the situation. But if he does not have access to such a script, then he must be willing to accept the conditional as being unchallengeable information even though some of it is new.

When the conditional is factual, i.e., consists entirely of actual world information, it has a marked usage. What the marked and unmarked usages have in common is that for both of them an option is involved somewhere along the line. For factual conditionals, a range of logical connections stretching from premise-conclusion through proportionality to contrast-concession can occur between the conditional and main clauses, and the way that the option arises depends partly on this logical connection.

When there is a premise-conclusion relation between the conditional and the main, one possibility is that the conditional, although factual, represents a far-out option for the participant under attention in the sense that he is surprised by it, disagrees with it, or even outraged by it. Another possibility is that although the conditional is currently factual, there was a time in the past contextual history of the conditional when its truth was in doubt. When there is a proportionality relationship between conditional and main, the option is because the conditional clause contains entirely of freshly learned information. Freshly learned information can also give rise to a conditional when there is a contrast-concession relation between the

conditional and the main. In addition, a conditional with a contrast-concession connection to the main can also obtain when there is an option in the mind of the participant under attention. And finally in all the examples of factual conditionals which lack a premise-conclusion connection, the conditional sentence has a watershed function.

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## A Performative Interpretation of "Either Make the Tree Good or . . ."

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Nearly all of the versions of the English New Testament were completed before the publication of John L. Austin's *How to Do Things with Words* in 1962. Almost none of the translators should, therefore, be faulted for failing to understand performative theory.

By PERFORMATIVE THEORY we mean "analysis and description of a class of utterances whose main point is to do something rather than to SAY something about something" (Black 1968:115). Thus, the umpire who says, "Out," and the justice of the peace who says, "I pronounce you man and wife," are doing more than a spectator who says, "The batter is out," or "Those two are man and wife." The PERFORMER is not commenting, but cementing or adjudicating a situation referred to by his utterance. Such utterances must therefore be treated as MORE THAN, OR OTHER THAN, ordinary conversational discourse.

Nearly all English translations of Matthew 12:33 betray their pre-1962 origins. Small wonder. The Greek could hardly be more simple. "Either make the tree good and the fruit of it good, or make the tree bad and the fruit of it bad," is exactly what it says, in a word-for-word translation.

So the *Authorized Version* reads, "Either make the tree good, and his fruit good; or else make the tree corrupt, and his fruit corrupt . . ."

*The Amplified Version* gives it as: "Either make the tree sound (healthy and good), and its fruit sound (healthy and good), or make the tree rotten (diseased and bad) and its fruit rotten (diseased and bad) . . ."

*Good News for Modern Man*: "To have good fruit you must have a healthy tree; if you have a poor tree, you will have bad fruit."

- Goodspeed*: "You must either make the tree sound and its fruit sound, or make the tree bad and its fruit bad . . ."
- Jerusalem Bible*: "Make a tree sound and its fruit will be sound; make a tree rotten and its fruit will be rotten."
- Living Bible*: "A tree from a select variety produces good fruit; poor varieties don't."
- Montgomery*: "Either make the tree good and its fruit good, or make the tree corrupt and its fruit corrupt . . ."
- New American Bible (1970)*: "Declare a tree good and its fruit good or declare a tree rotten and its fruit rotten . . ."
- New American Standard*: "Either make the tree good and its fruit good; or make the tree bad, and its fruit bad . . ."
- New English Bible*: "Either make the tree good and its fruit good, or make the tree bad and its fruit bad . . ."
- New International Version*: "Make a tree good and its fruit will be good, or make a tree bad and its fruit will be bad . . ."
- Phillips*: "Either make the tree good, and its fruit good; or make the tree bad, and its fruit bad . . ."
- Revised Standard*: "Either make the tree good and its fruit good; or make the tree bad and its fruit will be bad . . ."
- Weymouth (1902)*: "Either grant the tree to be a good one and its fruit good, or the tree worthless and its fruit worthless . . ."
- Williams*: "You must either make the tree healthy and its fruits healthy, or make the tree sickly and its fruits sickly . . ."
- Kenneth Wuest*: "Either declare the tree good and its fruit good, or declare the tree rotten and its fruit rotten . . ."

But there are various problems with most of these translations. One is that it is not in the power of human beings to MAKE trees good or bad. Another is that a ROTTING tree can still produce good fruit, as I have personally had opportunity to observe.

Still another problem is that most of the translations fail to do justice to the context, which is a disagreement between Christ and his critics over the source of healings which were being discussed. To most reader-listeners a connection between trees and healings is not immediately obvious.

But a performative interpretation takes care of all difficulties. It focuses on the declaring, judging, verdict-rendering act, or rather, in this case, on two such acts which are inseparably related: a pronouncement regarding the quality of a tree and another regarding the quality of its fruit.

Taking these factors into consideration, the best translation of the passage would be one which reads, "Either pronounce both a tree and its fruit to be good, or else pronounce both of them bad." Note that of the many

versions cited above, Richard Weymouth (1902), Kenneth Wuest (1956), and the New American Bible (1970) come closest to translating the passage ideally as judged by performative theory.

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## Text-knowledge Relationships

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This study concerns how texts interact with knowledge.<sup>1</sup> I take this interaction as fact, but knowing the fact is only one dimension of the problem. If the linguist accepts this interaction of text with knowledge, s/he must attempt to discover exactly how texts effect this interaction. More specifically, the problem for the linguist is the correct identification of the ways in which this interaction appears in and influences the form of texts. This then is the essence of this particular study. I here attempt to answer what seems to be the next logical question once one accepts the fact of text-knowledge interaction, namely, How do texts interact with knowledge and how do texts signal that interaction?

I believe a few simple illustrations will help to prove that there are multiple kinds of text-knowledge interaction. Consider the following texts, which interact with the OFFICIAL-TICKET-INSPECTOR frame of van Dijk (1977:221-22):

- (1) *The trees raced past my window and the constant blur of sights sent me into a deep trance of remembering. But suddenly my dream world was shattered into forgetting by the mechanical voice that now spoke to me, "May I see your ticket, please?"*

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<sup>1</sup>This is a modified version of chapters 3 and 4 of my doctoral dissertation, *On the interaction of linguistic texts and human knowledge*, submitted to the Graduate Faculty of the University of Texas at Arlington. Professor Longacre was the chairman of the dissertation committee.

- (2) *He had begun at the front of the train and had moved slowly, slowly back. At each passenger he had stopped and had seemingly only asked to see a ticket. But I knew better. He had entered each one's life and changed it—granted, perhaps, only minutely, but still he had changed it. And then he continued on to the next, and to the next, and then to me. I didn't hear him coming, for I was busy remembering. But his dull, thoughtless voice shattered all memories away, and I forgot that which only could save me now. "May I see your ticket, please?"*

Let us suppose that both texts were produced by the same individual and that the event being related is the same event: a spell of nostalgia interrupted by a ticket inspector. Thus, both texts interact with the same knowledge, the knowledge about ticket inspectors. But it should be clear that the texts differ with respect to the degree of explicit interaction with that knowledge. The first text has only minimal interaction, while the second makes the interaction the focus of the events being related. Thus, the degree to which a text interacts with knowledge may vary. But there are other possible ways that a text may interact with knowledge. In the succeeding sections of this paper, I will present some significant possible criteria of interaction and the relationships that issue from employing them. I call these relationships TEXT-KNOWLEDGE RELATIONSHIPS.

An attempt to identify relationships between linguistic texts and human knowledge is indeed a precarious undertaking. The task is plagued by vast uncertainty in our understanding of linguistic texts and, even more so, in our understanding of human knowledge, particularly of the organization of human knowledge. Classical epistemology, after over two millennia of speculation, does not provide a description of knowledge organization tangible enough for such a task, and yet the absence of an imminent formulation from this field should not preclude our progress into this next domain of structure, i.e., the relationships between text and its larger context, knowledge. A pragmatic resolution of the dilemma is espoused in this paper: a simplified and admittedly vague model of human knowledge organization is offered. The treatment of knowledge organization in this paper is simple and vague lest the presentation become unwieldy and the problem addressed, the relationships between texts and knowledge, become obscured. I believe that the simple formulation provided here is sufficient for the task and further that the relationships herein described will still obtain if applied to more elaborate, more powerful, and more realistic formulations of human knowledge structure.

Throughout this paper I employ the term FRAMES to refer to knowledge structures that orient behavior. The term is not new with me; indeed, it

enjoys a history of usage extending back, as far as I can tell, to 1932 with the publication of *Remembering* by Sir Frederick Bartlett. The range of the orientation that frames effect on behavior is understood variously by the different researchers that employ the term (cf. Goffman 1974, Minsky 1975, van Dijk 1977, Jones 1983, Brachman and Schmolze 1985.) My particular interest in this study lies in how frames orient text reception, i.e., how frames create expectations in the mind of the text receiver and how the text (and hence, to an extent, the text producer) interacts with those expectations.

Germane to any discussion of the interaction of linguistic texts and human knowledge is the work of Roger Schank, especially his contribution on REMINDING (1982). While Schank's proposed knowledge structures and processes of recall are much fuller and richer than the simple constructs that I employ in this paper, some basic observations that he has made should apply in my simple epistemology as well. First, Schank proposes memory structures that are general and able to be shared by a multitude of similar situations, as opposed to structures that are situation-specific as described in Schank and Abelson 1977, his earlier formulation. These general structures are activated by events and entities in the actual situation (or, as we shall see in this paper, in the text) and once activated create expectations that organize behavior. In the proposed typology that follows, the activation of knowledge structures in and of itself constitutes a kind of relationship between a text and a text receiver's knowledge. Further, it serves as a basis for other more complex relationships that rely on more than simple activation of knowledge structures. Schank also discusses these more complex processes and presents them as the means for changes in memory.

Schank suggests that expectation failures produce changes in the structure of memory. He proposes possible changes in memory structures that range from the mere modification of expectations without creating new structures to the creation of new meta-MOPS (memory organization packets), the most superordinate structure that he posits (1982:135). In the typology that I suggest below, modification of the text receiver's knowledge system is a central issue as well. I do not, however, attempt to locate such modification in the structure of knowledge since that would require a rather full presentation of a hierarchy of knowledge structures.

A perhaps fundamental difference between what I propose and what Schank has discussed relative to changes in memory structures is the effect of single experiences on the knowledge system and especially on the system as it relates to text reception. Schank is no doubt correct in stating that changes to generalized scripts occur only after multiple expectation failures occur and, in view of the focus of his work on reminding as a human cognitive process, the multiplicity of failures is the only reasonable thing to assume. Hence, the changes in memory structures proposed by Schank

de-emphasize the function of single instances of expectation failure. My typology, being one that relates to the narrow process of text-knowledge interaction in text reception and not to Schank's more broad process of reminding, must evaluate single instances of expectation failure and how they relate to text reception as an ongoing process.

Single failures of the knowledge system to accurately predict what will follow in a text should have some immediate effect on the knowledge system. This may be as slight as tagging the knowledge structure as being suspect of variation, but could it not also be as extreme as creating a new structure? A whole dimension of the problem of experience not addressed by Schank is the relative values that experiences can have for the individual. It is difficult to deny instances of a single failed expectation producing a significant change in what we know. Of course, the value of an experience cannot be predicted even by the text receiver, much less the text analyst, and hence is of little interest in a systematization of change; but to allow change in the knowledge system only after multiple similar expectation failures cannot be a fully accurate picture either.

I believe it is safe to say that a single occurrence of information encountered in a text that does not correspond to what is in the text receiver's knowledge system causes some modification in the knowledge system that is operative at least during the process of text reception. The modification may have no further permanence on the knowledge system than as an instance of an exception, but during the local process of the reception of that text an expectation failure must be acted upon in a more extensive way. The typology that I suggest below attempts to recognize the value of single experiences at least insofar as they relate to their text environment.

In relation to the work of Roger Schank, then, this study is more narrowly an examination of what happens in the process of text reception.

### **1. Text-knowledge relationships**

Text-knowledge relationships follow from the few simple possibilities that serve as answer to this question: In what ways can a text affect a text receiver's knowledge? We can conceive of three possibilities: (1) a text can simply employ knowledge without effecting change on the knowledge system, (2) a text can add knowledge to the knowledge system, or (3) a text can change the structure of the text receiver's knowledge system.

Of these possibilities, the first two are easily recognizable in the texts that we encounter daily. The last possibility is somewhat more difficult to recognize accurately. In order to accept the possibility of a text changing the structure of a knowledge frame, we must decide on the nature of such



change. It is possible to conceive of change as a text instantiating the knowledge frame that will be changed and then adding new information to it, information which will take precedence over other knowledge in creating expectations. The information in the original knowledge frame that is changed by this process of instantiation and addition does not go away; rather, it is remembered—at least for a time—but does not participate in creating expectations when that frame is later instantiated by a text. It is now the new, added knowledge that creates expectations. The frame has been changed, but it has been changed by virtue of a text employing it and adding to it. Since we can account for this kind of change in knowledge as text interaction that both employs and adds knowledge, the two possibilities already posited above, we can hardly consider change of this sort as a genuine possible answer to the question posed above.

We could conceive of change in another way, however. Perhaps a text could present knowledge that does not merely instantiate and add to existing knowledge in the text receiver's mind, but also, by the introduction of that new knowledge, causes the knowledge possessed by the text receiver to be restructured, i.e., to settle into different relationships among its constituents. Such change would be somewhat analogous to Kuhn's (1970:111–35) PARADIGM SHIFT.<sup>2</sup> While I must admit to this possibility and, hence, invite its influence upon the typology I wish to suggest, I believe such change in knowledge exists unpredictably and, therefore, unanalyzably. Such a change in a text receiver's knowledge system could not be predicted, either by a text producer in order to purposefully effect that change or by a text analyst in order to analyze that change, since it would assume an understanding of the receiver's knowledge system that is more thorough than possible. As will be seen below, the text-knowledge relationships that I suggest depend upon the assumption that a text encodes the text producer's best guesses about what the text receiver knows or does not know about the knowledge domain of the text as well as the text producer's intentions to interact with the text receiver's knowledge based upon those guesses. The text producer, however, can only know so much about what the text receiver knows. A change of the sort that is characterized by a structural shift would go beyond what a text producer could reasonably assume about the text receiver's knowledge. Because such a change will occur by virtue of conditions for which I cannot safely account, I have not incorporated it into the typology presented here. Therefore, the typology of text-knowledge interaction presented here deals simply with the instantiation of or addition to a knowledge frame by a text.

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<sup>2</sup>I am grateful to Harry Reeder for this suggestion and for his analogy from Kuhn's work.

The instantiation of or addition to knowledge is one dimension of the interaction between linguistic texts and human knowledge; another dimension is the degree of interaction, as illustrated above by texts (1) and (2). In a text that simply instantiates framed knowledge, we can profitably observe whether the text does so occasionally and minimally or whether it makes that knowledge its focus. In other words, does the text employ the frame simply to help convey a topic being related or does it employ the frame to the extent that the frame becomes the text's organizing principle? Text (1) above is an example of the former case; text (2), of the latter. For a text that adds to the text receiver's inventory of knowledge, degree of interaction is also a salient consideration. Does the text increase the knowledge system by adding a completely new frame or does it simply augment an old one? Minsky has suggested that a text can encode a text producer's purpose to enter an entirely new frame into the text receiver's knowledge system (1975:245), but this is not the only type of addition to the text receiver's knowledge inventory that occurs; a text can add further knowledge to a frame already possessed by the receiver.

Finally, we must admit the possibility that a text refuses to correspond to the expectations created by framed knowledge. This is a special case of a text employing knowledge. In a sense, the text employs a certain frame—but only up to a point. It is conceivable that after some point in such a text, the text simply departs from the knowledge further contained in the frame. This is more than conceivable; in fact, a great number of texts capitalize on such departure. This possibility is the motivation for a text-knowledge relationship proposed below which embodies such a device.

In response to these possibilities, I propose six text-knowledge relationships. In the sections to follow, I give definitions and employ illustrations of the relationships proposed. I have given labels to these relationships as follows: TRACING, MANIFESTATION, AUGMENTATION, ENTRY, JUMPING, and Juxtaposition. In positing these relationships, I do not wish to suggest that these are the full set of relationships possible for text-knowledge interaction; rather, they should be viewed as a starting set of relationships that allows us to make a case for a type of text analysis that depends on text-knowledge interaction. A summary of this approach to text analysis is presented in §2.

My illustrations are taken from a short story by E. B. White (1954), entitled *Death of a Pig*. Each illustration instantiates the frame of knowledge indicated by the uppercase label following the illustration. In most cases I rely on the PIG-RAISING frame since this frame provides the most instances of text-knowledge interaction in the text. For some of the relationships other frames are used as needed. It should be noted and stressed at the outset, however, that White's text is not limited to interaction

with only the few frames explicitly mentioned in this paper; I have limited my examples to the few contained herein for the sake of brevity.

A word of caution—or rather, a disclaimer—should be inserted here. What is being examined in this study are the text-frame relationships, not the frames themselves. I have given names to what I perceive to be frames in a most ad hoc fashion, knowing full well that, if not in most cases, at least in many, the frames posited may not be best labeled as I have done so and even that the frames may not be precisely as I have perceived them. Identifying and naming frames is, therefore, still a very open question for me, but the text-knowledge relationships should, I hope, stand on a less ad hoc footing.

Since I refer frequently to the PIG-RAISING frame, a brief view of its contents is in order before proceeding to the task of identifying text segments that interact with it. Given that frame structure is not a matter that can be insisted upon with any full measure of certainty, I believe it wise to posit a frame structure for this frame as far as it relates to White's use of it. The structure that I propose is one that relies on textlinguistic categories of information for a narration: setting, props, participants, and events. The PIG-RAISING frame, as suggested by these categories and as employed in White's narrative, follows:

(3) The PIG-RAISING frame

SETTING:

- A farm in the months of March through November, inclusive
- A pigpen (= pigyard)
- A pig shelter or suitable substitute (= old icehouse)

PROPS:

- A pig
- Pig fodder
- A trough for pig fodder
- Sawdust for the-warmth and comfort of the pig (optional)
- Water

PARTICIPANTS:

- A pig farmer (or interested party)

EVENTS:

- Buy a spring pig in springtime
- Feed the pig meal after meal throughout the spring, summer, and fall.
- Butcher the pig when the solid cold weather arrives
- Prepare the pig into smoked bacon and ham for consumption

**1.1. Tracing.** In the first relationship between text and knowledge here proposed, a primary condition must be present, viz., the text producer assumes that the text receiver has the knowledge that the text will instantiate. Thus, we can say that the frame with which a particular segment of text interacts is shared by both text producer and text receiver. This assumption is common to this first relationship and to the next one to be presented. Another criterion for this first relationship concerns the degree of interaction between text and knowledge. It appears that most instances of text-knowledge interaction occur when a text instantiates only a very few elements of a frame. In these instances, much of the total content of the frame is not explicitly mentioned in the text. In this sense, the text can be said to trace the frame. In instances of tracing, the text instantiates a frame primarily to contextualize the text's other elements. Seen as a whole, the text instantiates the frame here and there at most and employs these instances in service to other text elements (e.g., eventline, background information, etc.). A few examples of tracing from White's story show the tendency of traced knowledge to contextualize other text elements. Bold-faced words mark the specific segments of the examples that trace the frame.

- (4) *He had evidently become precious to me, not that he represented a **distant nourishment** in a hungry time, but that he had suffered in a suffering world.* PIG RAISING
- (5) *My **pigpen** is at the bottom of an old orchard below the house.* PIG RAISING
- (6) *... the stuff that goes into the trough and is received with such enthusiasm is an earnest of some **later feast of his own**, and when this suddenly comes to an end and the food lies stale and untouched, souring in the sun, the **pig's imbalance** becomes the man's, vicariously, and life seems insecure, displaced, transitory.* PIG RAISING
- (7) *I had assumed that there could be nothing much wrong with a **pig** during the months it was being groomed for murder;* PIG RAISING
- (8) *... my confidence in the essential health and endurance of **pigs** had been strong and deep, particularly in the health of pigs that belonged to me and that were part of my **proud scheme**.* PIG RAISING

I should point out that of the five examples above, all but (5) trace the PIG-RAISING frame in order to contextualize the narrator's reflections on the events taking place. Sample (5) is the first sentence in the narrative proper.

At the end of an introduction to the narrative in which White encapsulates the events about to be detailed, he begins to relate his tale with a short background paragraph about the physical setting; sample (5) is the first sentence of that paragraph. Hence, the frame tracing found in it serves to contextualize the events themselves to the setting expected by the frame.

Tracing, then, can be characterized by three conditions. First, the text is produced under the assumption that the knowledge instantiated is shared by both text producer and text receiver. Second, the text instantiates only parts of a frame and more probably only a mere shred of knowledge contained in the frame; the full content of the frame is in no wise reflected in the text. And third, the text at that point is on its own course, apart from successive elements in the frame; references to the frame may blend into a section of the text's development, but the text has its own development and cannot be predicted by the frame.

**1.2. Manifestation.** The next relationship between text and knowledge shares a characteristic with the preceding one. With frame manifestation the same assumption of shared knowledge obtains. The text producer produces the text expecting that the text receiver will recognize and be able to interpret references to the frames involved. The primary distinction that separates manifestation from tracing, however, is that of degree of interaction. While with tracing, a text makes only occasional and limited references to a frame, with manifestation a text more or less relates an entire frame or frame segment as a whole. Thus, much of the text's content at that point is that of the frame or frame segment. In addition, when a text manifests a frame, the frame becomes the orienting principle of the text. Unlike a text that traces a frame, a text that manifests a frame does so by developing along the same lines that the frame does. It does not depart from the contents of the frame and go on its own line of development as does the text that traces; the text manifests the frame with more or less the same content and development as the frame itself.

I should point out that the relationship identified here need not involve either an entire text or an entire frame. It is very possible that a text in its entirety would manifest a frame in its entirety, but more frequently a section of a text will manifest a segment of a frame. The example below illustrates this relationship.

- (9) *The scheme of buying a spring pig in blossomtime, feeding it through summer and fall, and butchering it when the solid cold weather arrives is a familiar scheme to me and follows an antique pattern.*

PIG RAISING

This sentence relates, in a brief fashion, all the events of a frame that contains knowledge about raising a pig. Notice that the reference to the frame is not detailed here, but rather is a broad sketch of this knowledge. We could probably supply much more information about raising pigs, or at least some of us could, but for the purpose of his narration White needs only this rough outline of the frame. I believe that what White relates in this sentence is nothing new to most readers; it is probably general, commonplace knowledge and is shared by most readers. Thus, White is not attempting to add new knowledge to the reader's knowledge system. Further, the sentence takes the contents of the frame as its basic orientation. These two features, the presence of shared knowledge and the lack of development in the sentence independent of the frame, identify this instance of text-knowledge interaction as frame manifestation.

This example occurs in the introduction to the narrative spoken of above. White's tale, then, opens with a review of knowledge about raising pigs so as to bring to the reader's attention the domain in which his story will operate.

When the two relationships described thus far are compared, we find one common characteristic and two dissimilar ones. Both relationships assume shared knowledge between text producer and text receiver. What distinguishes the two relationships is the degree or quantity of interaction between text and knowledge. Tracing is characterized by only sporadic frame instantiations, while manifestation occurs when the text or text section consists of little more than references to the frame. In addition, in frame manifestation the text develops according to the structure of the frame; its development can be accounted for, i.e., predicted by, the frame. When a text traces a frame, on the other hand, its structure is little influenced by what is shared by text producer and text receiver as framed knowledge.

**1.3. Augmentation.** The two preceding relationships obtain when the text producer assumes that the text receiver shares the same knowledge that the text instantiates. But such an assumption need not always exist. In fact, the opposite assumption is frequently reflected in texts. Many times the text producer assumes that the text receiver does not possess the same knowledge that s/he does. This assumption can relate to a frame in one of two ways. Either the text producer assumes that the text receiver does not possess the same amount of knowledge about a particular matter, or s/he assumes that the text receiver does not possess knowledge about the matter at all. The former assumption motivates instances of frame augmentation; the latter instances of frame entry. Again the point of distinction between these two is quantity.

Frame augmentation occurs when three conditions exist. First, the text producer assumes that the text receiver possesses generally the same frame

that the text instantiates. It should be stressed that the frame shared is only generally the same. Knowledge common to both text producer and text receiver serves as the basis for the instantiation; but the difference in knowledge between text producer and text receiver provides the second condition: the text producer assumes that the text receiver does not know everything that s/he knows about the frame. The final condition is that the text producer intends to add to the contents of the text receiver's frame via the text, i.e., s/he intends to augment the text receiver's knowledge. Since the first condition must exist in order for augmentation to take place, frame augmentation will in many cases occur when the text traces or manifests the frame first, thus establishing the sharedness of the first condition.

White's text does not employ frame augmentation very frequently, nor should we expect it to, since narratives do not generally serve to increase framed knowledge. But there are two fine instances of augmentation that illustrate the characteristics of this text-knowledge relationship. Again, boldface is used to mark the specific section of the text that participates in the relationship.

- (10) . . . *I went to the phone and cranked it four times. Mr. Dameron answered. "What's good for a sick pig?" I asked. (There is never any identification needed on a country phone; the person on the other end knows who is talking by the sound of the voice and by the character of the question.)* COUNTRY PHONES
- (11) *I visited the pig before breakfast and tried to tempt him with a little milk in his trough. He just stared at it, while I made a sucking sound through my teeth to remind him of past pleasures of the feast. With very small, timid pigs, weanlings, this ruse is often quite successful and will encourage them to eat; but with a large, sick pig the ruse is senseless and the sound I made must have made him feel, if anything, more miserable.* PIGS

In the first instance of frame augmentation above, White assumes that the reader knows something about country phones in that he mentions the cranking without explanation. But he also assumes that the reader is not fully aware of how communication takes place on these phones in that he gives a parenthetical note on the system of etiquette employed. The augmentation fills a gap that is created by the abrupt opening of the phone conversation. Normally we would expect, as per a PHONE-CALLS frame, an exchange of greetings, which never occurs here. With White's explanatory augmentation of the COUNTRY-PHONES frame, we are compelled to relax our expectations from the PHONE-CALLS frame and to adopt the conventions contained in the now augmented COUNTRY-PHONES frame.

The second instance augments a PIGS frame. Again, White assumes that his reader shares some knowledge with him about pigs, a safe assumption indeed. But he also assumes that the reader does not possess the particular knowledge about how to encourage pigs to eat. Thus, he explains why he has taken the action he did in the preceding sentences.

In summary, augmentation occurs when a frame is shared generally and when there is also an assumed difference between the text producer's frame and that of the text receiver. Additionally, the text producer must intend to decrease the differences by adding to the text receiver's inventory of knowledge via the text.

**1.4. Entry.** It is easily seen that a text can be produced based upon the assumption that the text producer possesses a frame that the text receiver does not. The text, then, may be produced primarily to add the frame to the text receiver's knowledge. This relationship between text and knowledge I call ENTRY. As mentioned above, frame entry differs from augmentation only in the matter of quantity. This means that while augmentation is characterized by some amount of shared knowledge between text producer and text receiver, entry is characterized by the complete lack of shared knowledge of a particular frame; the text producer assumes that the text receiver does not at all possess the frame that the text will refer to. Augmentation also relies on the condition that the text producer assumes a difference in the contents of a frame possessed by the text receiver. This is a moot issue with frame entry, but obviously the same condition exists; the text producer assumes this difference in frame entry as well. And as with augmentation, in producing a text that exhibits frame entry, the text producer intends to implement a change in the text receiver's inventory of knowledge by adding to it. Thus, frame entry differs from frame augmentation only in regard to shared knowledge: augmentation assumes the presence of it; entry assumes the lack of it.

*Death of a Pig* is a story about a failed attempt to rescue a sick pig from its demise so that it can get on with the normal, expected business of being fattened for the winter nourishment of its master. While most know enough about pigs to make it through a narrative about the expected course of a pig's trail to the farmer's table, few would understand the things White had to do in order to carry on his struggle in caring for the sick pig, without some explicit orientation about them. To this end, he adds, through knowledge entry, the CARE-OF-A-SICK-PIG frame in his narrative: (12).

White skillfully indicates knowledge entry by making himself a learner in the text as well. By relating the text (here a telephone conversation) that had previously entered the CARE-OF-A-SICK-PIG frame into his own knowledge, he makes us equal recipients with him in the knowledge entry.



- (12) *Mr. Dameron was back on the line in five minutes. "Henry says roll him over on his back and give him two ounces of castor oil or sweet oil, and if that doesn't do the trick give him an injection of soapy water. He's almost sure the pig's plugged up, and even if he's wrong, it can't do any harm."* CARE OF A SICK PIG

- (13) The CARE-OF-A-SICK-PIG frame

## SETTING:

A farm.

## FRAME ENABLER:

Suspicion that a pig is *plugged up*

## PROPS:

A pig suspected of being *plugged up*

A bottle of castor oil or sweet oil

A pig restraint (= a length of clothesline, a chain) (optional)

A syringe (optional)

An enema bag

A rubber tube

A bucket of warm soapy water

## PARTICIPANTS:

A pig farmer (or suitable substitute)

One or more helpers (optional)

## EVENTS:

Administer oil

Grab the pig by its forelegs

Roll the pig onto its back

Hold the pig's mouth open with pig restraint (optional)

Pour oil down pig's throat (optional: use syringe)

Release the pig

Check for results

If the pig leaves signs of being unplugged, exit this frame

Administer enema (Details omitted for decency's sake)

Check for signs that enema has worked (optional)

Notice that the text segment in (12) enters a complete procedure for helping a sick pig, including a postposed frame enabler: *the pig's plugged up*. Later in his text, White augments this frame fairly extensively and it turns out to be the dominant frame of the text; in fact, the narrative, from the point where this frame is entered, relates White's attempts to adhere to it. Since it

is the major frame of the text, I venture in (13) to posit a structure for it, again based on White's presentation and development of it.

**1.5. Jumping.** Just as texts frequently trace and manifest frames by instantiating them in line with our expectations, so also texts frequently contain references that do not meet our expectations. In fact, a text producer very often leads a text receiver along the normal expectations only to present the unexpected. Such texts can be said to jump the frame. We all know how common this device is in literature and humor.

Jumping requires firstly that the text producer assume shared knowledge. The form that this assumption may take in a text can be an instance of either tracing or manifestation. In effecting the jump, the text obviously contains some things quite different from the contents of the text receiver's knowledge, but these are the creative additions of the text producer and are not to be construed as the actual contents of the text producer's frame. So, in frame jumping we find shared knowledge with no assumed differences in what text producer and text receiver possess. Most importantly, it should be noted that unlike the preceding two relationships, augmentation and entry, which are characterized by the text producer's intention to effect a change in the text receiver's inventory of knowledge, frame jumping is not characterized by such an intention. The differences from the frame instantiated by the text are appendages to the frame, creatively produced by the text producer, and are meant to apply to the frame only for the particular text that contains them. No doubt, such frame jumping becomes part of the text receiver's memory (and the text producer's as well), but they do not become a further basis for interpreting later texts that instantiate the same frame. Other texts that instantiate the same frame may bring to mind a particular previous instance of jumping, but that instance should not create an expectation solely on the merit of its one occasion.

After manifesting the PIG-RAISING frame in the introductory section of the text, White proceeds to offer an example of frame jumping:

- (14) *My pig simply failed to show up for a meal. The alarm spread rapidly. The classic outline of the tragedy was lost.* PIG RAISING

From this point on we can no longer rely on our knowledge of raising pigs for confirmation of the events that follow; we must henceforth consult solely with the text for the description of the situation being related. But we do not understand the events that follow the jump as events to be added to our PIG-RAISING frame. We will perhaps remember the particulars of White's text the next time we encounter this segment of the frame either in another text or in our experience, but we will not utilize the

memory as something that helps to confirm expectations as the frame does. Thus, the events here are an aberration of the frame, confined in existence to this particular instance.

In other places in the text, White again rehearses this same instance of jumping from the PIG-RAISING frame for reasons to be discussed in the next section. These other instances follow.

- (15) *It was about four o'clock in the afternoon when I first noticed that there was something wrong with the pig. He failed to appear at the trough for his supper . . .* PIG RAISING
- (16) *I wanted no interruption in the regularity of feeding, the steadiness of growth, the even succession of days. I wanted no interruption, wanted no oil, no deviation. I just wanted to keep on raising a pig, full meal after full meal, spring into summer into fall.* PIG RAISING
- (17) *I have written this account in penitence and in grief, as a man who failed to raise his pig, and to explain my deviation from the classic course of so many raised pigs.* PIG RAISING

Relying on what has been presented above, it is possible to give a very distilled macrostatement on the text as far as it relates to framed knowledge: Jump the PIG-RAISING frame and trace the CARE-OF-A-SICK-PIG frame without success. The double whammy of failure—the jumping of one of the story's major frames and the failure to successfully trace the other—invites the moral of the story.

**1.6. Juxtaposition.** The last text-knowledge relationship is similar to the preceding one and yet differs fundamentally from the five relationships discussed thus far. This relationship occurs when a single section of a text creatively instantiates two (or rarely, more) frames to effect what will turn out to be metaphor, humorous or not. We can call this relationship JUXTAPOSITION. It differs from the preceding relationships in that it involves the interaction of a single text segment with more than one frame. An example of this will help us to see the conditions which must exist when juxtaposition occurs. The following excerpt from White's narrative contains an extended example of this relationship.

- (18) *He (Fred the dachshund) never missed a chance to visit the pig with me, and he made many professional calls on his own. You could see him down there at all hours, his white face parting the grass along the fence as he wobbled and stumbled about, his stethoscope dangling—a happy quack, writing his villainous prescriptions and grinning his corrosive grin.*      DOGS, DOCTORS

In this section of his tale, White matches our conventional knowledge about dogs with our conventional knowledge about doctors. The DOGS frame is primary here because it relates to the participant in focus, but the DOCTORS frame is creatively and humorously instantiated by the text as well and knowledge from it is called upon for comprehending the text at this point. In juxtaposition, as with jumping, a new detail is presented that goes beyond the normal contents of the frame. Here it likens the practice of a dachshund to the contents of another familiar frame, DOCTORS. The knowledge about dogs is, I believe, assumed by White to be shared by his reader, so much so that one of the specific portions of the juxtaposing text has no explicit explanation: *his stethoscope dangling*, a reference to the characteristic jowl of a dachshund. As with jumping, juxtaposition is not an attempt to effect a change in the text receiver's inventory of knowledge. The juxtaposition of the two frames is only a momentary phenomenon, though it may be remembered later; it does not, however, become a permanent part of the frame.

It would seem that most instances of juxtaposition are like tracing as far as degree of interaction is concerned; that is, juxtaposition usually unites only a single reference to one frame with a single reference to another. Once the juxtaposition takes place, a text develops apart from the combined form of the two frames that were momentarily melded. This is not to say, however, that juxtaposition does not occur in texts that extensively or even partially manifest a frame. A text may manifest a frame and in so doing may make frequent and varied matches between the frame in focus and other frames that have common contents. But the matching between the frame in focus and another frame is usually not sustained very long. Exceptions to this are, of course, the extended metaphor and the parable. In these, a frame is manifested and yet each reference to the frame is at the same time a reference to another frame. The text develops in accordance with both frames. The essence of this type of text is prolonged juxtaposition.

Since much of the humor in White's tale is effected by juxtaposition, it is fitting to relate more of the examples of this relationship:

- (19) *Once in a while something slips—one of the actors goes up in his lines and the whole performance stumbles and halts. My pig simply failed to show up for a meal. The alarm spread rapidly. The classic outline of the tragedy was lost. I found myself cast suddenly in the role of pig's friend and physician—a farcical character with an enema bag for a prop. I had a presentiment, the very first afternoon, that the play would never regain its balance and that my sympathies were now wholly with the pig. This was slapstick—the sort of dramatic treatment that instantly appealed to my old dachshund, Fred . . .* PIG RAISING, THEATER
- (20) *A pig couldn't ask for anything better—or none has, at any rate.* PIG RAISING, HUMAN SATISFACTION
- (21) *One of my neighbors said he thought the pig would have done better on new ground—the same principle that applies in planting potatoes.* PIG RAISING, POTATO RAISING
- (22) *He failed to appear at the trough for his supper, and when a pig (or a child) refuses supper a chill wave of fear runs through any household, or ice-household.* PIG RAISING, CHILD RAISING
- (23) *Kneeling, I felt his ears (as you might put your hand on the forehead of a child) and they seemed cool, and then with the light made a careful examination of the yard and the house for sign that the oil had worked.* CARE OF A SICK PIG, CARE OF A SICK CHILD
- (24) *. . . he (Fred the dachshund) suffers greatly from arthritis, moves with difficulty, and would be bedridden if he could find someone willing to serve him meals on a tray.* DOGS, CARE OF THE SICK
- (25) *The pig's lot and mine were inextricably bound now, as though the rubber tube were the silver cord. From then until the time of his death I held the pig steadily in the bowl of my mind; the task of trying to deliver him from his misery became a strong obsession.* CARE OF A SICK PIG, CHILDBEARING

- (26) *I went back up to the house and to bed, and cried internally—  
deep hemorrhagic intears.* CRYING, ERYSIPELAS<sup>3</sup>
- (27) *Never send to know for whom the grave is dug, I said to myself,  
it's dug for thee.* GRAVE DIGGING, FOR WHOM THE BELL TOLLS
- (28) *Everything about this last scene seemed overwritten—the dis-  
mal sky, the shabby woods, the imminence of rain, the worm  
(legendary bedfellow of the dead), the apple (conventional gar-  
nish of a pig).* DEAD PIGS, THEATER

**1.7. Conclusion.** In the preceding sections I have posited six relationships that attempt to account for at least some of the interaction between texts and knowledge. In defining these relationships I have tried to limit the number of defining characteristics to a minimum. The definitions of some of the relationships depend more heavily on certain characteristics, while others depend on other characteristics. For the sake of summation and clarity, I include all the relationships and their defining characteristics in (29).

(29) Features of text-knowledge relationships

	TRA	MAN	AUG	ENT	JUM	JUX
sharedness	+	+	+	-	+	+
difference	-	-	+	+	-	-
sporadic instantiation	+	-	+/-	-	+/-	+/-
independence of development	+	-	+/-	-	+/-	+
intentionality to effect change	-	-	+	+	-	-
single-frame instantiation	+	+	+	+	+	-

A few comments about (29) are in order. The relationships are defined by the presence or absence of six characteristics: sharedness, difference, sporadic instantiation, independence of development, intentionality to effect change, and single-frame instantiation. These characteristics have been expounded in the preceding sections, but a short expansion of the terms may help here. SHAREDNESS refers to the text producer's assumption that the knowledge a particular section of text instantiates is shared by the text receiver generally. As mentioned in §1.3, by 'generally' I mean that the text receiver is assumed to know something about the frame, but not necessarily all or even the same things the text producer knows. DIFFERENCE refers

<sup>3</sup>This instance of juxtaposition obtains because earlier in the text the narrator had been told that his pig could have erysipelas, a condition characterized by *deep hemorrhagic infarcts*.

to the text producer's assumption that his/her frame is different in content from the text receiver's. While this characteristic may seem to be the flip-flop of sharedness, the situation occasionally arises, as in augmentation, when a text producer utilizes a frame that s/he assumes is both shared by the text receiver and yet is partially different from his/her own. SPORADIC INSTANTIATION describes the text that only occasionally instantiates the frame amid other bits of information that are not part of that same frame. INDEPENDENCE OF DEVELOPMENT refers to the text that develops apart from expectations supplied by the frame. INTENTIONALITY TO EFFECT CHANGE refers to the text producer's intention to change the text receiver's framed knowledge. SINGLE-FRAME INSTANTIATION denotes a text segment that instantiates only one frame. It should be noted that in some relationships the +/- symbol is used to indicate that either state is possible when the relationship occurs, as was discussed in the sections above.

By positing these six relationships, I do not claim to have exhausted the possibilities for text-knowledge interaction. In fact, it could very well be that I have only begun to scratch the surface of the matter. In the system devised here, there is some asymmetry that invites the symmetrical mind to dabble, and such dabbling surely has its potential; perhaps the asymmetries will help to hint at other possibilities. The most obvious asymmetry is with jumping, which sort of hangs there waiting for a correlative, in the way in which tracing corresponds to manifestation and augmentation corresponds to entry. But what binds these pairs, the matter of the quantity of interaction, does not seem to suggest a possible mate for jumping. It is hard to conceive of a text that is a complete jump from a frame, for then there would be no expectations to jump off from in the first place. Perhaps something like parody or antithesis may come to mind, but still it seems that the text would have to manifest the frame parodied—if only, negatively.

Another very likely possibility is frame failure, in which frame instantiations fail to obtain, because of either poor production techniques or too great of a divergence in the frames possessed by text producer and text receiver. The following text illustrates the latter possibility:

- (30) *crc had done it again! I would have to stay overnight in the airport and wait for the next flight in the morning. Imagine it: 120 for a 727-90 on a leg that has a 2% no-show rate. Being a stand-by was bad enough, but knowing the causes of my misery doubled the torture.*

AIRPLANE TRAVEL

This text will have varied success with the general public, since the references to the AIRPLANE-TRAVEL frame are to elements of the frame that are not commonly held by the general public. But to an airline employee,

the text would be crystal clear, if not stingingly reminiscent. The text would fail if targeted for most of us, because the text producer's assumptions are wrong about the knowledge possessed by the text receiver. The frame may be shared generally (and there could be texts where even this assumption is wrong), but the text producer's assumption that no differences exist is mistaken. This type of relationship is not, I assume, intended, so a separate relationship need not be posited. Perhaps texts that are written to exclude some receivers, such as secret codes or secret society oaths, do exhibit this type of frame failure, but at least for a small group the texts succeed in their instantiations of the relevant knowledge. To assume that every text is intelligible to somebody is the proper Gricean (Grice 1975) thing to do.

In defining the relationships, I have laid heavy stress on text producer assumptions for what I hope are obvious reasons. But assumptions are bound to be wrong in some instances, as the previous text illustrates. Yet that an assumption fails does not necessarily entail that the text will fail. For example, I may assume that my reader possesses a certain frame and may construct a text that manifests it. But if my reader does not possess the frame, he may encounter the text as an example of frame entry, i.e., after reading the text the frame will become part of his knowledge. Miscalculations are bound to occur and obviously do, but very frequently without serious consequence. The text receiver can often comprehend the text while missing the intended relationships to knowledge.

The relativity in the identification of the text-knowledge relationships that surfaces here may be troubling to some. That one man's manifestation is another man's entry will not, I hope, diminish the value of the relationships being posited; it simply attests to the fact that knowledge differs from one person to the next and that a text can have more than ONE MEANING for the people related to it, the text producer and the text receiver.

## 2. Text-knowledge relationships and text structure

I believe that it is worthwhile to see how the instances of text-knowledge interaction in a text correlate with the text's structure, but a full presentation of this sort is far beyond the scope of this paper. Hence, here I will present only a summary of a full analysis presented elsewhere (Robichaux 1986:59-103). The summary is of an analysis of the text-knowledge relationships in White's *Death of a Pig*.

From an overall view of the discourse, we can say that the text is primarily a story built on frame jumping. Evidence of this can be seen in the distribution of this text-knowledge relationship throughout the text. We find jumping, always from the same PIG-RAISING frame, in the stage (14), at



the start of the main line material (15), at the end of episode 1 (16), within episode 4, at the end of episode 5 (these last two instances have not been cited in this paper), and in the closure (17). In most of the cases where White digresses from the storyline to the moral underlying the story, he digresses via frame jumping. Thus, frame jumping is the primary device used to bring the moral to the fore. The only exception to this occurs at the end of episode 4: *His suffering became the embodiment of all earthly wretchedness*. This instance of White bringing the moral of his tale to the fore is not an example of frame jumping.

The text interacts with the two major frames outlined in previous sections, the PIG-RAISING frame and the CARE-OF-A-SICK-PIG frame. The former frame is manifested in the stage so that the reader has an orientation for the deviation that White's story recounts. A preview of that deviation also occurs in the stage (14), where we find the first instance of frame jumping. Then, in episode 1, this frame is jumped again when the main line is set in motion (15). The other dominant frame, the CARE-OF-A-SICK-PIG frame, is entered in episode 1 as well (12). This instance of frame entry establishes an outline that the next three episodes follow. The events in these three episodes can be summarized by this instance of frame entry. Thus, frame entry serves to establish the MACROSTRUCTURE, using van Dijk's term, for the following three episodes.

Most of the instances of frame tracing involve the CARE-OF-A-SICK-PIG frame. Since this is the frame that establishes the way that the events of episodes 2, 3, and 4 will go, it is not surprising that this frame is so frequently traced. Those places where the text traces this frame keep the development of the text in tune with the knowledge that the reader has obtained concerning the care of a sick pig. A particularly good example of the use of frame tracing in order to effect coherence occurs in episode 4. At the end of the episode, when the macrostructure reaches the point when the enema is to be administered, White uses a discussion about his dog as the means to record the procedure:

- (31) *When the enema bag appeared, and the bucket of warm suds, his happiness was complete, and he managed to squeeze his enormous body between the two lowest rails of the yard and then assumed full charge of the irrigation. Once, when I lowered the bag to check the flow, he reached in and hurriedly drank a few mouthfuls of the suds to test their potency. I have noticed that Fred will feverishly consume any substance that is associated with trouble—the bitter flavor is to his liking. When the bag was above reach, he concentrated on the pig and was everywhere at once, a tower of strength and convenience.* CARE OF A SICK PIG

In these sentences, White tells the reader about the vile enjoyment the dog finds in all the pig's (and the narrator's) suffering while the enema is being administered. The focus of this section of the text is the dog's perverseness and thus the main clauses of each sentence here focus on that. But to keep this section of text coherent with the rest of the narrative, White traces the CARE-OF-A-SICK-PIG frame, primarily in fronted subordinate temporal clauses. This instance of frame tracing demonstrates the chief function of frame tracing in almost every text, i.e., the maintenance of coherence.

After the contents of the CARE-OF-A-SICK-PIG frame have been exhausted by the events of episodes 2, 3, and 4, another frame is entered in episode 5—the ERYSIPELAS frame. Though the contents of this frame, at least those presented to us in the text, are meager, this instance of frame entry provides the crowning complication in the narrative. It also sets the stage for an excellent example of frame juxtaposition used humorously in episode 7 (26).

In episode 6, White returns to the CARE-OF-A-SICK-PIG frame, but now the narrator is not the main participant but rather the local pig expert, McFarland. White himself assumes, along with McFarland's fiancée, the role of helper. The frame is again traced, this time, most interestingly, via the props contained in it. The account of this last attempt to help the pig is the last reference to the CARE-OF-A-SICK-PIG frame in the story.

Once care for the pig becomes useless, that is, once the pig dies, coherence is no longer effected by the text tracing the CARE-OF-A-SICK-PIG frame. In episode 7, the text does not cohere by virtue of tracing a frame; other coherent factors are involved here. In episode 8, however, the text again picks up frame tracing to effect coherence, this time with the HUMAN-BURIAL frame—with humorous effect since it is the pig that is being buried.

A great part of White's success with this narrative is due to the humorous delivery. A primary device used by White to obtain the humorous effect is frame juxtaposition. Most of the instances of frame juxtaposition involve the PIG-RAISING frame, the frame that the story jumps. Thus, White pokes fun at the very problem that he faces, and this is no doubt what makes the story so attractive. White also juxtaposes the DOGS frame with other frames to make sport of Fred, his dachshund. The dog then becomes another source of the humor obtained in the narrative by frame juxtaposition.

There are only two instances of frame augmentation in the text, and both are used as asides by White. The first instance (10) serves to explain why White began his phone conversation with a friend without a greeting. The second (11) adds information to the PIGS frame so that White's actions

(*I made a sucking sound through my teeth to remind him of past pleasures of the feast*) can be understood. Thus, both cases help to make seemingly incomprehensible actions comprehensible by defining them in terms of certain frames about which White assumes his readers have only minimal knowledge.

### 3. Generalizations on text-knowledge relationships and narration

White's *Death of a Pig* is a highly frame-oriented text; that is, it develops as a whole in accordance with a few key frames. Because the text so well illustrates the text-knowledge relationships proposed here, it is possible to venture some generalizations and guesses about the relationships.

From what has been seen in the narrative by White, it seems that frame tracing functions primarily to support coherence in a text. Because of this, frame tracing should, in most narratives, be the most common type of text-knowledge interaction, as it was in White's text. Because tracing depends on knowledge assumed to be shared by the text receiver, the text producer can easily instantiate any type of information contained in the frame in practically any environment. We can say, then, that frame tracing has a fairly free distribution in a narrative text. We shall see that this is not the case with some of the other frame types.

Frame manifestation will probably prove to function as staging or background material in a text. This conclusion comes from a consideration of the characteristics of frame manifestation in relation to the pragmatics of text production. Frame manifestation occurs when a text segment is organized according to the contents of a frame which the text producer assumes the text receiver shares. But if the frame is shared by both sides of the communication situation, no exchange of information is taking place; thus the need for the text to exist at all, if that is all the text is composed of, comes into question. Thus, it is hardly likely that frame manifestation, at least when it is intended to be such by the text producer, will constitute the main line of development in a narrative. It is conceivable, in fact White's use of frame manifestation is an actual proof of this, that this type of text-knowledge interaction serves to bring to the text receiver's attention a frame that the text will interact with later in some other fashion, such as jumping, tracing, or augmentation. The manifestation of a shared frame, then, sets up the knowledge domain which a text later exploits. It appears from this that frame manifestation is limited to background material in a narrative.

What comes to my mind in this regard are the typical instances of frame manifestation found in mystery novels and suspense stories. A writer may present the fine details of a shared knowledge frame, not because it adds

to the knowledge of the text receiver and thus communicates something to him/her, but because the fine detail elongates time in the text world and heightens the suspense. A suspense story by Jack Finney, *Contents of the Dead Man's Pockets*, has this precise use of frame manifestation. By a peculiar set of circumstances, the main character finds himself on the outside ledge of his high-rise apartment hundreds of feet above the bustling night traffic. As fear begins to grip him, he begins to grip the bricks in the wall against which he stands. Finney relates in vivid detail the feel of the bricks and mortar on the cheeks and fingertips of his main character. The information is not new to us because we all know what bricks and mortar feel like (at least on our fingertips). But the description, and it is description because the main line of the narrative does not develop at these points, helps us to feel with the main character the fear involved; the suspense becomes almost unbearable through the frame manifestation employed.

Frame entry involves new knowledge, knowledge that the text producer assumes the text receiver does not possess. The text producer intends to add this new knowledge to the text receiver's knowledge. Because of this, we should not expect to find frame entry on the main line of development in a narrative. A narrative presents the particular past experiences of a main character or group of main characters (AGENT ORIENTATION, Longacre 1983:3), and while these experiences will in all probability be remembered by the text receiver, they will be remembered as particular instances of general framed knowledge; they will not be stored as distinct frames in the mind of the text receiver. Thus, development in narration via the main-line material presents particulars, not generalizations, which are what frames are. The main line of development in a narrative, then, could not be an instance of frame entry, at least not in the intention of the text producer.

A narration may, of course, be used to enter a frame into the text receiver's knowledge via the skewing of the notional and surface structures of a text. An example of this would be a text that attempts to teach something (= to enter the frame) via a story about someone who correctly performed the thing being taught. It may also occur that a text is received as frame entry, though it was not intended to be so by the text producer. For example, Hemingway's *Old Man and the Sea* has some good techniques in it for reeling in a big fish, and the aspiring deep-sea fisherman may internalize a fairly detailed frame in the reading of it, but it is doubtful that this was Hemingway's purpose for writing the narrative.

Frame entry seems to be a type of text-knowledge interaction that occurs in expository or procedural texts or embedded texts of this nature. These text types correspond to the characteristics of frame entry because the assumption underlying them is that the text receiver is to learn something

new in the course of processing them. The two instances of frame entry in White's story support this. The first instance, the entry of the CARE-OF-A-SICK-PIG frame (12), is an embedded procedural text as evidenced by the imperative verbs used. A second instance enters the ERYSIPELAS frame via an embedded expository text. It is interesting to see how White embeds these two texts inside of his narrative. He uses phone calls to relate this general information that is framed knowledge, in nonpast, nonparticularized texts—the first a procedure, the second an exposition.

Frame augmentation served in White's text as author comments on accepted etiquette for using country phone lines and on attracting pigs to a meal. In a narrative, this is probably a typical use of frame augmentation. This type of text-knowledge interaction functions like frame entry in that it adds new knowledge to the text receiver's inventory of knowledge. Thus, we should not expect to find it occurring on the main line of development in narration. We should, however, expect it to occur as main-line material in expository and procedural texts.

Frame juxtaposition would appear to have a fairly free distribution. This text-knowledge relationship involves knowledge that is shared by both text producer and text receiver, but does not embody an intention on the text producer's part to effect change in the text receiver's knowledge. Because of this, it can serve the particulars found in narrations, especially as background.

The last type of text-knowledge interaction, frame jumping, seems best suited to inciting moment and complications in a narrative. The departure from expectations which characterizes this text-knowledge relationship provides the best device for separating a narration-worthy experience from a normal, predictable experience that a frame would normally encompass.

Only one frame is jumped in White's narrative (the PIG-RAISING frame), though there are frequent restatements of it in the course of the story. I would expect the jumping of only one frame alone to be the norm in a narrative. If a narrative jumps more than one frame, there would be the risk that the events that jump the various frames would compete for main-line development. It is possible, however, that a text could be composed of a series of frame jumpings and that these would be the point of the narrative, e.g., *The Day Everything Went Wrong* or something like this.

#### 4. Some unanswered questions

The summarized analysis and the generalizations offered in the preceding sections show, I believe, that an analysis of a text can be appreciably enhanced by examining the impact that the text has on the knowledge of the text receiver. It appears that such an examination sheds additional light

on the text as a linguistic unit. But there are a few unanswered questions that still remain, questions which cannot be fully explored within the scope of this study. Perhaps they could serve as issues for future research. At this time I wish only to make them known.

The matter which puzzles me most is the varying degree of orientation for a frame or frames that a text can have. We have seen that *Death of a Pig* develops quite closely to the contents of two major frames—that it is highly frame-oriented. But not all texts develop according to a frame as this text does. Some texts follow the contents of a frame for their development; others do not seem to be influenced by a frame for development at all. In those texts that do not develop according to the contents of a frame, there is still a considerable amount of text-knowledge interaction, but it may be types of interaction other than those which help a text develop according to a frame. Is it possible to categorize texts according to predominant types of text-knowledge interaction? Perhaps some texts would be called tracing texts, others juxtaposing texts, still others jumping texts, and so on. For example, an analysis of Thurber's *A Lover and His Lass* (Robichaux 1986:110–11) shows that this text relies heavily on frame juxtaposition (e.g., HIPPOPOTAMUSES and BATHTUBS, HIPPOPOTAMUSES and COASTWISE FRUIT STEAMERS, HIPPOPOTAMUSES and BASKETBALLS, HIPPOPOTAMUSES and BUSES, HIPPOPOTAMUSES and MOVING VANS, PARROTS and GARDEN SHEARS).

Another area of interest to me is the possibility of grammatical signals for each of the text-knowledge relationships proposed. For example, frame augmentation in White's text, (10) and (11), is signaled by a shift to the present tense. Are there similar signals for the other types of text-knowledge interaction? If there are, I suspect that they would be defined not only by the text-knowledge relationship but also by the text genre in which they occur, e.g., frame tracing in narration is more than likely marked by the past tenses, but in exposition by the present tenses.

Finally, what are the other text-knowledge relationships to be found in a text? I heartily assume that there are others. One comes to mind, but is at present only a hazy notion. Could there be a relationship called frame blocking whereby a text purposely blocks access to a frame so that full comprehension is hindered? Further analyses of texts will no doubt uncover more relationships between text and knowledge, some of which may be rare and some hopefully quite pervasive.

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## **Foreground and Tense-Aspect**



## An Introduction to the Use of Aspect in Hausa Narrative

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Hausa is a member of the Chadic language family, which places it with the Semitic and Cushitic languages in the Afroasiatic language stock. Hausa is widely spoken in West Africa, with 25 million speakers estimated (Grimes 1984).

Aspectual distinctions in Hausa are shown through the use of person-aspect markers, which encode information regarding person, number, aspect, and (in second- and third-person singular) gender. For the most part, each aspect is readily identifiable by its own characteristic pattern of tone and suffix (including in this characterization vowel length). Although these markers show agreement with subject, they are not purely pronominal; with the exception of imperatives and occasional progressive forms, such person-aspect markers are obligatory preceding the verb, even if an NP subject also occurs.<sup>1</sup>

- |     |                        |              |
|-----|------------------------|--------------|
| (1) | <i>muusaa yaa tàfi</i> | 'Musa went.' |
|     | <i>yaa tàfi</i>        | 'He went.'   |
|     | <i>*muusaa tàfi</i>    | 'Musa went.' |

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<sup>1</sup>In the transcription, vowels with grave accent indicate low tone; those with circumflex indicate falling tone on short vowels; *b*, *d*, and *k* indicate glottalized stops; doubling of consonants and vowels indicates length. It is not always possible to provide a clear English gloss, especially where particles are concerned, and in some instances no attempt is made to do other than to capture the meaning as well as possible in the free translation. Because tone and length are typically not indicated in standard Hausa orthography, I have relied on the transcription as represented in Kraft 1973:257-70 and his accompanying discussion on 481-91.

Table (2) presents third-person plural forms with the verb *zoo* 'come' which are representative of the sorts of differences found.

(2)	COMPLETIVE	<i>sun zoo</i>	'they came'
	RELATIVE COMPLETIVE	<i>sukà zoo</i>	'they came'
	FUTURE	<i>zaa sù zoo</i>	'they will come'
	FUTURE 2	<i>saà zoo</i>	'they will come'
		<i>swaà zoo</i>	'they will come'
	PROGRESSIVE	<i>su nàà zuwàà</i>	'they are coming'
	RELATIVE PROGRESSIVE	<i>su kèè zuwàà</i>	'they are coming'
	SUBJUNCTIVE	<i>sù zoo</i>	'they should come'
	HABITUAL	<i>sukàn zoo</i>	'they regularly come'

Several facts regarding the Hausa system are immediately evident. First, the PROGRESSIVE aspects occur with a different form of the verb from the others; these derived forms are referred to as verbal nouns and correspond to participles and gerunds in other languages. Further, it will be noted that there are two COMPLETIVE aspects and two PROGRESSIVE aspects; the so-called RELATIVE aspects get their name from the fact that they occur within relative clauses, but as will be clear from the discussion below, the RELATIVE COMPLETIVE aspect in particular has a much wider distribution. It is important to note, however, that when a negative construction is found, the difference between the COMPLETIVE and the RELATIVE COMPLETIVE, and the PROGRESSIVE and RELATIVE PROGRESSIVE, is neutralized. As a result, it is not possible to distinguish between the relative and nonrelative aspects when negated, and for that reason negative constructions are ignored in this preliminary study and no statements are made regarding the distribution of the various aspects in such constructions.

This paper investigates the distribution of such aspectual forms in Hausa narrative through examination of a portion of the Hausa novel *Magana Jari Ce* 'Talk is Wealth'. The HABITUAL aspect does not occur in this portion of text, so it cannot be investigated here. The other aspects are abbreviated as follows: completive (c), relative completive (rc), future and future 2 (f) (no distinction is made here, see below), progressive (p), relative progressive (rp), subjunctive (s).

In its Hausa version (Imam 1966-1970), the novel runs 552 pages, including illustrations. This study covers only the first fourteen pages; on the surface this may appear to be a trivial amount of data to include, so it is important to point out that this is a portion which has a significant amount of textual integrity and can properly be studied as a unit in and of itself. The novel deals with a number of important themes of Hausa life and culture, but for the most part, these first fourteen pages serve to

establish the context within which a series of folktales can be presented. The result is that the whole is a work along the lines of *The Arabian Nights*. Interspersed with the folktales at later points in the text there are narrative portions which refer back to the information and characters of these early pages and resume the account of their interaction, but such narrative is relatively brief in relation to the folktales which provide the majority of the subsequent text material, each of which forms a literary linguistic unit in its own right.

The following is a brief summary of the essential information of this portion of the work:

*Once there was a great chief, Abduramani, who was sad in spite of his wealth because although he had a daughter, he had no son. Even when his daughter gave birth to a son, Mahamudu, it had little effect on his unhappiness. But one day a great religious scholar came and told him of a dream in which a son was born to him. The chief carried out the instructions prescribed by the scholar, and a son, Musa, was born to his wife. Musa and Mahamudu were raised together like twins.*

*But Abduramani's vizier was jealous, because Musa's birth meant he himself could not inherit the kingdom upon the chief's death. So he made a plan to separate the two so that he could kill Musa. Although it was a time of peace, he counseled the chief to war, and suggested that Mahamudu be sent back to his own home for training. But Musa expressed displeasure with the plan, so Abduramani rejected the idea and the matter was dropped, leaving the vizier unsuccessful.*

*Meanwhile, the nearby chief of Senari sent his own vizier with a letter asking that his daughter and Musa be married. Abduramani was outraged at the idea and drove the emissary off. But his own vizier saw his chance, and he sent a message to the chief of Senari pledging his allegiance and telling him how to invade the country successfully.*

*One day Abduramani was off riding with Musa and Mahamudu when they came across an Arab with a parrot for sale. Musa wanted it, and the chief made an offer, but the offer was rejected as too low because the parrot not only had the ability to speak, but was also clairvoyant. Abduramani gave the parrot various tests, all of which he passed. Finally he asked him what the future held for Musa. The parrot was evasive and did not answer until threatened—Musa would be the cause of great destruction in the country. This made*

*Abduramani furious, and he was about to kill the parrot when a lone rider came up with the news that the chief of Senari had invaded the country. The parrot was consulted for advice, and he came up with a defense strategy which was successful, and the chief bought him.*

*Warfare continued, and the chief had to go to the battle. He left Musa and Mahamudu in the city, under guard, with the parrot ultimately responsible for them. But just as he was leaving, the vizier reminded him of his earlier promise to take Mahamudu with him to war, and so Musa was left alone, as the vizier wanted. That night Musa was able to escape from his imprisonment, but he had promised to tell the parrot everything, so he went to tell him he was following the troops to battle. The parrot responded that Musa had done well to come and tell him, for thus he showed that he was not like the little lion who did not follow the instructions of his superiors. Musa had not heard of the little lion, so he inquired about him, and the parrot spent all that night telling him the story.*

In subsequent portions also, the plan of Musa is always to go join the fighting; the plan of the vizier is always to kill Musa when he does so; the strategy of the parrot is always to keep telling stories to delay Musa and thus protect him. As I mentioned above, it is the numerous folktales which comprise the main body of the novel itself.

## 1. Distribution of aspects

Having summarized the text, I turn now to an examination of the distribution of the various aspects within the narrative. First I will discuss and illustrate the various functions apparent for each aspect; there are several areas of uncertainty here, some of which cannot be resolved without further research. After each aspect has been discussed, an attempt will be made to develop a ranking scheme for this particular text along the lines of that proposed in Longacre 1989. Except in those few cases indicated in the discussion, there is no difference between the distribution of the various aspects in quoted material versus nonquoted material. I have included examples of both contexts where possible, consistently presenting the nonquoted examples first, and indicating the examples from quotations by placing them in quotation marks.

**1.1. Relative completive (rc).** The relative completive aspect is the most common in this text, with nearly half the verbs being so specified. As

mentioned above, in negative constructions the distinction between the relative completive and the completive is neutralized; such constructions are not considered in this study.

The relative completive has three major uses in this text:

(a) A major use of the relative completive, and the source of its name, is to express completed action within relative clauses. In such constructions, the completive aspect never occurs, the relative completive being obligatory. Note the following examples.

(3) *ni'imoomi-n duuniyà-n naàn dà allàà ya baa shi*  
 prosperity-of world-DEF here REL God RC give him  
 these forms of prosperity which God had given him

(4) *shagàli-n dà akà yi ciki-n kasà-n nan*  
 extravagance-DEF REL RC do inside-of land-DEF here  
 the extravagance [of the celebration] which was carried out in the land

(5) *saura-n mutàànê-n dà sukà zoo dà sarkii, sukà*  
 rest-of people-DEF REL RC come with chief RC

*fashèè dà dààriyaa*  
 break with laughter

The rest of the people who had come with the chief broke into laughter.

(6) *"sanì-n dà allàà ya baa ni, báà shi dà iyààkaa"*  
 ability-DEF REL God RC give me NEG he with boundary  
 "This ability which God has given me is limitless."

(7) *"baà wàndà ya gaanèè ni"*  
 NEG one^who RC see me  
 "There isn't anyone who saw me."

(8) *"bààba, mun ji àbìl-n dà ka cèè dukà*  
 father C hear thing-DEF REL RC say all  
 "Dad, we heard everything you said."

Longacre (1989:419) points out that it is common for relativization to totally remove events portrayed in the clause from the rank scheme, being included rather as part of a noun phrase. As will be evident from discussion below, the relative completive in Hausa is the primary means of indicating events on the mainline of the text; in relativization, however,

there is a demotion of events portrayed by means of the relative complete from mainline to a position totally removed from the rank scheme. This pattern of using the same morphological form serving on the one hand to mark events on the eventline, and on the other to subordinate material to the status of nominal modifier, is striking because of the wide range of functions covered in a single form.

(b) A second use of the relative complete, and one clearly related to the first, is its occurrence when some constituent has been fronted from its position later in the clause.<sup>2</sup> The basic word order for Hausa is *svo*, with other clausal constituents commonly occurring following any object. Thus, any clause with a constituent other than a conjunction occurring preceding the subject (or in clauses lacking an overt subject, the person-aspect marker) has a fronted element. Use of the regular complete is prohibited, the relative complete being required if completed action is involved.

- (9) *mùtuùm, koo gida-n-sà ya shìga*  
 person even house-of-his RC enter  
 a person, even just entering his house
- (10) *shii bàà kudii sukà kaawoo shì ba*  
 he NEG money RC bring him NEG  
 As for him, money they should not bring to him.
- (11) *sai kawàì dâgà baaya-n-sù sukà ji wani*  
 then without^warning from back-of-them RC hear a  
  
*àbù hayà-hayà-hayà*  
 thing IDEOPHONE  
 Suddenly from behind them they heard a hubbub.
- (12) “*jii ya yi waje-n wadansu*”  
 hearing RC do place-of some  
 “What he did was hear it from someone.”
- (13) “*ammaa don kà cikà ùmùrni-n ùba-n-kà ka zoo*”  
 but that s fill command-of father-of-you RC come  
 “But to fulfill the command of your father you came.”

<sup>2</sup>This is also the case in relative clauses, of course, where the relative pronoun is moved to a position initial in the clause if it was not already located there.



Such usages of the relative completive as these are found in texts of all genres, whether narrative as here, or expository, or hortatory; thus in narrative it is not always clear when the aspect is marking an event on the eventline, or when it is simply required by the fact that an element is fronted in the clause.

(c) Nevertheless, it is clear that relative completive aspect carries the storyline in this narrative. As mentioned above, nearly half of the person-aspect markers which occur are relative completive. It is by far the most frequent aspect, and if those clauses containing it are extracted from the text, the result is a summary of the account. For example, note the series in (14), where chief Abduramani responds to the request from the chief of Sinari that his daughter marry Musa.

(14) *ya dùùbi mutààne-n-sà. ya cèè, "kù yi ta duukà-n-sù sai*  
 RC look people-of-his RC say s do at all-of-them until

*sun bar kasaa-t-a." wàziiri-n ya ruugàà, ya hayè*  
 c leave land-of-my vizier-DEF RC rush RC mount

*dooki-n-sà. mutààne-n-sà sukà dààfii baaya-n-sà.*  
 horse-of-his people-of-his RC follow back-of-his

*'ya-n birnii sukà bii sù "woohò, woohò."*  
 children-of town RC follow them woohò woohò

*faadàà duu ta ruudèè. fàadààwaa sukà yi ta*  
 palace all RC puzzled palace^people RC do at

*duuba-n juunaa*  
 watching-of RECIP

He looked at his people. He said, "Get all of them out of my land!" The vizier hurried to mount his horse. His people followed right behind him. The people of the city followed them shouting "Woho, woho!" All the palace was puzzled. The palace people were watching each other.

Here only one instance of the subjunctive appears (in an imperative), and one completive; the meaning of the latter is something like "(Keep after them until) they have left!" All other events are marked by the relative completive. As further illustration, also note (15) and (16).

(15) *duk dà hakà, tun dà muusaa ya saà bààkii sai*  
 all with thus since with Musa RC place mouth then

*ya hau, sukà koomàà gidaa, ya zààbi 'ya-n*  
 RC mount, RC return home RC choose children-of

*kwarbai, gùdaa dārii, ya aikàà dà suu iindà*  
 warrior unit 100 RC send with them place^where

*àkuu ya misàltaa masà*  
 parrot RC compare him

Nevertheless, since Musa had intervened, he set about following his advice and returned home, selected 100 warriors, and sent them to the place the parrot had indicated.<sup>3</sup>

(16) *ya daukoo jàkaa biyu, ya baà bàlaarabè kudi-n àkuu.*  
 RC pick-up sack two RC give Arab money-of parrot

*ya kaawoo ingarmàà . . . ya baa shì, ya kaaràà masà*  
 RC bring stallion RC give him RC increase him

*dà baayii bakwàì. ya baa shì kyankyandii goomà*  
 with slaves seven RC give him bags ten

*shaà biyu na tufaafi. ya sàllàmee shì, ya tàfi*  
 and two of clothes RC dismiss him RC go

He picked up 200 pounds [money] and gave to the Arab the price of the parrot. He brought a stallion . . . and gave it to him. He gave him seven slaves. He gave him twelve bags of clothes and dismissed him. He left.

Such examples are characteristic of the portrayal of the main events of the text; it is the other aspects, then, which invite analysis. The question to be investigated is: Why are not all events presented in the relative completive aspect?

**1.2. Subjunctive aspect (s).** In this text the subjunctive aspect has three major functions:

(a) To express purpose:

<sup>3</sup>We will see below that in such contexts prior events are commonly indicated by use of the regular completive; the parrot's indicating a place is such a prior event, but being in a relative clause here, the relative completive must occur anyway.

- (17) *dà zaa^kà<sup>4</sup> taarà màâlâmai àrbà'in, sù yi ta yi*  
with F gather teachers forty s do at doing

*ma-kà àddu'âà*  
for-you prayer  
if you will gather forty teachers in order that they pray for you

- (18) *ya ðau keeji-n yà jeefa-r*  
RC pick^up cage-DEF s throw  
He picked up the cage in order to throw it.

- (19) *ya shiga tùnààne-tùnààne-n àbii-n dà za-i<sup>4</sup> yi yà*  
RC enter musing-PL-of thing-DEF REL F do s

*hallàkà muusaa*  
kill Musa  
He began to think about what he would do in order to kill Musa.

- (20) *“na san yâddà zâ-n yi, in tàimàkee kà”*  
RC know how F do s help you  
“I know what I will do to help you.”

- (21) *“kù tafoo tààre dà wannàn yaaròò, yà nuunàà*  
s go together with this boy s show

*mukù hanyàà”*  
you road  
“Travel with this boy so that he can show you the road.”

(b) To express result or consequence (in these examples it is the second instance of the subjunctive which is in focus):

- (22) *in . . . mùtûm ya ceè za-ì tsayàà yà bayyànà . . . sai sù*  
if person RC say F stand s explain then s

*yi tsàmmaanì*  
do thinking  
if a person said he would stand in order to explain . . . they would think that

<sup>4</sup>In the Hausa orthography, person-aspect markers are written separately from the future marker *za* in all but the first singular (*zan*) and the third singular masculine (*zai*), where they are written together.

- (23) *in yaa mutù, duk duukìyaa-n nan, sai à rabàa, à*  
 if c die all wealth-DEF here then s divide s

*baà mààta-r-sà*  
 give wife-of-his

If he died [without a son] all this wealth would be divided and given to his wife.

- (24) *“na san yáddà zâ-n yi, in tàimàkee kà, kà*  
 RC know how F do s help you s

*ci kasâ-r”*  
 eat land-DEF

“I know what I will do in order to help you so you can conquer the land.”

(c) To express a wish, command, or request:

- (25) *sai sarkii ya cèè wà baayii sù tsayàà*  
 then chief RC say to slaves s stop  
 The chief told the slaves to stop.

- (26) *ya cèè sù lùùraa*  
 RC say s alert  
 He said they should stay alert.

- (27) *“allàà yà kârbi ròòko-m-mù”*  
 God s receive request-of-us  
 “May God receive our requests!”

- (28) *“mù jee, à kooyàà manà tààre”*  
 s go s teach us together  
 “Allow us to go and be taught together.”

- (29) *“kù tafoo tààre dâ wannàn jaaròò”*  
 s go together with this boy  
 “Travel with this boy.”

The following is especially impressive because of the long series of commands (the function of the completive in such constructions is discussed below):

- (30) *sai kù nèemi bùhuu. in daree yaa yi, kù tàfi*  
 then s seek bag if night c do s go
- koofâ-r gida-n sarkii, kù sàami wurii, kù mafée. dà*  
 door-of house-of chief s find place s hide with
- kun gan shi, kù kaamàà shi, kù rufè bààkî-n, kù*  
 c see him s seize him s cover mouth-DEF s
- tuuràà shi ciki-n bùhû-n, kù daurèè, kù jee dà*  
 push him inside-of bag-DEF s tie s go with
- shii kòògii, kù jeefàà*  
 him river s throw

“Get a bag! When night comes, go to the door of the chief’s house and find a place to hide. When you see him, grab him, cover his mouth, push him into the bag, tie it up, and take him to the river and throw him in!”

Note also sentence (31), which shows various functions in combination:

- (31) *zâ-n san yâddà zâ-n yi in saà shi yà surààree*  
 F know how F do s cause him s slip^away
- dà daree, yà bi ðan’uwa-n-sà*  
 with night s follow brother-of-his

“I know what I will do to cause him to slip away at night to follow his brother.”

There are a number of instances in which the subjunctive aspect is found following the conjunction *sai*, which in some contexts may be roughly translated as ‘then’; this construction commonly has a result interpretation, though not always (see also the examples above).

- (32) *sai yà rikè bààkii kawàì*  
 then s hold mouth only  
 [if a person saw Abduramani’s wealth] he would just hold his mouth  
 [in amazement]
- (33) *“dà ya kèè ka nàà dà hikimàà, sai kà gayàà minì...”*  
 with RP P with wisdom then s tell me  
 “Since you are so wise, tell me . . .”

The subjunctive also occurs in certain other prescribed contexts as well: after *don* 'because, so that' (34), after *gwàmmàà* 'it is better' (35), after *bàllee* 'much less' (36), after *àkallà* 'at least' (37), after *yaa kàmaatàà* 'it is necessary' (38), after *kadà* '(negative command)' (39), and after *kààfin* 'before' (40).

(34) *akà yaayèè su gàba daya don sù rikà wààsaa tààre*  
 RC wean them ahead one that s keep play together  
 They were weaned together so they could keep on playing together.

(35) "*gwàmmàà, kùwaa, mù zaunàà dà shirìì*"  
 better also s live with preparedness  
 "It is better that we stay prepared."

(36) "... *bàllee, maa, à tàmbàyee nì wàndà akà yi, ya wucèè*"  
 much^less — s ask me that RC do RC pass  
 "... much less I be asked that which has already happened."

(37) "*àkallà yà baà sàbà'in baayaa*"  
 at^least s give seventy back  
 "He has given at least seventy back" [= he is at least 70 years old].

(38) "*yaa kàmaatàà yà huutàà*"  
 C necessary s rest  
 "He must rest."

(39) "*kadà wani àbù yà baa kà tsòòroo dà sarkii*"  
 NEG a thing s give you fear with chief

*àbdùraamaaniì*  
 Abduramani  
 "Don't let anything make you afraid of Chief Abduramani!"

(40) "*kààfin yà keewayoo, ma, kaà shiryà uwa-r yaa kii*"  
 before s circle^back — F prepare mother-of war  
 "Before he returns, you can prepare the main body of troops."

It is clear, however, that there is no competition between the subjunctive and relative completive aspects; the subjunctive always indicates events that are hypothetical or at least unrealized, commonly referred to as irrealis—occurrence with *àkallà* is the only exception to this generalization; the relative completive never refers to such events.

**1.3. The future aspects (F).** As mentioned above, there are two future aspects; the so-called future 2 is rare, and for the purposes of this preliminary investigation the two are not distinguished. The following functions can be identified:

(a) Its most common use is to express a clear future event or intention, as in (41)–(44).

- (41) *ya d'aukoo kudii dà riigunàà, za-ì baà maalàmi-n nàn*  
 RC pick^up money with gowns F give teacher-DEF here  
 He picked up money and gowns to give to the teacher.
- (42) *in yaa mutù, shii yaà ci sàrautàà*  
 if C die he F2 eat chieftaincy  
 If he [the chief] died, he [the vizier] would become chief.
- (43) *"dà zaa^kà taarà mààlāmai àrbà'in"*  
 with F gather teachers forty  
 "if you will gather together forty teachers"
- (44) *"zaa^kà haifù"*  
 F give^birth  
 "You will have a child."

In at least some instances the event lies in the very immediate future, as in (45) and (46).

- (45) *za-ì taashì, ya cèè*  
 F get^up RC say  
 He was about to get up, and he said
- (46) *"in . . . kun kasà kúnnee, kwaà ji"*  
 if C arrange ear F2 hear  
 "If you pay attention, you will hear."

(b) It may express an event which is hypothetical, as in (47) and (48).

- (47) *in . . . mùtuùm ya ceè za-ì tsayàà yà bayyàà*  
 if person RC say F stand s explain  
 if a person said he would stand up to explain

- (48) *ya kaamâ shaawârvari-n âbî-n dâ za-i yi wâ sarkii*  
 RC seize deliberations-of thing-DEF REL F do to chief  
 He thought seriously about what he would do to the chief.

(c) There is at least one instance in which the reference is to an event which is future in respect to the contextual event in which it is reported, though not in actual fact.

- (49) *“muddâr kaa dâuki àlkaawâri-n zaa^kâ nadââ ni*  
 when C pick^up promise-DEF F appoint me  
*sarki-n gâri-n nân”*  
 chief-of town-DEF here  
 “when you promised to appoint me chief of this town”

(d) There is at least one instance in which the reference is clearly to an event in the past.

- (50) *“a’! dâ sarkî-n zaa^kâ yi baa’ââ?”*  
 what with chief-DEF F do mockery  
 “What! Will you mock the chief [like that]?”

Constructions like those of (51) are particularly interesting because of the combinations of aspects which they exhibit.

- (51) *“an gayâa mini, dâ zaa^kâ taarâ màâlâmai àrbâ’in, sù*  
 C tell me if F gather teachers forty s  
*yi ta yi makâ àddu’ââ har kwaanaa àrbâ’in, in*  
 do at do you prayer until days forty if  
*allââ yaa soo, zaa^kâ haifû”*  
 God C want F give^birth

“I was told that if you will gather together forty teachers and have them pray for you for forty days, if God wants it so, you will have a child.”

Notice in (51) that there is a sequence of *dâ* ‘if’ with future, followed by an embedded clause in which the subordinate clause is purposive and subjunctive is used; in the second sequence the main clause has the completive aspect, and the subordinate clause is resultive and future is used. The resultive use here, however, is not parallel with those instances



cited for the subjunctive in §1.2 above; notice in particular the use of the completive here, which sets the clause into the prior past. There may be a factor involved also that the use of the future in resultive clauses has the effect of drawing attention to the magnitude of the event—the birth of Musa to follow solves all the quandry of the chief up to this time, and Musa himself becomes the main character for all that is to follow. Such details of analysis invite further investigation.

**1.4. The completive aspect (c).** The following functions of the completive aspect can be identified (the common thread is that of a flashback):

(a) In direct quotes the completive aspect is used by the speaker to report on events that took place prior to the time of the report, as in (52)–(55). In the last of these sentences (55), at least, the event being referred to is actually false.

(52) *“naa yi mafarkii jiyà”*  
 c do dream yesterday  
 “I dreamed yesterday.”

(53) *“wàdànnan... duk sun tsuufa”*  
 these all c age  
 “These have all grown old.”

(54) *“wàziiri-n sarki-n sìinaarìi yaa zoo”*  
 vizier-of chief-of Sinari c come  
 “The vizier of the chief of Sinari has come.”

(55) *“kaa ga yàddà ya kaarèè”*  
 c see how RC finish  
 “You know how he [the young lion] ended up.”

(b) In parallel fashion, in nonquoted material, the completive aspect is used to refer to events that took place prior to the time of recounting, as in (56)–(58).

(56) *an... yi ma-tà auree*  
 c do to-her marriage  
 They had married her off.

- (57) *sai ya ga an rubùùtaa*  
 then RC see C write  
 He saw that they had written.

- (58) *dà àkuu ya ga sarkii yaa fùsaatàà*  
 with parrot RC see chief C angry  
 when the parrot saw that the chief had become angry

(c) In at least one instance the completive is used to interject comments by the narrator.

- (59) *kun san baa yàà yìwuwaa à bayyànaa shi ciki-n*  
 C know NEG P possible S reveal it inside-of

*wannàn... littaañi*  
 this book

You know it isn't possible to reveal it all inside this [one little] book.

(d) A few instances appear to refer to future events, always either in direct quote or in representations of thoughts, after *in* 'if'.

- (60) *in yaa mutù, shii yaà ci sàrautàà*  
 if C die he F2 eat chieftaincy  
 If he [the chief] died, he [the vizier] would take over the chieftaincy.

- (61) *in naa yi kòòkarî-n dà na rabà muusaa dà*  
 if C do trying-DEF REL RC divide Musa with

*màhàmuuddù, koomee yaa yi kyaù*  
 Mahamudu everything C do goodness

If I continue to try to separate Musa and Mahamudu, everything will be fine.

- (62) *"in allàà yaa soo, zaa^kà haifù"*  
 if God C want F give^birth  
 "If God wants it so, you will have a child."

- (63) *"in kaa sàyee ni, bùkaatàà taà biyaa"*  
 if C buy me necessary F2 visit  
 "If you buy me [wealth] must necessarily visit."

The fact that these are all hypothetical instances is striking. Note too that the sentence in (60) goes on to refer to the results; the meaning is that by the time the chief has died, certain undesirable things will take place as a result. This is a future event, to be sure, but one which is past in relation to what follows. Example (62) may be making reference to the cultural view of God's foreordination; God has made his plans already, so the meaning really is something like 'if God has intended that it be so'. The second example contains two instances; the vizier is talking to himself as he schemes, and the sentence appears to combine the thrust of the two cited above—his trying refers to an event which is in the past in relation to what follows, and what follows is of a certainty as to border on foreordination. Example (63) is like (60). The fact that both the relative completive and the future also occur in clauses with *in* 'if' calls for further investigation.

(e) At least one case refers to an event taking place at the time of speaking.

- (64) *"naa tabbàta, baà wàndà ya gaanèè ni"*  
 C promise NEG person RC see me  
 "I assure you—no one saw me."

(f) There are some idiomatic usages of the completive (no other aspects appear to occur in such constructions): in *yaa kàmaatàà* 'it is necessary' (65), in *yaa fi kyaù* 'it surpasses in goodness' [=it is better] (66).

- (65) *"yaa kàmaatàà yà huutàà"*  
 C necessary S rest  
 "He must rest."

- (66) *"yaa fi kyaù à bar kààzaa ciki-n gaashì-n-tà"*  
 C surpass goodness S leave chicken inside-of feathers-of-her  
 "It is better to let sleeping dogs lie."

**1.5. The progressive aspect (P).** As was the case for the completive aspects, the difference between the progressive and the relative progressive aspects is also neutralized when negated. The progressive aspect itself is relatively rare in this text, occurring with three major functions.

(a) To express a relatively long-term (nonpunctiliar) activity, as in (67)–(71).

(67) *su^`nàà zùnde-n wàziirìì*  
 P pointing-of vizier  
 They were pointing at the vizier.

(68) *su^`nàà murnàà*  
 P joy  
 They were rejoicing.

(69) *koowaa nàà duuba-n dan'uwa-n-sà*  
 everyone P looking^at-of brother-of-his  
 Everyone was looking at his brother.

(70) “*mu^`nàà ciki-n sulhùù hakà*”  
 P inside-of peace thus  
 “We are at peace now.”

(71) “*ka^`nàà tsàmmaanìì sarkii yaa tàmbàyee kà kari-n*  
 P think chief c ask you usage-of  
*màganàà nee?*”  
 word be  
 “Is it the case that you are thinking that the chief asked you as a  
 joke?”

(b) To identify an activity that is in progress at the time of another, providing further information regarding the setting of the latter (this is, of course, related to the usage above).

(72) *su^`nàà huutààwaa, sai*  
 P rest then  
 They were resting, when . . .

(73) *ya^`nàà nan ciki-n wannàn baki-n cikìì, sai*  
 P here inside-of this blackness-of inside then  
 He was still feeling sad, when . . .

(74) *wàlàhaa nàà yìì*  
 morning P do  
 It was midmorning.

- (75) *"mu^nàà hanyàà, sai..."*  
 P road then  
 "We were traveling, when . . ."
- (76) *"mu^nàà yi musù hakà nan har là'asàr ta yi"*  
 P do them thus here until afternoon RC do  
 "We treated them this way until later afternoon."

(c) To identify a present state, often in direct quotes.

- (77) *"i^nàà iyà baa dà lààbaari-n àbi-n dà za^à"*  
 P able give with news-of thing-DEF REL F  
  
*yi nan gàba"*  
 do here ahead  
 "I am able to give news of what will happen in the future."
- (78) *"dàà... ka^nàà gaanèèwaa, kaà saakè shirìl tun"*  
 if P understanding F2 repeat preparations since  
  
*dà wuri"*  
 with haste  
 "If you have understanding, you will make further preparations as soon as possible."

(d) To refer to an event in the future (which may be hypothetical), always in direct quotes.

- (79) *"in bàà jàkaa gùdaa ba, baa nàà sayáswaa"*  
 if NEG bag unit NEG NEG P selling  
 "If your offer isn't at least one sack [=100 pounds money], I am not selling."
- (80) *"in... shaawarà-r taakà bà tà fita ba, i^nàà"*  
 if plan-of yours NEG C go^out NEG P  
  
*murdèè makà wuyàà"*  
 wring you neck  
 "If your plan doesn't work, I will wring your neck."

- (81) *“in wani àbù ya sààmee shì, i^nàà yankàà ku”*  
 if a thing RC get him P butcher you  
 “If anything happens to him, I will butcher you!”

(e) There is at least one common idiomatic usage of the progressive construction, in a nonverbal clause with the preposition *dà* ‘with’ to express possession.

- (82) *“in ka^nàà dà hikimàà”*  
 if P with wisdom  
 “if you have wisdom”
- (83) *ya^nàà dà wata bùkaatàà*  
 P with a need  
 He has a need.

**1.6. The relative progressive aspect (RP).** The relative progressive aspect is used in a manner similar to that of the progressive, though more frequently in this text because of the large number of relative clauses and clauses containing fronted elements. Four uses can be identified, the first two of which are parallel with the usage of the relative completive as contrasted with the completive.

(a) Its most common use is in relative clauses with progressive meaning.

- (84) *wani bàbba-n sarkii wandà a^kèè kiraa àbdùraamaanì*  
 a bigness-of chief REL RP call Abduramani  
 a great chief who was called Abduramani
- (85) *àbì-n dà a^kèè kiraa duuniyàà*  
 thing-DEF REL RP call world  
 the thing which is referred to as the world
- (86) *“zùmùntà-n nan dà kèè tsàkaani-n-mù”*  
 relationship-DEF here REL RP between-of-us  
 “the relationship which is between us”
- (87) *“tààkamâ-r dà na^kèè yìì”*  
 conceit-DEF REL RP do  
 “the bragging which I am doing”

(b) It may occur in clauses with progressive meaning in which an element has been fronted to initial position. In the larger picture, this is true also in relative clauses, with the relative pronoun fronted.

- (88) *sai sù yi tsammaanì shaarà karyaa ya`kèè yìi*  
 then s do think cover lies RP do  
 They would think he was telling many lies.
- (89) *koo`inaa sarkì-n nan zaà shi, dà suu ya`kèè zuwàà*  
 everywhere chief-DEF here go him with them RP coming  
 Everywhere the chief went, he took them along.
- (90) *“in . . . laabaarurrukàà ka`kèè sô-n jii”*  
 if news RP want-of hear  
 “if it is news you are wanting to hear”
- (91) *“bàà irì-n màganàà kàmar taamù a`kèè reenààwaa ba”*  
 NEG sort-of word like yours RP despise NEG  
 “It is not your sort of message that one ignores.”

(c) The relative progressive verbal *kèè* occurs also with *nan* ‘here’ in the idiomatic expression *kèè nan*, which occurs when a full clause or larger unit serves as subject (no subject pronoun component occurs in such cases); it can be translated along the lines of ‘that’s the way it is’.

- (92) *àbì-n yaà zama kauyancii kèè nan*  
 thing-DEF F2 become yokel RP here  
 It was simply gauche behavior.
- (93) *àbì-n dà su`kèè soò kèè nan*  
 thing-DEF REL RP want RP here  
 That’s what they were wanting.
- (94) *“yaù kwaana-n-sà kàmar àshìrin kèè nan . . .”*  
 today days-of-his about twenty RP here  
 “It’s about twenty days now that he . . .”
- (95) *“dàbaarà-r-kà bà tà yi ba kèè nan”*  
 plan-of-yours NEG C do NEG RP here  
 “So your plan won’t suffice.”

The specific distribution of this construction invites detailed analysis which is beyond the scope of this paper; it appears to have the function of explicitly drawing attention to the information contained in the clause with which it occurs.

(d) The relative progressive verbal *kèè* is found also in the idiomatic expressions *koo dà ya ^kèè* 'even so' and *dà ya ^kèè* 'since'.

- (96) *àmmaa koo dà ya ^kèè sarkii ya yi murnàà*  
 but even with RP chief RC do joy  
 but even though the chief was happy
- (97) *koo dà ya ^kèè àbî-n nan dà àkuu ya fàdaa*  
 even with RP thing-DEF here REL parrot RC say  
 in spite of the fact that the thing the parrot said
- (98) "*dà ya ^kèè ka ^nàà dà hikimàà*"  
 with RP P with wisdom  
 "if you are so wise"

## 2. The aspectual ranking scheme

Having provided a beginning compilation of the various uses of Hausa aspects in this particular text, I turn now to a tentative analysis of the Hausa aspect system in its function in showing the relative importance of events in relation to one another.

In several different works, Longacre has proposed a scheme for ranking of events in narrative text. That of (99) is the most recent (Longacre 1990:4).

- (99) 1 Storyline  
 2 Backgrounded events  
 3 Backgrounded activities  
 4 Setting  
 5 Irrealis  
 6 Author intrusions  
 7 Cohesive



The idea is that not all events portrayed in the text are of equal importance in terms of their significance to the main thrust of the account. Longacre has proposed also that languages typically make use of different constructions (among them different tenses or aspects) in a manner that correlates with the ranking scheme; thus it is commonly the case that the use of a given construction indicates the relative importance of the event portrayed to the whole. The specific ranking scheme of (100) has been proposed for English (Longacre 1989:416).<sup>5</sup>

- (100) Band 1 Past (s/agent) action, (s/agent/patient) motion  
 Storyline Past (s/experiencer) cognitive events (punctiliar adverbs)  
           Past (s/patient) contingencies
- Band 2 Past progressive (s/agent) background activities  
 Background Past (s/experiencer) cognitive states (durative adverbs)
- Band 3 Pluperfects (events, activities—out of sequence)  
 Flashback Pluperfects (cognitive events—out of sequence)
- Band 4 Stative verbs/adjectival predicates/verbs with  
 Setting (expository) inanimate subjects (descriptive)  
                           *be* verbs/verbless clauses (equational)  
                           *be/have* (existential, relational)
- Band 5 Negatives  
 Irrrealis (other possible worlds) Modals/futures
- Band 6 Past tense (cf. setting)  
 Evaluation (author intrusion) Gnomic present
- Band 7 Script determined  
 Cohesive band (verbs in preposed/  
                           postposed adverbial clauses) Repetitive  
   Back reference

It is clear from the discussion above that Hausa aspects are used within this text to perform a number of the sorts of functions which Longacre

<sup>5</sup>The identification of case encoded by subject in Longacre's description will not be dealt with here. *s/agent* refers to a subject which is an agent, and *s/agent/patient* to a subject which has a coreferential case of both agent and patient, as is the case with motion verbs.

identifies. The relative completive is clearly the aspect used to identify events on the storyline (§1.1c); the completive is used primarily to identify flashbacks (§§1.4a,b); the progressive is used to provide setting information (§§1.5a,b), replaced by the relative progressive when fronting has taken place (§§1.6a,b); irrealis events are identified by use of the future (§1.3), the completive (§1.4d), and the progressive (§1.5d) aspects; author intrusion in terms of evaluation is identified by use of the completive in the only clear example noted in the text (§1.4c). Based upon the first pages of the novel *Magana Jari Ce*, then, the rank scheme in (101) can be tentatively set forth for Hausa.

(101)	Band 1	Relative completive Storyline
	Band 2	Completive Flashback
	Band 3	Progressive/relative progressive Setting
	Band 4	Progressive/future (future events) Irrealis                   Completive/future (hypothetical events) Subjunctive (purpose, result, wish, etc.)
	Band 5	Completive Author Intrusion

The introductory nature of this proposal can hardly be overemphasized; only one text has been examined, and there has been no attempt to relate the distribution of aspect with other factors of text organization (e.g., introduction of participants, marking of crucial events, marking of peak). And, of course, many questions remain within this study, not the least of which lies with distinguishing the different aspects which I have included in Bands 3 and 4, and incorporating the other sorts of examples from the discussion above into the scheme. In addition, the kinds of information found in nonverbal clauses has not been discussed. Nevertheless, it is clear even from this preliminary study that the aspectual system of Hausa is not used haphazardly in narrative text, and in fact to use the aspects correctly requires a considerable degree of sophistication and subtle awareness of the structure of the text being generated.

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# **The Identification of Storyline in Thai Narrative Discourse**

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## **1. Introduction to narrative storyline**

Every discourse has its main line of development and supportive material. The main line of development is the central feature of the discourse whereas supportive material consists essentially of elaborations and additions (Longacre 1989). Different types of discourse have differing main lines of development, as pointed out by Longacre:

Narrative text has a storyline; procedural text has a line of procedure; hortatory/persuasive text has a line of exhortation (which may, as a matter of fact, be very subtly concealed); and expository text has a line of exposition—to mention some basic distinctions. (1989:415)

Narrative discourse is chosen for discussion here because the main line of development can be singled out from supportive material with less difficulty in this type of discourse than in nonnarrative discourse, as pointed out by Callow:

Since narrative develops along a chronological theme-line (i.e., a time-line), it is usually not too difficult to decide whether a given clause (or other selected unit) conveys thematic or background information. If it reports an event in the event-series, occurring in chronological sequence, it is thematic; if it reports anything else, it is background. The distinction is not so easy to apply, however, to

nonnarrative discourses. These develop along a theme-line, which may be argumentative, hortatory, or explanatory; material which might have a background function in narrative may be thematic in these other types of discourse. (1974:55–56)<sup>1</sup>

## 2. The semantic characteristics of storyline elements

The storyline is a generic term to include any happenings that push the story forward. The important characteristics of these happenings are punctuality, sequentiality, and (most often) volition (Longacre 1990). Punctiliar happenings include actions and events that are well articulated as to inception, terminus, or both. The sequential happenings involve the regular chronological succession of actions and events; volitional happenings are actions or events that are conscious or planned (Longacre to appear). These happenings may be characterized further as follows:

An **ACTION** is a volitional and conscious happening in which the subject is agent. It may be a speech act or entail motion in which the subject is both agent and patient. Motion has the subsidiary function of reporting “to report the movement of a participant towards or away from the locus of the action proper” (Longacre 1989:417).

An **EVENT PROPER** is a happening in which the subject is patient. It takes place without plan or volition, as in ‘Jim fell off his chair’.

A **COGNITIVE EXPERIENCE** is a psychological or emotional event in which the subject is experiencer, as in ‘swept by anger’.

## 3. The semantic characteristics of nonstoryline elements

Grimes<sup>2</sup> classifies semantically nonstoryline elements or nonevents as setting, background, evaluation, and collateral. **SETTING** includes expository and descriptive materials which report the place, time, and circumstances under which actions take place. **BACKGROUND** includes nonpunctiliar, nonsequential activities and states that do not advance the storyline but temporarily overlap with storyline actions and events.

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<sup>1</sup>A chronological theme-line and background are referred to as storyline and non-storyline respectively by Longacre (1989). Hopper (1979:213) uses the terms **EVENTS** to refer to “the language of the actual storyline” and **NONEVENTS** to “the language of the supportive material.”

<sup>2</sup>The discussion of the semantic characteristics of nonstoryline elements is based on Grimes (1975) and Longacre (1989).

EVALUATION is intrusive material which includes the author's own evaluation, the opinions of any participant in a discourse, the author's evaluation of the culture within which he is speaking, and the aim of the discourse expressed in the form of a moral. COLLATERAL has to do with all possible events which might or might not happen. It includes anything that suggests possible alternatives, such as negation, questions, futures, imperatives, or predictions.

#### 4. Thai surface indicators of nonstoryline elements

According to Longacre (1983), the main line of narrative discourse is foregrounded in varying ways in various languages. In languages with tense-aspect systems such as English, the verb systems facilitate discourse. That is, differing tense, aspect, mood, and voice forms have different functions in discourse. In narrative discourse, for example, simple past-tense forms report successive actions and events which advance the story, whereas past-progressive forms report concomitant activities or nonstoryline.

Thai is a language without verbal inflection.<sup>3</sup> Storyline and nonstoryline cannot, therefore, be characterized solely on the basis of verbforms as in English. As pointed out by Longacre (to appear:25), "a language which has not much richness of structure in regard to tense-aspect distinction may distinguish the eventline of narratives by a conspiracy of nonsystemic ways." This holds true for Thai narrative discourse. I begin here by presenting how Thai uses grammatical forms to indicate nonstoryline, but only briefly, because the focus of the paper is on the identification of storyline.

Setting is identified by (1) nondynamic verbs which include descriptive verbs such as *daŋ* 'loud' and *sǔaj* 'beautiful', existential verbs such as *mi*: 'there is' and *lǎa* 'remain', equative verbs such as *pen* 'be' and *khi*: 'be', and

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<sup>3</sup>Thai belongs to the Kam-Tai family of languages, which are spoken in Thailand, Laos, the northern part of Vietnam, West Burma (Shan States), and Southwest China (Li 1960). It is an isolating language without a tense system as pointed out by Sindhvananda (1970:39): "There are many languages in which verbal inflections are grammatical devices to reflect human time concepts; whereas many other languages use other devices to fulfill the same purpose without having to do with verbform changes or requiring any verbform markers (auxiliaries)." Thai has neither verb inflections nor auxiliaries to convey time concepts. Instead, context or the juxtaposition of an adverb of time signals whether a spoken event is in the present, past, or future. The data used for this analysis were drawn from Burusphat 1991, which should be seen for a more extended discussion of the ideas presented here. I would like to thank David Thomas for his consulting assistance.

by (2) temporal and spatial elements such as 'When it was time to return to town...' (*kh rán th ỉn we:la: th ỉ: c ả? t ỉ: ỉ sad ẻtkl ỏp m ian ỉ*) and 'but when [the two daughters] reached their towns...' (*t ẻ: ph ỏ: p ỏj th ỉn b ỏ: n m ian kh ỏ: ỉ ton*).

Background is characterized by adverbs, auxiliaries, and preserial verbs. Adverbs include adverbs of frequency (*penpracam* 'routinely'), adverbs of repetition (*l ỏ: ỉ l ỏ: j wan t ỉtt ỏ: kan* 'many successive days'), adverbs of duration (*na:n* 'long time'), adverbs of ongoing activities (*r ỉaj r ỉaj* 'continually'), and adverbs of gradual activities (*th ỉkthi*: 'more and more'). Auxiliaries identify customary or routine activities (*m ỏk* 'usually', *ch ỏ:p* 'usually'), repetitive activities (*phaja:ja:m* 'try', *wian* 'repeat'), or ongoing activities (*khon* 'still'). Preserial verbs (*ja ỉ* 'still, yet', *kamlan* 'be in progress') indicate ongoing activities and usually occur with the postserial verb (*j ỉ: 'in progress'*).

Evaluation is indicated by descriptive elements (*di: l ỏa k ỏ:n* 'extremely good', *pen m ỏ: l ỏ:t* 'be an excellent dog') or by the first-personal pronoun in a question the narrator of a text addresses to his/her audience, as in (1), where (1a) is storyline and (1b) is not.

- (1) a. *wann ỉn d ẻk khon n ỉ: p ỏj thale:s ỏ:p l ỏk l ẻn th ỏ:j*  
 one^day child CLS this go lake deep play toss

*krab ỉan bon n ỏ:m*  
 tile on water

One day this child went to a deep lake to toss tiles onto the water.

- b. *l ẻn j ỏ: ỉraj ph ỉakraw s ỏ:p m ỏj*  
 play how group^us know INTERROG  
 Do we (our group) know how to play?

The most salient indicator of collateral information is the preserial verb *c ả?* 'will',<sup>4</sup> as illustrated in (2).

- (2) *m ẻ:k ẻ: khaj ỏp p ỏ:k c ả? w ỏ:*  
 woman^old move mouth will scold  
 The old woman was about to scold (her grandson).

<sup>4</sup>The preserial verb *c ả?* is translated 'will' in English but is not a future marker; it indicates potentiality, assertion, determination, or volition, which implies future tense in some contexts (Kanchanawan 1978:43).



Other indicators of collateral information are (1) certain auxiliaries (*khon* 'probably', *khuan* 'should, ought to', *nâ:* 'ought to', *?â:t* 'may, might, be supposed to', *thê:p*, *kiap*, *cuan* 'almost, nearly, on the verge of'), (2) verbs indicating doubt, wish, estimation, and the like, and (3) miscellaneous markers such as *rĭ:* (polar question), *mâj* (negative), and *thâ:* (condition).

### 5. Thai surface indicators of storyline elements

With these brief remarks concerning the indicators of nonstoryline in Thai, I turn now to the main focus of this paper—those which indicate storyline. The storyline in Thai narrative is expressed by clauses having verbs of the types listed in (3). For example, (4) is a dialogue with the speech verb *thă:m* 'ask' and the action verb *bô:k* 'wave', (5) is an event expressed by the clause containing the event proper verb *krathóp* 'hit', and (6) illustrates the motion verb *klâp* 'return'.<sup>5</sup>

- |     |                            |                    |
|-----|----------------------------|--------------------|
| (3) | action verbs               | event proper verbs |
|     | causative verbs            | propulsion verbs   |
|     | cognitive experience verbs | speech verbs       |

- (4) a. *nũ:* *pen* *?araj* *rĭ:plâ:w* *ke:* *thă:m*  
 you be how INTERROG he ask  
 "How are you?" he asked.

- b. *mâj* *pen* *raj* *rô:k* *mê:kkhală:* *bô:k* *mi:*  
 not be how FINAL Mekkhala wave hand  
 "I am all right," Mekkhala waved (her) hand.' (223)

- (5) *krâ:pria* *krathóp* *săw*  
 gunwale hit pole  
 The gunwale hit the pole. (221)

- (6) *măjkê:w* *klâp* *bâ:n* *dúaj* *khwa:mkhùnkhé:n*  
 Majkaew return home with irritation  
 Majkaew irritably returned home. (481)

<sup>5</sup>All examples in this section are from Jarungkitanan 1987, with page references given in each.

The storyline clause in (7a) has the action verb *cô:ŋ* 'stare at', whereas that of (7b) has the cognitive experience verb *rú:sik* 'feel'; the causative verb *thamhâj* is illustrated in (8).

- (7) a. *chanáchon cô:ŋ nâ: luŋ thim*  
 Chanachon stare<sup>^</sup>at face uncle Tim  
 Chanachon stared at Uncle Tim's face.
- b. *khăw rú:sik wâ: sŋaŋ khô:ŋ ke: sânkhrîa*  
 he feel that voice of him shaking  
 He felt that his (Uncle Tim's) voice was shaking. (591)

- (8) *khamphû:t khô:ŋ cha:j chara: thamhâj phû: thî: kamlaŋ*  
 speech of man old cause who that in<sup>^</sup>progress
- khít câ? paj du: má:j thaj thê:p thúk<sup>^</sup>khon pliancaj*  
 think will go see plant Thai almost everybody change<sup>^</sup>mind  
 The old man's speech caused almost everyone who was thinking of  
 going to see Thai plants to change his or her mind. (41)

The storyline is referred to as the line of sequential, punctiliar happenings. The verbforms in Thai narrative illustrated above, however, are unmarked for punctuality and sequentiality. Without any punctiliar or sequential marker, the punctuality and sequentiality of the verbforms are determined solely by the textual situation. This section identifies and illustrates indicators of PUNCTILIAR actions and events, indicators of SEQUENTIAL actions and events, and indicators of SIMULTANEOUS actions and events. The neutral verbs that are accompanied by these indicators report events that are of top salience.

**5.1. Indicators of punctiliar actions and events.** A punctiliar indicator is frequently used to signal the storyline status of cognitive experience verbs.<sup>6</sup> Other kinds of verbs are also accompanied by this indicator but they are rare. Punctiliar adverbs found primarily in Thai narratives are listed in (9).

<sup>6</sup>Verbs of cognitive experience which are punctiliar have the same form as verbs of cognitive state which are gradual and happen through a period of time. However, they are also different in that the subject of cognitive experience verbs experiences something suddenly whereas the subject of cognitive state verbs gradually experiences something (Longacre to appear). Verbs of cognitive experience usually need a marker that signals punctuality.

- |     |                          |                            |                        |  |
|-----|--------------------------|----------------------------|------------------------|--|
| (9) | <i>bàtnán?e:ŋ</i>        | 'at that moment'           | <i>(naj)thanthi:</i>   | 'immediately'  |
|     | <i>(châp)phlan</i>       | 'suddenly'                 | <i>najthandaj</i>      | 'suddenly'   |
|     | <i>hîak</i> <sup>7</sup> | 'suddenly,<br>with a gasp' | <i>najwína:thi:nán</i> | 'at that exact<br>moment'                              |
|     | <i>khîn(ma:)</i>         | 'suddenly' <sup>8</sup>    | <i>wêprîŋ</i>          | 'short period<br>of time'                              |
|     | <i>krâthanhân</i>        | 'suddenly,<br>abruptly'    | <i>wû:pkhînma:</i>     | 'suddenly flare<br>up (fire, anger,<br>sexual desire)' |
|     | <i>najna:thi:nán</i>     | 'in that minute'           |                        |  |

Some punctiliar indicators may occur together in the same clause, as in (10), where both *khînma:* 'suddenly' and *najna:thi:nán* 'in that minute' occur, reinforcing storyline movement carried by the cognitive experience verb *nîkthîŋ* 'think of'.

- (10) *thâ: nîkthîŋ chanachon khînma: najnathi:nan*  
 she think^of Chanachon suddenly in^minute^that  
 Suddenly, she thought of Chanachon. (92)

Even though punctiliar indicators occur with great frequency with cognitive experience verbs, they are also found within clauses containing other kinds of verbs. When the punctiliar indicators accompany a motion verb, they strongly highlight storyline movement, as in (11).

- (11) *bàtnán?e:ŋ thî: mátcuâ:t sî:dâm khîanthî: prú:t*  
 that^moment that death black move quickly  
  
*khînma: câ:k tâj krada:n pu: thô:ŋria*  
 up^come from under board cover bottom^of^boat  
 At that moment, the black death (the black snake) came up quickly  
 from under the board at the bottom of the boat. (594)

**5.2. Indicators of sequential actions and events.** Sequential indicators are important for distinguishing storyline from supportive materials in Thai narrative. They include temporal expressions, auxiliaries, and adverbial clauses. Typical temporal expressions are listed in (12).

<sup>7</sup>The meanings of *wû:pkhînma:* and *hîak* were taken from Haas 1980.

<sup>8</sup>The punctiliar adverb *khînma:* is a combination of the postserial verbs *khîn* 'up' and *ma:* 'come' which together form an adverbial phrase meaning "some idea, feeling, or thought, just occurs to a person suddenly without any obvious reason" (Sindhvananda 1970:25). The postserial verb *ma:* is sometimes omitted.

- |      |                      |                         |                   |             |
|------|----------------------|-------------------------|-------------------|-------------|
| (12) | <i>khru:diaw</i>     | 'one moment'            | <i>thi:sut</i>    | 'finally'   |
|      | <i>khru:naij</i>     | 'for a moment'          | <i>to:ca:knán</i> | 'from that' |
|      | <i>să:janrûjkhân</i> | 'late tomorrow morning' | <i>to:ma:</i>     | 'next'      |

Auxiliaries include completive markers (*côp* 'end', *sămrèt* 'successful', *sèt* 'finish'), perfective markers (*lé:w* 'already', *paj* 'go', *ma:* 'come'), and preserial verbs (*kô:* 'then',<sup>9</sup> *ciŋ* 'consequently, then'). Completive auxiliaries signal the completion of actions and may be followed by *lé:w* 'already', *kô:* 'then', or both.

Perfective *lé:w* 'already' is frequent in Thai narrative. It often follows an adverbial clause or precedes the final clause within a serial clause construction. The preserial verb *kô:* 'then' is of considerable importance in Thai narrative and frequently occurs with perfective *lé:w* 'already'. The great majority of storyline clauses are introduced by *kô:* 'then', which introduces a new sequence of actions, whereas *lé:w* 'already' signals the completion of the preceding event. The preserial verb *ciŋ* 'consequently, then' also signals temporal sequence and behaves in a way similar to *kô:* 'then', but it also implies a consequence of the previous event.

In (13), the verbforms are strongly sequential. The initial clause is sequentially marked by *lé:w* 'already', the second clause by *ciŋ* 'consequently, then,' and the final clause by *ca:knán* 'from that' and *ciŋ* 'consequently, then'.

- (13) a. *kraco:m?òk rîaprô:j lé:w*  
 tie^breast finish already  
 (After she) had already tied (the sarong-like lower garment above her) breast,
- b. *thə: ciŋ jîp phá:chéttua phǎ:n jàj khîn ma:*  
 she then pick^up towel CLS big up come  
  
*khlum làj*  
 cover shoulder  
 she then picked up a big towel to cover (her) shoulder.
- c. *ca:knán ciŋ hǎn ma: tha:ŋ rā:ŋ dam thî: khòt*  
 from^that then turn come way body black that coil

<sup>9</sup>The auxiliary *kô:* is translated as "then, consequently, also, too" (Haas 1980). As a sequential marker it has the meaning 'then'. It is also called an eventline connector because it connects two or more events sequentially (Chuwicha 1985).

*tua nîŋ sanit jù: mum hŋ*  
 body quiet absolute be corner room  
 After that, (she) then turned to the black body that coiled  
 up in absolute quiet at the corner of the room. (62)

Storyline elements are frequently carried by a serial clause construction. Example (14) illustrates such a construction with *lé:w* 'already' at the beginning of the final clause.

- (14) a. *khăw lúk paj thî: riarew sùantua*  
 he get^up go at motorboat private  
 He went to (his) private motorboat.
- b. *jìp thŷŋ kradâ:t khân ma: sŋ:ŋ thŷŋ*  
 pick^up sack paper up come two sack  
 (He) picked up two paper sacks.
- c. *nam ma: wa:ŋ bon tó?*  
 bring come put^on on table  
 (He) brought (the sacks) to put (them) on the table.
- d. *lé:w kê: kradâ:t ?ò:k*  
 already take^off paper out  
 Then, (he) took the paper off. (89)

Perfective *lé:w* 'already' tags a backreferential clause (15a), and (15b) begins with the preserial verb *kô:* 'then'.

- (15) a. *ke: wâ: lé:w*  
 he say already  
 (After) he had already said (so),
- b. *kô: khám pha:j kâp sâw dan hâj ria*  
 then support paddle with pole push let boat
- khlian lam ?ò:k*  
 move body out  
 (he) then pushed the paddle against the pole to move the  
 boat out (of its place). (267)

In (16), perfective markers *ma:* 'come' and *lé:w* 'already' occur together within the same clause, both functioning as sequential indicators.

- (16) *rót lên phà:n tuamian suphanburi: ma: lé:w*  
 bus run pass downtown Suphanburi come already  
 The bus had already passed the downtown of Suphanburi. (11)

Adverbial clauses that function as a sequential indicator may be a repetitive backreference or script-determined backreference. As a repetitive backreference, the adverbial clause may repeat the previous event as a tail-head linkage or sum up the event of the preceding paragraph as summary-head linkage (Thompson and Longacre 1985). The adverbial clauses are usually introduced by *mĩa* 'when', *pho:* 'when', or *lăn cã:k* 'after' and tagged by perfective *lé:w* 'already'. The preserial verbs *kô:* 'then' and *cinj* 'consequently, then' are often found preceding the verb of the following clause.

In (17), the adverbial clause functions as a tail-head linkage.

- (17) a. *dèkjĩn nuan pha:j ria paj sòn cãwna:j*  
 title Nuan row boat go take boss  
 Nuan rowed the boat to take (her) boss (to the pier).
- b. *mĩa sòn cãwna:j riapró:j lé:w kô: wonwian*  
 when take boss finish already then go^around
- jù: naj talã:t*  
 be in market  
 When (she) had already taken (her) boss (to the pier),  
 (she) then went around in the market. (104)

A script-determined adverbial clause is a kind of backreference which serves "to round out the eventline by filing in some predictable events" and provides cohesion between sentences (Longacre to appear:18). In (18), the adverbial clause does not repeat any preceding clause but it reports a predictable event.

- (18) *pho: hẽntua bã:n mê:kkhalã: kô: hẽn ria sĩ:khã:w cò:t jù:*  
 when see body house Mekkhala then see boat white moor be  
 When (she) saw the house, Mekkhala then saw a white boat  
 moored (at the pier). (85)

An adverbial clause usually precedes a main clause, but not infrequently may follow it in order to highlight the event expressed by the main clause, as in (19).

- (19) *chanáchon hăn ma: mɔ:ŋ thə: ʔi:kkhráŋ m̄a r̄ia*  
Chanachon turn come see her again when boat

*ʔò:k cà:k thá:*  
out from pier

Chanachon turned back to see her again when the boat had moved off from the pier. (50)

A postposed adverbial clause is also often found when a quotation precedes a speech verb of a main clause, as in (20).

- (20) *paj há: kan mǎjkê:w bò:k lǎŋ^cà:k kin khâ:wjen r̄iapró:j*  
go find together Majkaew tell after eat dinner finish  
“Let’s go to find (Mekkhala),” Majkaew told (her) friend after  
(they) had finished (their) dinner. (469)

**5.3. Indicators of simultaneous actions and events.** As discussed above, events usually occur in succession. Two or more events, however, may also occur simultaneously and yet both may be on the storyline. The relationship between these simultaneous events is expressed by conjunctive expressions of the sort listed in (21).

- |      |                             |                               |
|------|-----------------------------|-------------------------------|
| (21) | <i>léʔ</i>                  | ‘and’                         |
|      | <i>najwe:la:diawkan</i>     | ‘at the same time’            |
|      | <i>penwina:thi:diaw kâp</i> | ‘to be at the same second as’ |
|      | <i>phla:ŋ</i>               | ‘in the meantime’             |
|      | <i>phró:mkan</i>            | ‘simultaneously’              |
|      | <i>phró:mkâp</i>            | ‘together with’               |
|      | <i>wina:thi:nánʔe:ŋ</i>     | ‘at that second’              |

In (22), four events occur almost at the same time. Actually, it is rarely found that four events occur simultaneously, but the simultaneous occurrence of these four events indicates that this part of the story is pivotal. The first two events are linked by *léʔ* ‘and’ and *phró:mkan* ‘simultaneously’. Both conjunctive expressions are used together to highlight the simultaneity of these two events. The third event is simultaneously linked to the previous two events by the conjunctive expression *penwina:thi:diawkâp* ‘be at the same second as’. The final event is connected to the preceding events by two conjunctive expressions, that is, *léʔ* ‘and’ and *wina:thi:nánʔe:ŋ* ‘at that second’. Note that the preserial verb *kó:* ‘then’ following *léʔ* ‘and’ does not function here as a sequential indicator. In this

context it has an additive meaning and helps to confirm the simultaneity of events.

- (22) a. *khun . . . rawaŋ sǎŋ luŋ thim tako:n danlân*  
 you be^careful voice uncle Tim shout very^loud

*jâ:ŋtî:ntanòk*  
 frighteningly

“You . . . be careful,” Uncle Tim shouted loudly with fright

- b. *lé? phrô:mkan pha:j naj mi: khǎ:ŋ ke: kô:*  
 and simultaneous paddle in hand of him then

*wìŋ khâwsàj mē:bîa thî: chu: sǔ:ŋ nân*  
 throw^over toward hood that raise high that  
 and simultaneously (he) threw the paddle in (his) hand  
 over the hood of the snake that was held highly erect.

- c. *penwîna:thi:diawkâp thî: mē:bîa chòk wû:p*  
 at^same^second that hood move^to^bite sudden

*khâwhă: chanáchon*  
 move^toward Chanachon

Within that second, the snake suddenly moved to bite Chanachon.

- d. *lé? kô: . . . wîna:thi:nân?e:ŋ cha:jnùm phlâ?*  
 and also within^that^second young^man move^away

*nî: dúaj khwa:mtòkcaj*  
 get^away with excitement

And . . . within that second the young man moved away with excitement.

In (23), the simultaneity of two events is marked by the conjunctive expression *phla:ŋ* ‘in the meantime’.



- (23) *mê:kkhală: phaják riak phla:ŋ khajâp tua ?ò:k*  
 Mekkhala nod call meantime move body out

*də:n nam cə? paj tha:ŋ pratu:*  
 walk lead will go way door

Mekkhala called (him by) nodding (her head) as (she) moved to lead (the tourists) to the door. (91)

## 6. Thai contextual indicators

Although Thai neutral narrative verbforms are unmarked for punctuality or sequentiality, they are frequently considered to be storyline verbs without any storyline indicator. Such indicators are not required when two events may slightly overlap and thus be weakly sequential, or when the sequentiality of events may be drawn clearly from the textual situation. Without a storyline indicator, the storyline status of neutral narrative verbs is determined solely by the context.

In (24), the storyline is carried by a series of clauses which have propulsion verbs as main verbs. Only one overt subject is present, in the initial clause, the other clauses having zero anaphors as their subject. The occurrence of such clauses as a series determines the sequence of actions and events even though the series is not accompanied by a sequential indicator.

- (24) a. *mê:kkhală: jip sía thî: phâ:t jù: ma:*  
 Mekkhala pick^up blouse that place^upon be come

*khló:ŋ phâ:t wáj kâp làj*  
 put^loosely place^upon keep with shoulder  
 Mekkhala picked up [her] blouse that was placed upon (something) in order to put (it) loosely upon (her) shoulder.

- b. *kèp thûajka:fe: loŋ thà:t*  
 gather cup^coffee down tray  
 (She) gathered the coffee cups (and put them on) the tray.

- c. *jók paj wa:ŋ wáj naj ?à:ŋ*  
 lift go place keep in sink  
 (She) lifted (the tray and) went to put (them) in the sink.

Example (25) illustrates a series of neutral verbs sharing the same subject. This example consists of two clauses, each having a series of motion and action verbs which may be followed by an object. The sequentiality of these storyline clauses is grammatically unmarked but is implied by the context because a dialogue normally involves a sequence of speakers.

- (25) a. *thə: hǎn ma: mɔ:ŋ chanáchon nítnəŋ*  
 she turn come look^at Chanachon for^awhile

*pen chá:ŋchá:n*  
 be invitingly

She turned to look at Chanachon invitingly for awhile.

- b. *chanáchon khajàp tua biat khon ?i:n?i:n khâw paj*  
 Chanachon move body crowd^into people other enter go  
 Chanachon moved to crowd (his way) among the people  
 entering (the traditional Thai house). (33)

## 7. Summary

The primary concern of this paper is to distinguish storyline from non-storyline elements. The storyline includes happenings which are essentially punctiliar, sequential, and (most often) voluntary. Nonstoryline consists of supportive material: expository and descriptive materials (setting), non-punctiliar and nonsequential activities or states (background), intrusive materials (evaluation), and all possible events which might or might not happen (collateral).

Because Thai is a language without verbal inflection, the storyline and nonstoryline cannot be identified solely on the basis of verbforms. Apart from verbforms, the storyline indicators—including indicators of punctiliar, sequential, and simultaneous actions and events—play an important role in distinguishing the storyline from nonstoryline. These storyline indicators are punctiliar adverbs, temporal sequence expressions, auxiliaries, preserial verbs, and adverbial clauses. In the absence of a storyline indicator, the storyline status of a neutral narrative verb may also be discerned by the textual situation.

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## Foregrounding: An Assessment

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Since the pioneering work of Grimes (1975), Longacre (1976a, 1976b), Hopper (1979a, 1979b), and Jones and Jones (1979), the description of narrative foreground and background has been a focus of interest in the study of discourse. Foregrounding has been investigated in languages as diverse as Chechen (Nichols 1981), Inuktitut (Kalmar 1982), Indonesian (Rafferty 1982), and Old French (Fleischman 1986). And the term—originally drawn from the Prague school structuralists<sup>1</sup>—has made its way as well into the literature of cognitive psychology and computer science. Research on the topic is still characterized, however, by numerous conflicting claims and assumptions. Such a state of affairs is, of course, to be expected in an interdisciplinary research area; and many of the conflicts arise from different understandings of the term FOREGROUNDING itself. Work on narrative foregrounding, however, now seems diverse enough to merit (a) a review of the different approaches being taken and (b) an attempt to discriminate between mere conflicts in data and real issues of definition.

Although the review which follows makes no claim to be exhaustive,<sup>2</sup> it will, I hope, be adequate to support one conclusion—that the term FOREGROUNDING has become so diffuse in its application that it requires

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<sup>1</sup>According to Van Peer (1986:5), Garvin (1964) introduced the term into the western literary criticism as a translation of the Czech *actualisace*. See Van Peer for a comprehensive review of the concept in literary criticism.

<sup>2</sup>Informative overviews of foregrounding are to be found in, for example, Fleischman 1985:857–62, Reinhart 1984:803–5, and Tomlin 1983:7–10, as well as in Tomlin 1987, an anthology of work on the concept.

redefinition, and that such redefinition would be furthered by clarifying the assumptions that different disciplines bring to the investigation.

### 1. Foreground

The term FOREGROUND has a long history of usage in literary criticism, but its use in discourse analysis seems to have come about through an accretion of ideas drawn from different directions of research. The most significant is certainly the description of the MAIN LINE OR BACKBONE of a discourse, which began as an explanation of observed morphological marking in diverse languages (see, for example, Grimes 1975, Longacre 1976a and 1976b, and Jones and Jones 1979). These studies focused on the fact that there existed morphosyntax which could only be explained through reference to discourse phenomena.<sup>3</sup> BACKBONE and MAIN LINE were used to denominate the collection of phenomena marked by such morphosyntax, and it was not an objective of the research to define these terms in a syntax-independent way, although it was suggested that backbone clauses, taken together, constitute a plausible abstract of a story.<sup>4</sup>

The term BACKBONE was not limited to clauses positing temporally successive events, but was applied to important events narrated out of temporal sequence<sup>5</sup> and even occasionally to individuals (since certain of the particles marked prominent participants).<sup>6</sup> Foregrounding, however, has come to be associated with the set of clauses describing temporally sequenced events, as well as with gestalt theories of perception, in part perhaps in order to explicate ideas inherent in the characterization of main line. For example, what aspects of a narrative are the MAIN ones? And what are the perceptual concomitants of discourse PROMINENCE? The

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<sup>3</sup>The name MYSTERY PARTICLES in Longacre 1976b is indicative of this emphasis, suggesting both the focus on the particles and the novelty of their function.

<sup>4</sup>Jones and Jones, for example, state that they "have deliberately not defined these levels in a rigorous way as it is our contention that they are established *emically* for each particular language and therefore may not correspond exactly to the comparable level in another language" (1979:7). By contrast, Tomlin (1983:7-10) asserts the desirability of a syntax-independent definition.

<sup>5</sup>For instance, several of the examples in Longacre 1976b are translated with the past perfect tense, indicating that the events are related OUT OF ORDER—i.e., in an order that is not iconic to their order of occurrence. Longacre also speaks of MAIN EVENT LINE as though there may be several event lines in a narrative (Longacre 1976b:474).

<sup>6</sup>Longacre notes, for example, that in the Cubeo language of Colombia, the backbone particle *'cari* can mark a MAIN CHARACTER if it is affixed to a NP but EVENT LINE if it is affixed to a verb (Longacre 1976b:470).

influential work of Hopper on tense and aspect and of Hopper and Thompson on transitivity is largely responsible for the association of foregrounding with transitive, temporally ordered clauses. Hopper also seems to have been the first to use the term FOREGROUND for the backbone of a narrative, thus inviting associations with the literary analyses offered in British and European stylistics.

Wallace (1982) and Reinhart (1984) linked the concept with gestalt theory, suggesting that the visual distinction between figure and ground is the analogue of textual foregrounding. And, at the same time, psycholinguists investigated textual foregrounding as part of memory research, defining foreground as the textual referents present in short-term memory.

Foreground is thus being studied by means of at least three different methodologies—linguistic, literary, and psycholinguistic—and the work is informed by a metaphor drawn from visual perception. Certainly, there is reason to believe that these approaches will lead toward complementary conclusions. The foreground of a literary text and the backbone of a folktale both constitute portions of a text perceived as prominent by a text-receiver, the psycholinguistic research focuses on the process of perception, and visual theories offer an analogue which may have more than metaphoric significance. However, the assumptions of each type of research differ.

The starting point for psycholinguistic research is not the text, but rather a definition of cognitive process, appropriately operationalized. In general, the foreground of the text is taken to be whatever is identified by the operationalization chosen. It is not clear that this is the same portion of the text as is marked by foregrounding morphosyntax.<sup>7</sup>

Literary thinking about foreground also differs from that in discourse analysis, in part because it has been stimulated by texts structured toward different kinds of interpretive strategies. As Culler (1975) and others have argued, skillful readers of belletristic texts employ strategies of interpretation which involve multiple levels of abstraction, metaphorizing, and generalization in order to MAKE structural features of the text cohere around a theme. Sanctioned by such strategies, literary texts can be less transparent than narratives designed for oral presentation, and the link

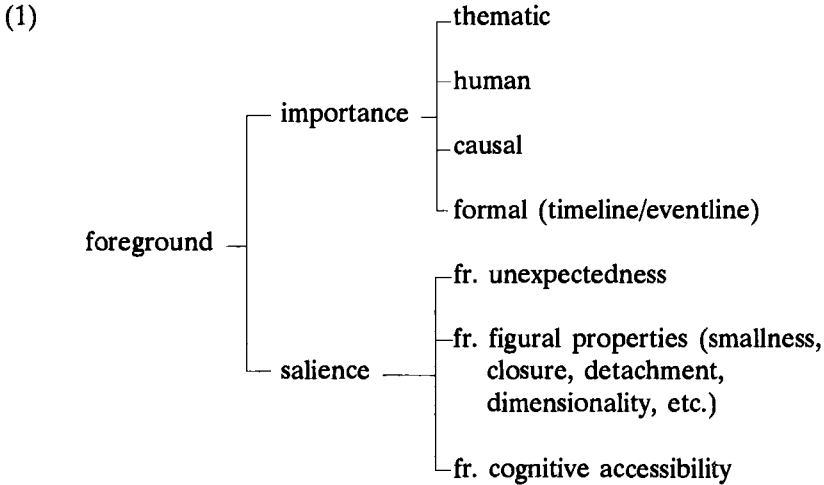
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<sup>7</sup>It would, of course, be possible to test this by performing similar psycholinguistic experiments on texts in languages which mark foreground morphosyntactically. Then we could determine whether the morphosyntactically marked clauses or anaphoric structures were those singled out by frequency of report or speed of recall. To my knowledge, however, such a correlation has not been attempted. The experiment described in Tomlin 1985 reflects the spirit of what I am suggesting; but Tomlin uses English texts, and foreground is not unequivocally marked in English.

between structure and meaning effected by foregrounding can be less direct.<sup>8</sup> While we might hope that textlinguistics will eventually integrate assumptions based on both kinds of texts into a theory of foregrounding, a number of current disputes might be clarified by provisionally differentiating the two.

**1.1. Definitions.** Several concepts currently masquerade under the single term FOREGROUNDING. In the first place, the word is used ambiguously for both the cognitive process and for the textual phenomena that trigger that process. In addition, the word is applied to three different levels of analysis. FOREGROUND can thus refer to a prior conception of narrative prominence (such as SALIENCE), to the phenomena identified as prominent in texts in general (e.g., temporally successive clauses), or to specific instances in a given text. The concept is often left undefined or left to be defined only through extrapolation from examples cited. As a result, definitions multiply.

Two major definitions of narrative prominence are implicit in the research: importance and salience. But each of the two has several subdefinitions, as figure (1) is intended to suggest.



<sup>8</sup>A disclaimer may be in order here. In suggesting that belletristic texts generally exhibit greater syntactic and pragmatic complexity than oral narratives, I mean only to describe a tendency that has colored the thinking of the two disciplines. Obviously, numerous specific texts could be instanced as counter-examples to this generalization.



Five of the seven subcategories listed in (1) are insightfully discussed in Fleischman 1985, although not in the same arrangement; and many of Fleischman's comments are echoed in the summaries which follow.

(a) *Thematic importance*, or importance in terms of literary interpretation (see, for example, Reinhart 1984, Fleischman 1986). This definition ultimately derives from the Russian formalist tenet that literary language is foregrounded or made strange—a description explicated by the Prague structuralists as parallelism, contrast, and deviance from ordinary language. Thus the definition was originally intertwined with “salience because of unexpectedness within a particular context” ((e) below). But British stylistics clarified the concept by pointing out that not all stylistic deviance, parallelism, and contrast is important, but only that which coheres to suggest a theme.

In literary criticism, however, *THEME* usually refers to a universal truth or evaluative generalization (e.g. “The theme of *Emma* is that lack of self-knowledge leads to misunderstanding of others”). It is not the same thing as *TOPIC* in discourse analysis, since it is usually a proposition, not an argument, and one which, moreover, may never be expressed overtly in the text. It thus differs as well from the topicalized referent sometimes investigated as theme in psycholinguistic research. Though all three are, of course, related through the notion of centrality, extracting a theme from a literary text appears to involve more selective winnowing of initially salient passages (i.e., of those exhibiting parallelism, contrast, and deviance), as well as more elaborate metaphorizing from those deemed relevant.

(b) *Human importance*, or importance derived from the presumption that certain situations are intrinsically more interesting to human beings, as, for example, the kinetic, agentive, and volutive situations that Hopper and Thompson (1980) have correlated with high transitivity. Thus, to adapt one of Fleischman's examples, killing a knight in chivalric combat has more intrinsic interest to human beings than sitting on a horse; and, as a result, the latter is typically backgrounded (Fleischman 1985:857–58).

(c) *Causal importance* is often interpreted as importance in terms of plot development. Some events seem more important than others because they trigger more succeeding events or have more significant consequences within the plot. Fleischman points out that this criterion is used to buttress arguments that negative predications can be foregrounded, since the non-occurrence of something expected can trigger other plot events.

Another kind of causal importance is discussed by DeLancey (1987) and Wallace (1982:206). DeLancey suggests that there is a cognitive category *CAUSE/EFFECT* which gives events fitting this prototype a natural salience. For this reason, the prototypical transitive clause, which can be analyzed as representing the event schema of “a volitional act on the part of the

agent, and a subsequent and consequent change of state on the part of the patient," is said to be a natural candidate for foregrounding (1987:61). And the various transitivity parameters (such as agentivity, kinesis, and perfectivity) cohere as they do because they reflect aspects of this CAUSE/EFFECT schema: perfectivity, for example, reflecting the fact that it is only completed events whose effects can be detected. According to DeLancey, "the natural basis for the transitivity prototype is the universal human understanding of the physical fact that events have causes" (1987:60). Causal importance can thus be seen as one kind of HUMAN IMPORTANCE, an attempt to provide specific explication of the claim that highly transitive situations are NATURALLY significant to human beings.

(d) *Formal or definitional importance*, as embodied in the sequence of temporally ordered clauses setting forth the events of the story. Labov and Waletzky (1967:22)<sup>9</sup> suggested that the defining property of narrative is that the clauses of a text are iconically ordered, in keeping with the temporal order of the events narrated. Many others have also emphasized temporal succession as one of several characteristics of foregrounded clauses (e.g., Labov 1972:360; Polanyi-Bowditch 1976:61; Hopper 1979a:39, 1979b:214; Hopper and Thompson 1980:281; Dry 1981, 1983; Thompson 1987; and Reinhart 1984; *inter alia*).

(e) *Saliency because of unpredictableness or unexpectedness in a given context*. This definition of textual saliency resembles the concept of ESTRANGEMENT OR DEFAMILIARIZATION discussed in (a) above. Language may attract attention either because it deviates from ordinary language or because it violates norms established within a particular text. Fleischman notes that this definition "emphasizes the fact that foreground is contextually determined" and, more than any other, "captures the perceptual neutrality of the gestalt figure-ground opposition. Predictable grammatical correlates of grounding are still assumed, but, like markedness values, they are relative and potentially reversible" (1985:860).

(f) *Saliency because of figural properties*. Wallace (1982) and Reinhart (1984) suggest that the manifestation of textual foreground and background "is the linguistic counterpart of the perceptual distinction between figure and ground proposed in the gestalt theory" (Reinhart 1984:787). Reinhart suggests, for example, that the criteria of punctuality, perfectivity,

<sup>9</sup>Labov and Waletzky defined the "displacement set of a clause" as "displacement set of clause c: the set consisting of the clauses before which c can be placed without affecting the temporal sequence of the semantic interpretation, c itself, and the clauses after which it can be placed without changing the temporal sequence of the original semantic interpretation" (1967:22). This definition has led to the position that temporally ordered clauses are the defining property of narrative. See, for example, Schiffrin 1981, Sztatowski 1987.

and temporal succession correlate, respectively, with the characteristics of smallness, closure, and good continuation which distinguish figure from ground in gestalt theory (Reinhart 1984:803–5).

Wallace argues against the traditional subdivision of verbal semantics into tense, aspect, and mood by pointing out that, cross-linguistically, the foreground/background distinction cuts across the other verb classifications (Wallace 1982:212). He divides morphosyntactic phenomena into prominent and less prominent, correlating the more prominent with figural properties, such as those listed in figure (2) on page 447.

(g) *Cognitive accessibility*. This is the kind of salience predicated of referents and concepts stored in short-term rather than long-term memory. At any given moment, short-term memory is presumed to include not only those items most recently mentioned in the discourse, but also others which have been thematized and thus endowed with global relevance. Foreground, as the contents of short-term memory, is typically operationalized as that which is quickly and accurately recalled—for example, swift identification of a pronoun referent suggests that that referent has been foregrounded. Cognitive accessibility, then, characterizes a derived class whose members are selected partly for their recency, partly for their global importance.

**1.2. Unrepresented assumptions.** As a representation of the current use of the term FOREGROUNDING, figure (1) is somewhat misleading for two paradoxically opposed reasons. On the one hand, it still does not adequately reflect the conceptual diversity involved. For example, it does not allow for the multiple PLANES of the text on which importance and salience can operate: both are sometimes predicated of events, episodes, and characters, as well as linguistic constructions. It also omits many specific characteristics deemed relevant to identifying foreground in one text or another; e.g., whether or not the main character is present, or whether or not an event is the central event of a sequence (Hopper 1979b). And it does not represent the frequently-heard suggestion that foreground is a CLUSTER CONCEPT, commonly manifested as a collection of properties, not all of which need be present to identify any one passage as an instance of foregrounding (Wallace 1982, Reinhart 1984, and Hopper and Thompson 1980).<sup>10</sup>

Alternatively, figure (1) does not attempt to portray the many potential and assumed overlaps among categories, e.g., the coincidence of highly transitive

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<sup>10</sup>This notion may remind us of the BAG OF TRICKS which Longacre (1983) identified as available to mark peak; and it has an appeal based on the recognition that most languages afford text-producers more than one option for achieving a given rhetorical effect. Most other treatments of foreground as a CLUSTER CONCEPT, however, seem to investigate only the cluster of features which mark transitivity.

and temporally successive clauses, or the crucial assumption—commonly held *a priori* in the literature—that importance and salience coincide.

Nor does figure (1) represent the several controversies currently linked to these definitions. Among the issues under dispute are (a) whether or not foreground is equivalent to temporally successive clauses, (b) whether the foreground/background distinction is best conceived as binary or continuum-like, (c) whether foreground is a relative or absolute determination, and (d) whether the application of the visual theory of figure and ground to textual foregrounding has more than metaphoric import.

The existence of these questions may be linked, albeit indirectly, to disciplinary differences, in that intradisciplinary assumptions inevitably color the terms in which (even interdisciplinary) discussion is framed. Thus a literary critic may speak *AS THOUGH* foregrounding were equivalent to thematic importance, or a discourse analyst may speak *AS THOUGH* the foreground/background distinction were binary, even when neither has the conscious aim of asserting this position.

## 2. Importance vs. salience

Definitions of foreground often couple importance and salience: e.g., “those elements of a narrative text which are marked somehow as salient or central to the meaning of that text” (Fleischman 1986:121), or “information which is more central or salient or important to the development of the discourse theme” (Tomlin 1985:89), or those units of text “that are most central and important, or which are major foci of attention, due to ‘estrangement’ devices” (Reinhart 1984:787). Thus it may be worth noting that importance and salience do not necessarily coincide. Of the four types of importance in figure (1), only human importance and causal importance (in the sense of DeLancey 1987) have any claim to global salience within a narrative. If it can be established that causality is a prior cognitive/perceptual category and transitivity a manifestation of it, then transitive clauses will necessarily unite importance and salience. But however intriguing the idea, at this point it remains primarily speculative.<sup>11</sup>

It is equally true that the properties associated with salience do not ensure centrality or importance. Cognitive accessibility, for example, is no

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<sup>11</sup>And, as an explanation, it has a certain circularity—it is intended to account for the generality of transitive morphosyntax, but it seems also to be based partly on that generality, in that “the universality of the transitive prototype shows that it is somehow an extremely natural category, and not simply a cognitively economical one” (DeLancey 1987:60).

guarantee of global importance, since it may obtain of recently mentioned items, whatever their inherent significance. And the other types of salience—unexpectedness and figural properties—may characterize unimportant, as well as important, textual elements. In their study of the French simple past (*sp*), for example, Waugh and Monville-Burston point out that figural properties such as smallness and definition can be associated with backgrounding:

Because it can be easily used in utterances meant to express precision and specification, *sp* is comparable . . . to figures which are sharply and clearly defined . . . This means that they may be of limited size . . . and . . . so *sp* has, in certain contexts, uses where precision and specificity are allied with lesser significance and secondariness (or even inconsequentiality). Thus *sp* often contributes to a sense of backgrounding . . . (1986:868)

The automatic coupling of importance and salience is partly a legacy from literary study, i.e., from the Russian formalists positing the significance of language *MADE STRANGE* through deviation from a norm. The kind of *IMPORTANCE* they originally defined, however, was a *FORMAL* or *DEFINITIONAL* importance—i.e., such language was asserted to be the primary formal device through which art achieves its function of presenting the world in a new way. Early structuralist attempts to identify all examples of such language in a text rapidly led to the conclusion that not all instances of contrast, parallelism, and deviance are thematically important. This, in turn, generated efforts to constrain the theory of literary foregrounding. So, for example, Leech (1970:123–24) proposed that *FOREGROUNDING* be confined to salient elements which *COHERE*; and Halliday (1971) made a distinction between *PROMINENCE* (or salience) and *FOREGROUNDING*, with the latter confined to salient features *MOTIVATED* by the *VISION* of the text.<sup>12</sup>

In literary texts, not only do many salient passages fail to have interpretive force, but the converse is equally true: many significant passages are not initially salient. Only after reflection and rereading does the thematic importance of many words, phrases, or higher-level units become manifest. The same may be asserted of causal importance, as this criterion is applied to plot events. That is, many plot events with numerous or conspicuous consequences are not conspicuous in themselves; indeed, a whole genre—that of the mystery novel—is rooted in the lack of salience of actions central to the plot. Only in relatively straightforward texts, structured for immediate understanding, are the most salient features likely to be also the most thematically or causally important.

<sup>12</sup>For a discussion of this point, see Van Peer (1986:15–16).

### 3. Temporally successive clauses

Text type also bears indirectly on the dispute concerning the importance of temporally successive clauses. The temporally successive clause analysis has the merit of identifying foreground with a clearly defined level of text structure, one which, moreover, frequently has morphosyntactic marking, e.g., the aspectual marking investigated by Hopper (1979b). There are difficulties, however, with this identification. Givón (1987:185) points out that its emphasis on tense and aspect markers limits its applicability to language families other than Indo-European, and numerous researchers have questioned the thematic importance of temporally successive clauses.

Temporally successive clauses may lay claim to one kind of importance—definitional importance—in that they constitute a necessary, perhaps a sufficient, condition for the identification of narrative. Since they are often highly transitive (because aspectually perfective), they may possess whatever human importance we wish to ascribe to transitivity (see (b) above); but whether or not they seem reliably associated with thematic importance may depend on the type of text studied.

In narratives without elaborated structure, the events usually convey content that is central to the POINT of the story;<sup>13</sup> but temporally successive clauses do not necessarily have more thematic importance than other narrative phenomena.<sup>14</sup> This becomes obvious when dealing with complex narratives and abstract definitions of theme. In literary narratives, for example, themes are inferred from characterization, commentary, symbol, and setting, as much as from narrative events; events are often so de-emphasized as to lack thematic import.

### 4. Relative vs. absolute categories

Literary texts may also lead toward a position that the determination of foreground is not absolute but relative. That is, many different kinds of structures may function as foreground, since structures become foreground,

<sup>13</sup>And, therefore, the ABSTRACT-FORMING criterion can be used to identify backbone or main line.

<sup>14</sup>Reinhart (1984:787), for example, notes: "Obviously, there is no reason to expect that the NARRATIVE temporal sequences should be more important, in this sense [i.e., thematically] than the nonnarrative units." And Thompson (1987:436) says that the TEMPORAL ORDERING criterion and the IMPORTANT EVENT criterion need to be sharply distinguished, adding that Kalmar (1982) for Czech and McCleary (1982) for Brazilian Portuguese have shown that "while sequentiality might be relevant to aspect marking, IMPORTANCE OF BACKBONE may not be."

not by virtue of possessing certain inherent qualities but rather by virtue of contrasting with an appropriate background.

In this way, foregrounding is said to be linked with point of view, in that a text-producer can choose to foreground anything s/he wishes by placing it against an appropriate background; and through the foregrounding choices of different narrators, a reader is made aware of the inherent relativity of the concept. Fleischman, for example, notes that the definition of foreground as unexpectedness ((e) above) integrates well with the idea that every narrative reflects someone's point of view (1985:860). That is, the fact that foreground is contextually determined reflects the filtering of events through some consciousness, which may promote some situations to importance and demote others.

The relative position seems most apparent when foregrounding is approached from the study of belletristic texts, in which the reshaping of material attributable to point of view is most conspicuous. Certain structural features frequent in literary narrative serve to highlight just this reshaping—e.g., (a) the framing of the main narration within another which comments upon it (cf. James's *The Turn of the Screw* or Fitzgerald's *The Great Gatsby*); (b) the use of multiple narrators (often narrating the same incidents in a different way, cf. Durrell's *Alexandria Quartet* or Scott's *Jewel in the Crown*); (c) the differentiation of a character's voice from that of the narrator, through devices like free indirect speech, interior monologue, and stream of consciousness narration (cf. Woolf's *Mrs. Dalloway* or Austen's *Emma*); and (d) devices which call attention to the creative role of the narrator, such as narrative intrusions (cf. *Tristram Shandy*, *Tom Jones*) or the use of alternate endings (cf. Fowles's *The French Lieutenant's Woman*). Although features can also be found in nonliterary narrative, they are so frequent in western literary narrative as to be impossible to overlook.

By contrast, an ABSOLUTE conception of foreground—although not universally espoused by any one group—may more frequently color discussions of discourse in which the foreground/background distinction is overtly marked. This is so because such texts suggest a more stable identification of foreground than those which ostentatiously manipulate point of view.

## 5. Other questions

Such texts may, however, foster a more consistent apprehension of the foreground/background distinction as continuum-like, rather than binary. Where foreground markers are identified, ways of speaking about this issue are influenced by the kind of marker found; and certain markers are

themselves inherently scalar rather than binary. Among these are repetition (similar *laissez*: Fleischman 1986), addition of adverbs (Nichols 1981:205), variation in length of units (Longacre 1983). Other markers would seem to be binary (e.g., an aspectual particle is either present or absent; foregrounding word-order either is or is not manifested). Where a language has more than one way of marking foreground, however, different combinations of markers allow for varying degrees of foreground. This is what gives the cluster-concept approach to foreground its scalar character.

The figure/ground metaphor, by contrast—although it may emphasize the relativity of foreground—summons up a binary conceptualization. In the kind of visual representation usually offered (i.e., a simple line-drawing), a given part of the picture is either figure or ground, not both. It is true that certain famous drawings can be seen in two ways, but the picture cannot be viewed both ways at once. Nor can the viewer discriminate different degrees of membership in the figure, or different figures which are more or less foregrounded. Such continuum-like discriminations are more easily made about textual importance than visual figure-hood.

Such differences acquire a measure of importance in the context of occasional statements which seem to imply that the visual metaphor of figure and ground has some substantive import (as opposed to illustrative force) when applied to text-reception. There seems to be such an implication, for example, in Reinhart's initial suggestion that foregrounding, like temporal deixis, is organized on a spatial model, or in Waugh and Monville-Burston's discussion of the French simple past:

SP refers to a figure with clear-cut dimensions. This figure may be the speech event itself, the text as a whole, a major or minor subpart of the text, or even the verbal process. (1986:852)

Thus we may wish to ask whether the visual properties characteristic of figures correlate reliably with properties discernable in portions of a text.

A conclusive answer to this question would require an investigation of perceptual processes. Something preliminary might be learned, however, by listing the properties of textual foreground identified in the literature and attempting to discern whether they are analogous to figural properties. Figure (2) represents a preliminary attempt at such a correlation, listing some of the figural characteristics offered by Wallace (1982:214) and matching them with instances of textual foreground.<sup>15</sup> At best, however, such a chart can be only suggestive; and, in this case, the lack of definitional constraints on foregrounding inhibits our ability to integrate findings or make generalizations based on them.

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<sup>15</sup>The correlations are not necessarily those of the authors cited.



(2) Visual characteristic	Textual analogue
Well-defined:	dimensionality, as marked by the French simple past (Waugh and Monville-Burston 1986)
Bounded, enclosed:	completed events, perfective aspect (Reinhart 1984)
Small:	punctual events
Near:	present tense in Old French (Fleischman 1985); deictics ( <i>here, now</i> )
Above, in front:	sentence topicalization; macrostructural cues (e.g., title)
Greater contrast:	deviance from ordinary language
Stable:	repeated material in overlays (Grimes 1972), similar <i>laisses</i> in OFr (Fleischman 1986)
Meaningful, familiar:	repeated material in overlays, <i>laisses</i>
Symmetric:	parallelism, contrast (cf., Prague structuralism).

Figure (2) suggests a possible correlation between visual and textual properties. It is admittedly limited in its usefulness, however, because of the potential ambiguity of the claim that “visual property *x* is analogous to textual phenomenon *y*.” So many disparate textual phenomena have been identified as foreground that it is difficult to determine whether the relation “is analogous to” means the same thing in each case.

## 6. Conclusion

This is the major difficulty with the current multidisciplinary study of foregrounding. In the absence of an agreed-upon definition of the central concept, we may identify as foreground whatever textual feature strikes us as prominent. This, in turn, leads to a proliferation of implicit definitions extrapolated from such identifications and to differences of opinion deriving as much from a priori assumptions as from data conflict.

Certain disputes discussed above, for example, seem to derive from the fact that literary and linguistic approaches to foregrounding have been only partially integrated. Even though each approach grows logically from the type of texts which are its focus, unexamined differences between them may have contributed to dissent over the relativity of foreground, the importance of temporally successive clauses, and the occurrence together of importance and salience.

In literary texts, with their elaborated structures, written for readers willing to apply intricate interpretive procedures, importance and salience need not—and frequently do not—coincide. Nor are temporally successive clauses necessarily relevant to the type of importance central to literary study—thematic importance—since this is founded on a notion of theme which can be fairly far removed from plot events. Furthermore, as investigated in literary stylistics, foregrounding is inherently a relative, rather than an absolute determination, inextricably tied to point of view.

In discourse analysis, investigation can focus on morphosyntactic markers of foreground in oral or written texts whose simpler structure increases the likelihood that salience and importance will coincide. Many of the markers identified have aspectual meaning as well as pragmatic function, and this may bolster the identification of foreground with temporally successive clauses, while the identification of specific markers may lead away from conceptualizing foreground as relative.

Of course, no one would wish to argue against the eventual integration of insights from many disciplines into a single theory of textual foregrounding. Indeed, the importance of the concept is indicated by the fact that it evokes so much multidisciplinary interest. But effective integration may be furthered by first isolating disparate assumptions traceable to work with different text types.

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## The Historic Present and Speech Margins in Matthew

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This paper considers two related features of the Greek of Matthew's Gospel: the historic present (hereafter, HP), and the form of margins that are used to introduce reported speeches.

The occurrences of the HP in Matthew's Gospel may be explained in terms of two factors: DETACHMENT of the events so encoded from their context (Waugh and Monville-Burston 1986:852f; discussed in §1) and, in the margins of noninitial speeches of closed conversations,<sup>1</sup> CONTINUATION of the authority role of one of the speakers in the reported conversation (Johnstone 1987, §2).

An analysis of the HP in terms of two factors, one of which exclusively involves verbs which introduce speech, has been featured in previous articles (e.g., Buth 1977; cf. also Thackery's partial exclusion of *legei* from his remarks about the use of the HP in Mark's Gospel, as quoted in Turner 1963:61f). The present paper differs from these analyses in associating verbs which introduce the FIRST speech of a reported conversation with those which introduce "a date, a new scene, a new character, occasionally a new speaker" (Turner 1963:62). In addition, this paper does not claim that the use of the HP to detach an event from its context highlights the episode which follows the HP (contrast Levinsohn 1977 and Boos 1984). Rather, the HP is explained in terms of a relationship between the events so encoded and their immediate context.

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<sup>1</sup>A closed conversation is one in which each speaker and addressee is drawn from those of previous speeches, rather than being introduced to the scene at the point of the conversation (Levinsohn 1987:27).

The continuation usage of the HP occurs in connection with one of two basic strategies for presenting conversations: an unmarked or DEVELOPMENTAL strategy, typified by the use of DEVELOPMENTAL CONJUNCTIONS, especially *de* (Levinsohn 1987:157; §2.1), and a marked or NONDEVELOPMENTAL strategy, typified by the use of asyndeton and the HP (§2.2). Modifications of these basic strategies are discussed in §§2.3–4. The paper terminates with a brief description of participant reference in the margins of noninitial speeches (§3).

### 1. The historic present as marker of detachment

The term DETACHMENT is taken from Waugh and Monville-Burston 1986 and Boutin 1988. Waugh and Monville-Burston analyze the simple past tense in French as a device which detaches a FIGURE (one or more events) from its CONTEXT (other events). Boutin applies the concept to the affix *in* in Banggi, a Northwestern Austronesian language of Sabah, Malaysia, although he avoids the term figure:

Detached events are typically highlighted or downgraded against the other events. Because figure implies importance as against ground, I use the more neutral term detachment since events which are detached may be highlighted or downgraded. (Boutin 1988:30)

I follow Boutin in describing one of the functions of the HP in Matthew as detachment, rather than figure, since the rhetorical effects of using the HP to detach events vary with the context. The HP is used most commonly to detach the INTRODUCTORY event(s) or speech (the ONSET; Longacre 1983:39) of a section of an incident from both the previous section and the nuclear events that are to follow (§1.1). It is used to detach the CONCLUDING speech or action of an incident, generally with the rhetorical effect of marking it as PEAK (Longacre 1983:24) or highlighting it (§1.2). It is used also in the margin of the FIRST speech of a conversation when that margin is associated, by *kai*, with the event which preceded the speech; in this context, it is the degree of transitivity of that event (Hopper and Thompson 1980) which appears to determine the rhetorical effect of detachment (§1.3). Consequently, the HP is not associated exclusively with either highlighting or backgrounding.

**1.1. The HP and the initial event(s) or speech of a section.** When an incident of the narrative of Matthew consists of a number of sections

between which there is “action discontinuity” (Givón 1983:8),<sup>2</sup> indicated by a conjunction such as *tote*,<sup>3</sup> Matthew commonly employs the HP to present that introductory event (or events) which lead to the nuclear events of the section. This has the effect of detaching such introductory events from both the previous section and the nuclear events which are to follow.

Introductory events which are described using the HP include those which introduce on stage an active or supernatural participant, as in (1) and (2), and those which move on-stage participants to the location of the following nuclear events, as in (3).<sup>4</sup> More than one introductory event may be described using the HP (3).<sup>5</sup>

- (1) [Section 1 ends with John telling those who had come for baptism:]  
 “. . . he who is coming after me is mightier than I.” (3:7ff)

[Section 2: Introductory Event]

*tote paraginetai ho Iēsous apo tēs Galilaias epi ton Iordanēn*  
 then arrives the Jesus from the Galilee at the Jordan

*pros ton Iōannēn tou baptisthēnai hyp’ autou.*  
 to the John of the to be baptized by him  
 Then Jesus comes from Galilee to the Jordan to John, to be  
 baptized by him. (3:13)

[Section 2: Nuclear Events]

John would have prevented him . . . but Jesus answered him . . . (3:14f)

<sup>2</sup>“Action discontinuities . . . occur when actions are not given in natural sequential order and when there is a significant temporal gap between one action and the next . . . Changes in the TYPE of action may also be discerned as action discontinuities, e.g., when narrative moves from the reporting of a conversation to events that lead from that conversation, or vice versa” (Levinsohn to appear).

<sup>3</sup>*Tote* marks “low level divisions within an episode” (Schooling 1985:18).

<sup>4</sup>Cf. also 2:19; 3:1; 4:5; 9:14; 15:1; 17:1; 25:19; 26:36, 40, 45. 27:38 is similar (*tote staurountai syn autō duo Iēstai* ‘then are crucified with him two robbers’), in that the previous section ends at 27:37, and 27:39 describes the first nuclear event of the next section. However, the robbers do not feature in an active capacity until 27:44. If a section begins with the introduction of a NONACTIVE, MINOR participant, then the HP is not used; cf. 12:22; 19:13. Cf. also 20:20, where Jesus, rather than the mother of the sons of Zebedee, is presented in an authority role; cf. §§2.1–2 on 20:21). Also, attention quickly switches from her to her sons (20:22; cf. §2.3).

<sup>5</sup>When examples are cited, only the pertinent material is given in a transliteration of the Greek. A free translation follows (based on the Revised Standard Version (RSV) but modified where appropriate to reflect more closely the structure of the Greek). Any context quoted is also based on the RSV.

- (2) [Section 1 ends with the departure of the wise men] (2:12)

[Section 2: Introductory Event]

*anachōrēsantōn de autōn, idou angelos kyriou*  
having^departed now them behold angel of^Lord

*phainetai kat' onar tō Iōsēph legōn...*  
appears in dream to^the Joseph saying

When they had gone, an angel of the Lord appeared to Joseph in a dream, saying, "Rising, take the child and his mother . . ." (2:13)

[Section 2: Nuclear Events]

So he, rising, took the child and his mother . . . (2:14)

- (3) [Section 1 ends with Jesus telling the devil:]  
"Again it is written, 'You shall not tempt the Lord your God.' " (4:7)

[Section 2: Introductory Events]

*palin paralambanei auton ho diabolos eis oros*  
again takes him the devil to mountain

*hypsēlon lian kai deiknysin autō pasas*  
high exceedingly and shows to^him all

*tas basileias tou kosmou kai tēn doxan autōn*  
the kingdoms of^the world and the glory their  
Again, the devil takes him to a very high mountain, and shows him all the kingdoms of the world and their glory, (4:8a,b)

[Section 2: Nuclear Events]

*kai eipen<sup>6</sup> autō...*

and said to^him

and said to him . . . (4:8c)

A section may begin also with a speech introduced with the HP (usually, following *tote*). The speech represents a new initiative on the part of the speaker, usually in the light of the preceding events, but the resulting event(s) are to be viewed as nuclear with respect to the introductory

<sup>6</sup>Some manuscripts have the HP (*legei*) also in 4:8c.



speech. In other words, the speech is to be viewed as of secondary importance, in comparison with the actions. This is illustrated in (4).<sup>7</sup>

- (4) [Section 1 ends:]  
 So the king became angry, and he sent his troops and  
 destroyed those murderers and burned their city. (22:7)

[Section 2: Introductory Speech]  
*tote legei tois doulois autou...*  
 then says to^the slaves his  
 Then he says to his servants, "The wedding is ready,  
 but those invited were not worthy. Go therefore  
 to the thoroughfares, and invite to the marriage feast  
 as many as you find." (22:8f)

[Section 2: Nuclear Events]  
 And those servants went out into the streets and  
 gathered all whom they found... (22:10)

The use of the HP described in this section may be compared with Thackery's claim that its main function is to introduce "a fresh paragraph in the narrative" (Turner 1963:62). I am making a stronger claim, viz., that the HP is used to introduce a fresh paragraph in the narrative WHEN THAT PARAGRAPH REPRESENTS A NEW SECTION OF A LARGER INCIDENT.

The significance of this claim may be seen by comparing the passages so far considered, especially (2), with (5). Although this sentence introduces an active participant, the HP is not used because the previous events do not form a separate section, but rather are part of the setting for the events which are to follow (cf. the rsv translation of 1:18b-19 as a single sentence).

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<sup>7</sup>Cf. also 18:32; 20:8 (with *de*); 26:38; 27:13. Other possible examples in which an introductory speech may be considered to lead to nuclear speeches are: 9:37, in response to 9:36; 15:12; 26:31. Further examples are 9:6b and 12:13a, in both of which an HP plus *tote* introduce a further speech by Jesus, but to a different addressee than before. This speech in turns leads to nuclear responses by the addressees or bystanders (9:7f; 12:13bf).

- (5) Now the birth of Jesus Christ took place in this way. When his mother Mary had been betrothed to Joseph, before they came together she was found to be with child of the Holy Spirit; and her husband Joseph, being a just man and unwilling to put her to shame, resolved to divorce her quietly. (1:18f)

*tauta de autou enthymēthentos, idou angelos kyriou*  
 these but of^him thinking^on behold angel of^Lord

*kat' onar ephanē autō legōn*  
 by dream appeared to^him saying  
 But as he considered this, behold, an angel of the Lord  
 appeared to him in a dream, saying . . . (1:20)

**1.2. The HP and the final event or speech of an incident.** The HP may also be used to detach the final event or speech of an incident. The rhetorical effect is often, but not always, that of highlighting the act concerned. This is illustrated in (6). In this passage, *tote* introduces Jesus' third and final answer to the devil,<sup>8</sup> while the HP detaches the same speech, with the rhetorical effect of highlighting it.<sup>9</sup>

- (6) [Section 2]  
 Again, the devil takes him to a very high mountain, and shows him all the kingdoms of the world and the glory of them, and he said to him, "All these I will give you, if you will fall down and worship me." (4:8f)

[Section 2: Concluding Speech]  
*tote legei autō ho Iēsous . . .*  
 then says to^him the Jesus  
 Then Jesus says to him, "Begone, Satan! for it is written . . ." (4:10)

[Transition]  
*tote aphīēsin auton ho diabolos*  
 then leaves him the devil  
 Then the devil leaves him (4:11a)

<sup>8</sup>As well as linking sections between which there is action discontinuity (cf. footnote 3), *tote* is used to mark the climax of a complex incident or conversation (cf. Buth 1982:13; e.g., Peter's third and final denial in 26:74).

<sup>9</sup>Cf. also 28:10; 22:21b (cf. §2.2 for the HPS in 22:20,21a).

[Section 3: Nuclear Events]

and behold, angels came and attended him. And, hearing that John had been put in prison, he returned to Galilee. (4:11b–12)

In (7), the HP detaches the final event of the section (cf. the paragraphing in the New International Version), but does not appear to have the rhetorical effect of highlighting. Rather, the event concerned acts as a TRANSITION between two sections. On the one hand, it concludes the incident of 3:13–15. On the other, it forms the background to the incident of 3:16f.<sup>10</sup>

(7) [Section 2]

Then Jesus comes from Galilee to the Jordan to John, to be baptized by him. John would have prevented him . . . But Jesus answered him, “Let it be so now; for thus it is fitting for us to fulfil all righteousness.” (3:13ff)

[Transition]

*tote aphîēsin auton.*  
then permits him  
Then he consented. (3:15b)

[Section 3: Nuclear Events]

And when Jesus was baptized, he went up immediately from the water, and behold, the heavens were opened . . . (3:16)

The passage in (8) provides a further instance of an HP used to detach the final act of an incident, this time in connection with *kai*.<sup>11</sup>

(8) And immediately his leprosy was cleansed. (8:3)

*kai legei autō ho Iēsous . . .*  
and says to him the Jesus  
And Jesus says to him, “See that you say nothing to any one . . .” (8:4)

**1.3. The combination action *kai* HP speech margin.** In Acts, the HP is used when the event described immediately before it is “preliminary to it,

<sup>10</sup>Cf. (1) for the HP in 3:13. Cf. also 4:11a, in (6), which acts as a transition between two sections involving Jesus—4:8–10 and 4:11b–12.

<sup>11</sup>8:20 may be similar. Cf. §3 on the use of a full NP to highlight the speeches of 8:4 and 8:20.

or . . . setting the scene for it" (Levinsohn 1987:94). The HP, which is often a verb of speaking, is linked to the preliminary event by *kai*.

This same usage is found also in Matthew. If the event linked to the HP by *kai* has low transitivity (Hopper and Thompson 1980), such as a verb of perception or discovery, then it forms the ground for the following speech (the figure). In turn, the speech introduced in connection with the HP may be viewed as a new initiative or INCITING MOMENT (Longacre 1983:21) which leads to the nuclear event(s) of the incident. This is illustrated in (9).<sup>12</sup>

- (9) As Jesus passed on from there, he saw a man called  
Matthew sitting at the tax office (9:9a)

*kai legei autō . . .*  
and says to<sup>h</sup>him  
and he says to him, "Follow me." (9:9b)

And he rose and followed him. (9:9c)

In (10), a speech introduced with the HP is linked by *kai* to a high-transitivity action (and a further action of significance follows). The effect of detaching the speech from the accompanying action(s) is possibly to give it more prominence than it would otherwise receive.<sup>13</sup>

- (10) but when he saw the wind, he was afraid, and beginning  
to sink he cried out, "Lord, save me." Jesus immediately  
reached out his hand and caught him, (14:30–31a)

*kai legei autō . . .*  
and says to<sup>h</sup>him  
and says to him, "O man of little faith, why did you doubt?" (14:31b)

And when they got into the boat, the wind ceased. (14:32)

<sup>12</sup>Cf. also 4:19; 20:6; 21:19; 22:12; 26:71. In the case of 20:6, the whole conversation may be viewed as leading to the unstated though implied result (cf. 20:2,4) that the addressees went into the vineyard; cf. §2.2 on the use of the HP in 20:7. Other examples in which the event preceding the speech is the ground for the speech are 4:6 ('stood him on the wing of the temple *kai* says') and 22:20 ('they brought him a denarius *kai* he says'). Cf. also 9:28b.

<sup>13</sup>Cf. also 21:13 and 8:26a (the speech of 8:25 is introduced in a clause subordinated to the main verb *ēgeiran* 'roused'). 8:4 (discussed in §1.2) is similar, except that no action follows the speech introduced with the HP.

## 2. The margins of noninitial speeches and the HP as marker of continuation

Two basic strategies for presenting a conversation in the context of narrative are employed in Matthew—an unmarked and a marked strategy. They may be distinguished on the basis of the sentence introducer or conjunction employed in connection with the margins which introduce noninitial speeches.

The unmarked or developmental strategy is so called because it employs *de* or some other DEVELOPMENTAL CONJUNCTION (Levinsohn 1987:157) in connection with the margins of noninitial speeches. As the exchange takes place, attention is directed to each speaker in turn. Neither participant is given a special AUTHORITY ROLE (Johnstone 1987). Prototypically, this strategy is characterized by fronting of the reference to the speaker (usually, employing the articular pronoun) and by *de* (§2.1).

The marked or nondevelopmental strategy is typified by the use of asyndeton or *kai* in connection with the margins of noninitial speeches. It is employed when one participant is presented in an authority role over against another. Prototypically, this strategy is characterized by asyndeton and the HP of the verb in the speech margin (§2.2).

Modifications of the developmental strategy are considered in §2.3. The margins of noninitial speeches may include a participial form of *apokrinomai* 'answer', indicating that the respondent to the previous speech has assumed an authority role or otherwise speaks with authority. Alternatively, the verb in the speech margin may be in the HP, thus detaching the speech concerned from the rest of the conversation.

Modifications of the nondevelopmental strategy are discussed in §2.4. In some noninitial speech margins, the aorist of *phēmi* 'affirm' is found, rather than the HP; in such cases, the authority of the original speaker does not carry over to the response. *Kai*, rather than asyndeton, is employed in other margins; in such cases, the speeches concerned are closely associated with each other.

The table in (11) summarizes the implications of the strategies and modifications discussed in §2. The term TIGHTKNIT in the table refers to a relationship between reported speeches such that each successive speaker takes up the same topic as that of the previous speech and develops the conversation from the point at which the last speaker left off (Levinsohn 1987:180, 36). Circumstances in which this tightknit relationship is broken are discussed in §2.3.

## (11) DEVELOPMENTAL

Strategy	Noninitial Speech Margin	Significance
Prototypical	articular pronoun + <i>de</i>	+tightknit
Modification	articular pronoun+ <i>de</i> + <i>apokritheis</i>	+tightknit + authority
Modification	<i>apokritheis</i> + <i>de</i> + NP	-tightknit + authority
Modification	articular pronoun + <i>de</i> + HP	+tightknit + detachment

## NONDEVELOPMENTAL

Strategy	Noninitial Speech Margin	Significance
Modification	asyndeton + HP	+ continuing authority
Modification	asyndeton + <i>phēmi</i>	-continuing authority
Modification	<i>kai</i>	+ close association
	+ HP	+ continuing authority
	+ aorist	-continuing authority

**2.1. The prototypical developmental strategy for presenting a reported conversation.** The unmarked developmental strategy is most commonly employed when the answer to a question or request contains significant content, as in (12),<sup>14</sup> or when the noninitial speech concerned is contrastive, where *de* is commonly translated ‘but’, as in 14:16 (13). It may be used, however, whenever a speech is viewed as a new development in the conversation, as in 14:18.<sup>15</sup>

- (12) and assembling all the chief priests and scribes of the people,  
he inquired of them where the Christ was to be born. (2:4)

*hoi de eipan autō . . .*  
they and said to^him  
They told him, “In Bethlehem of Judea . . .” (2:5)

<sup>14</sup>Nonverbal responses are prototypically presented in the same way, as in 2:9, 4:20, and 8:32b.

<sup>15</sup>Cf. also 12:3, 11; 13:28a, 52; 14:29a; 15:16, 27, 34b; 16:14, 23; 19:11, 16b, 18b, 28; 21:11; 22:37; 26:18, 50a, 70; 27:4b, 21b, 23a, 23b. Two examples in which asyndeton and a HP might have been expected are 20:21a, where it appears that the exchange is presented with the initiative passing to Jesus, and 27:11b, where the use of *ephē* ‘affirms’ suggests that Jesus is in control (cf. §3 on the use of a full NP to highlight this speech).

- (13) When it was evening, the disciples came to him and said,  
 "... send the crowds away to go into the villages and  
 buy food for themselves." (14:15)

*ho de Iēsous eipen autois...*  
 the but Jesus said to^them  
 But Jesus said, "They need not go away; you give them  
 something to eat." (14:16)

*hoi de legousin<sup>16</sup> autō...*  
 they but say to^him  
 But they say to him, "We have only five loaves here and two fish." (14:17)

*ho de eipen...*  
 he and said  
 And he said, "Bring them here to me." (14:18)

**2.2. The prototypical nondevelopmental strategy for presenting a reported conversation.** The nondevelopmental strategy is commonly employed in connection with expected answers, as in (14). It is also used in connection with responses that are in line with the intentions of the previous speaker when the initiative does not pass to the new speaker, as in (15). In both cases, since the response does not represent a new initiative, no NEW DEVELOPMENT (Levinsohn 1987:83) has occurred, and so *de* would be inappropriate. The use of the HP, in turn, seems to indicate that the authority and intention of the original speaker carry over to the response.<sup>17</sup>

- (14) When they came to Capernaum, the collectors of the  
 half-shekel tax went up to Peter and said, "Does not  
 your teacher pay the tax?" (17:24)

*legei...*  
 says  
 He says, "Yes." (17:25)

<sup>16</sup>Cf. §2.3 concerning this occurrence of the HP.

<sup>17</sup>Cf. also 9:28b; 13:51b; 20:7a (cf. §1.3 for the use of the HP in 8:6); 20:22b, 33; 21:31b, 41; 22:21a, 42b; 26:25b, 64. 18:22 is an exception to this usage, in that Jesus does more than simply confirm Peter's understanding, as expressed in 18:21. The HP appears to be used to detach this concluding speech, as in the examples discussed in §1.2. Also, cf. §3 on the use of a full NP to highlight this speech.

- (15) As he entered Capernaum, a centurion came forward to him, beseeching him and saying, "Lord, my servant is lying paralyzed at home, in terrible distress." (8:5f)

*legei autō . . .*

says to^him

He says to him, "I will come and heal him."<sup>18</sup> (8:7)

But the centurion answered, "Lord, I am not worthy to have you come under my roof; but only say the word, and my servant will be healed . . ." (8:8)

If a speech introduced in connection with a HP is followed by a concluding speech by the other speaker in which the conclusion represents the goal to which the initial exchange was aiming, then the nondevelopmental strategy continues to be employed. This is illustrated in 22:43 of (16). The reason that Jesus asked the question in 22:42a is in order to lead up to the assertion of 22:43.<sup>19</sup>

- (16) Now while the Pharisees were gathered together, Jesus asked them a question, saying, "What do you think of the Christ? Whose son is he?" (22:41f)

*legousin autō . . .*

say to^him

They say to him, "Of David." (22:42b)

*legei autois . . .*

says to^them

He says to them, "How is it then that David, inspired by the Spirit, calls him Lord . . ." (22:43)

In each of the examples so far considered in this section, the intention or authority of the original speaker has carried over to the speeches

<sup>18</sup>Jesus' answer, with its emphatic pronoun *egō* 'I', has been taken as a simple statement, as a question (Allen 1907:77), and as a rhetorical question, "Shall I, a Jew, come and heal him in a Gentile home?" (Filson 1960:111; I am grateful to Bruce Turnbull for pointing this out to me). However Jesus' answer is interpreted, the force of the HP is that the initiative is left with the centurion.

<sup>19</sup>Cf. also 19:8; 20:7b, 23; 21:31c, 42; 27:22b. Contrast 13:52 in (29), which employs the developmental strategy; this final speech is an addition to the conversation, rather than the goal of the exchange of 13:51. In 22:21b, *tote* precedes the HP; cf. §1.2.



introduced with the HP and asyndeton. The same holds true in (17). A second question-and-answer SIMPLE DIALOGUE PARAGRAPH (Longacre 1983:48) begins, but Jesus' original intention remains unchanged.<sup>20</sup>

- (17) Now when Jesus came into the district of Caesarea Philippi, he asked his disciples, "Who do men say that the Son of Man is?" (16:13)

*hoi de eipan...*  
they and said  
And they said, "Some say John the Baptist, others say Elijah, and others Jeremiah or one of the prophets." (16:14)

*legei autois...*  
says to^them  
He says to them, "But who do you say that I am?" (16:15)

Simon Peter replied, "You are the Christ, the Son of the living God." (16:16)

**2.3. Modifications of the developmental strategy.** In this section I consider margins of noninitial speeches which feature a developmental conjunction like *de*, but which are not prototypical (as described in §2.1). Such margins may include *apokrinomai* 'answer', reflecting the authority with which the new speaker responds. Alternatively, the verb in such margins may be in the HP, indicating the detachment of the speech concerned from its context.

*Developmental strategy margins which include apokrinomai.* Two common uses of *apokrinomai* 'answer' in speech margins may be distinguished in Matthew: the combination articular pronoun plus *de* plus 'answer', and the combination 'answer' plus NP, usually with *de*. In both cases, the presence of 'answer' indicates both that the speech concerned is a response to the previous speech (or nonverbal situation), and that the initiative has passed to the new speaker or otherwise that s/he speaks with authority.<sup>21</sup>

<sup>20</sup>Cf. also 19:7, 10, 18a, 20; 27:22a. 20:21b is similar; cf. the comment in §1.1 on 20:21a. A further example is 26:35, although it is not followed by a response from the other speaker (cf. §2.4 on the use of *ephē* in 26:34).

<sup>21</sup>I am grateful to Randall Buth for this observation.

When the speech margin begins with 'answer', and not with the articular pronoun, the effect is to break the tight-knit relationship which is normal between speeches of a closed conversation (Levinsohn 1987:36).

The addition of 'answer' to the prototypical developmental speech margin seems to reflect the authority of the respondent. This combination most commonly is used, as in (18), to effectively reject a proposal, correction, or suggestion (whether stated or only implied). It is also used, as in (19), however, to introduce an authoritative answer to a request for information.<sup>22</sup>

- (18) And the tempter came and said to him, "If you are the Son of God, command these stones to become loaves of bread." (4:3)

*ho de apokritheis eipen...*  
 he but answering said  
 But he answered, "It is written, 'Man shall not live by bread alone, but by every word that proceeds from the mouth of God.'" (4:4)

- (19) And his disciples came to him, saying, "Explain to us the parable of the weeds of the field." (13:36b)

*ho de apokritheis eipen...*  
 he and answering said  
 And he answered, "He who sows the good seed is the Son of man..." (13:37)

In Levinsohn 1987, I noted that *apokrinomai* 'answer' is used in Acts when the tight-knit relationship between successive speeches is broken, for instance, because the speaker makes a "counter-assertion which takes the conversation off in a new direction" (1987:36; cf. Longacre 1983:51). This observation holds true also for speech margins in Matthew which OPEN WITH *apokrinomai*.<sup>23</sup> The speech so introduced is treated, not as part of a tight-knit complex, but as a main event in its own right, reflecting the new initiative which the speech represents.

<sup>22</sup>Cf. also 12:39, 48; 15:3, 13, 24, 26; 16:2; 19:4; 20:13; 21:29(!); 21:30b; 24:2; 25:12; 26:23. Cf. also 13:11; 17:11; 26:66b.

<sup>23</sup>In Acts, the combination articular pronoun plus *apokrinomai* is never found in a speech margin.

This is illustrated in (20). Rather than replying to the question addressed to him, Jesus counters with an assertion which takes the conversation off in a new direction.<sup>24</sup>

- (20) And when he entered the temple, the chief priests and the elders of the people came up to him as he was teaching, and said, "By what authority are you doing these things, and who gave you this authority?" (21:23)

*apokritheis de ho Iēsous eipen autois . . .*  
 answering and the Jesus said to^them  
 And Jesus answered them, "I also will ask you a question . . ." (21:24)

The passage in (21) is typical of those in which the tight-knit relationship between successive speeches is broken because a specific member of the group of previous addressees seizes the initiative and gives a significant response to a speech which had been addressed to the group as a whole.<sup>25</sup>

- (21) Immediately Jesus spoke to them, saying, "Take courage! It is I. Don't be afraid." (14:27)

*apokritheis de autō ho Petros eipen . . .*  
 answering and to^him the Peter said,  
 And Peter replied, "Lord, if it's you, tell me to come to you on the water." (14:28)

Similar to the above passages are those in which the tight-knit relation between speeches is broken because the addressees are not the previous speaker. Cf. 17:17 (Jesus addresses his remarks to the "unbelieving and perverse generation", rather than specifically to the man who had spoken to him); 20:22a (Jesus addresses his reply to Zebedee's children, rather than to their mother). Cf. also 21:27 (the speakers are no longer talking among

<sup>24</sup>Cf. also 3:15a; 8:8; 22:29; 25:26. 25:9 is similar (*apekrithēsan de . . . legousai* 'answered but . . . saying'). In the case of 16:17bff (17), Jesus' response to Peter's confession of 16:16f, while not a counter to Peter's words, certainly represents a new initiative. The same principle applies to the following passages in which *kai* is used (cf. §2.4 for the motivation for using *kai*, rather than *de*): 11:4; 24:4; 25:40; 27:25. Cf. also 15:28a (cf. footnote 8 on the use of *tote*).

<sup>25</sup>Cf. also 15:15; 16:16; 26:25a, 33. The same principle applies to 12:38 and 19:27, in both of which *tote* introduces a new section (cf. Schooling 1985:18).

themselves (21:25b–26), but are now responding to Jesus' question of 21:24f).<sup>26</sup>

*Developmental strategy margins in which the verb is in the HP.* As might be expected, this combination unites the prototypical developmental strategy reflected in fronted reference to speaker plus *de* (§2.1) with the function of detachment associated with the HP.

The rhetorical effect of detachment always depends on the context. In connection with the final speech of a section, it detaches that speech from the speeches which led up to it, with the rhetorical effect of highlighting (§1.2), as in (22) and (23).<sup>27</sup> In such contexts, the detached speech is the climax of the section. It is not simply the means of realizing the next significant action (§1.3). 13:28b of (23) is probably detached because it is transitional, separating the two key pronouncements of the other party.<sup>28</sup>

- (22) Another of the disciples said to him, "Lord, let me first go and bury my father." (8:21)

*ho de Iēsous legei autō . . .*  
 the but Jesus says to^him  
 But Jesus says to him, "Follow me, and leave the dead to bury their own dead." (8:22)

- (23) And the servants of the householder came and said to him, "Sir, did you not sow good seed in your field? How then has it weeds?" (13:27)

*ho de ephē autois . . .*  
 he and affirmed to^them  
 He said to them, "An enemy has done this." (13:28a)

*hoi de douloi autō legousin . . .*  
 the and slaves to^him say  
 And the slaves say to him, "Then do you want us to go and gather them?" (13:28b)

<sup>26</sup>*Apokrinomai* is also used to introduce significant responses to SITUATIONS; cf. 17:4; 27:21a; 28:5. Cf. also 21:21 (the disciples' exclamation had not been addressed to Jesus). In addition, *apokrinomai* is found in connection with speeches given in a formal setting such as a trial or council meeting (25:37, 44, 45), which "probably do not therefore enjoy a tight-knit relationship with each other" (Levinsohn 1987:36).

<sup>27</sup>Cf. also 17:20; 21:16b.

<sup>28</sup>Cf. also 14:17 of (13).

*ho de phēsin . . .*

he but affirms

But he says, "No; lest in gathering the weeds you root up the wheat along with them . . ."

(13:29)

**2.4. Modifications of the nondevelopmental strategy.** In this section, I consider margins of noninitial speeches which are nondevelopmental but not prototypical (as described in §2.2). Some feature asyndeton plus the aorist of *phēmi* 'affirm', instead of the HP. Others, instead of asyndeton, feature *kai*, with or without the HP.

*Nondevelopmental margins which feature the aorist of phēmi.* The combination asyndeton plus *ephē* 'affirmed' is employed to introduce a response to a speech which is not viewed as developmental, when the authority of the original speaker does NOT carry over to the response. This contrasts with the prototypical nondevelopmental strategy described in §2.2 (asyndeton plus HP), which typically indicated that the authority of the original speaker did carry over to the response.

In (24), the new speaker (Pilate) does no more than confirm the request of the previous speakers. In other words, his speech is not viewed as a new development in the story. Nevertheless, his granting of their request is not because they have any authority over him; rather, he exercises his own authority in granting it.<sup>29</sup>

(24) Next day . . . the chief priests and the Pharisees gathered before Pilate and said, "Sir, we remember how that imposter said, while he was still alive, 'After three days I will rise again.' Therefore order the sepulchre to be made secure until the third day . . ."

(27:62ff)

*ephē autois ho Pilatos . . .*

affirmed to^them the Pilate

Pilate said to them, "You have a guard of soldiers; go, make it as secure as you can."

(27:65)

<sup>29</sup>Cf. also 25:21, 23. 17:26 is similar; Jesus affirms the corollary of Peter's answer, while retaining the initiative.

In (25), the new speaker (Jesus) reaffirms a position he took in an earlier speech of the conversation, and his speech is not viewed as a new development. At the same time, he retains his authority role (cf. also the HP in 26:35).<sup>30</sup>

- (25) Then Jesus said to them, "You will all fall away because of me this night . . ." In response, Peter declared to him, "Though they all fall away because of you, I will never fall away." (26:31ff)

*ephē autō ho Iēsous . . .*  
 affirmed to^him the Jesus  
 Jesus said to him, "Truly, I say to you, this very night,  
 before the cock crows, you will deny me three times." (26:34)

*legei autō ho Petros . . .*  
 says to^him the Peter  
 Peter says to him . . . (26:35)

*Kai* in connection with the margin to a noninitial speech. As in Acts, *kai* is used, where *de* would have been expected, to associate speeches that set the scene for the nucleus of the incident concerned (Levinsohn 1987:96–103) or that conclude a section in anticipation of a shift of attention to the climactic section of the incident (1987:114–17).

In (26), *kai* associates speeches that set the scene for the following nuclear events. This association is particularly appropriate, as the miracle closely parallels 14:15–21 (cf. the use of *de* throughout that passage). The HP is probably used in 15:33 and 15:34a of (26) because Jesus occupies the authority role (§2.2).<sup>31</sup>

<sup>30</sup>Cf. also 21:27b (reaffirming the position stated in 21:24). 4:7 is similar; Jesus reaffirms his opposition on the same ground (the Scriptures) as in his speech of 4:4. 19:21 is also treated as nondevelopmental, perhaps because Jesus' words are viewed as stating the implications of the commandments he quotes in 19:18f, rather than expressing an additional commandment (France 1985:286).

<sup>31</sup>Cf. also 11:4. 8:32a is similar (the use of *kai* associates Jesus' response with the request of 8:31, thus enabling attention to remain on what happens to the demons and the pigs in 8:32b–d).

- (26) Then Jesus, calling his disciples to him, said, "I have compassion on the crowd, because they have been with me now three days, and have nothing to eat; and I am unwilling to send them away hungry, lest they faint on the way." (15:32)

*kai legousin autō hoi mathētai . . .*  
 and say to^him the disciples  
 And the disciples say to him, "Where are we to get bread enough in the desert to feed so great a crowd?" (15:33)

*kai legei autois ho Iēsous . . .*  
 and says to^them the Jesus  
 And Jesus says to them, "How many loaves have you?" (15:34a)

They said, "Seven, and a few small fish." (15:34b)

In (27), *kai* associates speeches that conclude a section, in anticipation of a shift of attention to a further, final exchange in 8:21f.<sup>32</sup>

- (27) Now when Jesus saw great crowds around him, he gave orders to go over to the other side. And a scribe, approaching, said to him, "Teacher, I will follow you wherever you go." (8:18f)

*kai legei autō ho Iēsous . . .*  
 and says to^him the Jesus  
 And Jesus says to him, "Foxes have holes, and birds of the air have nests; but the son of man has nowhere to lay his head." (8:20)

Another of the disciples said to him, "Let me first go and bury my father." (8:21)

I do not know why *kai* is used in 24:4 and 9:15, rather than *de*. In both instances, the incident consists of a short question and a long answer. Both (personal conversation) describes such examples as instances in which the

<sup>32</sup>Cf. §1.2 on the use of the HP in 8:20. Cf. also 26:72 (immediately followed by the climactic exchange of 26:73–75); 25:40; 27:25 (immediately followed by the climactic act of 27:26).

threshold at which the writer replaces Semitic *kai* with a developmental conjunction has not been reached.

### 3. Notes on participant reference in noninitial speech margins

Coding of reference to participants in Matthew is on the scale:

zero anaphora—articular pronoun—free pronoun—full NP

The articular pronoun is restricted, in noninitial speech margins, to fronted subjects plus *de*. Zero anaphora is found with asyndeton, *kai* and *tote*. I refer collectively to the articular pronoun and zero anaphora as REDUCED forms. Reduced forms are used to refer to the speakers of noninitial speeches, except when the speech concerned is either (a) a new initiative or counter-assertion, or (b) a concluding speech which is given prominence.

The use of a full NP in these two circumstances is consistent with a modified form of Givón's ICONICITY PRINCIPLE that "the more disruptive, surprising, discontinuous or hard to process a topic is, the more CODING MATERIAL must be assigned to it" (1983:18). What I have termed new initiatives correspond to Givón's discontinuous topics, and my counter-assertions are his disruptive topics. Concluding speeches do not have to be surprising, however, for a full NP to be used. Rather, "more coding material" is a common rhetorical device for indicating the importance of the information being presented (Levinsohn 1978:125).

13:28b in (23) and 8:4 in (8) are examples of a full NP occurring in connection with a NEW INITIATIVE. Examples of speech margins beginning with full NP references to the subject, in connection with COUNTER-ASSERTIONS, include 14:16 (13) and 8:22 (22). When the speech margin begins with *apokrinomai*, it is the norm for reference to the subject to be a full NP (§2.3); the only exception is found in 25:45, in the second ROUND of a story consisting of two sets of parallel events (25:45 parallels 25:40).

References to the speaker of a CONCLUDING speech are sometimes by means of a full NP, sometimes with a reduced form. The means chosen corresponds with whether the speech concerned is given special prominence or not.

13:52 in (28) illustrates the use of a reduced form of participant reference, when a concluding speech is not given special prominence. The exchange concerned occurs at the end of a collection of parables (13:3–50), but is not the climax of that collection.<sup>33</sup>

<sup>33</sup>Cf. also 19:11f.



(28) "Have you understood all this?" (13:51a)

They say to him, "Yes." (13:51b)

*ho de eipen autois...*

he and said to them

And he said to them, "Therefore every scribe who has been trained for the kingdom of heaven is like a householder who brings out of his treasure what is new and what is old." (13:52)

4:10 in (6) illustrates the use of a full NP, in connection with a concluding speech which is given prominence. In this case, the full NP is accompanied also by the use of the HP to detach the speech concerned, and by *tote*, one of whose functions is to mark paragraph peak (climax or denouement) (Buth 1982:13).<sup>34</sup>

#### 4. Conclusion

I have described the HP in Matthew's Gospel in terms of two functions: DETACHMENT of the events so encoded from their context, and CONTINUATION of the authority role of one of the speakers in a reported conversation.

The continuation function of the HP is found exclusively in the margins of noninitial speeches and, with few exceptions, is restricted to non-developmental margins characterized by asyndeton.

The function of detaching from surrounding events the event so encoded is found in a variety of contexts, and its rhetorical effect varies with the context. The event introduced in connection with the HP may itself be highlighted, or it may be downgraded in importance, with respect to surrounding events. It is even possible that, in a few cases, detachment has no implications for grounding, but is an end in itself.

Recognition of two basic strategies for presenting conversations (an unmarked and a marked strategy) makes it possible to explain why the HP

<sup>34</sup>Cf. also 28:10. Other examples of concluding speeches introduced with a full NP include 8:4, 20 (*kai* plus HP; in (8) and (27), respectively); 27:65 (asyndeton plus *ephē*; in (24)); 27:11b (fronted NP plus *ephē*; cf. comment in §2.1); and 18:22 (asyndeton plus HP; cf. comment in §2.2).

The pronoun *kai autos* 'also he' is found in 21:27b. The speech is nondevelopmental (Jesus is reaffirming the position he stated in 21:24; 2.4), so zero anaphora might have been expected. The pronoun is employed in order for the parallel to be drawn by the other participants with the speech of 21:27a. Cf. also 25:44 (the parallel is with 25:37).

is sometimes used in reported conversations in Matthew, and is absent in others. When the marked, nondevelopmental strategy (typified by asyndeton) is chosen, the HP is the norm, indicating that one of the speakers occupies an authority role with respect to the other. When the unmarked, developmental strategy (typified by *de*) is chosen, however, the function of the HP is usually that of detachment.

Developmental strategy speech margins may be modified also by the inclusion of *apokrinomai* 'answer', when the respondent seizes the initiative or otherwise assumes the authority role. Participant reference in speech margins, which follows Givón's ICONICITY PRINCIPLE, contributes both to the identification of new initiatives, and to the prominence of concluding speeches.

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## Concerning Otomanguean Verbs of Motion

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A theory of language, like human language itself, is a tool. It is purposive and it is useful if it accomplishes the goal of communicating an understanding about the nature of human language or of one of its exponents. A linguistic theory is only a metaphor for truth, and due to the complexity of language is, in fact, **GENERALLY UNTRUE** if we try in any rigorous way to define the closeness of a match between metaphor and reality. But a certain level of understanding is attainable through theory building and that makes it worthwhile.

In any case, linguistic theorizing is fun if we do not take ourselves or our theories too seriously. The discovery and description of a linguistic system is a pleasurable experience. And yet the trend of linguistic argumentation in the last thirty-five years has also made it easier to sometimes forget (or try to cover up) how puny our theories actually are and how arrogant we can sometimes be in claiming what is **TRUE** or what "allows us to refute . . . a fallacious argument."<sup>1</sup>

No one has had more fun than Bob Longacre in these past few years. Few have had the pleasure of discovering and describing such a wide range of linguistic systems from almost everywhere but Timbuktu as he. Long ago he enunciated his view of theory as follows:

Granted the centrality of patterning in human behavior it follows that we should require that a linguistic theory give centrality to linguistic patterns. In measuring the fit of a theory with the

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<sup>1</sup>This is an actual quote, but it can go unidentified since it typifies the kind of statement that any of us might fall into in today's theoretical climate.

empirical facts of individual languages we should require that a theory lead to a description in which patterns are thrown into bold relief. (Longacre 1964:13)

Some years ago, I had the privilege of working with Albertha Kuiper (Kuiper and Merrifield 1975) and David Westley (Westley and Merrifield 1990)<sup>2</sup> to discover and describe the way verbs of motion and arrival are used in two Otomanguean languages of Mexico—Diuxi Mixtec and Tepetotutla Chinantec. The latter is perhaps the closest of the Chinantec languages to Palantla Chinantec, the language of Mexico which has been my own special interest for thirty-five years, but my collaboration in the study of the former rested heavily on the first-hand knowledge of my colleague Albertha Kuiper and on our ability together to interact with her principal language associate from Diuxi, Sra. Amelia Martínez Pérez de Matías.

The more recent Chinantec report has not received comment that I know of, but the Mixtec study has enjoyed some attention because of the analysis we put forward concerning motion verbs in particular. This is gratifying and stimulating—to see others building upon your work or even criticizing it. After all, theories are just metaphors and, in the end (if not in the beginning) they are wrong. While our theory of Mixtec verbs of motion may be wrong in some respects, it has been shown to have merit in other respects.

The first response to Kuiper and Merrifield 1975 (hereafter *k&m*) was by my SIL colleagues Speck and Pickett (1976; hereafter *s&p*), who describe verbs of motion and arrival for Texmelucan Zapotec, an Otomanguean cousin of Diuxi Mixtec. *s&p* found a number of the concepts defined for Mixtec to be useful in the description of Zapotec. They also expanded on the way some of the concepts might be defined; but they challenged some of the Mixtec analysis on the basis of Zapotec patterns.

Subsequently, Monica Macaulay attempted to follow the Diuxi analysis for verbs of motion and arrival in Chalcatongo Mixtec (1982), but later decided (1985) that the *s&p* analysis for Zapotec was not only better for Diuxi and Chalcatongo Mixtec, but that it also supports the suggestion of *s&p* that, on the basis of the revised analysis, “a significant general statement might be made about Otomanguean verbs, at least at some historical level” (1976:59).

I will here comment briefly on the discussion of these questions concerning Mixtec, to the extent I feel I can do so (§1), and then describe

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<sup>2</sup>In spite of the late date of Westley and Merrifield, both of these papers were written at about the same time.

the situation for Palantla Chinantec (§2) as further input to what a general statement for Otomanguean verbs might (in part) include.

### 1. The analysis of Diuxi Mixtec verbs of motion

In order that the ground should be level, I must say that my knowledge of Diuxi Mixtec today is for all practical purposes limited to the statements Kuiper and I made in the *K&M* report. Kuiper is the continuing student of Diuxi Mixtec and I have not discussed Diuxi verbs with her since 1975.<sup>3</sup> Macaulay, on the other hand, is expert in the related Mixtec language, but not in Diuxi;<sup>4</sup> *s&p* know Zapotec languages well; my strength is in Chinantec. Since the *s&p* analysis of Diuxi is an alternative that *K&M* themselves reported but rejected as being less attractive (*K&M* 34), I can merely discuss the merits of the arguments presented in the ensuing discussion in the hope of contributing to any general statement that might ultimately be forthcoming.

*s&p* took the same functional approach to description as *K&M* had done by asking "What do I need to know in order to use this form appropriately and to understand other people when they use it?" (*s&p* 58). This turns out to be the key, I think, to understanding the motivation for the *K&M* analysis. *s&p* then found a number of concepts in *K&M* appropriate to their description of Zapotec, adding very useful discussion, as did Macaulay (1985) in her description of Mixtec. These concepts include those of *BASE*, *PLA*, *ROUND TRIP*, and *MOMENTARY*.<sup>5</sup>

**Base.** It would seem that many Otomanguean languages distinguish motion by an agent to a random location from motion to a location often frequented by that agent as some sort of *BASE OF OPERATIONS*, such as

<sup>3</sup>As the senior linguist of the *K&M* report, however, I do not imply by this that I can duck responsibility for the analysis reported. I happily accept responsibility for its shortcomings.

<sup>4</sup>C. Henry Bradley tells me that the two languages are geographically and linguistically remote. Forbidding terrain and numerous Mixtec communities where significantly divergent forms of Mixtec are spoken lie between them, and this has effectively inhibited any significant direct contact in recent times.

<sup>5</sup>*PLA* (place of the locutionary act), *TLA* (time of the locutionary act), and *MOMENTARY* were taken from Fillmore 1969. Other abbreviations used in this paper are *AFF* (affirmation modal), *ANA* (anaphoric), *ASSEV* (asseveration modal), *C* or *COMPL* (completive), *COND* (conditional), *H* or *HAB* (habitual), *HOD* (hodiernal past), <sup>H</sup> (high tone), *I* (intensive), *ITER* (iterative), <sup>L</sup> (low tone), <sup>M</sup> (mid tone), *P* or *PROG* (progressive), *PRF* (perfect), *PST* (past), *REFL* (reflexive), *REL* (relative), *S* or *STA* (stative).

his/her home or home town. So that, for example, in Palantla Chinantec, the two related verbforms of (1) mark that distinction.

- (1) a. *ka<sup>L</sup>-ŋó<sup>L</sup> huĭ<sup>LH</sup> huu<sup>LM</sup> hia<sup>H</sup> huĭi<sup>M</sup>*  
 PST-GO<sup>^</sup>C3 John road amid town  
 John went to Valle Nacional.

- b. *ka<sup>L</sup>-ŋa<sup>ʔL</sup> huĭ<sup>LH</sup> huu<sup>LM</sup> ha<sup>H</sup>- kia<sup>ʔLM</sup>*  
 PST-GO<sup>^</sup>BASE<sup>^</sup>C3 John road at of<sup>^</sup>3  
 John went home.

It is appropriate, therefore, to define a concept such as *BASE* to account for the difference between such verbs. *K&M* defined such a concept informally and discussed prototypical situations to which it would apply. *s&p*, in turn, discussed situations which are appropriate to the use of *base* in Zapotec, but then go on to say "that the general definition needs modification when two facts are brought into consideration." The specific facts they mention are not important here or at issue. I wish only to comment on the approach I think needs to be taken when a general definition might seem to need modification because of such additional facts.

Language is complex and a very powerful communicative tool. It is more and more understood, I think, that our attempts to define linguistic concepts must fall back upon the use of prototypes (Comrie 1981:100-4, Givón 1984:14ff). If we insist on air-tight and all-encompassing definitions that cover all situations, we are doomed to failure. In the analysis of the semantics of kinship terminologies, for example, Merrifield 1981 found useful what Scheffler and Lounsbury (1971:7) refer to as rules of extension,<sup>6</sup> in which a kinship term has a primary reference but may, and more often than not does, have extended references as well.

A case in point is the Palantla Chinantec term *ŋiu<sup>L</sup>* 'my older collateral male kinsman'. The primary referent of this term is ego's older sibling—any male child of one or both of ego's parents born prior to ego's birth. Using well-defined conventions this primary reference can be encoded as *ePCm* (elder, Parent's Child, male). The term *EXTENDS*, however, to any male child, born prior to ego's birth, of *ANY OF EGO'S KINSMEN*, with two exclusions: the named kinsman may not be ego's lineal kinsman, nor can his birth have preceded that of ego by more than one generation (which would classify him as a 'grandfather'). It is fairly simple to straightforwardly define a rule of extension which extends *ePCm* to all the possible

<sup>6</sup>Lounsbury (1964:356) earlier wrote of expansion and reduction rules, the same phenomenon viewed from opposite vantage points.



kintypes which the foregoing statement implies. The rule simply adds, without limit, *Ps*, *Cs*, or both, to *ePCm*, in conventional manner, to generate the strings *ePCCm*; *ePPCm*, *ePPCCm*, *ePPCCm*; *ePPCCm*, *ePPCCm*, *ePPCCm*, and so forth (Merrifield 1981:10).

I would take a similar approach to the semantics of verbs. It seems to me that many concepts might have a primary, or prototypical, range of reference to which it may be convenient to add extensions by way of conventionalized interpretations of complex circumstances. Whereas a person's home, his town, or his country, would be the prototypical references for base, it should by convention be possible to define contexts in which an agent could ESTABLISH a base for the purposes of a specific situation, when the language so permits.

s&P (62) describe such a situation for Zapotec in which a man arrives at a friend's house, leaves a bundle there, and returns later to retrieve it. At his first approach to the friend's house he interchanges greetings with his friend using a nonbase form of the verb 'come', but uses the base form of the verb upon his return. This Zapotec language permits the establishment of a temporary base for such circumstances.

I do not know if this is possible in Diuxi; but Macaulay (1985:58) describes a similar phenomenon in Chalcatongo, where regular motion to a particular place—such as a child going regularly to school—provides conditions sufficient to the use of motion verbs marked for base. She goes further to define nonbase as a "marked category which encompasses the meaning of the marked category, base" (1985:58f) which allows a person to choose a nonbase form of the verb for a sentence like 'I will go to my house'. I do not believe, but cannot categorically say that this is impossible in Diuxi; I can say categorically that this is not said in Palantla Chinantec. I can imagine situations in Chinantec, however, where a nonbase location might temporarily be treated as a base for rhetorical purposes. This is the kind of thing that skillful language use is all about.

**Place of the locutionary act (PLA).** The use of verbs of motion entails both source and goal of the motion in relation to the location of the speech act (PLA). K&M based their discussion of Diuxi motion verbs on a prototypical PLA (35f), with only minimal discussion of more complex speech situations, since their primary purpose was to lay out the distinctive core semantics of the motion verbs themselves. s&P (60) add useful discussion relating to three situations "in which the PLA is not the basic point of reference." Their first case describes a situation in which the interlocutors are at some distance from each other—whether in sight of each other but at a distance, or through the use of written communication. They suggest that each interlocutor may ground the PLA at his/her own

location or at that of the other party. So that, as in English, if mother calls her child to 'come', the child may respond with 'I am coming' by choosing mother's location as *PLA*.

This kind of language use seems to me, again, best treated as a matter of convention rather than as a departure from the primary meaning of a word. I would expect the semantic analysis of the verbs of any single language, such as Texmelucan Zapotec, to be more straightforward if we take the simple *PLA* situation as the prototype and then apply extensional conventions to account for more complex situations. This will certainly be true if we hope for a general statement to cover families of languages, since both Diuxi Mixtec (K&M 36, note 9) and Chalcatongo Mixtec (Macaulay 1985:60) disallow the use of a motion verb in such a response, requiring rather a verb of arrival.<sup>7</sup>

**Round-trip verbs or momentary verbs.** To this point, differences in analysis relate more to differences in semantic conventions than to the primary meaning of specific verbs. We now come, however, to two areas of critical difference in analysis between K&M, on the one hand, and S&P and Macaulay 1985, on the other.

K&M claim that Diuxi Mixtec has six verbs of motion: two that reference one-way motion of an agent away from base *PLA* or nonbase *PLA*, respectively, two that reference one-way motion of an agent to base *PLA* or nonbase *PLA*, respectively, and two round-trip verbs—one referencing motion of an agent from nonbase *PLA* and return back to *PLA*, the other referencing motion to nonbase *PLA* and return away from *PLA*. These are listed in (2), which is presented in four columns to accommodate both simple (noniterative) and iterative interpretations of each of the two aspects, potential and completive. Cells in the iterative columns are empty for K&M one-way verbs because, in this view, iterative one-way trips actually entail round trips and round-trip verbs, therefore, satisfactorily encode such situations.

On the other hand, S&P claim that Texmelucan Zapotec has just four verbs of motion, all encoding round trips—two that reference motion of an agent from base *PLA* or nonbase *PLA*, respectively, and return back to *PLA*, and two that reference motion of an agent to base *PLA* or nonbase *PLA*, respectively, and return away from *PLA*.

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<sup>7</sup>Lowe (1969, 1974a, 1974b) has described the kind of permutations a speaker uses in well-defined contexts for the use of personal pronouns. It is this kind of conventional permutation of the position of interlocutors in relation to *PLA* that I have in mind as extensions of the primary meaning of these verbs.

(2)	POTENTIAL		COMPLETIVE		
	SIMPLE	ITERATIVE	SIMPLE	ITERATIVE	Diuxi (K&M)
	<i>núʔú</i>		<i>núʔú</i>		'go home'
	<i>hǎʔǎ</i>		<i>hwáʔá</i>		'go'
	<i>ndíši</i>		<i>ndíši</i>		'come home'
	( <i>kiši</i> )		<i>váši</i>		'come'
	( <i>hǎʔǎ</i> )	<i>šéʔé</i>	<i>nšéʔé</i>	<i>nšéʔé</i>	'go and return'
	<i>kiši</i>	<i>kiši</i>	<i>nkíši</i>	<i>nkíši</i>	'come and return'

s&P suggest that an analysis of Diuxi verbs along the lines of the Texmelucan analysis would lead to "a significant general statement... about Otomanguean motion verbs, at least at some historical level" (s&P 59). s&P present their reanalysis of Diuxi verbs of motion in their table 2 (s&P 63), which includes only the verbs that do not encode base. It is represented here as (3).

(3)	POTENTIAL	ITERATIVE	PROGRESSIVE	COMPLETIVE	Diuxi (s&P)
	<i>hǎʔǎ</i>	<i>šéʔé</i>	<i>hwáʔá</i>	<i>nšéʔé</i>	'go and return'
	<i>kiši</i>	<i>kiši</i>	<i>váši</i>	<i>nkíši</i>	'come and return'

One difference between the two analyses that does not appear directly in (2) and (3) is that K&M claim that Diuxi motion verbs are momentary verbs. No one disputes that both Mixtec and Zapotec verbs of arrival are momentary verbs, but s&P and Macaulay 1985 suggest that Diuxi verbs of motion are not. Although disagreements about the theory of Mixtec motion verbs may persist after this discussion is ended, I believe that part of the problem lies in differences in focus—between inflectional forms, on the one hand, and their uses in context, on the other.

Before discussing the crux of the difference between these two interpretations, note that Macaulay follows the s&P analysis, but also includes the verbs which encode base in her table 5 (1985:74), which is represented here as (4).

(4)	POTENTIAL	ITERATIVE	PROGRESSIVE	COMPLETIVE	Diuxi (Macaulay 1985)
	<i>núʔú</i>		<i>hwánuʔú</i>	<i>núʔú</i>	'go home'
	<i>ndíši</i>		<i>hwándíši</i>	<i>ndíši</i>	'come home'
	<i>hǎʔǎ</i>	<i>šéʔé</i>	<i>hwáʔá</i>	<i>nšéʔé</i>	'go and return'
	<i>kiši</i>		<i>váši</i>	<i>nkíši</i>	'come and return'

Macaulay's claim is also different from that of s&P in at least one essential point. Whereas s&P propose a reanalysis of the Diuxi data, Macaulay implies, without directly saying so, that the K&M data are in

error as well as the analysis. First, K&M (36) state that *kiši* has an iterative as well as a noniterative interpretation. This is apparently not accepted by Macaulay in that she leaves the last cell of her second column blank. Second, she indicates that the verbs *nú?ú* and *ndíši* are progressive when occurring with the prefix *hwá-* and completive without it, in the face of specific statements by K&M (41) that no difference in meaning or usage between such forms had been encountered. On the one hand, these claims are made by Macaulay without specific research in Diuxi. On our part, it would be foolish to claim that our understanding of the data was perfect when we wrote; but the statements we made were based on specific inquiries concerning the usage of the forms in question.

Returning now to more substantive matters, more comparative Mixtec data are now available in the series of Mixtec publications edited by Bradley and Hollenbach (1988, 1990, 1991, in press). While the sketches included in these studies do not focus on verbs of motion, as such, they do include some inflectional forms which are reproduced here in (5) for Jamiltepec Mixtec (Johnson 1988:103), Ocotepéc Mixtec (Alexander 1988:252f), Silacayoapan Mixtec (Shields 1988:397), Ayutla Mixtec (Hills 1990:197), Coatzacoapan Mixtec (Small 1990:401), Alacatlazala Mixtec (Zylstra 1991:109), and Yosondúa Mixtec (Farris in press).<sup>8</sup> The corresponding Chalcatongo data from Macaulay (1985:67) are also included in (5).

The more recent data from Bradley and Hollenbach are presented within the single, unifying framework they designed to aid in the comparison of the several languages, which conforms closely to the s&p analysis, although Small (1990:401) references the discussion upon which these present comments are based, and Kuiper and Oram (1991:328), whose data from Diuxi-Tilantongo are the same as reported in K&M and are therefore not repeated in (5), indicate that the K&M analysis is a possible alternative. This arrangement is quite all right and, in fact, is probably the best one to show the morphological structure of the system from a historical and comparative point of view at the very least.

As s&p are careful to point out, the view they support of Diuxi structure is one which K&M themselves entertained on the basis of structure. They found *hwá?á* looking like a continuative verbform and cite Longacre's (1957:56) reconstruction of Proto Mixtecan *w-* (continuative) as evidence (K&M 34). K&M rejected this interpretation for contemporary Diuxi, however, on the basis of language use, as opposed to morphological history.

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<sup>8</sup>A few compromises have been made to accommodate these data within a single chart to highlight the cognate forms. Please consult the original articles for specific matters of orthography, labeling of aspects, and glosses of verbforms.

(5)	POTENTIAL	HABITUAL	PROGRESSIVE	COMPLETIVE	
a. 'go home'	<i>nú?ũ</i> <i>no?ò</i>	<i>kanu?u</i>	<i>kúnũ?ú</i> <i>kwano?o</i>	<i>nú?ũ</i> <i>ninó?o</i>	Coatzospan Chalcatongo
b. 'go'	<i>kũ?u</i> <i>kĩ?i</i> <i>kũ?u</i> <i>kũ?u</i> <i>kĩ?ĩ</i> <i>kõ?o</i> <i>kĩ?ĩ</i> <i>kĩ?ĩ</i>	<i>čá?á</i> <i>šé?é</i>  <i>šá?á</i> <i>kañe?e</i>  <i>šá?á</i> <i>há?á</i>	<i>kwá?á</i> <i>kwá?á</i> <i>kwá?á</i> <i>kwā?á</i> <i>kwé?é</i> <i>kwá?á</i> <i>kwā?á</i> <i>kwá?á</i>	<i>čá?á</i> <i>šé?é</i>  <i>nišā?á</i> <i>ñé?é</i> <i>nišā?á</i> <i>šá?á</i> <i>nihá?á</i>	Jamiltepec Ocatepec Silacayoapan Ayutla Coatzospan Alacatlalzala Yosondúa Chalcatongo
c. 'come home'	<i>ndĩšĩ</i> <i>ndi?ši</i>	<i>kandi?ši</i>	<i>ndĩšĩ</i> <i>kúndi?ši</i>	<i>ndĩšĩ</i> <i>ndi?ši</i>	Ocatepec Coatzospan
d. 'come'	<i>kĩčĩ</i> <i>kĩšĩ</i> <i>kĩšĩ</i> <i>kiši</i> <i>ki?ši</i> <i>kĩšĩ</i> <i>kĩšĩ, kíi</i> <i>kii</i>	<i>kĩšĩ</i>  <i>kĩšĩ?</i> <i>kaki?ši</i>    	<i>vāči</i> <i>vaši</i> <i>vaši</i> <i>kwaši</i> <i>vé?šĩ</i> <i>vaši</i> <i>vāšĩ</i> <i>bèi</i>	<i>kĩčĩ</i> <i>nkišĩ</i> <i>nakĩšĩ</i> <i>nikiši</i> <i>nkĩ?ši</i> <i>kišĩ</i> <i>kiši, kii</i> <i>nikii</i>	Jamiltepec Ocatepec Silacayoapan Ayutla Coatzospan Alacatlalzala Yosondúa Chalcatongo
e. 'go and return'			<i>sá?á</i>	<i>našá?á</i>	Silacayoapan

As Longacre pointed out in the passage quoted earlier, we would like in our description to set out the linguistic patterns of a language in bold relief. The problem we find with verbs of motion in many languages of the world, including Otomanguean languages, however, is a strong tendency for assymetry, so that various patterns of a language may be in conflict.

It turns out, for example, that of the eight Mixtec languages cited above from the Bradley and Hollenbach volumes, all exhibit a pervasive pattern in which there are just three inflectional forms of the verb, which we can

call POTENTIAL, PROGRESSIVE,<sup>9</sup> and COMPLETIVE, for the vast majority of verbs. But six of the languages are treated as having a small subclass of verbs with a fourth aspectual category, which we can call HABITUAL.<sup>10</sup> Interestingly enough, with two exceptions in the eight languages,<sup>11</sup> all of the verbs with this fourth aspectual category are verbs of motion. Verbs of motion, in these languages, are presented as having a different inflectional pattern than all the other verbs of the language. Not finding a strong morphological pattern to follow in the analysis of Diuxi motion verbs, K&M looked elsewhere.

It is difficult, probably impossible, to prove whether Diuxi motion verbs are momentary verbs or not. The K&M claim is interpretive and was designed to elucidate the use of these verbs. We cited three collocational patterns of adverbs and verb prefixes which seemed to us to indicate a perfective or completive use of the forms in (6).

- (6) *váši-da*      come ^ COMPL-1s      'I have come.'  
*hwá?á-da*      go ^ COMPL-1s      'I am (already) going.'

These first-person forms are commonly used when a speaker is just arriving at or departing from a friend's home. It is possible to read a continuative or progressive sense into these forms, based appropriately upon their probable morphological antecedents; but it is also possible to see them as perfective, and to see a perfective-imperfective binary pattern as in focus in these highly defective verb paradigms. None of the discussion by either S&P or Macaulay 1985 favoring a progressive interpretation is any less speculative than the perfective analysis. The closest they come is for S&P (59) to claim that Texmelucan verbs of motion are not momentary

<sup>9</sup>CONTINUATIVE is the traditional term for this category in the Mixtec literature, but more recent discussion of tense-aspect categories (such as Comrie 1976 and Dahl 1985) would seem to point to PROGRESSIVE as a better choice.

<sup>10</sup>It would be a poor choice to call this category ITERATIVE in Mixtec, as S&P and Macaulay have done, since any number of verbs in Mixtec (and all other languages?) encode certain kinds of actions or events that can be interpreted iteratively irrespective of a wide range of inflectional categories. Linguists know better than most that it is possible to confess of iteratively knocking one's head against a wall by the use of past-, present-, and future-tense verbs in any number of languages.

<sup>11</sup>In Jamiltepec (Johnson 1988:103), one nonmotion verb meaning 'exist' has five inflectional forms; but two of them appear to be suppletive, leaving just three that seem to be related morphologically. Coatzospan (Small 1990:402) has six verbs of position with a unique fourth inflectional form.

and for Macaulay (1985:65) to claim that the Chalcatongo cognate of *váši* is not momentary.<sup>12</sup>

I do not recall if we found *váši* occurring with *?iku* 'yesterday' but we did find *hwá?á* in this context (K&M 34), as one of the elements leading us to favor a perfective interpretation.

In regard to whether all the motion verbs explicitly encode round trips, they will certainly have to be defined as doing so if they are not considered momentary verbs and if the various verbforms are grouped as just four verbs. Because of the importance of the concept base in Diuxi verbs of motion, which I do not recall as being the optionally-marked category that Macaulay reports for Chalcatongo (1985:58f), even the so-called one-way verbs entail a return toward or away from base. The question is whether they explicitly mark the return trip or whether it is simply real-world entailment. The question may be moot and depend upon the interpretation of the other factors already discussed.

Without insisting that K&M had it 100 percent right about Diuxi, I am not ready to acknowledge that we necessarily had it wrong either. I will settle for addressing the broader question of a general statement for Otomanguean verbs of motion by contributing a little more data from Palantla Chinantec and a few comments that need to be considered before adopting such a statement.

## 2. Palantla Chinantec verbs of motion

The structure of Chinantec verbal paradigms has been discussed now in a variety of places, Westley 1991 to take the most recent, so I will not belabor the point other than to say that it is normally useful to display twelve forms which are the intersection of three aspectual categories—termed for Chinantec PROGRESSIVE (P), INTENTIVE (I), and COMPLETIVE (C)—and four person-number categories—first singular (1s), first plural (1p), second (2), and third (3). In the case of verbs of motion, however, they all show suppletive stems which distinguish singular and plural agents, with the

<sup>12</sup>It could be argued that even Macaulay's proof example (10) *ndè?è-ri hà Juan a-bèi iči núu* 'I see that John is now coming towards us' (1985:65), although translatable by the English present progressive, is actually perfective, not focusing upon the progressive movement of the agent. I am in no position to insist on such an interpretation for Chalcatongo, but would argue that the equivalent Diuxi sentence can have that meaning. I wonder if the Chalcatongo preverbal element *a-* 'now' is not cognate with Diuxi *šā-* 'already', which contributes perfective meaning to a sentence (Kuiper and Oram 1991:241).

result that each stem has up to nine forms for singular agents and nine forms for plural agents.

(7) 'go (move away from PLA to nonbase)'

	1s	2s	3s	1p	2p	3p
P	$\eta\acute{o}^{LM}$	$zi\acute{e}g^{PM}$	$\eta\acute{o}^{LM}, z\acute{a}g^{LM}$	$\eta i^L niag^{LH}$	$\eta i^L no^{PLM}$	$\eta i^L l\acute{e}^M$
I	$\eta\acute{o}^{LH}, nei^{LH}$	$g\acute{u}^H$	$\eta\acute{o}^L, z\acute{a}g^L$	$za^H niag^{LH}, z\acute{i}g^H$	$gu^H no^{PLM}$	$za^L l\acute{e}^M$
C	$\eta\acute{o}^L$	$zi\acute{e}g^{PM}$	$\eta\acute{o}^L$	$\eta i^L niag^{LH}$	$\eta i^L no^{PLM}$	$\eta i^L l\acute{e}^M$

(8) 'go home (move away from PLA to base)'

	1s	2s	3s	1p	2p	3p
P	$\eta a^{PLM}$	$zi\acute{a}^{PM}$	$\eta a^{PLM}$	$\eta ag^{PLM}$	$\eta i^L no^{PL}$	$\eta i^L lia^{PL}$
I	$ne^{PLH}$	$gu\acute{i}^{PH}$	$z\acute{a}^{PL}$	$z\acute{i}g^{PH}$	$gu^H no^{PH}$	$za^L lia^{PL}$
C	$\eta\acute{a}^{PL}$	$zi\acute{a}^{PM}$	$\eta a^{PL}$	$\eta\acute{a}g^{PL}$	$\eta i^L no^{PL}$	$\eta i^L lia^{PL}$

(9) 'come (move toward PLA to nonbase)'

	1s	2s	3s	1p	2p	3p
P	$gio^{LM}$	$\eta i^{PM}$	$h\acute{a}^{LM}$	$h\acute{a}^{LM}$	$ha^L no^{PL}$	$ha^L l\acute{e}^M$
I	$gio^{LH}$	$\eta i^{PLH}$	$hi^L$	$hi^H$	$hi^H no^{PL}$	$hi^L l\acute{e}^M$
C	$gio^L$	$\eta i^{PL}$	$h\acute{a}^L$	$h\acute{a}^L$	$ha^L no^{PL}$	$ha^L l\acute{e}^M$

(10) 'come home (move toward PLA to base)'

	1s	2s	3s	1p	2p	3p
P	$giog^{PLM}$	$\eta e^{PLM}$	$hog^{PLM}$	$hag^{PM}$	$ha^L no^{PLH}$	$ha^L lia^{LM}$
I	$giog^{PLH}$	$\eta e^{PLH}$	$hiúg^{PM}$	$hi\acute{a}g^{PH}$	$hi^H no^{PLH}$	$hi^L lia^{LM}$
C	$gióg^{PL}$	$\eta\acute{e}^{PL}$	$hóg^{PL}$	$h\acute{a}g^{PL}$	$ha^L no^{PLH}$	$ha^L lia^{LM}$

(11) 'go and come back (move away from and return back to PLA)'

	1s	2s	3s	1p	2p	3p
P	_____	_____	_____	_____	_____	_____
I	_____	_____	_____	_____	_____	_____
C	$\eta e^H$	$\eta e^{PH}$	$\eta e^H$	$\eta i^H niag^{LH}$	$\eta i^H no^{PLM}$	$\eta i^H l\acute{e}^M$

Palantla Chinantec verbs of motion are presented in (7)–(11) in terms of four paradigms defined by the movement of an agent either away from or toward PLA and by the goal of that movement as being either the agent's base or not, and a fifth highly defective paradigm that defines a round trip without apparent reference to base.<sup>13</sup> A great deal of suppletion

<sup>13</sup>I need to do further study of the round-trip forms, and warn the reader that this listing is incomplete. Additional forms occur, such as  $ma^M na^M u^H \eta e^L h\acute{i}a^H hu\acute{i}^M$  'I have already been to town (today)', which I will not discuss. The line between completed round trips for motion verbs is difficult to draw between round trips that focus on arrival.



is involved, even including a few competing forms in the paradigm for the verbforms naming 'motion away from PLA to nonbase'. The paradigms are complete in the sense that the three aspectual categories common to the majority of Chinantec verbs are represented in all the paradigms except the last.

Completive forms of these verbs are unremarkable in their interpretation, indicating completed motion prior to the time of the speech act (TLA). For verbs indicating motion away from PLA, the completive form simply states that the agent is out of sight at TLA, without any implication that s/he has reached any particular location away from PLA.<sup>14</sup> For verbs indicating motion to PLA, the completive form is used after the agent arrives.

- (12) a. *ma<sup>M</sup>-ka<sup>L</sup>-ŋa<sup>PL</sup> ʔio<sup>LH</sup> ha<sup>H</sup>kiá<sup>PLM</sup>*  
 PRF-PST-go<sup>^</sup>C3s woman home<sup>^</sup>3  
 The woman already went home.

- b. *za<sup>M</sup> ka<sup>L</sup>-ha<sup>L</sup>lê<sup>M</sup> huú<sup>LM</sup> he<sup>PLM</sup> bá<sup>PH</sup> læg<sup>LM</sup>*  
 3 PST-come<sup>^</sup>C3p road Usila AFF this  
 This person has come from the town of Usila.

Intentive forms indicate action intended or predicted but which has not been initiated at TLA—the typical meaning of intentive verbs in Palantla Chinantec generally, which corresponds to the cross-linguistic semantic universal FUTURE proposed by Dahl (1985:103).

- (13) a. *nei<sup>LH</sup> bá<sup>PH</sup> hni<sup>M</sup> hĩa<sup>H</sup> huü<sup>M</sup> ʔiá<sup>L</sup>*  
 go<sup>^</sup>I1s AFF 1s amid town tomorrow  
 I WILL go to town tomorrow.
- b. *hi<sup>L</sup>liá<sup>LM</sup> hu<sup>LH</sup> hĩa<sup>H</sup> huü<sup>M</sup> ʔiá<sup>L</sup>*  
 come<sup>^</sup>home<sup>^</sup>I3 John amid town tomorrow  
 John will come back home tomorrow.

The progressive form of most verbs may ambiguously indicate habitual, iterative, or progressive action by an agent, or an existing condition (in the case of nonagentive verbs), with the context sometimes narrowing the interpretation to one or two of these. This is illustrated for nonmotion verbs in (14).

<sup>14</sup>In complex clauses ('I left before the lightning struck'), the time referenced by one verb may be the point of reference for the time of another verb, rather than TLA, which is the prototype for interpreting the tense-aspect of a simple clause.

- (14) a. *ʔa<sup>M</sup>lá<sup>ʔM</sup> lía<sup>LM</sup> ha<sup>H</sup>. ɲí<sup>ʔH</sup> ʔnig<sup>M</sup>*  
 how? be<sup>^</sup>P3 at sit<sup>^</sup>P2 2s  
 How are things going at your house? [PROG]
- b. *ɲiá<sup>LM</sup>-hni ʔi<sup>M</sup> tē<sup>M</sup>-hni ʔɲég<sup>L</sup>*  
 walk<sup>^</sup>P1s-1s REL know<sup>^</sup>S1s-1s REFL<sup>^</sup>1s  
 I do what I please, or I am doing what I myself want  
 to do. [HAB, PROG]
- c. *ʔa<sup>L</sup>hág<sup>L</sup> hu<sup>H</sup> ʔi<sup>M</sup> lá<sup>LM</sup>-za si<sup>M</sup> ka<sup>L</sup>la<sup>ʔL</sup>híá<sup>L</sup> hmai<sup>H</sup>*  
 not<sup>^</sup>be COND REL be<sup>^</sup>P3-3 light every day  
 It is not as if they [shooting stars] become lights every day. [ITER]
- d. *lí<sup>M</sup>liu<sup>ʔLM</sup>-hni hu<sup>H</sup> lá<sup>ʔM</sup> hā<sup>M</sup> za<sup>M</sup> ca<sup>L</sup>-ciā<sup>M</sup> zía<sup>LM</sup>*  
 babble<sup>^</sup>P1s-1s COND as one 3 NEG-be<sup>^</sup>s heart<sup>^</sup>3  
 I am babbling like an idiot, or I babble like an idiot. [HAB, PROG]
- e. *hǐ<sup>LM</sup>-za giu<sup>ʔLH</sup> kǐg<sup>M</sup> ʔi<sup>M</sup> heǐ<sup>ʔLH</sup>*  
 smoke<sup>^</sup>P3-3 cigar one REL turn<sup>^</sup>around  
 He smokes very frequently. [ITER]
- f. *kǐg<sup>M</sup> ʔi<sup>M</sup> hǐ<sup>LM</sup>-za giu<sup>ʔLH</sup>*  
 one REL smoke<sup>^</sup>P3-3 cigar  
 He smokes continually. [HAB]
- g. *za<sup>M</sup> hǐ<sup>LM</sup> giu<sup>ʔLH</sup> bá<sup>ʔH</sup> ná<sup>LM</sup>*  
 3 smoke<sup>^</sup>P3 cigar AFF that  
 He is a smoker. [HAB]

In the case of verbs of motion, progressive forms may have a habitual or iterative reading, but not a progressive reading.

- (15) a. *zág<sup>LM</sup>-za hía<sup>H</sup> huǐ<sup>M</sup> kǐg<sup>M</sup> ʔi<sup>M</sup> heǐ<sup>ʔLH</sup>*  
 go<sup>^</sup>P3s-3 amid town one REL turn<sup>^</sup>around  
 S/he frequently goes to town (Valle Nacional). [ITER]
- b. *zág<sup>LM</sup>-za hía<sup>H</sup> kuǐ<sup>M</sup>*  
 go<sup>^</sup>P3-3 amid corn  
 He (habitually, iteratively) goes to his cornfield. [HAB, ITER, \*PROG!]  
 BUT NOT: \*He is going to his cornfield.

While interpreting forms like (15b) as nonprogressive might be challenged as subjective when they lack adverbials such as 'frequently', the use of plural verbforms provides further evidence that progressive FORMS of motion verbs do not have a progressive INTERPRETATION. Note that in (7)–(11) almost all plural forms of motion verbs are binomial, consisting of an unstressed element and a following stressed element, and note that the first element of the various plural verbforms is, in fact, a phonologically reduced singular motion verb. Students of Chinantec (Rupp 1989, Anderson 1989, Pace 1990, Westley and Merrifield 1990, Westley 1991) are currently referring to such prefixes as DIRECTIONAL prefixes, which may be proposed, not only to form plural motion verbs, but to form directional verbforms of most any verb, as in (16).

(16) a. *hi<sup>L</sup>-kieg<sup>M</sup>-za*                      *?ma<sup>M</sup> ha<sup>H</sup>- la<sup>M</sup>*  
 come<sup>^</sup>13-place<sup>^</sup>3s-3    wood    at    here  
 He will come and place the piece of lumber here.

b. *ma<sup>M</sup>-ka<sup>L</sup>-ŋi<sup>H</sup>-kiég<sup>H</sup>-za*                      *?ma<sup>M</sup> ha<sup>H</sup>- kia<sup>?LH</sup>-za*  
 PRF-PST-go<sup>^</sup>come<sup>^</sup>c-place<sup>^</sup>3s-3    wood    at    of<sup>^</sup>3-3  
 He already went and placed the piece of lumber at his  
 house and returned here.

Recall now that the Mixtec motion verbs are unique among Mixtec verbs in having a fourth inflectional form to mark HABITUAL (H) aspect. While there is no such fourth form for Palantla Chinantec verbs of motion in their full phonological forms, nor any such fourth form for any nonmotion verb (Merrifield 1968:28), there is a fourth aspectual form of the reduced motion verbs that form the directional prefixes. Table 1 of Merrifield 1968 (1968:23) lists all the one-way directional prefixes and is reproduced here as (17).

(17) 'go'	1s	1p	2	3	'come'	non3	3
H	<i>ŋi<sup>M</sup></i>	<i>za<sup>M</sup></i>	<i>gu<sup>M</sup></i>	<i>za<sup>M</sup></i>		<i>ha<sup>M</sup></i>	<i>ha<sup>M</sup></i>
P	<i>ŋi<sup>H</sup></i>	<i>za<sup>H</sup></i>	<i>gu<sup>H</sup></i>	<i>ŋi<sup>L</sup></i>		<i>ha<sup>L</sup></i>	<i>ha<sup>L</sup></i>
I	<i>ŋi<sup>H</sup></i>	<i>za<sup>H</sup></i>	<i>gu<sup>H</sup></i>	<i>za<sup>L</sup></i>		<i>ŋi<sup>H</sup></i>	<i>hi<sup>L</sup></i>
C	<i>ŋi<sup>L</sup></i>	<i>ŋi<sup>L</sup></i>	<i>ŋi<sup>L</sup></i>	<i>ŋi<sup>L</sup></i>		<i>u<sup>L</sup></i>	<i>u<sup>L</sup></i>

Now note in (18) that habitual and progressive forms may be distinguished in nonmotion verbs by means of these directional prefixes, but in (19) that a plural motion verb may only occur with the habitual form of the directional prefix, the progressive form being ungrammatical in this context.

- (18) a. *za<sup>M</sup>-kiég<sup>L</sup>-za*      *?ma<sup>M</sup>*    *ha<sup>H</sup>-* *hǵ<sup>M</sup>*  
 go<sup>^</sup>H3-place<sup>^</sup>3s-3    wood    at    ANA  
 He (habitually) goes to place wood at that (aforementioned)  
 place.
- b. *ŋi<sup>L</sup>-kiég<sup>L</sup>-za*      *?ma<sup>M</sup>*    *ha<sup>H</sup>-* *hǵ<sup>M</sup>*  
 go<sup>^</sup>P3-place<sup>^</sup>3s-3    wood    at    ANA  
 He has gone to place wood at that (aforementioned) place.
- (19) a. *za<sup>M</sup>-lǵ<sup>M</sup>-za*      *ha<sup>H</sup>-* *hǵ<sup>M</sup>*  
 go<sup>^</sup>H3-go<sup>^</sup>3p-3    at    ANA  
 They (habitually) go to that (aforementioned) place.
- b. *\*ŋi<sup>L</sup>-lǵ<sup>M</sup>-za*      *ha<sup>H</sup>-* *hǵ<sup>M</sup>*  
 go<sup>^</sup>P3-go<sup>^</sup>3p-3    at    ANA  
 They are going to that (aforementioned) place, *or*  
 They have gone to that (aforementioned) place.

While the progressive form of a motion verb may be read as habitual or iterative, it may also occur with the prefix *ma<sup>M</sup>-* (perfect). This prefix may occur with progressive or completive forms of verbs, as in (20).

- (20) a. *ma<sup>M</sup>-ka<sup>L</sup>-hái<sup>L</sup>-hni*    *si<sup>M</sup>*    *kia<sup>?</sup>LM-za*  
 PRF-PST-see<sup>^</sup>C1s-1s    paper    of<sup>^</sup>3-3  
 I have seen his/her book(s).
- b. *ma<sup>M</sup>-kǵ<sup>?</sup>M*      *ǵǵ<sup>M</sup>*    *?ǵ<sup>LM</sup>*  
 PRF-chew<sup>^</sup>P3    baby    tortilla  
 The baby already eats tortillas.

This prefix is probably equivalent to the cross-linguistic universal ALREADY proposed by Dahl (1985:129), which he finds closely related to his universal PFACT (= perfect). The use of this prefix with a verb of motion is appropriate as soon as a trip is initiated away from PLA or at the completion of a trip to PLA. When I get up from my friend's house and begin to leave, I announce my departure by the use of (21a). Until the moment of moving to go, I may speak of my impending plan to depart for home by using the intensitive form *ne<sup>?</sup>LH*; but as soon as I make the move, the progressive form with *ma<sup>M</sup>-* (perfect) is the verbform of choice. (21b) is also appropriate when a third person is seen on the way to his field. At the close of a trip, as in (21c), the completive verb with *ma<sup>M</sup>-* is used,

although a progressive-form verb of arrival might be used in this context also (discussed below).

- (21) a. *ma<sup>M</sup>-ŋa<sup>LM</sup>-hni*  
 PRF-go<sup>^</sup>home<sup>^</sup>P1s-1s  
 I am going home.
- b. *ma<sup>M</sup>-zá<sup>LM</sup>-za hĩa<sup>H</sup> kũĩ<sup>M</sup>*  
 PRF-go<sup>^</sup>P3-3 amid corn  
 He is on his way to his cornfield.
- c. *hñĩ<sup>M</sup> ma<sup>M</sup>-na<sup>M</sup>-gió<sup>L</sup> giu<sup>LH</sup>*  
 1s PRF-HOD-COME<sup>^</sup>C3 Sir  
 It is I who have come, Sir.

As in the case of the ungrammatical progressive form of (19b), the progressive forms *ŋa<sup>LM</sup>* or *zá<sup>LM</sup>* may not be used without the perfect prefix to obtain a progressive reading of the sort we might wish to give them based on the English free translations of (21a) and (21b). And while (19b) is unacceptable, the progressive form of (19a) may occur with the prefix *ma<sup>M</sup>*- (perfect) with a noniterative and nonhabitual reading, as in (22).

- (22) *ma<sup>M</sup>-za<sup>M</sup>-lé<sup>M</sup>-za ha<sup>H</sup>- hĩg<sup>M</sup>*  
 PRF-go<sup>^</sup>H3-go<sup>^</sup>3p-3 at ANA  
 They are going to that (aforementioned) place.

When the situation makes it clear that a perfective interpretation is implied, the perfect prefix is sometimes left unspoken. Thus, when the man of the house comes into view on his return from working in the gardens or from having gone to town to make purchases, either of the forms in (23) is appropriate without apparent differences in tense-aspect meaning.

- (23) a. *ʔéĩ<sup>H</sup> huĩ<sup>LH</sup> hog<sup>LM</sup>*  
 ANA John come<sup>^</sup>home<sup>^</sup>P3  
 Here comes John now (he has returned home to PLA).
- b. *ʔéĩ<sup>H</sup> huĩ<sup>LH</sup> ma<sup>M</sup>-hog<sup>LM</sup>*  
 ANA John PRF-come<sup>^</sup>home<sup>^</sup>P3  
 Here comes John now (he has returned home to PLA).

While (21a) and (22) may translate best as progressive forms in English, the facts seem to disallow such an interpretation for the Chinantec forms themselves. And so we come to the point of all this. ONE WAY TO ACCOUNT FOR THIS APPARENT ANOMALY IS TO CONSIDER CHINANTEC VERBS OF MOTION AS MOMENTARY VERBS, of which there are many in Palantla Chinantec—verbs which occur in only intentive or completive form, as for example the verb *gue<sup>M</sup>* ‘go to sleep’, which requires the stativizing prefix *ri<sup>M</sup>*- to yield anything near to a progressive reading (actually stative).

(24)	<i>gué<sup>L</sup>-za</i>	sleep <sup>^</sup> I3-3	‘s/he will go to sleep’
	<i>ka<sup>L</sup>-gue<sup>M</sup>-za</i>	PST-sleep <sup>^</sup> C3-3	‘s/he went to sleep’
	<i>ri<sup>M</sup>-gué<sup>L</sup>-za</i>	STA-sleep <sup>^</sup> S3-3	‘s/he is asleep’

It is insufficient to notice that Chinantec motion verbs have three inflectional forms, including progressive forms, without also noting that the progressive forms do not easily yield to a progressive reading. While the facts concerning the form of Diuxi Mixtec verbs of motion differ considerably in detail from those of the corresponding Palantla Chinantec verbs, it is striking to find a number of similarities in both form and even in usage between the two distantly related languages. These patterns of use of the verbs of motion, as well as their morphological patterning, need to be considered both in the description of the languages in their own terms, as well as in the formulation of a general statement that might encompass the larger family of languages of which they are part.

**Verbs of arrival.** The foregoing discussion has addressed only the verbs of motion. Verbs of arrival are listed in (25)–(28).

(25) ‘arrive there (at nonbase away from PLA)’

	1s	2s	3s	1p	2p	3p
P	<i>ziég<sup>L</sup></i>	<i>ziég<sup>ɽL</sup></i>	<i>ziég<sup>L</sup></i>	<i>zi<sup>L</sup>niag<sup>LH</sup></i>	<i>zi<sup>L</sup>no<sup>ɽLM</sup></i>	<i>zi<sup>L</sup>lé<sup>M</sup></i>
I	<i>ziég<sup>LH</sup></i>	<i>ziég<sup>ɽLH</sup></i>	<i>ziég<sup>LH</sup></i>	<i>zi<sup>H</sup>niag<sup>LH</sup></i>	<i>zi<sup>H</sup>no<sup>ɽLM</sup></i>	<i>zi<sup>H</sup>lé<sup>M</sup></i>
C	<i>ziég<sup>L</sup></i>	<i>ziég<sup>ɽL</sup></i>	<i>ziég<sup>L</sup></i>	<i>zi<sup>L</sup>niag<sup>LH</sup></i>	<i>zi<sup>L</sup>no<sup>ɽLM</sup></i>	<i>zi<sup>L</sup>lé<sup>M</sup></i>

(26) ‘arrive home there (at base away from PLA)’

	1s	2s	3s	1p	2p	3p
P	<i>ziá<sup>ɽL</sup></i>	<i>ziá<sup>ɽL</sup></i>	<i>ziá<sup>ɽL</sup></i>	<i>zi<sup>L</sup>niag<sup>ɽL</sup></i>	<i>zi<sup>L</sup>no<sup>ɽL</sup></i>	<i>zi<sup>L</sup>lia<sup>L</sup></i>
I	<i>ziá<sup>ɽLH</sup></i>	<i>ziá<sup>ɽLH</sup></i>	<i>ziá<sup>ɽLH</sup></i>	<i>zi<sup>H</sup>niag<sup>ɽL</sup></i>	<i>zi<sup>H</sup>no<sup>ɽL</sup></i>	<i>zi<sup>H</sup>lia<sup>L</sup></i>
C	<i>ziá<sup>ɽL</sup></i>	<i>ziá<sup>ɽL</sup></i>	<i>ziá<sup>ɽL</sup></i>	<i>zi<sup>L</sup>niag<sup>ɽL</sup></i>	<i>zi<sup>L</sup>no<sup>ɽL</sup></i>	<i>zi<sup>L</sup>lia<sup>L</sup></i>

(27) 'arrive here (at nonbase PLA)'

	1s	2s	3s	1p	2p	3p
P	<i>guĩ<sup>LM</sup></i>	<i>guĩ<sup>PLM</sup></i>	<i>guĩ<sup>LM</sup></i>	<i>u<sup>L</sup>niag<sup>LH</sup></i>	<i>u<sup>L</sup>no<sup>PLH</sup></i>	<i>u<sup>L</sup>lɛ<sup>M</sup></i>
1	<i>guĩ<sup>M</sup></i>	<i>guĩ<sup>PM</sup></i>	<i>guĩ<sup>M</sup></i>	<i>u<sup>H</sup>niag<sup>LH</sup></i>	<i>u<sup>H</sup>no<sup>PLH</sup></i>	<i>u<sup>H</sup>lɛ<sup>M</sup></i>
C	<i>guĩ<sup>L</sup></i>	<i>guĩ<sup>PL</sup></i>	<i>guĩ<sup>L</sup></i>	<i>u<sup>L</sup>niag<sup>LH</sup></i>	<i>u<sup>L</sup>no<sup>PLH</sup></i>	<i>u<sup>L</sup>lɛ<sup>M</sup></i>

(28) 'arrive home here (at base PLA)'

	1s	2s	3s	1p	2p	3p
P	<i>guĩ<sup>PLM</sup></i>	<i>guĩ<sup>PLM</sup></i>	<i>guĩ<sup>PLM</sup></i>	<i>u<sup>L</sup>niag<sup>PL</sup></i>	<i>u<sup>L</sup>no<sup>PL</sup></i>	<i>u<sup>L</sup>lia<sup>L</sup></i>
1	<i>guĩ<sup>PL</sup></i>	<i>guĩ<sup>PL</sup></i>	<i>guĩ<sup>PL</sup></i>	<i>u<sup>H</sup>niag<sup>PL</sup></i>	<i>u<sup>H</sup>no<sup>PL</sup></i>	<i>u<sup>H</sup>lia<sup>L</sup></i>
C	<i>guĩ<sup>PL</sup></i>	<i>guĩ<sup>PL</sup></i>	<i>guĩ<sup>PL</sup></i>	<i>u<sup>L</sup>niag<sup>PL</sup></i>	<i>u<sup>L</sup>no<sup>PL</sup></i>	<i>u<sup>L</sup>lia<sup>L</sup></i>

As mentioned earlier, all parties to this discussion about Otomanguean verbs of motion and arrival agree that verbs of arrival are momentary verbs. In the case of Palantla Chinantec, verbs of arrival do have morphologically progressive forms in the same way as verbs of motion do. Whereas the progressive form of a motion verb may occur with habitual or iterative readings in the absence of the prefix *ma<sup>M</sup>-* (perfect), verbs of arrival never have such readings and never occur without the prefix *ma<sup>M</sup>-* (perfect).<sup>15</sup> The prototypical use of first-person progressive forms of the verbs in (27) and (28) are as greetings upon arrival at someone's house or upon returning home after an absence. (29a) is probably more commonly heard in this context than the completive form of the verb of motion cited in (21c).

(29) a. *hni<sup>M</sup> ma<sup>M</sup>-na<sup>M</sup>-guĩ<sup>LM</sup> giu<sup>PLH</sup>*  
 1s PRF-HOD-arrive^here^p3 Sir  
 It is I who have come (arrived here), Sir.

b. *ma<sup>M</sup>-u<sup>L</sup>niag<sup>PL</sup> hni<sup>H</sup> hmi<sup>H</sup>zág<sup>L</sup>*  
 PRF-arrive^home^here^p1p 1x Palantla

*-kala? ná<sup>H</sup> ?io<sup>LH</sup>*  
 again ASSEV woman

We have come back again to Palantla, you see, Madame.

Note that plural verbs of arrival are binomial in the same way as plural verbs of motion and that the second element of these binomial stems is the same for corresponding verbs of the two sets (with minor inflectional differences). The fact that verbs of arrival are uncontestedly momentary

<sup>15</sup>This is also true in Tepetotutla Chinantec (Westley and Merrifield 1990:112).

verbs in Mixtec, Zapotec, and Chinantec supports the contention that verbs of motion are momentary verbs in Chinantec, at the very least, given the morphological relatedness of the two sets of verbs in their plural forms.

**Inanimate intransitive verbs.** All of the verbs discussed above occur with animate agents as subject, and are termed animate intransitive (AI) verbs in Chinantec studies. There are also inanimate intransitive (II) verbs of motion and arrival which take an inanimate patient as subject ('the package arrived'). They are closely related phonologically to their AI counterparts and are listed in (30)–(31). Since inanimate subjects are by definition third persons, these verbs have just three singular forms and three plural forms each.

- |      |   |                      |                                 |                                |                           |                    |                      |                                |                        |
|------|---|----------------------|---------------------------------|--------------------------------|---------------------------|--------------------|----------------------|--------------------------------|------------------------|
| (30) |   | 'go'                 | 'go home'                       | 'come'                         | 'come home'               |                    |                      |                                |                        |
|      | P | $\eta\acute{o}^{LM}$ | $\eta i^L \acute{l}\acute{e}^M$ | $\eta a^{\mathcal{P}LM}$       | $\eta i^L \acute{l}e i^L$ | $h\acute{a}g^{LM}$ | $h a^L \acute{l}i^M$ | $h a g^{\mathcal{P}LM}$        | $h a^L \acute{l}e i^L$ |
|      | I | $\eta\acute{o}^L$    | $z a^L \acute{l}\acute{e}^M$    | $z\acute{a}g^{\mathcal{P}L}$   | $z a^L \acute{l}e i^L$    | $h i\acute{a}g^L$  | $h i^L \acute{l}i^M$ | $h i\acute{a}g^{\mathcal{P}M}$ | $h i^L \acute{l}e i^L$ |
|      | C | $\eta\acute{o}^L$    | $\eta i^L \acute{l}\acute{e}^M$ | $\eta\acute{a}^{\mathcal{P}L}$ | $\eta i^L \acute{l}e i^L$ | $h\acute{a}g^L$    | $h a^L \acute{l}i^M$ | $h\acute{a}g^{\mathcal{P}L}$   | $h a^L \acute{l}e i^L$ |
- 
- |      |   |                      |                              |                                 |                        |                 |                            |                              |                      |
|------|---|----------------------|------------------------------|---------------------------------|------------------------|-----------------|----------------------------|------------------------------|----------------------|
| (31) |   | 'arrive there'       | 'arrive home there'          | 'arrive here'                   | 'arrive home here'     |                 |                            |                              |                      |
|      | P | $z i\acute{e}g^L$    | $z i^L \acute{l}\acute{e}^M$ | $z i\acute{a}g^{\mathcal{P}L}$  | $z i^L \acute{l}e i^L$ | $g o g^{LM}$    | $u^L \acute{l}\acute{e}^M$ | $g o g^{\mathcal{P}LM}$      | $u^L \acute{l}e i^L$ |
|      | I | $z i\acute{e}g^{LH}$ | $z i^H \acute{l}\acute{e}^M$ | $z i\acute{a}g^{\mathcal{P}LH}$ | $z i^H \acute{l}e i^L$ | $g\acute{u}g^M$ | $u^L \acute{l}\acute{e}^M$ | $g\acute{o}g^{\mathcal{P}L}$ | $u^L \acute{l}e i^L$ |
|      | C | $z i\acute{e}g^L$    | $z i^L \acute{l}\acute{e}^M$ | $z i\acute{a}g^{\mathcal{P}L}$  | $z i^L \acute{l}e i^L$ | $g o g^L$       | $u^L \acute{l}\acute{e}^M$ | $g\acute{o}g^{\mathcal{P}L}$ | $u^L \acute{l}e i^L$ |

These impersonal verbs have the same grammatical and semantic characteristics as their AI counterparts. Typical sentences with these verbs are presented in (32).

- (32) a.  $ma^M$ - $gog^{\mathcal{P}LM}$   $li\acute{o}^{LH}$   
 PRF-arrive<sup>^</sup>home<sup>^</sup>here<sup>^</sup>P<sub>3s</sub> package  
 The package has come back (arrived back here).
- b.  $\acute{p}\acute{e}i^H$   $si^M$   $ka^L$ - $z i^L \acute{l}e i^L$   
 ANA paper PST-arrive<sup>^</sup>here<sup>^</sup>C<sub>3p</sub>  
 The books have arrived (here).
- c.  $na^L$   $b i^{\mathcal{P}H}$   $h i\acute{a}g^{\mathcal{P}M}$   $si^M$   
 NOW AFF come<sup>^</sup>I<sub>3s</sub> paper  
 The letter will come soon.



### 3. Final remarks

Most of the argumentation occurs throughout the paper, so that little needs to be said here by way of summing up beyond a reminder that a linguistic analysis should attempt to place the patterns of language in bold relief. As we attempt to do this, we need to remember that our analysis is but a theory of what a language is like, a metaphor that we hope will convey a measure of understanding of how a language is constructed and used.

Whether or not Diuxi Mixtec verbs of motion are momentary is not an ontological question. A statement to the effect that they are is instrumental in the sense that it accounts for the appropriateness of their use in well-defined situations in ways that other explanations do not. I continue to believe that the explanation we set forth for Diuxi was explanatory in this sense. I do not believe that the recognition of another pattern in which they participate—a morphological paradigm of undoubted historical value—necessarily falsifies the insight a momentary analysis brings to the data.

It is always possible, of course, that our understandings of the Diuxi data are partial or in error. The discussion so far has not shown this to be the case. As we learn more about these Otomanguean languages and gain experience in the comparison of tense-aspect systems in a wider range of human languages, we can hope that our metaphors about them will be PROGRESSIVELY more helpful and satisfying.

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## The Function of Time Words in Guarayu

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Robert Longacre made a very powerful statement in *The Grammar of Discourse* when he wrote, "language is language only in context" (1983:xv). He immediately clarifies on the same page by adding:

For too long a time, linguistics has confined itself to the study of isolated sentences, either such sentences carefully selected from a corpus or, more often than not, artfully contrived so as to betray no need for further context.

Most of us, either through personal experience or through listening to the experience of others who have worked with languages, have heard of the MYSTERY PARTICLES or other linguistic phenomena which could never be properly analyzed on the word, clause, or even sentence level, but which gave up their secrets only when analyzed in light of the whole context, the discourse. Longacre gives the following list of such phenomena he has found in natural languages:

Among these problems have been deixis and the use of articles; pronominalization, and other anaphoric ways of referring to a participant; better understanding of tense, aspect, mode, and voice in verbs; use of optional temporal and spatial expressions; the function of extra-position, left dislocation, and other such features; subject selection, object selection, and other focus phenomena; the function and thrust of conjunctions and other sequence signals; and the function of mystery particles which occur in connected context in some languages, which the native speaker knows where to use and where not to use, but which defy translation. (1983:xv)

I would like to give an illustration of this from Guarayu,<sup>1</sup> a language of the Tupi-Guarani language family (Gregores and Suárez 1967:15) with which my wife and I worked in Bolivia.

Early in the analysis of the language I tried to elicit words relating to time—past, present, and future. I soon found that tense only had two realizations in the verb phrase, **REALIZED** (the unmarked form) and **UNREALIZED**. In a truer sense these indicate moods of the verb rather than tense. There was no way of distinguishing present from past, recent past, or distant past on the phrase level. I was able sometimes to distinguish the time frame by the use of a time word or phrase on the clause level. There were only a few clauses out of a large corpus, however, in which I was able to make this distinction. The vast majority of sentences gathered from texts were ambiguous in this respect.

Are they truly ambiguous? By looking only at the lexical meaning of the words within the sentence I could not determine whether the sentence was present tense or some form of the past tense. In normal everyday speech, however, this was perfectly clear to the hearers. As I analyzed the language from a discourse perspective (Newton 1978:198),<sup>2</sup> I found that a time word or phrase occurs in a narrative at the very beginning of the **SCENE** (setting) of a story and is sometimes repeated at the end of the scene. This is illustrated in (1) by the time word *araka?e* (distant past), from a story of *The Fox and the Jaguar*.

- (1) *Araka?e there was a fox-man. He befriended his uncle. His uncle was a jaguar araka?e.*

The time frame of the story is set by the speaker, in this example, in relation to the time in which the speaker gives his story. That is, the story happened in the distant past and outside of the experience of the story teller.

This analysis, however, does not give the total meaning or function of time words, nor does it indicate where they are to be used in a discourse.

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<sup>1</sup>There are approximately 5500 speakers of Guarayu in the central rain forests of Bolivia, South America, the majority of whom live in five main villages near the confluence of the White River and the San Miguel-San Julian River in the Department of the Beni. I worked in the village of Urubicha (63°W and 15°S), one of the five villages, between 1973 and 1985. The major part of the language analysis was completed by 1976.

<sup>2</sup>Dr. Ursula Wiesemann, of the Brazil Branch of the Summer Institute of Linguistics, held three workshops in Bolivia in 1973, 1975, and 1976. During this time, Dr. Wiesemann was a great help to me in analyzing different types of Guarayu texts from a discourse perspective. It was during these workshops that three of the functions of time words were discovered.

For instance, in the same story of *The fox and the jaguar*, once the scene is established, the jaguar initiates action as illustrated in (2).

- (2) *The jaguar said to the fox, "Let's go hunt for something far away to eat." So they went along the marsh in search of something. They killed a cow in the marsh. Then his uncle [the jaguar] said, "Return, go, and take this to your aunt so that she can eat," he said to him concerning the beef. He [the fox] returned bringing it. When it was dark he arrived at his aunt's, bringing it with him. Then his aunt said to him, "Where is your uncle staying?" "He is staying there in the marsh," he said. "He is keeping an eye on the meat," he said to his uncle's wife. "So my uncle sent this beef to you," he said. "My uncle said, 'Later on sleep with her,' " he said to his aunt araka?e.*

I could not at first figure out why the storyteller had used *araka?e* there in the middle of the episode! After further analyzing the text, I discovered that up to that point Jaguar had been taking the initiative. When Fox returned to the house with the meat for Jaguar's wife, he was simply doing what Jaguar proposed. It was at this point in the story that Fox took the initiative, for his uncle had said nothing about him sleeping with his wife!

This gave me two very different functions of the time word, and as I continued analyzing other texts I found that the general time word has at least four functions in Guarayu narrative:

- a. to indicate the time frame for the entire text,
- b. to optionally indicate the end of an episode,
- c. to indicate a significant change of the initiator of action, and
- d. to indicate a pivotal point in an episode, especially in the peak episode presented in a narrative.

Had I not looked at these stories and analyzed their constituent parts within their context—that is, from the perspective of the whole discourse—I would have missed an important part of the function of these time words in narrative texts, and I would not have been able to predict when to use them throughout the text.

This has ramifications for translating material from one language to another. If we are translating a narrative into Guarayu, and it is to be dynamic, then we need to know where to put time words so that they perform their proper functions and so that the translated narrative has the proper punch.

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## **Clause and Sentence**



## On Defining Grammatical Levels

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In 1964 Robert Longacre's first major theoretical (and general) volume *Grammar Discovery Procedures* (hereafter GDP) was published. Unfortunately, shortly after its appearance it was attacked by proponents of the then-prominent U.S. theory, resulting in its being ignored by many scholars and review editors, primarily because it was outside of the mainstream. Fortunately, others did discover it and have given many of its insights a prominent place in their grammatical descriptions. Much of what was included therein is still of great value. The introduction, for example, contains many useful ideas, and the chapters of clause, phrase, and word, remain very helpful for those wishing to analyze a language other than their own. The chapter on the sentence, however, has long since been replaced by further work by Longacre himself—and the later publications (e.g., Longacre 1970; Ballard, Conrad, and Longacre 1971a, b; and Longacre 1983) should be consulted for that level.<sup>1</sup>

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<sup>1</sup>I believe that this article is of the type quite appropriate for a festschrift. Although it presents little that is new, it focuses on one major insight of the honoree and offers further discussion on that insight, both to demonstrate its usefulness and to promote its wider knowledge. Another purpose is also to thank Bob for his unique contributions to linguistic thought and analysis, many of which I have used to considerable profit both in grammatical analyses, and in the teaching of graduate linguistic courses.

The idea in GDP on which I wish to focus is the method of deciding on how to assign a given string to a particular grammatical level.<sup>2</sup>

### 1. Basic definition of LEVEL

The insight on which I wish to focus permeates the entire volume (GDP)—namely, that units of a given level are composed of nuclear constituents having a unique relationship. For the purposes of this presentation I will assume that all nuclear units are obligatory to the construction in question in order not to complicate this discussion—although Longacre and others have also considered DIAGNOSTIC as a feature which will, on occasion, allow nonobligatory units to be considered nuclear. Simply put, in many languages of the world, clauses are clauses because (among other optional constituents) they contain a subject and a predicate. Although many other theories (including tagmemics itself which was clearly the central theoretical stance of GDP) have added other features to clauses in the description of many languages—such as ROLES or the CASES of Fillmore, Chafe, or Platt, and the various other relationships (e.g., circumstance, carrier, identifier) described in systemic grammar. The basic inclusion of a subject-predicate relationship at the clause level has been virtually included in all language descriptions.<sup>3</sup> According to Longacre, however, the function of constituents becomes the primary factor in the determination of the assignment of a particular string to a level. When one finds two or more units whose constituents have the same nuclear constituents, they are considered to be on the same grammatical level.<sup>4</sup>

Although the functional relationships of nuclear constituents are primary in this definition of LEVEL and are sufficient at the clause level (that is, virtually every clause will have a subject-predicate relationship with the only exceptions being, for example, stative clauses with dummy subjects or

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<sup>2</sup>Actually, methods for this definition are part of what caused rejection of this volume by some. The methods are foreshadowed in the volume's title—*Discovery Procedures*. Some read this as AUTOMATIC procedures (especially those in the then-prominent theory where such procedures were overtly rejected). But Longacre himself describes them as GUESS-AND-CHECK procedures and clearly meant them as universal tendencies or features which the analyst could use as good guesses but would have to check rigorously against the data to discover whether or not they did apply in a particular circumstance.

<sup>3</sup>In some descriptions, of course, on the other hand, a NP-VP sequence is considered as primary, but a subject-predicate description is also generally allowed.

<sup>4</sup>I am well aware that others have in effect used this criterion in analyzing data, but Longacre, I believe, first made it explicit and applied it consistently.

no subjects such as *it's raining* or Spanish *llueve* which can be included on other grounds), such a unique relationship will often not be sufficient for units on other levels. For English, Longacre in *GDP* (1964:75) proposes three major types of phrases—single-headed (e.g., *a big apple*), double headed (e.g., *John and Mary*), and relator-axis (e.g., *to Washington*). His later suggestion that these three types be considered layers of one level (1983:290) does not change the comments made here. Hierarchical considerations must also enter. All these three types of units are also considered to be phrases because they normally (or most frequently) function as fillers of clause-level slots—with clauses higher than phrases in the grammatical hierarchy. Also, for a particular language, of course, other slots or functions will also need to be taken into consideration. For example, single-headed constructions may have both nouns and verbs as heads, with different types of modifiers going with nouns than with verbs (e.g., restrictor with nouns and manner with verbs).

## 2. On clause versus sentence

Longacre's basic principle for distinguishing levels is useful in illuminating a pesky problem in linguistic description—namely, the analysis of strings which appear to be the same (see Longacre 1983:300) but which, in fact, contain different types of relationships—especially strings which appear to be clauses but actually are not. I will here call upon Longacre's publications which appeared after *GDP*, in which he explored further sentence structure, for example, those appearing in 1970 and 1983. One persistent problem is a confusion of subject versus topic. Some scholars, e.g., Halliday, seem to feel that all clauses contain topics (a theme-rheme structure, in his terms—see 1985:38-67).

Longacre's proposal, however, seems to be much more satisfactory, namely, that topics require comments, and they are a bipartite constituency which is different from the clause-level subject-predicate relationship and actually function at a higher level. Part of the reason for this latter conclusion is that very often topics and comments are both manifested by clauses, and Longacre's sentence level is, primarily, the place where clauses are strung together. Longacre, therefore, would analyze *John came yesterday* as a clause and *Yesterday, John came* (when spoken with a pause after *yesterday* and different intonation contours on *yesterday* and on *John came*) as a sentence. Within the clause, there are three slots—subject, predicate, and time—while within the sentence, there are only two—a margin of time plus a base. It would also be possible, of course, to have a related clause *Yesterday John came* as an emphatic variant of the one with

the more common order. Several years ago, at a work session of a Georgetown Roundtable Conference I heard an informal presentation by Sandra Thompson and Paul Hopper, suggesting that *Yesterday John came* and *Yesterday, John came* should be analyzed as different strings. Longacre's solution of postulating their occurrence on two different levels does indeed seem to be a useful solution.

In his publications on the sentence after GDP, Longacre first presented a detailed analysis of the sentence (1970) and later postulated a deep versus a surface grammar (e.g., Ballard, Conrad, and Longacre 1971a and 1971b and Longacre 1983), but I have limited the discussion here to surface structures. Levels of his deep structure, however, could also be described in the same way, namely, via the different relationships at each level.

### 3. Above the sentence

Although most scholars, including Longacre himself, generally describe components of structures larger than the sentence in a global fashion, that is, nonlinearly, to some degree at least, distinctions between various high levels should also be made via a description of relationships between constituents. Granted, the varieties of such relationships are usually much more limited in levels above the sentence than in the lower levels. That is, one may find a theme-development structure, say, at a paragraph level, and an aperture, stage, peak, closure, finis structure (Longacre 1983:22) at a story level. Other more complicated relationships also occur in various types of discourse. For levels higher than the sentence, however, relationships between constituents do seem to often play a lesser role, and more global features (such as tense restrictions, etc.) to play a more prominent role in the definition of level. Longacre's more recent publications (e.g., 1989), covering a good number of discourse features, should be consulted.

### 4. Conclusion

Therefore, an insight of Longacre, published nearly 30 years ago, is still valuable today in the definition of grammatical levels. As stated earlier, this is but one of the many useful insights published in GDP, which scholars today would be well advised to consult when wishing to describe a language.

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## Syntax-88: The New Binarism

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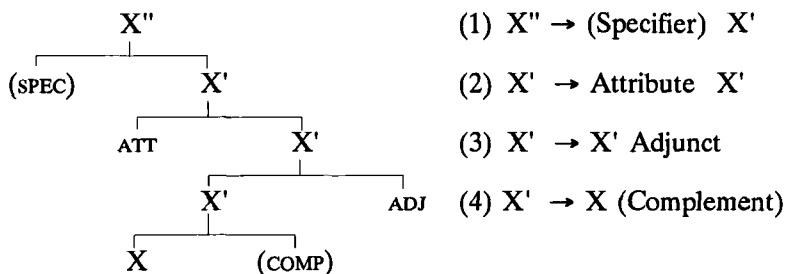
A new binarism has emerged for 1988 in the form of X-bar syntax in which all construction is binary, all construction is endocentric, and constituents, before movement, are generated in surface order. This review of the new binarism is intended to show the state of X-bar syntax within Government and Binding theory. It is based in large part upon Radford (1988), but is not restricted to that source.

### 1. Phrase level

Phrase-level structure is generated by applying the principles of X-bar syntax to lexical categories. These principles are later applied to nonlexical categories to form clause structures.

**1.1. X-bar syntax.** X-bar syntax (Jackendoff 1977, Radford 1988) begins with the principle that between words and full phrases there are small phrases, resulting in three levels of structure—FULL PHRASE, SMALL PHRASE, and WORD. These are labelled respectively as X'' (X double-bar), X' (X-bar) and X (any word category). The structure of X-bar syntax is given in (1).

## (1) X-bar syntax (Radford 271)



Rule 1. Specifier rule is obligatory and reduces X'' (full phrase) to X' (small phrase). The specifier is optional.

Rule 2. Attribute rule, for premodifiers, is optional and recursive. Attribute is daughter and left sister of X'.

Rule 3. Adjunct rule, for postmodifiers, is optional and recursive. Adjunct is daughter and right sister of X'.

Rule 4. Complement rule is obligatory and reduces X' (small phrase) to X (word category). The complement is optional.

**1.2. Immediate constituent analysis.** X-bar syntax is reminiscent of Immediate Constituent (IC) analysis from Bloomfield (1933) to Hockett (1958). Every construction is successively cut into two parts until no further cuts are possible. Within IC analysis there were certain practical rules for endocentric phrase construction.

(a) Locate the head word of the phrase.

(b) Cut premodifiers beginning at the leftmost constituent.

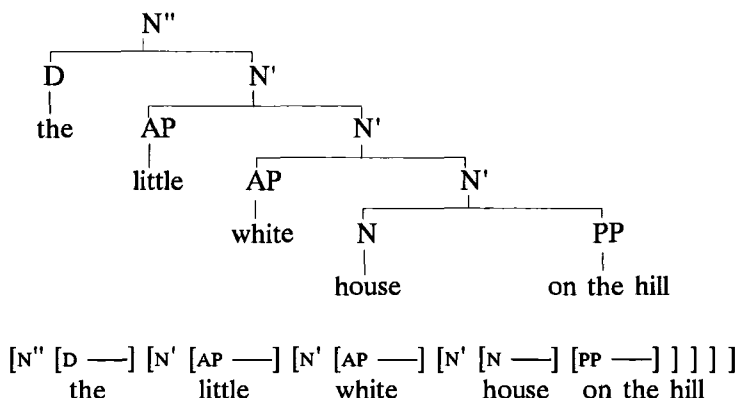
(c) Cut postmodifiers beginning at the rightmost constituent.

When these rules are applied to the noun phrase, an IC analysis results, as in (2). If this structure is inverted, with minor changes in labelling, an X-bar structure is produced, as in (3).

## (2) IC analysis

The	little	white	house	on the hill
			N	PP (Ad)
		AP	N'	
	AP	N'		
D	N'			
N''				

## (3) X-bar noun phrase



**1.3. Phrase types.** All categories are developed by analogy with the noun phrase, with the phrase structure always binary, always endocentric, and always consonant with surface order. These rules are subject to the endocentricity and modifier constraints and apply to the categories noun phrase (NP), verb phrase (VP), adjective phrase (AP), adverb phrase (ADV), and prepositional phrase (PP).

The ENDOCENTRICITY CONSTRAINT states that, in theory, any level category can branch into an equal or lower level category. A category cannot be vacuously recursive, that is, it cannot be rewritten as itself without branching.

- (4) Endocentricity constraint (Radford 261). All constituent structure rules are of the form:

$$X^n \rightarrow \dots X^m \dots, \text{ where } n \geq m \text{ and } n \neq m \text{ if } X^n \text{ is nonbranching.}$$

The MODIFIER MAXIMALITY CONSTRAINT states that, in practice, if the modifying category is not to be expanded, it is simply listed as a full phrase, XP, where X = the modifying category; but if the modifying category is to be expanded, it is introduced as X' and expanded according to the regular rules for X-bar syntax.

- (5) Modifier maximality constraint (Radford 263)

*Every nonhead term in the expansion of a rule must itself be a maximal projection of some category.*

**1.4. Phrase generation.** With these rules, the structure of all types of phrases is the same. Any phrase may be computer-generated by answering a series of questions, given the type of phrase, the head of the phrase, and the phrase to be generated.

- (6) Specifier (Y/N)? If No, X'' goes to X' without branching. If Yes, identify the category of specifier and list the specifier. X'' then branches into specifier and X'.
- (7) Attribute (Y/N)? If No, skip this rule since it is optional. If Yes, identify the category and list the attribute. X' then branches into attribute and X'. Attribute is daughter and left sister of X'.
- (8) Adjunct (Y/N)? If No, skip this rule since it is optional. If Yes, identify the category and list the adjunct. X' then branches into X' and adjunct. Adjunct is daughter and right sister of X'.
- (9) Complements (Y/N)? If No, X' goes to X without branching. If Yes, identify the categories and list the complements. X' then branches into X and its complements.

These rules, (6)–(9), written into a computer program, can draw the perfect X-bar syntax tree for any category. The program is not analytic; the user makes the decisions. But once the decisions are made, the computer can draw the structural tree accordingly.

Making decisions in X-bar syntax is not always without problems, but decisions have to be made. How is specifier different from attribute? How is complement different from the optional modifiers, attribute and adjunct? These two questions are addressed in §§1.6-7.

**1.5. Specifier vs. attribute.** Specifier is an optional element in an obligatory rule and should take precedence over attribute, which is a premodifier introduced by optional rule. Deciding what is the specifier for the various phrase types is a problem. One practical rule is that specifier precedes attribute when both occur.

Noun phrases have optional determiners. It seems pretty obvious that the determiner class, in its widest sense, is the specifier for noun phrases. Adjectives, and sometimes nouns, are attributes.

- (10) NP: *the little white house*

Verb phrases have specifiers predetermined by the system in use here (following Jackendoff). The only specifiers for verb phrases are the aspectual verbs *have* (perfect) and *be* (progressive) or both. Attributes for verb phrases are VP-adverbs.

- (11) VP: *will have completely read the book* (Radford 240)

Adjective phrases have a motley class of premodifiers, including intensifiers—*very, quite, too, so*; demonstratives—*this, that*; comparatives—*more, most*. They call this category DETERMINER and use it as a specifier. The adverb class serves as attributes.

- (12) AP: *so utterly incompetent* (Radford 245)

Adverb phrases use the same determiner class as specifiers and occasionally have other adverbs as attributes. Some analysts would like to treat adjectives and adverbs as a single class.

- (13) ADVP: *quite independently of me* (Radford 245)

Prepositional phrases take a limited set of determiners as their specifiers, including *so, right*, and occasionally have adverbs as attributes.

- (14) PP: *right on the top shelf* (Radford 246)

In IC analysis one of the watchwords was BEWARE OF INTERNAL MODIFICATION. In a phrase like *so completely independent*, the adverb *completely* modifies *independent*, but what does *so* modify? Either *so* modifies *completely* and is a specifier for the adverb and the adverb phrase is an attribute, or *so* modifies *independent* and is a specifier for the adjective and the adverb is an attribute. Or it may be that the structure is ambiguous between the two.

**1.6. Complements vs. adjuncts.** The notion COMPLEMENT is based on the traditional verbal complement. Complements complete the meaning of the head “in an intuitively fairly obvious sense” (Radford 1988:176). Adjuncts add optional characteristics to the head.

*Verbal complements.* Verbal complements are predetermined by logical structure. One-place predicates have no complement, two-place predicates have a single complement, and three-place predicates have two complements, violating the elsewhere-consistent binary structure. The theory also

uses thematic relations, a role-labelled logical structure. The subject and all verbal complements are role-labelled arguments. Adjuncts, on the other hand, are not part of the argument structure that characterizes a particular verb. In (15), the verb *give* requires three arguments, AGENT, THEME, and GOAL. It takes two complements, THEME and GOAL. The adverb *yesterday* is an adjunct of time, not part of the verbal logical structure.

(15) VP: *John /gave /Mary /the book /yesterday.* (Radford 373)

*Adjective complements.* Since adjectives may be predicates, they too have a logical structure. All transitive adjectives have a single complement, intransitive adjectives have no complement. In (16), the adjective *afraid* requires two arguments, a LOCATION (experiencer) and a THEME. The direct object of the transitive adjective is a complement. The adverb *sometimes* is an adjunct of time.

(16) AP: *Harry /is afraid /of the dark /sometimes.*

*Noun complements.* The distinction between complement and adjunct for other phrases is determined by analogy with the verb. For noun phrases, this determination can be made by verbalizing the noun to reveal the logical structure associated with the noun. Noun complements may precede or follow the head noun. The complement is always closer to the head than either attributes or adjuncts. Precomplements follow attributes; postcomplements precede adjuncts. In (17), since *a student of physics* is one who studies physics, and the verb *study* has a direct object, the phrase *of physics* is a postcomplement. Since the phrase *with long hair* is not the object of the verb *study*, it is an adjunct, not a postcomplement.

(17) NP: *a /student /of physics /with long hair* (Radford 192)

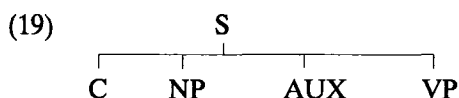
In (18), since *physics student* is one who studies physics, the noun *physics* is a precomplement. Since *Cambridge* is not the object of the verb *study*, it is an attribute, not a precomplement.

(18) NP: *a /Cambridge /physics /student* (Radford 198)

## 2. Clause level

Clause-level structure is generated by extending the principles of X-bar syntax to nonlexical categories such as complementizer (COMP or C) and inflection (INFL or I). The S (sentence) symbol is no longer useful.

**2.1. Complementizer.** C (Radford 293) is a nonlexical, base-generated category that marks a position in sentence structure. This position is filled by the word class, COMPLEMENTIZER, in dependent clauses, but may be empty in main clauses. For main clauses, the position is used as a landing site for the auxiliary in subject-auxiliary inversion. The basic sentence structure is not simply NP – AUX – VP (Chomsky 1965) but C – NP – AUX – VP.



The problem with this structure is that (a) it is obviously not binary and (b) it does not conform to triple-X bar syntax. But let us suppose that nonlexical categories such as COMP do occur at three levels in the same way as word-level categories. What use would there be for C'' and C' and how are they defined?

(20) CP = Complementizer phrase (Radford 505)

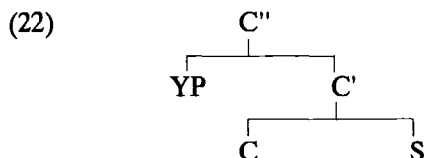
C'' = SPEC + C'	Rule 1. X'' → SPEC X'
C' = C + S	Rule 2. X' → X COMP
C = COMP	Complementizer class

But what could this specifier be? The answer lies in WH-questions in which two types of movement take place. The auxiliary is moved to COMP position in front of the subject, and the WH-word is moved to the C-specifier position at the front of the sentence.

(21) *Where has my little dog gone?*

DS:	SPEC	COMP	<i>my little dog</i>	<i>has</i>	<i>gone</i>	<i>where</i>
SS:			<i>has</i>	<i>my little dog</i>	—	<i>gone where</i>
SS:	<i>where</i>	<i>has</i>	<i>my little dog</i>	—	<i>gone</i>	—

CP (complementizer phrase) becomes the principal sentence structure. The specifier becomes YP (any phrase) since the *wh*-phrase may belong to any word category, and C remains as the position for complementizers and the site for subject-auxiliary inversion.



**2.2. Inflection.** AUX = Tense (Modal) (Perfect) (Progressive) was used in Chomsky 1965. But the VP in triple X-bar syntax has already assumed the PERFECT and PROGRESSIVE. A nonlexical category called INFLECTION or I (Radford 304) is used as a site for TENSE-MODAL in finite clauses and for the infinitive marker *to* in nonfinite clauses. Assuming, as we did for COMP, that INFL has a place in triple X-bar syntax, what use is there for I'' and for I', and how are they defined?

(23) IP = Inflection phrase (Radford 508)

I'' = SPEC + I'	Rule 1: X'' → SPEC X'
I' = I + COMP	Rule 2: X' → X COMP
I = INFL	Tense, Modal, or <i>to</i>

But what could this specifier and this COMP represent? Since INFL is added to the verb phrase, COMP here is the VP. If I' is INFL + VP then the specifier here must be the subject NP of the sentence. The IP phrase is revised as follows, and S is lost forever.

(24) IP = Sentence without COMP

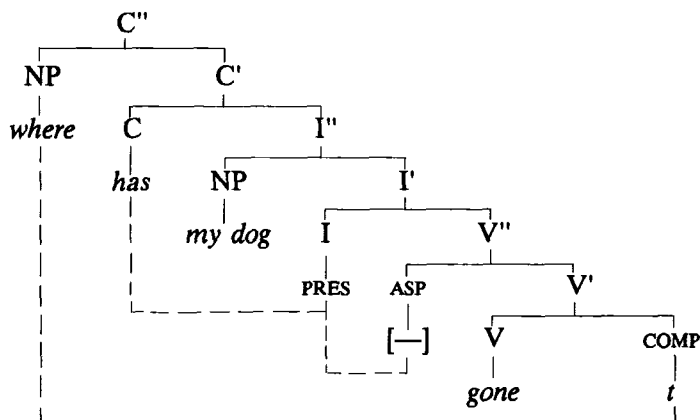
I'' = NP + I'	Subject + Predicate
I' = I + VP	Inflection + Verb Phrase
I = INFL	Tense, Modal

**2.3. C-I-V structure.** With the acceptance of the nonlexical categories COMP and INFL into X-bar syntax, sentence structure becomes a C-I-V structure with CP as the highest node, IP as the main clause structure, and VP as the full predicate as in (25). The interrogative *where* is moved to the C-specifier position. The aspectual verb *have* is moved into the I-position,



then the tensed verb *has* is moved to the C-position by subject-auxiliary movement.

(25) C-I-V structure



**2.4. Clause generation.** The C-I-V clause structures can be computer-generated by asking a series of questions about the sentence. As the questions are answered, the C-I-V structure is developed on the screen.

- (26) WH-phrase (Y/N)? If No, C'' goes to C' without branching, since specifiers are optional. If Yes, specify the category (YP) and the WH-item which fills that category.
- (27) Subject-Auxiliary Inversion (Y/N)? If No, mark the C category as empty (e), since C is an obligatory category. If Yes, specify the auxiliary which is moved.
- (28) Subject? Name the subject of the sentence, and it will be placed in the subject position under the NP node.
- (29) Modal (Y/N)? If there is a modal, it is entered under I. If there is no modal, the I remains, since it is an obligatory constituent, but is never empty, since it contains at least tense or infinitive *to*.
- (30) Aspectual verb (Y/N)? If there is an aspectual verb, perfect *have* or progressive *be* is entered in the structure. If there is no aspectual

verb,  $V''$  goes to  $V'$  without branching, since the ASP in specifier position is optional in the verb phrase.

- (31) Complements (1/2)? When this question is answered, the verb must be specified. Then, if there are complements they must be specified by category and lexical item. If there is no complement, then  $V'$  goes to  $V$  without branching, since complement is optional.

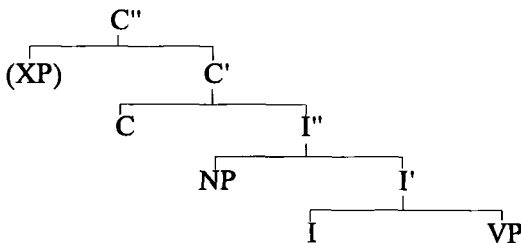
When the structure is complete, the program will indicate the types of movement transformations that occur, moving ASP or  $V$  into  $I$  to acquire tense, moving the  $I$  in Subject-Aux inversion to  $C$ -position, moving the *WH*-phrase to  $C$ -specifier position in *WH*-questions. This program is outlined in detail below, to indicate the mechanical nature of the X-bar syntax and movement rules within the system.

**2.5. Clause types.** Within  $C$ - $I$ - $V$  structure, three different kinds of clauses are distinguished: (a) ordinary clauses with  $CP$  structure, (b) exceptional clauses with  $IP$  structure, and (c) small clauses, with  $SC$  structure. Ordinary clauses contain  $COMP$  and  $INFL$ , exceptional clauses contain  $INFL$  but no  $COMP$ , and small clauses contain neither  $COMP$  nor  $INFL$ .

Since exceptional clauses are well defined and small clauses are well defined, any clause which is neither an exceptional clause nor a small clause is an ordinary clause. Exceptional clauses and small clauses are alike in that neither can ever have a complementizer, neither can ever have an empty  $PRO$  subject, and both allow raising and passive to apply across clause boundaries.

*Ordinary clauses.* Ordinary clauses are defined as clauses which contain both  $COMP$  and  $INFL$ , with  $C$ - $NP$ - $I$ - $VP$  structure, as in (32). The  $XP$  node is the site for *WH*-movement, the  $C$ -node is for complementizers and acts as the site for subject-auxiliary inversion.

- (32) Ordinary clauses ( $CP$ ) (Radford 512)



Ordinary clauses include all main clauses, all finite dependent clauses, and some nonfinite clauses. Nonfinite clauses include all the *for-to* clauses with overt subject and clauses with an empty PRO subject (formerly treated as applications of Equi NP deletion).

## (33) Finite clauses

- (a) all main clauses
- 
- statements

*Your father will put the car in the garage.*

questions (Radford 464)

*[Which car] will your father put [\_\_\_] in the garage?*

- (b) all finite dependent clauses

indirect statements (Radford 513)

*I knew [that he would resign].*

*I knew [he would resign].*

indirect yes/no questions (Radford 299)

*John wondered [whether/if he would get a degree].*

*John wondered [would he get a degree].*

indirect WH-questions (Radford 512)

*I wonder [which one she will give him].*

*I wonder [which one will she give him].*

## (34) Nonfinite clauses

- (a)
- for-to*
- clauses with overt subject (Radford 302)

*I am anxious [for you to arrive on time].*

- (b) clauses with empty (PRO) subject.

statements

*I am anxious [PRO to finish].* (Radford 439)

*John persuaded Mary [PRO to resign].* (Radford 323)

*Mary promised John [PRO to resign].* (Radford 324)

yes/no questions

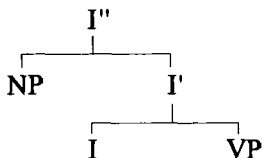
*I don't know [whether PRO to agree].* (Radford 302)

WH-questions

*I don't know [where PRO to turn].* (not cited)

*Exceptional clauses.* Exceptional clauses (Radford 317) are clauses that contain INFL but no COMP. They are dependent clauses with the canonical structure NP-to-VP, as represented in (35).

## (35) Exceptional clauses (IP) (Radford 435)



Exceptional clauses are those clauses which were formerly treated as A-type and B-type raising (Postal 1974). In X-bar syntax, A-type raising, subject-to-subject raising, is accepted, but B-type raising, subject-to-object raising, is not. Both types of clause, however, are classed as exceptional clauses.

## (36) Clauses with subject-raising (Radford 435)

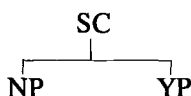
*[John] seems to me [to be happy].*

## (37) Clauses with objectively marked subjects (Radford 318)

*I believe [him to be right].*

*Small clauses.* Small clauses (Radford 324) are clauses that contain neither INFL nor COMP. They are dependent clauses with the canonical structure NP-YP, where YP stands for any type of phrase. Small clauses are an anomaly in triple X-bar syntax. Since they are exocentric structures, they violate the endocentricity condition. The structure of small clauses is represented in (38).

## (38) Small clauses (SC) (Radford 515)



Small clauses are like exceptional clauses. They do not permit PRO, have objectively marked subjects, and permit passive and reflexive (Radford 327). They lack the infinitive marker *to* or a form of the verb *be*, however, and are therefore classed as a different type of clause.

## (39) SC as verbal complements

*Why not let [everyone . . . go home]?* (Radford 324)

*I consider [him . . . intelligent].* (Radford 327)

*John had [Bill . . . leave].* (Radford 519)

(40) SC as complement of the preposition *with*.

NP: *How can I cook with [the kitchen . . . a mess]?* (Radford 328)

AP: *Don't prepare food with [your hands . . . dirty].* (Radford 329)

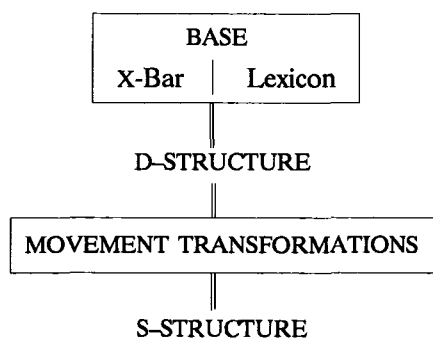
PP: *With [the cat . . . out of the bag], I can't lie.* (Radford 328)

### 3. Movement

All transformations are reduced to a single rule of MOVE ALPHA (Radford 536). Movements within the grammatical model include V-MOVEMENT, I-MOVEMENT, NP-MOVEMENT, and WH-MOVEMENT.

**3.1. The model.** Within Government and Binding theory the base, composed of X-bar syntax and lexicon, produces D-STRUCTURE which is converted by movement transformations into S-STRUCTURE. Because of the structure-preserving principle, the structure of the sentence generated remains unchanged after movement. S-STRUCTURE represents the lexical words in their proper sequence; D-STRUCTURE represents word order before movement, as in (41).

(41) Grammatical model (Radford 419)



**3.2. V-to-I movement.** V-movement is an obligatory transformation in English that moves the leftmost constituent of V to the I position when I is empty and finite. This moved constituent is either the aspectual verb or the main verb of the sentence. At the I-site, the verb acquires its tense and agreement features.

- (42)
- John annoys me.*
- (Radford 403)

DS: *John* [I Pres] [VP [v annoy] me]SS: *John* [I annoys] [VP [ ] me]

In negative placement, the negative is placed between I and VP as the right hand daughter of the I-constituent, assuring its position after the first auxiliary of the verb phrase. If the auxiliary verb *do* occurs, it is generated within I and there is no V-to-I movement.

- (43)
- He has not finished.*
- (Radford 406)

DS: *He* [I Pres] not [VP [ASP have] finished]SS: *He* [I has] not [VP finished]

**3.3. I-to-C movement.** I-movement is an optional transformation that moves the I-constituent into an empty COMP position (= Subject-Auxiliary Inversion). Only aspectual verbs and modals are subject to I-movement. Gaps created by I-to-C movement cannot be refilled.

- (44)
- Will he tell the truth?*
- (Radford 411)

DS: [C e] [S he [I will] [VP tell the truth] ]

SS: [C will] [S he [I ] [VP tell the truth] ]

**3.4. NP-movement.** NP-movement moves an NP from its base position to a compatible NP position. NP-movement includes the NP-movement in passives and NP-movement in raising structures.

*NP-movement (passive).* Passive structures are generated with an empty subject and an object. NP-movement in passive structures is an obligatory transformation that moves the NP immediately adjacent to the verb into empty subject position.

- (45)
- The car will be put in the garage.*
- (Radford 420)

DS: [S [NP e] will be [v put [NP the car] in the garage] ]

SS: [S [NP the car] will be [v put [NP ] in the garage] ]

*NP-movement (raising)*. NP-movement in raising structures is an obligatory transformation that moves a subordinate subject NP into main clause empty subject position. The NP is raised out of exceptional and small clauses, not ordinary clauses.

- (46) *John seems to me to be unhappy.* (Radford 435)

DS: [<sub>NP</sub> *e*] *seems to me* [<sub>IP</sub> [<sub>NP</sub> *John*] *to be unhappy*]

SS: [<sub>NP</sub> *John*] *seems to me* [<sub>IP</sub> [<sub>NP</sub> \_\_\_ ] *to be unhappy*]

**3.5. WH-movement.** WH-movement moves a WH-phrase from its base position to C-specifier position in S-structure. WH-movement includes questions, restrictive relatives, and some other WH-type clauses.

*WH-movement (questions)*. WH-movement in questions is an obligatory rule which moves the WH-phrase inside a full CP-structure to the leftmost position in that CP-structure.

- (47) *Which car will your father put in the garage?* (Radford 465)

DS: [<sub>CP</sub> [<sub>IP</sub> *your father will* [<sub>VP</sub> *put* [*which car*] *in the garage*]]]

SS: [<sub>CP</sub> [*which car*] *will* [<sub>IP</sub> *your father* [<sub>VP</sub> *put* [\_\_\_ ] *in the garage*]]]

*WH-movement (relatives)*. WH-movement in restrictive relative clauses is an obligatory rule in English that moves the WH-phrase in a relative clause to the leftmost position in that clause.

- (48) *The book which I put on the table.* (Radford 491)

DS: *The book* [<sub>IP</sub> *your father* [<sub>VP</sub> *put* [*which*] *on the table* ] ]

SS: *The book* [*which*] [<sub>IP</sub> *your father* [<sub>VP</sub> *put* [\_\_\_ ] *on the table*]]]

#### 4. Lexicon

The lexicon associated with X-bar syntax consists of lexical entries and lexical redundancy rules. Lexical items are entered into the structure by the projection principle.

LEXICAL ENTRIES specify idiosyncratic properties of lexical items. Each item is specified according to (a) category, (b) subcategory, (c) selection restrictions, and (d) thematic relations.

LEXICAL REDUNDANCY RULES specify properties of lexical items predictable from general principles, such as (a) the head-first principle, (b) the strict adjacency principle (NP-complements are strictly adjacent to their heads), and (c) the clause-last principle (clause complements are positioned last in the structure).

(49) Projection principle (Radford 394)

*Syntactic representations must be projected from the lexicon, in that they observe the lexical properties of the items they contain.*

(50) Lexical entry (Radford 379)

*murder*

Category	[+V, -N]
Subcategorization	[NP ___ NP]
Selection features	<human> ___ <human>
Thematic relations	agent ___ theme

Lexical items become the terminal nodes in all structures, and if they are properly projected from the lexicon, should produce sentences that are both syntactically and semantically acceptable.

**4.1. Category.** Word categories are established in the usual way—according to meaning, form, and distribution—using norms from semantics, morphology, and syntax. Word categories within the system are Nouns (N), Verbs (V), Adjectives (A), Adverbs (ADV), Prepositions (P), and Determiners (D), among others.

*Supercategory.* Supercategories (Radford 146) are created using the features [+V, +N]. Verbs are classified as [+V, -N], adjectives as [+V, +N], nouns as [-V, +N], and prepositions as [-V, -N]. The [+V] category, verbs and adjectives, are used as predicates; the [+N] category, nouns and adjectives, have gender, number, and case; the [-N] category, verbs and prepositions, take NP complements.

**4.2. Subcategorization.** Lexical items are subcategorized according to context-free or context-sensitive properties. Context-free features are inherent to the lexical item, outside of context, and include the features



[+common], [+count], [+animate], [+human], [+abstract] (Radford 338). Context-sensitive properties—strict subcategorization or C-selection—is contextual and based on the sister constituents of the lexical item as it appears in context. Subcategorization deals only with complements, not with adjuncts, since adjuncts are never sister constituents of the head word.

(51) (Strict) Subcategorization principle (Radford 365)

*Any lexical item will be subcategorized with respect to the range of idiosyncratic complements (sister constituents) which it permits.*

*Verbs.* Verbs are subcategorized as intransitive [ $\emptyset$ ], transitive [NP], optionally transitive [(NP)], or ditransitive [NP,NP], [NP,PP]. Verbs with prepositional complements must specify prepositions that are idiosyncratic, such as *rely [on]*, *wait [for]*. Verbs with clausal complements should specify whether the clause is an ordinary clause [CP], an exceptional clause [IP], or a small clause [SC].

(52) *John persuaded [Mary] [that he was right].* (Radford 351)  
*persuade:* [NP,CP]

*Adjectives.* Adjectives are subcategorized as transitive or intransitive, especially when they are used as predicates. Transitive adjectives take only prepositional [PP] or clausal [CP] complements. Adjectives with prepositional complements must specify idiosyncratic prepositions. Adverbs, if subcategorized at all, follow the norm for adjectives.

(53) *Mary is fond [of John].* (Radford 362)  
*fond:* [of]

*Nouns.* Nouns are subcategorized according to the complements they take. Nouns, like adjectives, may take only prepositional [PP] or clausal [CP] complements.

(54) *desire [for Mary to do it]* (Radford 362 )  
*desire:* [CP]

*Prepositions.* Prepositions are subcategorized according to the complements they take in a given context, either no complement [ $\emptyset$ ], noun phrase [NP], prepositional phrase [PP], or clause [CP].

- (55) *I haven't seen him since [∅].* (Radford 363)  
*I haven't seen him since [the party].*  
*I haven't seen him since [before the party].* (not cited)  
*I haven't seen him since [the party began].*  
*since: [∅], [NP], [PP], [CP]*

**4.3. Selection restrictions.** Selection restrictions provide idiosyncratic semantic information about lexical items by listing the context-free semantic features of categories surrounding the lexical entry. Selection restrictions apply only to predicates, and specify the kind of subject and complements the predicate permits.

- (56) *[John] persuaded [Mary] [to tell the truth].* (Radford 371)  
 = Somebody persuaded somebody to do something.  
*persuade: <animate> \_\_\_ <animate> <inanimate>*

**4.4. Thematic relations.** Thematic relations, or S-SELECTION, provides idiosyncratic semantic information about lexical items by listing the number and kind of arguments for a particular predicate. Thematic relations apply only to predicates and specify the thematic role of the subject and complements associated with that predicate.

*Number of arguments.* Thematic relations should first specify the number of arguments in the logical structure of any given predicate, independent of what role labels will be used. Predicates may be one-, two-, three-, or even four-place predicates.

- (57)
- |             |             |                 |
|-------------|-------------|-----------------|
| One-place   | <i>die</i>  | [NP ___]        |
| Two-place   | <i>kill</i> | [NP ___ NP]     |
| Three-place | <i>give</i> | [NP ___ NP, NP] |

*Kind of arguments.* Thematic relations adds a role label for each of the arguments of a predicate. In the labelling system used by Gruber and Jackendoff, there are five role labels: agent, theme, location, source, and goal. Of these, theme is obligatory to every sentence, location (stative) is mutually exclusive with source and goal (nonstative). Clauses are embedded only under the theme role.

(58)

One-place	<i>die</i>	THEME	(Radford 376)
Two-place	<i>kill</i>	AGENT, THEME	(Radford 373)
Three-place	<i>give</i>	AGENT, GOAL, THEME	(Radford 373)

*Thematic relations and subcategorization.* Radford (384) suggests that subcategorization information may be redundant because it is predictable from thematic information. But subcategorization deals with language forms, sister constituents such as NP, PP, or ADVP; thematic relations deals with function—how these forms are related to the verb. With the verb *go*, the goal role may be realized as NP, ADVP, or PP—as in *go home*, *go there*, *go into the house*.

*Thematic relations and selection restrictions.* Radford (389) suggests that selection restrictions may be redundant because they are predictable from thematic relations. But selection restrictions deal with inherent features of surrounding categories. Thematic relations, on the other hand, are relational—not categorial—and are not specified by inherent features. Thematic roles are read onto the noun, with its inherent lexical characteristics, from the predicate.

## 5. Conclusion

Syntactic models must be judged according to their goals. The goal of the model which uses the new endocentric binarism is to describe UNIVERSAL GRAMMAR, a system of knowledge which is characteristic of the human species. This model consequently treats all languages in the same way and, within a given language, treats all structures in the same way. This is a valid goal and the new binarism is part of the means to begin to attain it. But the goal of universal grammar is not necessarily the goal of every linguist.

Some linguists are working on a preliminary description of totally unknown languages. Robert Longacre (1965), in evaluating immediate constituent analysis, stressed the need for function:form analysis over merely formal analysis, and the need for string analysis over binary analysis. His insights are still useful today for linguists working in the area of language description.

Other linguists are working on natural language processing. Although a few attempt to use Chomskyan methods in their analysis, the majority seem to prefer a string-type analysis for computational work, particularly in constructing ATN parsers.

These goals need not be contradictory. Even if universal grammar were the ultimate goal of every linguist, languages must be accurately described before they are formalized in terms of a universal grammar. And computational linguistics has a role to play in testing syntactic components for particular or universal grammars. For attaining more proximate goals, syntactic tools must be judged according to their usefulness for the task at hand.

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## Minimum Freedom and the Sentence

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1. Venturing into discourse grammar (not that this term should really be used to dignify such forays) now and then, and above and beyond the call of normal duty, is common enough. Longacre's clearly held conviction that the discourse lies at the heart of things is something worlds apart, and something greatly to be applauded.

2. Consider the English SENTENCE. In 1931, John Ries asked *Was ist ein Satz?* (Ries 1931), made a study of more than a hundred answers—that is, definitions—that had been given, and added one of his own. Leonard Bloomfield (Hockett 1970:231–36) condemned nearly the whole effort in the name of his antimentalism. If the task, however philistine, had been to tell a sentence from a nonsentence, most of the purported definitions had indeed failed, and it was not clear what other need they could satisfy.

3. The one formulation to find favor was Antoine Meillet's (1912:339):

... a whole (*ensemble*) consisting of forms which are bound to one another by grammatical constructions and which do not depend on any other whole.

Conceived as it was “without any reference to logic or psychology,” it was LINGUISTIC, i.e., formal. That, presumably, made it easier to test its adequacy and to ask whether it captures the attributes of what are commonly called sentences.

4. Bloomfield thought that minimum freedom is the property which best characterizes what one calls WORDS: “a minimum free form is a WORD” (Hockett 1970:130). This ought to mean that words are minimum discourses, or that some discourses are as short as words. It would be more natural,

however, to say not only that discourses are minimum free forms, but that it is discourses, not words, that are THE minimal free forms.

5. The one-word English<sup>1</sup> discourse of (1) is a morpheme construct into which enter (a) a LEXICAL morpheme (L: /yés/ [its morph consisting of consonants, vowel, and a lexical accent<sup>2</sup> /´/), (b) a morphemic STRESS (St: /´/), and (c) a melody or INTONATION (I: /?/⁴).

(1) *Yés'?*

Being morphemic, each has a meaning (or has meanings) in which it recurs in other discourses.<sup>5</sup> L requires no explanation, /´/ perhaps recurs on *yes* and *no* in pronunciations of (2), and /?/ perhaps recurs over the forms in (3).

(2) *Yés'!*  
*Yés'sir.*  
*Nó'sir.*

(3) *Réally'?*  
*Did<sup>6</sup> you say yes'?*  
*Are you all right', sir?*

6. This threefold distinction only hints at the barest outline of things. Its claim to fundamental validity is based, however, on very ordinary precedent. For instance, the equalities which speakers will assert, upon proper elicitation,<sup>7</sup> for the forms of (1)–(2) and for those of (3), and the inequalities that are their converses, recall like assertions for segmental morphemes. It is sufficient to compare the inequalities in stress and intonation of the pairs in (4) and (5) with those of the segmental phonemes in (6).

<sup>1</sup>The phenomena discussed here are not universals. One need go no further than French to find a completely different surface situation, especially with regard to stress (St).

<sup>2</sup>Automatic, of course, in this monosyllable.

<sup>3</sup>The question of how many phonologically distinct stresses there are in English is left open. See also the following note.

<sup>4</sup>The rising melody frequently found on yes-or-no questions is here recognized, for convenience's sake, as a terminal melody. It might, however, be preferable to consider question and answer as one sentence—the problem of how many distinct morphemic melodies there are in English and what the phonemic components of their morphs might be is left open.

<sup>5</sup>Admittedly, allophonic diversification in this field is such as to make it difficult on occasion to decide what is and what is not the same.

<sup>6</sup>Lexical /´/, especially when deleted in sandhi, is hereafter on occasion disregarded.

<sup>7</sup>By whatever approximation to the ideal pair test.

- (4) [I] guess' [so].  
guess [who']...<sup>8</sup>
- (5) yes'?  
yes'.
- (6) yés  
léss  
guéss

Once identified, the manifestations of these entities are open to the kind of sophisticated phonetic study which has been expended on loudness and pitch; but those entities cannot simply be discovered in the raw phonetic record.

7. Lexical accents, stress morphemes, and intonation melodies are essentially independent of one another in English. It seems that stress morphemes are largely in construction with ordinary segmental morphemes and with one another while intonation morphemes, so long as they are subminimal, are largely in construction with one another.<sup>9</sup> All are linked by neutralizations and sandhi relationships. L dictates the location of loudness in syntactic stressing (St);<sup>10</sup> I peaks may be louder (L, St) than intonation valleys, and stressed syllables (L, St) more highly pitched (I) than unstressed ones (St), but only OTHER THINGS BEING EQUAL. While word-order arrangements are not uncorrelated with intonation (*I'm all right'*. vs. *Are you all right'?*) they are not simply predictable from it nor vice versa; compare the forms of (7).

- (7) *I'm all right'?* [= 'Are you saying that I'm all right?']  
*Are you all right'.* [= 'All I want to know is: Are you all right?']

In the area of theme-rheme, topicalization, and anaphora, for example, the factor St as it functions in such relationships plays a conspicuous role (Hoenigswald 1980) which cannot be bypassed lightheartedly by the *ex machina* positing of a phonemic CONTRASTIVE STRESS. No doubt these one-sentence discourse types do not just lie side by side but are hierarchically ordered in a way which may well be indicated by the bracketed matter in (7).

<sup>8</sup>The ellipsis (...) stands for some intonation melody (note 4).

<sup>9</sup>It is easy to hum intonation melodies without words, intelligibly and meaningfully. Nothing comparable can be done with stress morphemes.

<sup>10</sup>Just so, intonation is superadded on lexical tones in tone languages. Chomsky and Halle 1968 were greatly concerned with the relations between L and St. They quite defensibly did not deal with I.

8. It follows that *yés, réally, áre* are not free forms since even when they occur IN ISOLATION they are in construction at least with an intonation. Another difficulty, which is better known, has to do with compound words: are certain familiar accentuations of *blackboard, output, undo* only lexical? By definition, then, the forms that are more truly self-sufficient<sup>11</sup> are not the words but the discourses (texts).

9. And sentences? It will be agreed that, within a discourse, (8) is one sentence,<sup>12</sup> but that the sequence in (9), also within a discourse, is two sentences.

(8) *We can try but it won't work.*

(9) a. *We can try.*

b. *But it won't work.*

In other words, it may be that what are commonly called SENTENCES in English are DISCOURSE CONSTITUENTS SUCH THAT THEIR INTONATION IS MINIMUM FREE—that is, such that their intonation can occur over an entire discourse as well.<sup>13</sup> The intonations of (8), (9a), and (9b) are each free. On the other hand, (9b) is not itself a discourse because *But* requires a context. It is not necessary to decide whether such a context is or is not GRAMMATICAL in Meillet's sense.<sup>14</sup>

However, there is one further corollary: (9a) is not here a discourse either, since we want the discourse, (9), to consist entirely of sentences, without residue.<sup>15</sup>

10. The presence and the relative separability of something very much like English intonation is possibly a universal. This would explain why the

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<sup>11</sup>Speaking of the self-sufficiency of the sentence, Meillet adds "grammatically"—a troublesome point (Cf. 9).

<sup>12</sup>St is left unmarked in (8) and (9).

<sup>13</sup>This formulation was proposed long ago (Hoenigswald 1960:12); an effort is made here to put it into context. There is a distinction to be made between (a) intradiscourse dependence, exemplified in a simple fashion by the *but* of (8) and the *But* of (9b), but founded pervasively by all the links that characterize a connected text, and (b) the global dependence on the grammar and lexicon at the speaker's command.

<sup>14</sup>fn 11.

<sup>15</sup>This seems implicit in the minimum freedom stipulation as commonly understood. Anacoluthon and such will remain a separate problem under ANY analysis. The challenge would be to find the formal equivalent of the marginality of anacoluthon as a stylistic device. (8) and (9) may be mere sentences, not discourses, inasmuch as they are also somehow recognizably linked to their context and in turn leave an embedding environment that requires them as a context—say, as part of a story.



sentence is so frequently regarded as natural, given, or axiomatic; but this can be unfortunate. Some practitioners see the goal of syntax in the generating of all the well-formed sentences of a language. This does not much matter until it leads to reports of semantic acceptability which ostensibly pertain to sentences but are tested and judged as if those sentences were one-sentence discourses. Speakers may indeed be found rejecting the celebrated *colorless green ideas sleep furiously* as a discourse; but they may drop their objections once a discourse<sup>16</sup> environment is provided to supply a meaning—allegorical or what not.

11. Brilliant exceptions to the contrary,<sup>17</sup> the uncertainty about sentences and discourses, the frequent reluctance to separate syntactic stresses from intonation melodies in languages like English, and, in general, an astonishingly widespread unwillingness to observe speech have all taken their toll.<sup>18</sup>

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<sup>16</sup>This is complicated by the fact that the sentences of the underlying state which seems to be the appropriate one to start from can be transformationally conjoined or embedded to form longer surface sentences. While it may be true that the passive transformation can be applied to direct objects but not easily to expressions of extent, in themselves, as in *\*a mile was walked by her*, a little padding certainly helps: *the extra mile walked by her in silence seemed like a hundred*, or the like.

<sup>17</sup>Such as Bierwisch 1966, Bresnan 1971, 1972, and the many observations in Bolinger's varied work (e.g., 1982). The phenomena reported by Trager and Smith 1951 deserve reanalysis.

<sup>18</sup>Not to mention a good deal of worrying about the relation between the sentences of language and the sentences and propositions of logic and science. Thanks are due Henry Hiz for his invaluable discussion.

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## Parsing Relative Clauses in Copala Trique

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When a speaker creates a discourse, some parts carry the eventline forward, and other parts present various kinds of background information. One kind of background information is that contained in relative clauses, which help the hearer identify the referent of a particular noun phrase (Longacre 1989:419–20, 439). It therefore seems important that natural languages provide some syntactic device to distinguish relative clauses from main clauses. In English, for example, the presence of a relative pronoun tells the hearer that the material that follows it is to be parsed as a relative clause.

In Copala Trique two devices mark relative clauses. One is a set of introductory pronouns that combines the functions of head noun and relative pronoun into a single morpheme. The other is a special set of continuative-aspect forms for about a dozen frequent verbs. Neither of these devices occurs in all relative clauses, however, because many relative clauses have noun, as opposed to pronoun, heads, and because many contain verbs other than the ones that have special forms.

Relative clauses that do not contain at least one of these devices are not marked as such in any way, not even by pause. They are therefore potentially ambiguous (at least locally) with a variety of other syntactic structures. This situation presents the hearer with a formidable parsing task, but in practice the problem arises in less than a third of the relative clauses because introductory pronouns and special verbforms occur so frequently. In a sample of text containing ninety-five relative clauses,

sixty-four contained one or both of these devices, leaving only thirty-one to be parsed by means of other cues.<sup>1</sup>

In this study, I describe the two syntactic devices that signal the presence of a relative clause and then survey briefly the nature of the parsing task for the remaining cases. The main strategy I propose is that, when the hearer encounters a string that could be a relative clause but contains neither device, he attempts to match it to other syntactic structures in the language. Only if he fails to find a match does he parse the string as a relative clause.

### 1. Introductory pronouns

Copala Trique has a set of five third-person pronouns that occur when some other element follows them within the same noun phrase. These pronouns are listed in (1).<sup>2</sup>

- |     |                          |                 |
|-----|--------------------------|-----------------|
| (1) | <i>zii</i> <sup>5</sup>  | 'he (who)'      |
|     | <i>nii</i> <sup>5</sup>  | 'she (who)'     |
|     | <i>ze</i> <sup>32</sup>  | 'thing (that)'  |
|     | <i>reh</i> <sup>32</sup> | 'place (where)' |
|     | <i>yan</i> <sup>32</sup> | 'place (where)' |

Introductory pronouns may be followed by any element that normally follows the head of a noun phrase: an adjective, a deictic, or a relative clause.

- |     |   |                         |                        |
|-----|---|-------------------------|------------------------|
| (2) | <i>zii</i> <sup>5</sup>                                       | <i>zaʔ</i> <sup>1</sup> | <i>a</i> <sup>32</sup> |
|     | he  | good                    | DECL(ARATIVE)          |
|     | the good man <i>or</i> the good person <i>or</i> the good one |                         |                        |

<sup>1</sup>The text sample used in this study included the three myths found in Hollenbach 1988 and also a tar baby story in Hollenbach n.d.

<sup>2</sup>Copala Trique has the following consonants: fortis stops *p t k*, lenis stops *b d g*, affricates *ts ch chr*, fortis sibilants *s sh shr*, lenis sibilants *z zh r*, and resonants *m n l y w*. There are five oral vowels, *i u e o a*, and their nasalized counterparts, which occur only in word-final syllables and are written with *n* following the vowel. There are three laryngeals: glottal stop (*ʔ*), *h*, and an abstract laryngeal which occurs only in word-final position and is actualized mainly by shortness on the preceding vowel. In the examples in this study, a vowel plus the abstract laryngeal is written as a single vowel, and a vowel alone at the end of a word is written as a double vowel. There are five tone levels, written with the numbers <sup>1</sup> to <sup>5</sup> from low to high. For further information about the phonology of Copala Trique, see Hollenbach 1984.

- (3) *nii*<sup>5</sup> *nianh*<sup>5</sup> *a*<sup>32</sup>  
 she this DECL  
 this woman *or* this one
  
- (4) *ze*<sup>32</sup> *kiranh*<sup>5</sup> *chii*<sup>3</sup> *a*<sup>32</sup>  
 thing bought man DECL  
 the thing that the man bought
  
- (5) *reh*<sup>32</sup> *kaʔanh*<sup>32</sup> *chii*<sup>3</sup> *a*<sup>32</sup>  
 place went man DECL  
 the place where the man went
  
- (6) *yan*<sup>32</sup> *kawi*<sup>ʔ3</sup> *chii*<sup>3</sup> *a*<sup>32</sup>  
 place died man DECL  
 the place where the man died

English has nothing resembling introductory pronouns, and they are therefore difficult for English speakers to conceptualize. They are also hard to translate because English noun phrases rarely contain modifiers when they have a pronoun head, and so it is necessary to resort to the word ‘one’ or a generic noun like ‘person’, ‘thing’, or ‘place’. When introductory pronouns precede a relative clause, they combine in a single morpheme the functions of head and relative pronoun, and so they need to be translated by sequences like ‘person who’, ‘thing that’, or ‘place where’.

It is important not to confuse introductory pronouns with true relative pronouns. Relative pronouns occur with a noun head, and link it to the following relative clause. Copala Trique does not have relative pronouns; it has only introductory pronouns, which do not occur together with a noun head, but rather take the place of one. Therefore, even though (4)–(6) may appear to have the structure of headless relatives, they cannot be analyzed in this way.

Introductory pronouns contrast with ordinary third-person pronouns, which occur as the final element within their noun phrase and cannot be modified by adjectives, deictics, or relative clauses. They are listed in (7). The two pronoun sets do not contain the same categories: the introductory pronouns lack an animal category, and the ordinary pronouns lack a place category.

- (7) *zo*<sup>ʔ3</sup> ‘he’  
*no*<sup>ʔ3</sup> ‘she’  
*zho*<sup>ʔ3</sup> ‘it (animal)’  
*yo*<sup>ʔ3</sup> ‘it (inanimate)’

It is important to note that there is no referential difference whatever between the corresponding masculine, feminine, and inanimate pronouns of the two sets; the difference is solely a question of syntactic function. From the point of view of the speaker, the extra set of pronouns complicates the grammatical description of the language. For the hearer, however, the presence of an introductory pronoun versus an ordinary pronoun signals crucial structural information about a sentence. Perhaps the closest parallel in English syntax is the case distinction in the pronoun system.

The pairs of sentences in (8) and (9) show ordinary pronouns contrasting with introductory pronouns. In each case, the noun phrase is enclosed in square brackets. Note that the hearer is able to make a parsing decision about whether to close a noun phrase node or hold it open for the inclusion of further material simply on the basis of which pronoun occurs.

- (8) a. *kaʔanh*<sup>32</sup> [*zoʔ*<sup>3</sup>] *ngah*<sup>32</sup> *a*<sup>32</sup>  
 went he Putla DECL  
 [He] went to Putla.
- b. *kaʔanh*<sup>32</sup> [*zii*<sup>5</sup> *chee*<sup>5</sup> *chreh*<sup>32</sup>] *ngah*<sup>32</sup> *a*<sup>32</sup>  
 went he walks trail Putla DECL  
 [The man who walks on the trail] went to Putla.
- (9) a. *nawih*<sup>3</sup> [*yoʔ*<sup>3</sup>] *a*<sup>32</sup>  
 finished it DECL  
 [It] is all gone.
- b. *nawih*<sup>3</sup> [*ze*<sup>32</sup> *zaʔ*<sup>1</sup>] *a*<sup>32</sup>  
 finished thing good DECL  
 [The good stuff] is all gone.

Copala Trique is a vso language, and in relative clauses, the verb immediately follows the head of the noun phrase, as seen in (8b) and also (4)–(6). There are, however, various sequences besides relative clauses in which the syntax permits a verb to follow a noun or pronoun. One of these sequences is an independent clause with an element in preverbal focus position. In (10a) and (11a), a pronoun is modified by a relative clause; in (10b) and (11b), a pronoun occurs in preverbal focus position.<sup>3</sup> The presence of an introductory pronoun versus an ordinary pronoun is the only difference between the pairs in (10) and (11). If there were no such

<sup>3</sup>A focused element is indicated by small capitals in the free translation.

difference, the only thing that would prevent ambiguity is the fact that (10a) and (11a) are not complete sentences.

- (10) a. *nii<sup>5</sup> goʔ<sup>3</sup> saʔanh<sup>32</sup> raʔa<sup>3</sup> chii<sup>3</sup> a<sup>32</sup>*  
 she gave money hand man DECL  
 the woman who gave money to the man
- b. *noʔ<sup>3</sup> goʔ<sup>3</sup> saʔanh<sup>32</sup> raʔa<sup>3</sup> chii<sup>3</sup> a<sup>32</sup>*  
 she gave money hand man DECL  
 SHE gave money to the man.
- (11) a. *nii<sup>5</sup> goʔ<sup>3</sup> chii<sup>3</sup> saʔanh<sup>32</sup> raʔa<sup>3</sup> a<sup>32</sup>*  
 she gave man money hand DECL  
 the woman to whom the man gave money
- b. *noʔ<sup>3</sup> goʔ<sup>3</sup> chii<sup>3</sup> saʔanh<sup>32</sup> raʔa<sup>3</sup> a<sup>32</sup>*  
 she gave man money hand DECL  
 The man gave money to HER.

Another syntactic pattern in which a verb can follow the head of a noun phrase is found in paratactic sentences, in which two independent clauses are simply juxtaposed, with no conjunction linking them.<sup>4</sup> In (12a) and (13a), a pronoun is modified by a relative clause; (12b) and (13b) show paratactic sentences. The presence of an introductory pronoun versus an ordinary pronoun lets the hearer know whether the boundary between two independent clauses has been reached.

- (12) a. *nawih<sup>3</sup> ze<sup>32</sup> cha<sup>4</sup> shnii<sup>3</sup> a<sup>32</sup>*  
 finished thing ate boy DECL  
 The stuff the boy ate got used up.
- b. *nawih<sup>3</sup> yoʔ<sup>3</sup> cha<sup>4</sup> shnii<sup>3</sup> a<sup>32</sup>*  
 finished it ate boy DECL  
 It got used up; the boy ate (it).

<sup>4</sup>A set of paratactic sentence types was described for Chicahuaxtla Trique by Longacre (1966), and there are many parallel structures in Copala Trique.

- (13) a. *chee<sup>5</sup> zii<sup>5</sup> kaʔanh<sup>32</sup> ngah<sup>32</sup> a<sup>32</sup>*  
 walks he went Putla DECL  
 The one who left for Putla is walking.

- b. *chee<sup>5</sup> zoʔ<sup>3</sup> kaʔanh<sup>32</sup> zoʔ<sup>3</sup> ngah<sup>32</sup> a<sup>32</sup>*  
 walks he went he Putla DECL  
 He is walking; he has left for Putla.

In both (12) and (13), the choice of pronoun makes the construction explicit. In (12), the choice of pronoun is the only difference between the paired forms, and the sentences would be completely ambiguous if there were no difference in the pronouns. In (13), however, the pronoun choice is not the only difference. The presence of the second pronoun *zoʔ<sup>3</sup>* 'he' in (13b), which serves as the subject of 'went', shows that this sentence does not contain a relative clause. In (13a), there is a gap following 'went' that is logically filled by the pronoun *zii<sup>5</sup>* 'he', which is the head of the relative clause.

Still another circumstance in which a verb can follow the head of a noun phrase involves object-complement clauses. In (14), the sentences begin with the verb *aʔweh<sup>32</sup>* 'be willing'. In (14a), the subject of 'be willing' is a noun phrase containing a relative clause. In (14b), the subject of 'be willing' is an ordinary pronoun, which is followed by an object-complement clause. Note that, in addition to the difference between the two pronouns, (14b) contains the pronoun *noʔ<sup>3</sup>* 'she' as the subject of 'go'; the presence of this pronoun also prevents ambiguity.

- (14) a. *aʔweh<sup>32</sup> nii<sup>5</sup> kaʔanh<sup>2</sup> ngah<sup>32</sup> a<sup>32</sup>*  
 is^willing she will^go Putla DECL  
 The woman who will go to Putla is willing.

- b. *aʔweh<sup>32</sup> noʔ<sup>3</sup> kaʔanh<sup>2</sup> noʔ<sup>3</sup> ngah<sup>32</sup> a<sup>32</sup>*  
 is^willing she will^go she Putla DECL  
 She is willing to go to Putla.

In (15a), a noun phrase containing a relative clause is the subject of the initial verb; (15b) shows a syntactic causative in which the verb *ʔyah<sup>3</sup>* 'make, do, cause' and its subject follow an object-complement clause.



- (15) a. *kotoh*<sup>32</sup> *zii*<sup>5</sup> *kiʔyah*<sup>3</sup> *yaʔanh*<sup>32</sup> *a*<sup>32</sup>  
 slept he made god DECL  
 The man that God made slept.
- b. *kotoh*<sup>32</sup> *zo*<sup>ʔ3</sup> *kiʔyah*<sup>3</sup> *yaʔanh*<sup>32</sup> *a*<sup>32</sup>  
 slept he made god DECL  
 God caused him to sleep.

Even though the only formal difference between (15a) and (15b) is the presence of an introductory pronoun versus an ordinary pronoun, the two sentences have very different syntactic structures. The main verb in (15a) is ‘slept’, and the main verb in (15b) is ‘made’.

## 2. Verbs with two continuative aspect forms

Trique verbs are characteristically inflected for three aspects: continuative (CONT), completive (CMPL), and potential (POT), roughly equivalent to present, past, and future tenses. Continuative aspect is usually expressed by the stem alone. A set of about ten to twelve common Trique verbs, however, nearly all referring to position, has a second continuative-aspect form with a lowered tone, sometimes with the addition of final *h*. These are listed in (16).

(16)	CONT1	CONT2	CMPL	POT
sit	<i>yaan</i> <sup>5</sup>	<i>yanh</i> <sup>1</sup>	<i>kayaan</i> <sup>5</sup>	<i>kayanh</i> <sup>1</sup>
sit	<i>ne</i> <sup>3</sup>	<i>ne</i> <sup>13</sup>	<i>kane</i> <sup>3</sup>	<i>kane</i> <sup>13</sup>
stand	<i>nikun</i> <sup>ʔ3</sup>	<i>nikun</i> <sup>ʔ1</sup>	<i>kanikun</i> <sup>ʔ3</sup>	<i>kanikun</i> <sup>ʔ13</sup>
lie	<i>nah</i> <sup>3</sup>	<i>nah</i> <sup>13</sup>	<i>kinah</i> <sup>3</sup>	<i>kinah</i> <sup>13</sup>
be in	<i>nuu</i> <sup>32</sup>	<i>nuu</i> <sup>2</sup>	<i>kunuu</i> <sup>32</sup>	<i>ku<sup>2</sup>nuu</i> <sup>32</sup>
be in	<i>shion</i> <sup>4</sup>	<i>shion</i> <sup>1</sup>	<i>kishion</i> <sup>4</sup>	<i>kishion</i> <sup>1</sup>
be wedged	<i>ʔnih</i> <sup>32</sup>	<i>ʔnih</i> <sup>2</sup>	<i>kiʔnih</i> <sup>32</sup>	<i>ki<sup>2</sup>ʔnih</i> <sup>32</sup>
be on top	<i>taa</i> <sup>5</sup>	<i>tah</i> <sup>1</sup>	<i>kitaa</i> <sup>5</sup>	<i>kitah</i> <sup>1</sup>
hang	<i>noko</i> <sup>ʔ3</sup>	<i>noko</i> <sup>ʔ1</sup>	<i>kanoko</i> <sup>ʔ3</sup>	<i>kanoko</i> <sup>ʔ13</sup>
be stuck	<i>no</i> <sup>4</sup>	<i>no</i> <sup>1</sup>	<i>kano</i> <sup>4</sup>	<i>kano</i> <sup>1</sup>
exist	<i>man</i> <sup>4</sup>	<i>man</i> <sup>1</sup>	<i>kuman</i> <sup>4</sup>	<i>kuman</i> <sup>1</sup>
move	<i>wah</i> <sup>32</sup>	<i>wah</i> <sup>2</sup>	_____	_____

There is no aspectual difference whatever between the two continuative forms. The difference between them is that each is used in a different syntactic environment. The low-tone form (continuative 2) occurs in clause-

initial position, both in independent clauses and in relative clauses. The basic form (continuative 1) is used in noninitial position; it occurs mainly in independent clauses that have some element in preverbal focus position.<sup>5</sup>

In (17a) and (18a), a noun nucleus is modified by a relative clause, using the continuative-2 form; in (17b) and (18b), an independent clause occurs with one noun in focus position, using the continuative-1 form; and in (17c) and (18c), a verb-initial independent clause occurs with the continuative-2 form.

- (17) a. *yanh<sup>3</sup> tah<sup>1</sup> riaan<sup>32</sup> me<sup>3</sup>sa<sup>4</sup> a<sup>32</sup>*  
 paper is<sup>^</sup>on face table DECL  
 the paper that is on the table

- b. *yanh<sup>3</sup> taa<sup>5</sup> riaan<sup>32</sup> me<sup>3</sup>sa<sup>4</sup> a<sup>32</sup>*  
 paper is<sup>^</sup>on face table DECL  
 THE PAPER is on the table.

- c. *tah<sup>1</sup> yanh<sup>3</sup> riaan<sup>32</sup> me<sup>3</sup>sa<sup>4</sup> a<sup>32</sup>*  
 is<sup>^</sup>on paper face table DECL  
 The paper is on the table.

- (18) a. *shnii<sup>3</sup> ne<sup>13</sup> ra<sup>4</sup> we<sup>ʔ3</sup> a<sup>32</sup>*  
 boy sits in house DECL  
 the boy who is living in the house

- b. *shnii<sup>3</sup> ne<sup>3</sup> ra<sup>4</sup> we<sup>ʔ3</sup> a<sup>32</sup>*  
 boy sits in house DECL  
 THE BOY is living in the house.

- c. *ne<sup>13</sup> shnii<sup>3</sup> ra<sup>4</sup> we<sup>ʔ3</sup> a<sup>32</sup>*  
 sits boy in house DECL  
 The boy is living in the house.

Relative clauses like (17a) and (18a) are quite common in Copala Trique because prepositional phrases cannot modify a noun; \**yanh<sup>3</sup> riaan<sup>32</sup> me<sup>3</sup>sa<sup>4</sup> a<sup>32</sup>* 'the paper on the table' and \**shnii<sup>3</sup> ra<sup>4</sup> we<sup>ʔ3</sup> a<sup>32</sup>* 'the boy in the house' are not acceptable noun phrases.

<sup>5</sup>Speakers are not always consistent in their use of the continuative-2 form. For some, it seems to be obligatory in relative clauses, but optional at the beginning of independent clauses, which may indicate that, for them, it is becoming a relative-clause marker. Also, there are differences among speakers about which verbs have continuative-2 forms.

In (17a) and (18a), the head noun serves as the subject of the verb in the relative clause, but it is also possible for a head noun to have some other role in a relative clause. In (19a), the head noun is a location. The relative clause contains the continuative-2 form of the verb, followed by the subject and a stranded preposition. If a location is in focus position in an independent clause, the preposition may be stranded, as in (19b), or fronted along with its object, as in (19c). If it is stranded, the only difference between the relative clause and the independent clause with focus is the presence of the continuative-2 verb versus the continuative-1 verb. Sentence (19d), like (17c) and (18c), shows a verb-initial independent clause containing a continuative-2 form.

- (19) a. *yoo*<sup>4</sup>                    *nuu*<sup>2</sup>    *ro<sup>3</sup>koʔoo*<sup>13</sup>    *ra*<sup>4</sup>    *a*<sup>32</sup>  
          palm<sup>^</sup>basket    is<sup>^</sup>in    gourd<sup>^</sup>bowl    in    DECL  
          the palm basket that the gourd bowl is in
- b. *yoo*<sup>4</sup>                    *nuu*<sup>32</sup>    *ro<sup>3</sup>koʔoo*<sup>13</sup>    *ra*<sup>4</sup>    *a*<sup>32</sup>  
          palm<sup>^</sup>basket    is<sup>^</sup>in    gourd<sup>^</sup>bowl    in    DECL  
          The gourd bowl is in THE PALM BASKET.
- c. *ra*<sup>4</sup> *yoo*<sup>4</sup>                    *nuu*<sup>32</sup>    *ro<sup>3</sup>koʔoo*<sup>13</sup>    *a*<sup>32</sup>  
          in palm<sup>^</sup>basket is<sup>^</sup>in    gourd<sup>^</sup>bowl    DECL  
          The gourd bowl is IN THE PALM BASKET.
- d. *nuu*<sup>2</sup>    *ro<sup>3</sup>koʔoo*<sup>13</sup>    *ra*<sup>4</sup>    *yoo*<sup>4</sup>                    *a*<sup>32</sup>  
          is<sup>^</sup>in    gourd<sup>^</sup>bowl    in    palm<sup>^</sup>basket    DECL  
          The gourd bowl is in the palm basket.

Even though continuative-2 verbforms are very common, they are somewhat less frequent as a syntactic marker of relative clauses than introductory pronouns. Of the ninety-five relative clauses in the corpus studied, fifty-four had introductory pronouns, and twenty-three of these also had continuative-2 forms. An additional ten had just the continuative-2 form without an introductory pronoun.

### 3. Parsing strategies for unmarked relative clauses

In the text sample examined for this study, thirty-one of the ninety-five relative clauses had noun heads, rather than pronoun heads, and verbs other than continuative-2 forms. The question that I address in this section is: how does the hearer decide that these sequences are relative clauses,

rather than some other construction in which a verb can follow a noun? Because language must be processed quickly, the way in which the hearer arrives at a decision must be largely unconscious and based on plausible guesses, rather than precise reasoning. Many factors seem to be involved. Some, like the immediate discourse context and the mutual belief system, are not specifically linguistic. Other factors, such as common syntactic patterns and collocational facts about individual lexical items, are not only linguistic, but highly language specific.

Before attempting to assess the role of these factors, it is necessary to consider the following statistics. In the text sample I examined, which contained 728 sentences, I found 178 sequences that contained neither an introductory pronoun nor a continuative-2 verbform, but which could potentially be parsed, at least locally, as relative clauses. Of this number, however, I judged that 147 were not relative clauses; the 31 that were comprised less than 20% of the total. On the basis of frequency, therefore, a strategy that leads the hearer to consider other structures first will be more efficient than one that leads him to begin with a relative-clause analysis.

The role of the discourse context and the mutual belief system in the parsing process is that they help the hearer know who the participants are, what has happened so far, and what is likely to happen next. If the information contained in a potential relative clause moves the narrative forward, it is likely not to be a relative clause. If it contributes to the identification of a participant, it is likely to be a relative clause.

The role of syntactic patterns and collocational factors is that the presence of specific lexical items, especially verbs, creates expectations in the hearer. For each verb, one or more case frames is stored in the hearer's mental lexicon, and, as he processes incoming material, he looks for some element that can plausibly express each position in the pattern.<sup>6</sup> If all the positions are filled, he will parse the structure as an independent clause; but if there is a gap in some position, he will parse it as a relative clause.

The patterns that the hearer has stored in his brain include structures larger than single clauses, such as paratactic sentences containing two juxtaposed independent clauses and single clauses containing embedded object-complement clauses. For many of these structures, the presence of particular lexical items serves as an important parsing cue.

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<sup>6</sup>For a view of parsing based on this position, but formulated in the framework of government-and-binding theory, see Pritchett (1988). For a view of parsing based on the notions of late closure and minimal attachment, see Frazier (1979). I have not treated Frazier's model in this study because a pilot study showed that these two principles often made incorrect predictions for Copala Trique. Other material on parsing strategies is found in Frazier and Fodor (1978) and Frazier and Rayner (1982).

In order to see these factors in operation it will be helpful to work through some examples. Example (20) is a paratactic sentence which contains a local ambiguity.

- (20) *chee*<sup>5</sup> *chii*<sup>3</sup> *achraa*<sup>5</sup> *zo?*<sup>3</sup> *a*<sup>32</sup>  
 walks man sings he DECL  
 The man walks along singing.

When the hearer encounters the first two words of (20), which are an intransitive verb and its subject, he has met the requirements for an independent clause. When, however, he comes to the third word, the intransitive verb 'sing', it could be either the first word of another independent clause, or the first word of a relative clause modifying 'man'. When he reaches the fourth word, he finds the pronoun 'he', which satisfies the needed subject role for 'sing'. If 'sing' were the verb of a relative clause, no subject would be expressed because the head noun 'man' would logically fill the role. The hearer therefore finds two complete clauses and parses the structure as a paratactic sentence. Additional support for this analysis is found in his mental pattern for paratactic simultaneous action sentences, which have coreferential subjects and often have a motion verb in the first part.

Example (21) is a purpose sentence, but the syntactic ambiguity remains throughout, and the parsing decision must be based on factors outside the syntax. Purpose sentences consist of a main clause followed by a purpose clause, which requires a verb in potential aspect.

- (21) *kiranh*<sup>5</sup> *chii*<sup>3</sup> *?nuu*<sup>5</sup> *natu?wee*<sup>2</sup> *zo?*<sup>3</sup> *a*<sup>32</sup>  
 bought man corn will^resell he DECL  
 The man bought corn in order to resell (it), *or*  
 The man bought the corn which he will resell.

The hearer can easily parse the first three words of (21) as a transitive clause, but realizes when he reaches the verb 'resell' that he is dealing with a more complex structure. Because this verb is in potential aspect, it can be the verb of a purpose clause. When he reaches the fifth word, which is an ordinary pronoun that can serve as the subject of 'resell', the purpose-sentence reading is confirmed. Because inanimate direct objects are often unexpressed, the lack of an element following the subject does not constitute a gap that forces a relative-clause reading. Either reading is possible, but the purpose sentence takes precedence because of discourse-pragmatic factors: it is far more plausible that the speaker would express the purpose for buying corn than that he would identify which corn was bought.

Example (22), on the other hand, contains a relative clause.

- (22) *tanuu*<sup>3</sup> *tume*<sup>4</sup> *shuman*<sup>?</sup><sup>3</sup> *kawi*<sup>?</sup><sup>3</sup> *kii*<sup>3</sup> *a*<sup>32</sup>  
 soldier guarded town died yesterday DECL  
 THE SOLDIER WHO GUARDED THE TOWN died yesterday.

When the hearer encounters the noun 'soldier' at the beginning of (22), he expects it to be a focused element in an independent clause and proceeds to the verb 'guarded'. Because 'soldier' is a plausible subject for this verb, the original hypothesis holds. He moves on to the word 'town', which provides an object for the verb. It is only when he comes to the verb 'died' that he realizes the construction is more than a simple clause. In that neither 'guard' nor 'die' is a verb that takes a sentential complement, he considers the possibility of a paratactic sentence. When he arrives at the time adverb 'yesterday' and sees that there is no subject following 'died', however, the possibility of a paratactic sentence is also ruled out, leaving relative-clause readings as the only remaining possibility. Four such readings are syntactically possible, but three of them are ruled out on other grounds: 'THE SOLDIER guarded the town that died yesterday', 'The town that died yesterday guarded THE SOLDIER', and 'THE SOLDIER THAT THE TOWN GUARDED died yesterday'. Because only animate beings can serve as the subject of 'die' and 'guard', these readings are not considered.

Examples (23) and (24) show the syntactic-causative construction, which contains an object-complement clause in focus position. Virtually any clause in the language can be followed by a form of the verb *ʔyah*<sup>3</sup> 'make, do, cause', followed by an agentive subject.<sup>7</sup> Whenever the hearer encounters *ʔyah*<sup>3</sup> after a complete clause, he attempts to parse the sentence as a causative, even if there is a noun immediately preceding *ʔyah*<sup>3</sup>, which makes a relative-clause reading possible. In these sentences, even though both readings are grammatically correct and lexically reasonable, the causative reading is chosen because this construction is so common. It would be rejected only if there were a mismatch with the discourse context.

- (23) *cha*<sup>4</sup> *chii*<sup>3</sup> *rtaa*<sup>31</sup> *ʔyah*<sup>3</sup> *sha*<sup>3</sup>*na*<sup>1</sup> *a*<sup>32</sup>  
 eats man tamale makes woman DECL  
 The woman makes the man eat the tamale, *or*  
 The man eats the tamale that the woman makes.

<sup>7</sup>There are also certain compatibility requirements on aspect sequences.

- (24) *katuh*<sup>5</sup> *shuwee*<sup>3</sup> *we?*<sup>3</sup> *ki?yah*<sup>3</sup> *chii*<sup>3</sup> *a*<sup>32</sup>  
 entered dog house made man DECL  
 The man caused the dog to enter the house, *or*  
 The dog entered the house that the man built.

Other verbs like *a?weh*<sup>32</sup> ‘be willing’ and *uun*<sup>3</sup> *nukwah*<sup>13</sup> ‘be able’ regularly take object-complement clauses in normal order. Some of these verbs require potential aspect in the object complement, and others require aspect agreement. If such a verb has a noun as its subject, the hearer attempts to parse a verb in the appropriate aspect following that noun as part of an object complement, rather than as part of a relative clause modifying the subject noun (or as part of the second clause in a paratactic sentence). The presence of the pronoun subject for the second verb confirms the hypothesis that no relative clause is involved.

- (25) *a?weh*<sup>32</sup> *shreh*<sup>3</sup> *ki?yah*<sup>13</sup> *zo?*<sup>3</sup> *mi<sup>3</sup>sa*<sup>4</sup> *a*<sup>32</sup>  
 is^willing priest will^make he mass DECL  
 The priest is willing to say mass.

- (26) *guun*<sup>3</sup> *nukwah*<sup>13</sup> *sha<sup>3</sup>na*<sup>1</sup> *na<sup>3</sup>shkah*<sup>2</sup> *no?*<sup>3</sup> *kah*<sup>32</sup> *a*<sup>32</sup>  
 became strong woman raised she log DECL  
 The woman was able to lift the log.

Sometimes the significant information the hearer uses involves prohibitions, as well as positive expectations. It is a syntactic fact about Copala Trique that the equative verb *me*<sup>3</sup> ‘be’ does not occur in relative clauses.

- (27) *shnii*<sup>3</sup> *chee*<sup>5</sup> *chreh*<sup>32</sup> *me*<sup>3</sup> *tinuu*<sup>5</sup> *gwaa*<sup>4</sup> *a*<sup>32</sup>  
 boy walks trail is brother John DECL  
 John’s brother is the boy who walks on the trail.

When the hearer encounters the first three words of (27), he attempts to parse them as an independent clause with the subject noun in focus position. When he comes to the verb ‘be’, however, he knows the structure is more complex than a single clause. Because ‘walk’ does not take an object complement, one possible reading is ruled out. Because ‘be’ rarely occurs as the verb in the second part of a paratactic sentence, a second reading is ruled out. And because the verb ‘be’ never occurs in relative clauses, it must be the main verb, leaving the verb ‘walk’ as the verb of a relative clause.

In the text corpus there were a few fixed phrases in the form of relative clauses, as in (28) and (29). Such strings seem to be parsed by matching

them with strings stored in the mental lexicon, and this matching apparently takes priority over decision-making processes based on syntax or discourse considerations.

(28) *chruun*<sup>3</sup> *akaa*<sup>32</sup>  
 wood burns  
 firewood

(29) *aga*<sup>23</sup> *a?ne*<sup>23</sup> *chruun*<sup>3</sup>  
 metal cuts wood  
 axe

I first became aware of the parsing strategy I propose here when my husband and I tried to construct a descriptive phrase to translate the term *synagogue*. We used 'house where the Israelites meet together', but found that it was consistently parsed as part of a paratactic sentence. This phrase often occurred in sentences similar to (30). Because the verb 'go' is relatively common in the first part of paratactic sequence sentences, the hearer expected this construction and did not consider the relative-clause reading even though it is syntactically correct.

(30) *ka?anh*<sup>32</sup> *zo?*<sup>23</sup> *we?*<sup>23</sup> *nuu*<sup>3</sup> *chre?*<sup>22</sup> *yuwii*<sup>31</sup> *israelita*<sup>4</sup> *a*<sup>32</sup>  
 went he house become compact person Israelite DECL  
 He went to the house where the Israelites meet together, *or*  
 He went to the house; the Israelites meet together.

#### 4. Conclusions

The decision-making process for parsing relative clauses is clearly based on a variety of factors. Even though it is difficult to assess the way in which they interact, I propose the following steps as an approximation to a model of this process.

a. Does an introductory pronoun occur followed by a verb? If so, parse the sequence as a relative clause.

b. If not, does a continuative-2 verbform occur following a noun? If so, parse the sequence as a relative clause.

c. If neither of these conditions is met, but a verb occurs following a noun, is the sequence a fixed phrase (idiom)? If so, parse it as a relative clause.

d. If the noun-verb sequence is not an idiom, try to match the words with the syntactic patterns for clauses with a focused element, clauses with an



embedded object complement, and paratactic sentences. If there is a match, parse the sequence as an instance of that pattern.

e. If the noun-verb sequence does not match any of these patterns, parse it as a relative clause.

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**Phonology, Phonological History, and Writing Systems**



## On Five-level Tone Systems

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In his long and productive career, Robert E. Longacre has carried out explorations of linguistic phenomena at levels from phonetics to discourse in language families from around the globe.<sup>1</sup> In his published work one finds an exceptional commitment to empirical discovery (witness, for example, the spirit of his 1964 grammar manual). In this contribution to honor our friend and colleague, we return to perhaps his first significant linguistic discovery, as reported in his article "Five phonemic pitch levels in Trique" (Longacre 1952). Growing out of his field experience in the late forties with this language from Mexico, this seminal work chronicles the frustration with his initial treatment of Trique tones and goes on to draw the conclusion that Trique has a tonal system with five contrastive levels (heights) of pitch. Since that time it cannot be said that five-level tonal systems have turned up in hordes, but there are now at least some even more obvious and unambiguous examples than Trique. Our modest aim here is to provide a brief overview of examples of some five-level tone phenomena not only from the Americas, but also from Asia and Africa.

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<sup>1</sup>Support for some of this research (JAE) was provided by the Committee for Scholarly Communication with the People's Republic of China and the National Endowment for the Humanities for the period January-June, 1990. The data from Pa-hng and Shidong Kam analyzed here were collected respectively from Wan Ren-sheng, a Pa-hng civil servant from Laobao Township, Sanjiang County, Guangxi Province and from Long Yaohong, a Kam student of the Central Institute of Nationalities, Beijing.

### 1. Trique

In 1947, Longacre encountered in Trique of Oaxaca (Mexico) a complex tonal language that ultimately defied analysis as anything less than a five-term system. Initial hypotheses of three or four tone heights failed to account for all the contrasts recognized by native speakers when presented with Trique forms in controlled frames. Longacre's discovery, in this regard, flew in the face of the state-of-the-art summation by his colleague Kenneth Pike that:

The number of permitted registers in various languages seems to be limited to two, three, or four: languages have been reported with more levels of perceived pitch than four, but apparently such numerous levels are not all contrastive or lexically significant, and would reduce to fewer phonemic registers. (1948:5-6)

Longacre's working hypothesis by 1949 of a five-level system in Trique was, further, confirmed by Pike himself in 1950 and reported in detail in Longacre 1952.

The Trique case is significant in the annals of tone study from both methodological and theoretical points of view.

As a case study of empirical research, involving the gathering of data, assembling it in relevant categories and constructing hypotheses to cover all instances of occurrence, Longacre's is a classic story in fieldwork. From a beginning hunch that perhaps three tones would suffice, research led on fairly quickly to the realization that four tones would be required to account for the clear instances of pitch contrasts. But then RESIDUES, nagging recalcitrant occurrences of tone, turned up that resisted inclusion in any of the four established categories.

The complete five-level inventory was finally reached by employing two methods: contrast in substitution frames and contrast in minimal sets. The substitution test is illustrated from Longacre's account (1952:69), as in (1), in which the tones of the final forms all vary in the same segmental and tonal context, varying correspondingly and, therefore, relevantly as to their meaning at the same time.<sup>2</sup>

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<sup>2</sup>In Longacre's system, <sup>1</sup> represents the highest pitch height and <sup>5</sup> the lowest. In the Y. R. Chao terminology the level pitch would be represented as a sequence of numbers with the highest being <sup>55</sup> and the lowest <sup>11</sup>. Thus, in addition to being scalar reversals, the Longacre system regards tones as points on a pitch scale, whereas the Chao system regards tones as stretches. Cf. the discussion of SPLITTERS and LUMPERS in §9.2. We have indicated which system is being used at each particular point in the text.

- |     |   |                            |
|-----|---|----------------------------|
| (1) | <i>gu<sup>5</sup>du<sup>5</sup>?we<sup>5</sup> ku<sup>1</sup></i> | 'I will sell bones'        |
|     | <i>gu<sup>5</sup>du<sup>5</sup>?we<sup>5</sup> jo<sup>2</sup></i> | 'I will sell palm baskets' |
|     | <i>gu<sup>5</sup>du<sup>5</sup>?we<sup>5</sup> ka<sup>3</sup></i> | 'I will sell squash'       |
|     | <i>gu<sup>5</sup>du<sup>5</sup>?we<sup>5</sup> ?a<sup>4</sup></i> | 'I will sell nine'         |
|     | <i>gu<sup>5</sup>du<sup>5</sup>?we<sup>5</sup> za<sup>5</sup></i> | 'I will sell eleven'       |

The second method is essentially a noncontextual one in which forms that contrast only as to tone are assembled in partial sets (partial because no totally identical sequence of segments occurs with all the tones), as in (2).

- |     |                         |                        |                          |                  |
|-----|-------------------------|------------------------|--------------------------|------------------|
| (2) | <i>za<sup>2</sup>h</i>  | 'I am eating'          | <i>w:e<sup>12</sup></i>  | 'straw mat'      |
|     | <i>za<sup>3</sup>h</i>  | 's/he is eating'       | <i>w:e<sup>2</sup></i>   | 'hair'           |
|     | <i>za<sup>5</sup>h</i>  | 'I am going to eat'    | <i>w:e<sup>3</sup></i>   | 's/he is fierce' |
|     | <i>za<sup>43</sup>h</i> | 's/he is going to eat' | <i>w:e<sup>343</sup></i> | 'century plant'  |

Thus, through a series of such demonstrations each tone can be shown to be in contrast with all other tones in some set such as these, though not in all sets for any given tone. The recognition of five levels of tone is also clearly contingent on the decomposition of complex glides into their constituent levels, a factor Longacre (1952:73) acknowledges as contributing to the overall difficulty of the analysis. Specifically, tone 1 only occurs in combination with other tones.

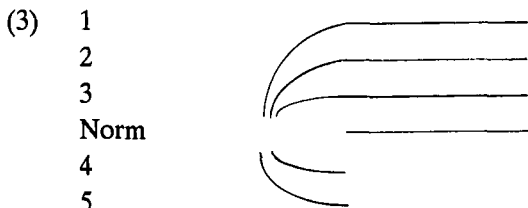
From a theoretical perspective, Longacre's Trique work challenges and adjusts (as all scientific inquiry should) our universalist taxonomic doctrine on what the upper limits are for natural language tone levels. However, that "the presence of five phonemic pitch levels in Trique is incontrovertible" (1952:81) must be counterbalanced by the further observation (1952:77) that the system is "asymmetrical in that tonemic combinations involving the lower tones are comparatively numerous, while such combinations involving the two higher tones are comparatively few... [and] the actual complexity of phonemic structure is no greater than that of [a]... four-level system." Thus, one may be led to conclude that not only are five-level tone systems highly marked in any survey of world tone languages, but that upon closer inspection even those that do occur may maintain their distinction by something of a fragile margin.

The phonetic facts of Trique further lead Longacre to suggest the possibility that five-level systems may turn out to be best understood:

...in terms of a hypothetical norm of the speaking voice and degree of departure from that norm. This norm seems to lie somewhere between the tones 3 and 4, since tones 1, 2, and 3

strike up from somewhere near this relative pitch range and tones 4 and 5 strike down from it. (1952:80–81)

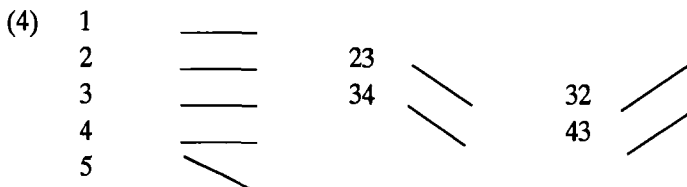
The situation Longacre seems to have in mind is something like that represented schematically in (3).



Whether this account of how five-level systems use their phonetic space has any universal basis is, of course, an empirical question that requires more investigation. As we shall point out below, however, a study of Gaoba Kam, a Kadai language of southern China, makes the identical claim on grounds apparently completely independently of Longacre's work. Our own investigation of a similar kind of Kam and a variety of Pa-hng showed mixed results; data from one language confirmed this view; the other did not.

## 2. Chinantec

Trique, as it turns out, is not the only Meso-American language with a five-level tone system. Skinner (1962:251) also reports that "Usila Chinantec demonstrates five phonemic tone registers occurring in almost all possible combinations in bisyllabic words." The tones may be represented as in (4), in which 1 is again high and 5 low. There are four phonetically level tones (1, 2, 3, and 4), while tone 5 actually starts just lower than 4 and falls sharply. The tone sequences, which also occur over single syllables, begin rather precisely at the tone height of the first tone of each sequence and either rise or fall in the direction of, but not fully reaching, the level of the second indicated tone.





As Skinner notes (254), these sequences all constitute a rather “shallow” contour, involving as they do only tones that are adjacent in height to one another. In comparison with Trique and Ticuna (§3), Skinner says:

Usila Chinantec has fewer tones and tone sequences within the syllable—nine—than either Trique or Ticuna. Nevertheless, of the three languages, Usila Chinantec has the most complete filling in of possible tonal combinations in bisyllabic words having one tone per syllable. (1962:254)

To provide a few concrete instances of Usila Chinantec tone patterns we list the forms of (5). In the first column, tones 1–5 occur preceding a syllable with tone 1, while the second syllable of words in the second column illustrates the four tone sequences.

(5)	<i>o<sup>1</sup>nó<sup>1</sup></i>	‘lard’	<i>a<sup>2</sup>ló<sup>23</sup></i>	‘small pheasant’
	<i>a<sup>2</sup>ló<sup>1</sup></i>	‘mule’	<i>o<sup>1</sup>kuá<sup>232</sup></i>	‘dirt’
	<i>si<sup>3</sup>tá<sup>1</sup></i>	‘authorities’	<i>si<sup>1</sup>kué<sup>34</sup></i>	‘my hand’
	<i>ma<sup>4</sup>ló<sup>1</sup></i>	‘Tuxtepec’	<i>i<sup>4</sup>cié<sup>43</sup></i>	‘truth’
	<i>u<sup>5</sup>ló<sup>1</sup></i>	‘Palantla’		

### 3. Ticuna

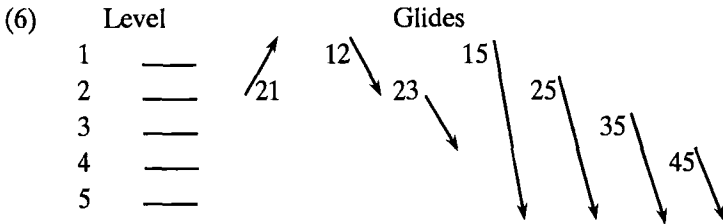
The first reported instance of a five-level tone system in South America is Anderson 1959 on Ticuna, a language spoken by some 21,000 people in the northeastern Amazon regions of Peru, Colombia, and Brazil (Grimes 1988:135).

Anderson’s narrative of the trial and error saga so familiar to the field linguist in confronting a complex problem in virgin linguistic territory is reminiscent of Longacre 1952. The Andersons began in 1953 with a hopeful initial hypothesis that the forms for ‘woman’ and ‘howler monkey’ differed minimally merely by stress placement as /’nge?e/ vs. /nge’?e/, respectively. This system shortly proved incapable, however, of handling in any consistent fashion all of the prosodic differences with which they were presented. Further data now seemed to indicate that perhaps a three-tone scheme was needed, which could represent the above pair as /nge?è/ ‘woman’ vs. /nge?e/ ‘howler monkey’ (with mid-tone vowels unmarked), and other pairs such as /ma?è/ ‘grass’ vs. /má?e/ ‘wasp’.

But after seven months of research in the field, the three-tone system also had to yield to an even richer hypothesis to account for the numerous instances of further tonal contrasts that had emerged. Alerted to the discovery by Longacre of a five-level system in Trique and aided by Pike’s

Mexican-trained ear at a field workshop in 1955, a five-tone scheme was posited which resolved all the remaining problematic Ticuna pitch phenomena.

The Ticuna tones and tone sequences number a total of twelve, which may be represented as in (6), where 1 is high and 5 low. Ticuna thus involves a five-height system with five level pitches and seven glides or sequences, one of which is rising (21) and all other falling.



Under the five-height tone hypothesis the Andersons were now able to provide a coherent representation for, among many others, the trisyllabic forms of (7).

- |   |                        |
|---|------------------------|
| (7) <i>ca<sup>3</sup>na<sup>3</sup>mu<sup>1</sup></i> | ‘I weave it’           |
| <i>ca<sup>3</sup>na<sup>3</sup>mu<sup>4</sup></i>     | ‘I send it’            |
| <i>ca<sup>3</sup>na<sup>3</sup>mu<sup>5</sup></i>     | ‘I eat it (raw fruit)’ |
| <i>ca<sup>3</sup>na<sup>3</sup>mu<sup>35</sup></i>    | ‘I spear it’           |

#### 4. Miao-Yao

Interestingly enough, in the same year (1947) that Longacre was discovering five-levels of tone for Trique, Chang was publishing in Chinese (and perhaps thus not widely noted in the West) concerning five-level systems in Miao-Yao (Hmong-Mien) languages of China, Vietnam, Laos, and Thailand. These languages possess some of the more complex phonological systems of Southeast Asia.

Prosodically, Miao-Yao employs three to twelve tones, of which as many as five have been described as having level (i.e., noncontour) pitch trajectories in some varieties. These monosyllabic languages provide particularly clear examples of tonal systems whose pitch dimensions must allow for five independent heights. That these five tones are manifested in rather straightforward fashion as contrastive stretches of simple steady-state pitch on differing monosyllabic morphemes serves to dramatize the reality of a five-height system. Recall the difficulty Longacre initially encountered in

the case of Trique wherein the upper-most tone height (tone 1) does not occur alone, but derives by abstraction as a feature of a more complex tonal contour. It was also pointed out that only four of the Usila Chinantec tones are phonetically level, the fifth being a contour that falls from below tone four to something even lower, thus necessitating a fifth height for the system.

In an English-language version of his original work, Chang (1953:375) discusses ten varieties (seven in detail) of Miao-Yao in terms of their phonetic implementations of the eight historical proto-tone categories (A<sub>1</sub>, A<sub>2</sub>; C<sub>1</sub>, C<sub>2</sub>; B<sub>1</sub>, B<sub>2</sub>; D<sub>1</sub>, D<sub>2</sub>),<sup>3</sup> here listed respectively simply as tones I - VIII. Two varieties of Miao-Yao (MTK<sup>4</sup> and YYT) illustrate five-height systems in which an unambiguous level pitch is associated with each height along with three other contour pitch stretches, as indicated in (8) and (9). Observe that level tones can turn up in any of the proto categories (including VII in other lects).

(8) MTK

I	II	III	IV	V	VI	VII	VIII
mid-high level	high falling	high level	mid-low level	high rising	mid level	low rising	low level

(9) YYT

I	II	III	IV	V	VI	VII	VIII
rising	mid level	mid-low level	low level	high level	high-mid level	high falling	low falling

<sup>3</sup>Tone categories in Asia are usually defined by their historical sources; but, regrettably, there is confusion in the traditional notations, inasmuch as Chinese scholars use the Chinese names given to Middle Chinese tone categories for the proto tones of other languages and numbers, grouped pairwise 1/2, 3/4, 5/6, 7/8 (and sometimes even 9/10) for contemporary reflexes, whereas the Thai tradition uses A, B, C, and D for the proto tones and A<sub>1</sub>/A<sub>2</sub>, B<sub>1</sub>/B<sub>2</sub>, C<sub>1</sub>/C<sub>2</sub> and D<sub>1</sub>/D<sub>2</sub> (or D<sub>1S</sub>/D<sub>2S</sub> and even D<sub>1L</sub>/D<sub>2L</sub>) for contemporary reflexes. But B<sub>1</sub>/B<sub>2</sub> corresponds to 5/6 and C<sub>1</sub>/C<sub>2</sub> to 3/4; thus, either B and C are reversed or 3/4 and 5/6 are reversed.

<sup>4</sup>MTK is Hei (black) Miao of Shitungk'ou (Shidongkou) village of Taikung (Taigong) County, Kueichow (Guizhou) Province. This village is the same one cited by Kwan (1966); both Chang and Kwan having the field research of Fang Kuei Li as their source. From Kwan's description the Black Miao inhabit the banks of the Qingshui River, which flows from central Guizhou out the eastern border. Shidong, Taijiang (Taixian) County is located about 50 km northeast of the capital of SE Miao-Kam Autonomous District at Kaili.

In a later paper, Chang assembled further data towards a reconstruction of the Proto-Yao tone system. He notes in passing that:

Yao, in contrast to Miao, has a complicated system of finals: vowels may occur in final position, or they may be followed by *-y*, *-w*, *-p*, *-m*, *-t*, *-n*, *-k* (in some dialects *-ʃ*), or *-ŋ*. Miao, on the other hand, has a complicated system of initials, with both simple consonants and consonant clusters, which Yao for the most part lacks. (1966:303)

With these kinds of syllabic reductions and segmental shifts, it is perhaps not surprising that the phonetic character of the tones has varied so greatly. In fact, though he associates the Proto-Miao initial consonants with each Proto-Yao tone and cites Yao cognates in six dialectal variants, it is again not surprising that Chang merely lists the phonetic tone correspondences rather than suggesting a proto shape for each tone. That is, though five-level tone systems occur in Miao-Yao, they appear to be highly marked and cannot be reconstructed as original.

A study of a Black Miao location of Guizhou (Ch'ing Chiang Miao) by Julia Kwan, a student of Fang Kuei Li, also described a five-level tone system. Her research (1966:27-33) provides the details in (10), here recast in the form of the Miao-Yao data in (8) and (9). A comparison of Kwan's CCM with Chang's MTK shows only a minor variation; namely, CCM has a mid-rising tone *v*, while MTK reflects a high-rising *v*.<sup>5</sup>

(10) CCM

I	II	III	IV	V	VI	VII	VIII
mid-high	high	high	mid-low	mid	mid	low	low
level	falling	level	level	rising	level	rising	level
44	51	55	22	35	33	13	11

By way of summary, the five level tones above may be located historically in terms of the classic voiced-voiceless initial bifurcation of Asian tone systems, as in (11).

(11)

	*A	*C	*B	*D
*Voiceless initials	I level	III level	V	VI
*Voiced initials	II	IV level	VI level	VIII level

<sup>5</sup>This difference is unexplained since, presumably, Kwan used data from the same location as Chang, both based on Li Fang Kuei's fieldwork.

During a 1990 fieldtrip to Guangxi Province, Edmondson collected data on Pa-hng Red Yao, who speak a kind of Bunu Miao (Edmondson 1990); it is the same language as Chang's YYT by another name.<sup>6</sup> The main differences between the data collected in Sanjiang and Rongshui Counties and YYT are that the Pa-hng has only four level tones. Moreover, tone 2 has a pitch value of 22 in Pa-hng but 33 in YYT.<sup>7</sup> Historically speaking, Chang's YYT has achieved its fifth level tone by manifesting historical tone 3 and tone 4 as different pitches, whereas historical tone categories 3 and 4 are identical in Pa-hng, because either the proto tone \*c never split or because its two reflexes after splitting collapsed to form a single pitch again.

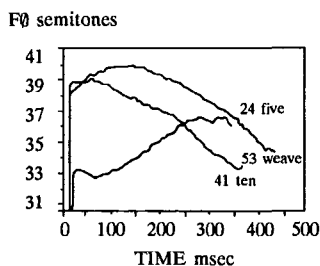
Figures (12) and (13) plot the pitch values of the seven distinctive tone categories derived from computer processing of multiple repetitions of the following examples: tone 1 *pja*<sup>24</sup> 'tree, five', tone 2 *pə*<sup>22</sup> 'flower', tone 3 *tə*<sup>(2)11</sup> 'fire', tone 4 *māi*<sup>(2)11</sup> 'horse', tone 5 *qo*<sup>55</sup> 'egg', tone 6 *təi*<sup>44</sup> 'die', tone 7 *na*<sup>53</sup> 'weave', and tone 8 *kuu*<sup>41</sup> 'ten'. The speaker's tone space extends from 33 to 41 semitones, with the highest tone (55) appearing at 41 semitones, the lowest (11) at 33 semitones. Mid-low (22) appears at 35 semitones, mid-high (44) at 39 semitones. The historical correspondence between Pa-hng and YYT requires that Pa-hng tones 3 and 4 bifurcate and become 22 and 11, respectively, thereby forcing tone 2 to elevate from 22 to 33. No other changes are necessary to achieve the YYT situation. Note also that the higher of the four level tones of Pa-hng rise before leveling off and the lower of the tones drop before leveling.<sup>8</sup> The change between a four-level and a five-level tone system, in this instance, only requires the addition of a new contrast at the nearest higher level.

<sup>6</sup>The Pa-hng Red Yao number about 10,000 and are found in Sanjiang Kam Autonomous County, Longsheng County, Rongshui Miao Autonomous County, all in Guangxi Province, Liping County and Congjiang County both in Guizhou Province as well as 2,000 in Northern Vietnam. Chang 1947 refers to this language as Yung-ts'ung, Hsishanchieh, and Tahua Yao. Shi, Shi, and Liao 1988 and personal correspondence with Dr. David Strecker indicate that YYT is a form of Pa-hng Red Yao, which is a Hmongic (Miao) language whose speakers are grouped for cultural and historical reasons with the Yao (Red Yao or Eight Name Yao).

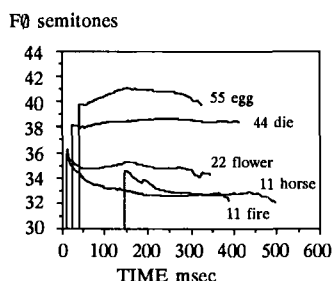
<sup>7</sup>These data and those on Kam were recorded on high-quality recording tape with a Sony TCM5000 professional quality cassette tape recorder using an Atus ATR20 low impedance unidirectional dynamic microphone placed close to the mouth but sufficiently outside the airstream to avoid microphone blast. The speaker repeated each elicited item five or more times. At a later time the tapes were played into the CECIL hardware unit (Computerised Extraction of Components of Intonation in Language, SIL, Jaars, Waxhaw, NC), which contains bandpass filters, an amplifier, and an 8-bit parallel interface to an AT-286 DOS computer. The digitized data were saved on floppy disk medium.

<sup>8</sup>Cf. similar phenomena in Trique (§1) and Kam (§5).

## (12) Pa-hng Red Yao rising and falling tones



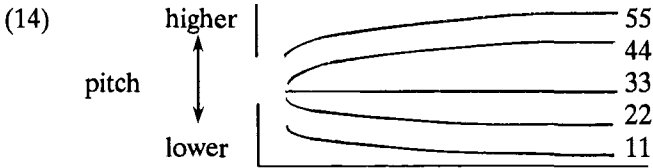
## (13) Pa-hng Red Yao level tones



## 5. Gaoba Kam

In their study of Gaoba Kam (Jinzhan County, Guizhou Province, China), Shi, Shi, and Liao (1988) describe the following values for the nine tones that occur on cv syllables:  $ma^{45}$  'vegetable',  $ma^{11}$  'come',  $ma^{22}$  'tongue',  $ma^{33}$  'light in weight',  $ma^{13}$  'ink',  $ma^{31}$  'horse',  $ma^{55}$  'cut down',  $ta^{24}$  'nail', and  $pa^{44}$  'husk'.

They found that, of the nine tones occurring in cv syllables, five were level and defined five distinct heights. Phonetically, these level tones all begin at mid height and are described as diverging like "rays of the sun," the lower tones falling before they become horizontal in the latter part of their course, the higher tones rising before sustaining a level trajectory. Shi, Shi, and Liao support their claim with fundamental frequency data derived by calculation from sound spectrograms and plot the results basically as in (14).



They attribute this pitch pattern to the natural tendency of the glottis to initiate phonation at a mid-pitch level. This assumption basically amounts to claiming that there is a natural center of gravity for pitch around which speakers initiate a syllable. In this regard, recall Longacre's similar and independent proposal for Trique (§1).

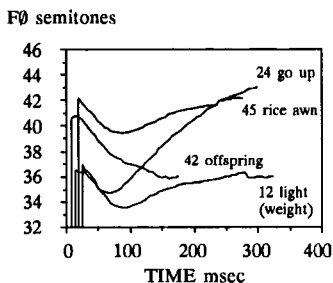
## 6. Shidong Kam

Haudricourt (1961) and others since have pointed out that Kam is a language of extraordinary tonal complexity. We are also beginning to understand how this complexity arose. Simply stated, these tones evolved from a proto language that had three contrasts of pitch in open syllables, called \*A, \*B, and \*C (Li 1977). There were also closed syllables that at first had no tonal contrast but took over the pitch shapes of some open syllables; these were called \*D. At a later time, the vowel length contrast of D-type syllables was transformed into a pitch contrast; in the terms of investigators of this field, the \*D split into \*DS (D-short) and \*DL (D-long) to give five tonal categories. Later still came the Great Tone Split (Haudricourt 1961, Brown 1975), in which a voiced-voiceless contrast on initial consonants was replaced by low-high pitch heights; from five, a total of ten tones appeared (§4). This heritage can be seen in the numbering system used above and in the study of China's minority Kadai languages (cf. Wang 1984). A → 1, 2; B → 5, 6; C → 3, 4; DS → 7, 8 (or sometimes 7s, 8s); and DL → 9, 10 (or sometimes 7L, 8L). These developments were widely shared by languages across the Asian mainland, including Kam, Bouyei, Chinese, Miao-Yao, and many others, which is why it has been called the Great Tone Split.

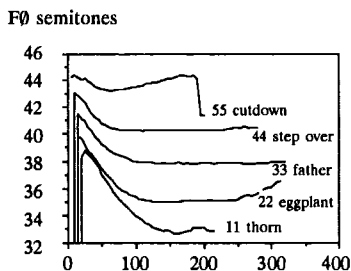
Unlike most languages of the area, Kam was not satisfied with ten tones. It carried the process of turning initial-consonant contrasts into pitch contrasts one step further by using an old theme with a new variation. Vocabulary items with aspirated initial consonants were depressed at the onset of the syllable to create a new set of rising tones. Thus, after all these changes, there resulted a low set from items with original voiced initials, a high set from items with original voiceless initials, and a rising set from items with original aspirated initials, a total of fifteen tones in all.

New field research on Shidong Kam<sup>9</sup> was subjected to instrumental study. As in Gaoba, we found nine tones in cv syllables, which can be divided into contour and level types. The contour tones are exemplified by *áa*<sup>13</sup> 'light in weight', *ʔa*<sup>25</sup> 'ascend', *ʔa*<sup>45</sup> 'riceawn', and *ʔa*<sup>42</sup> 'offspring'. The set of minimal contrasts involving level tones is exemplified by *ʔa*<sup>11</sup> 'thorn', *ʔa*<sup>22</sup> 'eggplant', *ʔa*<sup>33</sup> 'father', *ʔa*<sup>64</sup> 'step over', and *ʔa*<sup>55</sup> 'cut down'. A display of the pitch values for these forms is presented in (15) and (16).

(15) Shidong Kam rising and falling tones



(16) Shidong Kam level tones



The graphs in (15) and (16) demonstrate that the pitch curves for the five level tones of Shidong Kam are, in fact, not level—also a finding of Shi, Shi, and Liao. Unlike in their study, however, it appears that the pitch of all tone categories dropped over the course of the first 50–100 msec before becoming level and not just the lower ones; there was no center of gravity out of which lower tones descended and higher tones rose. The drop-before-level-pitch phenomenon was also found in syllables with initial

<sup>9</sup>Tianzhu County Shidong Village of Guizhou Province, which is located only 15–20 km to the northeast of Gaoba and is, as far as can be determined, virtually identical with it.



*m* as well as with initial *p*. Notice that, just like the level tones, Shidong Kam’s nonlevel tones also exploit the full range of a five-height tone space with what are quite delicate pitch differences. Moreover, there is a similar drop in fundamental frequency at the onset of these syllables in rising tones before the rise begins.

With so many tone contrasts, it is not surprising that Kam might possess more examples of five-level tone systems than elsewhere. Indeed, the *Dongyu Diaocha Baogao* (1957) reports two additional noncontiguous locations with five levels. These are represented in (17) and (18).<sup>10</sup> Note again, however, that each of the three types of Kam with five-level tones differs as to what category has a level tone and what pitch value is found in that category.

(17) Damiaoshan Kam, Guangxi Province

I	II	III	IV	V	VI	VII	VIII	IX	X
44	22	33	11	55	53	55	33	22	11

(18) Jianhe Xiaoguang Kam, Guizhou Province

I	II	III	IV	V	VI	VII	VIII	IX	X
35/11	22	33/23	31	55/25	44	55/25	33	23	31

7. Bouyei

One of the languages cited by Wang (1967:97) as having five level tones is Shuicheng Fa’er Bouyei (Guizhou Province, China). Examples of the phonetic values of these tones (Buyi Diaocha Baogao 1959) are *na*<sup>44</sup> ‘thick’, *na*<sup>11</sup> ‘rice paddy’, *na*<sup>33</sup> ‘face’, *na*<sup>22</sup> ‘maternal uncle’, *kwa*<sup>55</sup> ‘to cross’, *a*<sup>13</sup> ‘river’, *zap*<sup>55</sup> ‘carrying pole’, *zap*<sup>55</sup> ‘cage for piglets’, *kap*<sup>13</sup> ‘pinch’, and *kap*<sup>13</sup> ‘grasp’.<sup>11</sup> These are represented in (19).

(19) I	II	III	IV	V	VI	VII	VIII
mid-high	low	mid	mid-low	high	low-mid	high	low-mid
level	level	level	level	level	rising	level	rising
44	11	33	22	55	13	55	13

<sup>10</sup>Tone I, III, V, VI, and IX are each divided into two in this latter variety of Kam.

<sup>11</sup>In the system for describing tones in Bouyei, the tone categories 7 and 8 designate the checked syllable tones, i.e., those with syllable structure CVC. 7s and 7L (7short and 7long) refer to the vowel length of these closed syllables. In many locations, but not in Shuicheng Fa’er Bouyei, the vowel length conditions a difference in pitch.

There is no obvious parallel between level categories in Bouei and those in Kam or Miao-Yao. Tones I-V are level in Bouei, for example, whereas I', II, III, V, and VI are level in Shidong Kam. Tones I and V have the highest pitch level in Bouei; in Kam, it is categories V and VI. Five-level tones exist at only one of the forty locations from which we have Bouei data.

### 8. Ngamambo

Turning briefly now to Africa, Asongwed and Hyman (1976) have noted that the Ngamambo variety of Moghamo possesses an extraordinarily complex system of tonal patterns even by Grassfields Bantu standards.<sup>12</sup> The authors discuss, among other things, how a two-tone system of Proto-Grassfields developed into a system of five phonetic pitch levels. They describe these five as surface manifestations of tonal combinations found primarily on nouns. Stated simply, in this language nouns have a prefix and a tone concord that combines with the lexical tones of the root. The five resulting forms are described by Asongwed and Hyman as (1) low [L], (2) unreleased low [L°], (3) lower-mid [ˈM], (4) mid [M], and (5) high [H]. Only two of these are found on monosyllables—[L] and [H]—plus the nonlevel tone HL. Bisyllabic nouns have more complex tonal patterns, most involving some kind of prefixing. Examples with tones L, M (one example of ˈM), and H are attested. The combinations L-L, L-L°, L-ˈM, and L-LH occur, with low tone in the first syllable. The combinations M-HL, ˈM-ˈM, and M-H occur, with mid tone in the first syllable. Finally, the combinations: H-HL, H-L, and H-H occur, when the first syllable has a high tone. Five different phonetic levels are thus seen to occur on the second syllables of bisyllabic nouns.

A complete recapitulation of Asongwed and Hyman's treatment would be too lengthy to present in detail here. Nevertheless, some of their conclusions are of interest for our discussion of languages with five level-tone contrasts and how these may have developed. Basically, they argue that the prefix carries one of three prosodic tonal states: nasal carries L, vowel carries M (or ˈM), and consonant-vowel carries H. Asongwed and Hyman choose the solution that L occurs underlyingly on nasal prefixes, H on both vowel prefixes and consonant-vowel prefixes, with a subsequent rule lowering H to M (ˈM) conditioned by whether the syllable begins with a consonant or vowel. They state, moreover, that Proto-Western-

<sup>12</sup>We were unable to obtain the references cited in Maddieson 1978 for the other five-level tone languages of Africa.

Grassfields had a word structure consisting of a monosyllabic prefix and a bisyllabic stem, in which the stem lost its final syllable, with the tone of the lost syllable continuing to exercise influence over tonal combinations, such that  $L-L\downarrow \rightarrow L-L$ ,  $L-L\uparrow \rightarrow L-L'$ ,  $L-H\downarrow \rightarrow L\cdot M$ ,  $L-H\uparrow \rightarrow L-LH$ , where  $\downarrow$  and  $\uparrow$  represent floating tones. The conclusion of this article is that the collapse of syllables with only two original tones can result in forms that distinguish five level pitches.

## 9. Some concluding observations

**9.1. Limits on the dimensions of natural language phenomena.** As our knowledge of natural language grows, so does our ability to characterize the possibilities within its various subsystems. From the point of view of gross acoustics, of course, the number of fundamental frequency levels produced (or producible) in human languages is undoubtedly myriad. The ultimate task of an empirical linguistics, however, is to characterize TONE LEVEL from an emic and systemic perspective. Doke's (1926) nine levels of tone for Zulu thus seem not to have survived scrutiny, nor did they even accord with his own description of three levels elsewhere (1921-23) when contrastive phonological function is taken into account (Pike 1948:6, fn. 8).

More recently, Duthie (1986) proposes, among other revisions of Ladefoged's inventory of phonetic features, a seven-level system of relative pitch levels under the general rubric of REGISTER, as in (20), with a neutral mid level accorded a value of 0, situated between three ascending (+) levels and three descending (-) levels.

(20)	-3 low	0 mid	+1 mid-high
	-2 low-mid		+2 high-mid
	-1 mid-low		+3 high

This system clearly commends itself for symmetry and a certain arithmetic logic. It is straightforwardly advertised as phonetic rather than phonemic. If the goal, however, is to provide a universal phonetic alphabet for tone from which languages (or analysts) select a set of gross (acoustic?) features, this system would appear to be too sparse. On the other hand, if these phonetic features are thought to predict the limits of specification of phonological contrast in any particular language, they seem by all evidence to be too numerous. The question from this angle is ARE THERE ANY SEVEN-LEVEL TONE LANGUAGES? This paper suggests that the magic number

limiting the significant levels of tone would seem to be five (Maddieson 1978:338) or, as Longacre originally put it:

There must be somewhere a practical limit to the degree of complexity of a phonemic or tonemic system... and probably a symmetrical four-level or an asymmetrical five-level system approaches this extreme limit in tonemic complexity. (1952:73, fn. 1)

**9.2. The nature of tones as linguistic objects.** The conception of what tones are in Trique, as well as in Chinantec and Ticuna, is ultimately bound up with the goal of providing a parsimonious interpretation of the total repertoire of unique pitch sequences in each language.

In Trique, for example, in which eighteen unique, unconditioned tonal configurations present themselves, the analyst must decide whether to be a splitter or a lumper in positing the prosodic primes of the language. If, as a lumpner, one opts to conceive tone as a complex object including some with pitch trajectories that are level (e.g., 3), others that have single change contours (e.g., 45), and still others that have double change contours (e.g., 354), the inventory of tone types becomes rather large, eighteen in the case of Trique. On the other hand, Longacre ends up, predictably enough, as a splitter of Trique tone, with fewer primitives but more combinations thereof.

There are other consequences as well. On the positive side, one may argue that by decomposing all pitch phenomena into discrete units of level, the use of level specifications needed in any given case is maximized while at the same time automatically accounting for rising and falling features without having to accord them any status as primitives in the system. This is convincing, of course, to the extent that those latter features play no role in stating any tone generalizations. There is, however, a price to pay for splitting. To be specific, levels 3 and 4 occur independently in Trique. They also occur in combinations of 34, 43, or even 343 on a single syllable, and similarly with the other independently needed pitch levels. But the sequences 12, 21, and in one case 51 also occur in Trique, in which levels 2 and 5 occur independently but level 1 does not. The latter turns up only in these combinations with other pitch levels. At this point, the decision to be a splitter argues in favor of being a thoroughgoing one. But that, unfortunately, involves the recognition of a nonindependently occurring level 1 pitch as a prime in the system as the highest pitch level from which to specify the glide sequences above on the model of the other sequences in the language.

Wang (1967) argues against the splitter (register) approach, commenting that Trique may simply be considered a four-level system if one recognizes as contour tones all those involving level 1. The problem with that solution is that it provides no principled basis for not collapsing all the other sequences into units. Longacre (1952:69, fn. 1) did, in fact, consider this

option, but rejected it for precisely that reason. For example, should the 343 and the 354 sequences be viewed as contour units because they are the only double change sequences and are restricted to occurrence on the ultimate syllable? In this regard, however, while recognizing the rationale for Longacre's analysis of Chichahuaxtla Trique, Hollenbach (1977:60) is able to propose just such a contour approach for the Copala Trique dialect. The reason she can do so, however, is that Copala Trique is devoid of a number of the historical morphophonemic tonal accretions that complicate the situation for contemporary Chichahuaxtla Trique.

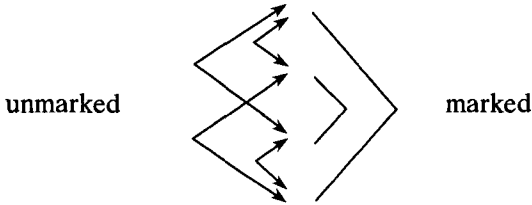
Thus again, in the case of Trique, the answer to the question "What is a tone?" seems to be THAT CONFIGURATION OF FEATURES WHICH COMBINES SIMPLICITY WITH ELEGANCE TO REPRESENT ALL THE PATTERNS OF THE TONE SYSTEM. In the final analysis, however, one must inevitably observe that *de gustibus non disputandum est*.

**9.3. The representation of five level tones.** The existence of five level tones has figured significantly in the discussion of how to represent tonal phenomena in a phonological theory of language. Since five level tones pose a maximum, an adequate feature system for representing tones should predict this fact. Moreover, the system of representation should also be capable of expressing a natural class of tones whose members—just as with classes of segments—tend to undergo phonological processes together, whether historical sound change, tone sandhi, or other change in context. Wang (1967) suggested three features [high], [mid], and [central]. Woo (1969) proposed three features as well, called [high], [low], and [modify]; and Maddieson (1970) has [high], [low], and [extreme]. All of these proposals have been questioned because of redundancy, e.g., [+mid] is needed only if there is a fifth level.

Woo (1969) uses [+modify] to indicate lower than the highest for 44 tones or higher than the lowest for 22 tones. However, both of these feature systems are less successful than that proposed in Yip (1980, in press), where it is suggested that tone space is divided into high and low registers, distinguished by the feature [upper], each register being further divided by the feature [high]. While only being capable of describing four pitch heights, this scheme makes accurate predictions about natural classes that correspond very well to the bifurcation of one pitch into high and low reflexes in the familiar Asian environment of initial consonants with the respective features [-voice] and [+voice]. To remonstrations that five levels of pitch are not encompassed by [ $\pm$  upper,  $\pm$  high], Yip counters that five-level tone systems may really involve a contour tone mistaken as a fifth level (à la Wang on Trique) or that the fifth level tone might be some kind of conditioned variant. For cases of bona fide five-level tone systems, then a

feature [modify] à la Woo could be invoked.<sup>13</sup> Yip's proposal (4 = [+upper, +high], 3 = [+upper, -high], 2 = [-upper, + high], and 1 = [-upper, -high]) also predicts tone alternation correspondences which may be diagrammed as in the markedness scheme of (21), where unmarked alternations of tone level are indicated with arrowheads and differ by only one value of either [upper] or [high], while marked alternations of levels are indicated with unheaded lines and differ by more than one value.

(21)



Clements' (1983) hierarchical system of tone features may or may not involve splitting. A three-level tone system thus might be described as H (M L), in which the more closely related M and L are simply the high and low T of a lower register and the H is an unsplit high of the upper register. In any case, the system allows for asymmetrical phenomena in a straightforward fashion.

Hyman (1986) proposes to use the notion of underspecification of a tone, having H and L be interpreted as "effect a pitch height change of +1" or "effect a pitch height change of -1," respectively, and by having primary and secondary tiers to allow pitch height changes as spreading between the two.

The description of some of the languages in the sources we consulted is often rather meager. At least for some, however, some of the historical rules are known. The Trique data from Longacre (1952, 1957) indicate, for example, that the 55 tone (his 1) is probably a conditioned reflex of 44 (his 2), originally sharing a natural class feature of height (H).

The East Asian languages discussed here, both Miao-Yao and Kadai, underwent developments similar to each other, wherein each proto tone split into two in the context of the feature [voice] of the preceding initial

<sup>13</sup>Note that the tone system of Shidong Kam must be accounted the status of a bona fide five-level tone system. Duanmu San has suggested (personal communication) that Yip might also represent the 33 tone by using three features [upper], [high], and [low], which, with  $\pm$  values, would yield six distinctive values.

consonants.<sup>14</sup> Thus reflexes after split share a common feature of a natural class. Consider the tones in (22), where, for example, two proto tones split in parallel fashion in Bouyei into 44 and 33 in old voiced-initial environments and into 11 and 22 in voiceless ones (and so on for the other tones above).

(22)	44, 11	33, 22	Bouyei
	44, 22	33, 11	Damiaoshan Kam
	55, 44		Shidong and Gaoba Kam, Trique, Pa-hng
	55, 22		Black Miao

**9.4. Reflections on five-level tone systems.** What empirical generalizations may then be found in five-level tone systems? There is at least one generalization of note in data from such systems. Level tones seem to occur as one member of a correspondence set involving as the other member another level tone. This feature seems to be true by a margin of about two-to-one. In other words, level tones develop more often from level tones than from nonlevel tones. That would suggest that the processes of UNIT TONE CHANGE—the elevation or depression of a tone shape (rise, fall, or level) to a new pitch height—are more prominent in the history of five-level tone systems than EDGE EFFECTS, which raise or lower the pitch height of the leading or trailing edge of a syllable tone, thus altering the configuration of the pitch contour (Yip 1989). The Asian type of tone bifurcation, however, is commonly conceived of as unit change; and Asian languages are prominent among those having five level tones.

Furthermore, data from tone sandhi and historical change indicate that a tone with true 33 (mid) pitch may belong phonologically to the upper or lower subset of pitch heights. For instance, Snyder and Lu (1990:4) show that 33 tones in Wuming Zhuang, a Kadai language of northern Guangxi closely related to Bouyei, belong with the upper register. Behavior of this type speaks in favor of six values in the phonological system even if these collapse to five phonetic values. For instance, in a phonological system with three features [upper], [high], and [low], the values [+upper, -high, +low] and [-upper, +high, -low] might be interpreted to have the identical phonetic interpretation, namely 33. If we assume that natural classes involving the change of only one feature are least marked—that two features are more marked and that all three features are the most marked—this would predict correspondences of the types indicated in a markedness matrix displaying markedness in terms of the number of feature changes

<sup>14</sup>As we explained above, the prime tone category and the high tone category in Kam do not seem to constitute two members of a class of level tones.

required to relate a pitch in the H set with a pitch in the L set, as in (23), where 1 is the lowest and 3 the highest.<sup>15</sup>

(23)	55	44	33	33	22	11
	55	1	2	1	2	3
	44		1	2	1	2
	33			3	2	1
	33				1	2
	22					1
	11					

For the correspondences listed in (22), four of them (33:22, 44:22, 33:11, 55:44) have a markedness value of 1 and only 44:11 and 55:22 have a markedness value of 2.<sup>16</sup> None have markedness value of 3. So far, so good; but it remains to be seen if a more adequate feature calculus can be envisaged that would predict other traits of a five-level tone system and explain why in tones, as in acts of a drama, five are good measure.

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<sup>15</sup>Empty cells in (23) represent meaningless or redundant correspondences; e.g., 55:55 is meaningless and 11:22 is the same as 22:11.

<sup>16</sup>The weight of changes requires some interpretation about which of the two 33 values is involved.



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## Reconstructing Mixe-Zoque

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Forty years ago, Wonderly (1949) clearly demonstrated the close relationship among the various Zoque dialects, including Sierra Popoluca and Tapachulteco.<sup>1</sup> Some years later, Nordell (1962) proposed that there were two branches of the Zoque-Mixe family, a Zoque branch including the various dialects of Zoque and both Sierra Popoluca and Texistepec Popoluca, and a Mixe branch including the various Mixe dialects and including Sayula Popoluca and Oluta Popoluca. His study was based on lexicostatistics, with a few cognate sets included to illustrate his points.

Much more data are now available in various languages of this family, including extensive dictionaries in Totontepec Mixe (Schoenhals and Schoenhals 1965), Coatlán Mixe (Hoogshagen and Hoogshagen in preparation); Copainalá Zoque (Harrison, Harrison, and García H. 1981), Rayón Zoque (Harrison, Harrison, and López Juárez 1984), and Francisco León Zoque (Engel and Engel 1987); Sayula Popoluca (Clark and Clark 1974), Oluta Popoluca (Clark 1981), and Texistepec Popoluca (Clark and Nordell 1980). Sierra Popoluca materials come from my own field notes. Nordell's Guichicovi Mixe materials are unavailable to me.<sup>2</sup>

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<sup>1</sup>Wonderly's source material for Tapachulteco came from González Casanova (1927) and Sapper (1927). He also had limited unpublished data for Camotlán Mixe from Walter S. Miller.

<sup>2</sup>Nordell and I were making plans to work together on comparative Mixe-Zoque materials during the summer or fall of 1990, but his untimely death prevented us from carrying out those plans.

This paper attempts to demonstrate Nordell's contention that there is a basic dichotomy between Zoque and Mixe and also attempts to show how the various Popoluca languages fit into the overall language picture.

### 1. The general picture of Proto-Mixe-Zoque (PMZ).

From comparative evidence, it seems relatively clear that the phonemes of PMZ included those of (1).

- (1)   \*\*p   \*\*t       \*\*k   \*\*ʔ       \*\*i   \*\*j       \*\*u  
           \*\*ç                           \*\*e   \*\*a       \*\*o  
           \*\*s  
      \*\*m   \*\*n       \*\*ŋ  
      \*\*w           \*\*y       \*\*h

A vowel could be short or long; and a syllable nucleus could consist of a short vowel, a long vowel, or either of these followed by /ʔ/ or /h/.

This picture differs from Wonderly's Proto-Zoque picture in two ways. First, Wonderly includes a labiovelar phoneme \*kw. This is based on the correspondences for 'scorpion' which has a medial /kw/ cluster in Zoque, including Sierra Popoluca, but a /p/ in Tapachulteco, Sayula Popoluca, Oluta Popoluca, and Mixe. Since medial clusters are not uncommon, however, it seems to me that an original medial cluster of \*k and \*w could have yielded /p/ in the dialects where it is now found.

The second difference is that Wonderly posited a seven vowel system, based on correspondences where Tapachulteco exhibits /e/ and all other languages /a/. This occurs in \*kama 'cornfield' (or 'field', that is, any cultivated area), \*hahm 'lime', and \*çaʔ 'stone' (See §2).

### 2. The position of Tapachulteco.

Wonderly included Tapachulteco (TA) with his reconstructions of Proto-Zoque and it seems to me that it fits there. From the evidence I have seen, it has fewer cognates with Mixe than with Zoque. On the basis of evidence from TA, which is very sketchy, there seems to be no difficulty with consonant correspondences with other Zoque languages, but the vowels are more problematic. If the Tapachulteco data are accurately recorded, however, there has been considerable shifting of vowels in TA. PMZ \*\*i shifted to TA /o/, PMZ \*\*o to TA /a/, PMZ \*\*a to TA /e/, both unstressed PMZ \*\*j and \*\*a to TA /i/. Only PMZ high vowels \*\*i and \*\*u seem not to have

shifted. Positing additional PMZ vowels using these shifted vowels as evidence seems to me unwise.

From the meager evidence available, it seems that TA belongs with the Zoque rather than the Mixe group. Although I understand that Terry Kaufman, probably with more material on TA than I have seen, places TA with the Mixe group.

### 3. Reconstructions

Reconstructed forms are presented in three groups—reconstructed Proto-Zoque (PZ), reconstructed Proto-Mixe, and, using these reconstructed forms and Oluta Popoluca (OP), Proto-Mixe-Zoque (PMZ). I use OP with PZ and MZ because it is not completely clear whether OP belongs to the Mixe or the Zoque branch. In some ways it is like Mixe and in others more like Zoque. Where other languages have CVC nouns, for example, Oluta has a final /i/, as indicated in (2).<sup>3</sup>

(2)	'bone'	SP	<i>pak</i>	CZ	<i>pak</i>	TM	<i>pahk</i>	SYP	<i>pahk</i>	OP	<i>paki</i>
	'house'	SP	<i>tik</i>	CZ	<i>tik</i>	TM	<i>təhk</i>	SYP	<i>tihk</i>	OP	<i>tiki</i>
	'tongue'	SP	<i>toɕ</i>	CZ	<i>toɕ</i>	TM	<i>to:ɕ</i>	SYP	<i>to:ɕ</i>	OP	<i>to:ɕi</i>
	'tooth'	SP	<i>tiɕ</i>	CZ	<i>tiɕ</i>	TM	<i>tə:ɕ</i>	SYP	<i>ti:hɕ</i>	OP	<i>ti:ɕi</i>

An examination of OP forms, reveals them to be like Mixe 33% of the time, like Zoque 18% of the time, and either like neither or could be derived from either 49% of the time. For example, original *\*\*kipi* comes down in PM meaning 'wood' and in PZ meaning 'firewood'. OP falls with the Zoque group. However, original *\*\*ɕu'uɕy* comes down in PM meaning 'meat' but in PZ with a different meaning, i.e., in CZ meaning 'wretched' but in SP meaning 'corpse'. OP *tsu'chi* 'meat' falls with the Mixe group. Original *\*\*sis* comes down in PZ meaning 'meat' but in PM meaning 'muscle', but is lost in OP. Cognate sets for Proto-Zoque and Proto-Mixe are presented in (3) and (4), respectively.

Zoque and Mixe reconstructions are used, together with Oluta Popoluca forms to reconstruct the Proto-Mixe-Zoque (PMZ) forms presented in (5). Discussion of developments from PMZ now follows.

<sup>3</sup>CHZ Chimalapa Zoque, CM Coatlán Mixe, CZ Copainalá Zoque, OP Oluta Popoluca, PM Proto-Mixe, PZ Proto-Zoque, RZ Rayón Zoque, SP Sierra Popoluca, SYP Sayula Popoluca, TA Tapachulteco, TLM Tlahuitoltepec Mixe, TM Totontepec Mixe, TXP Texistepec Popoluca.

(a) A PMZ short vowel plus *\*\*h* plus stop or affricate (sets 1, 6, 10, 42) maintains the postvocalic *\*\*h* in both PZ and PM. PMZ *\*\*h* is then lost, however, in most Zoque dialects; but reappears in CZ under certain morphophonemic conditions.

(b) All PMZ single-syllable words of CVC pattern (where V is either long or short and whether or not *\*\*h* follows) develop a final /i/ in OP unless the PMZ final consonant is /ŋ/ (sets 1, 6, 8, 9, 12, 13, 29, 30, 33).

(c) PMZ medial *\*\*y* becomes *\*ʔ* in both PM and OP (set 2). This may suggest that OP derives from PM rather than PMZ directly. The PMZ *\*\*a* in the second syllable apparently assimilated to *\*o* in PM.

(d) The words for 'broom' (set 3) and 'cigar(ette)' (set 27) derive from verbs 'sweep' and 'smoke', respectively. The PM nominalizing suffix apparently was *\*-an*, while the PZ form is either *\*-kuy* as in 'broom' or *-i* as in 'cigar'. It is not clear which form was the original one, or if all three hark back to PMZ.

(e) The final vowel in PMZ patterns *\*\*CVCV*, *\*\*CVCVʔ*, and *\*\*CVCVh* is lost in PM, with the exception of *\*\*i* (sets 4, 5, 15, 16, 21, 26, 31, 39, 47, 49). *\*\*i* is retained after a stop, but is lost after *\*\*w*, which apparently then becomes PM *\*u* (set 31). The presence of the postvocalic *\*ʔ* in set 4 is not explained. Sets 53 and 54 are clearly related, and the final vowel of the root morpheme is lost in PM.

(f) A PMZ long vowel plus *\*\*h* plus final consonant is shortened in PZ and the *\*\*h* is lost (sets 7, 13, 25, 48). In Rayón Zoque, *\*\*h* is normally retained, unless followed by nasal consonant, in which case the nasal becomes a voiceless stop of the same point of articulation (sets 13 and 25). The Rayón form for 'skunk', however, is *wih paʒihi*, which seems to have fallen together with the word for 'opossum'—*ʒihi* in PZ. When nothing follows postvocalic *\*\*h*, it remains in both PZ and PM (set 9).

(g) PMZ single-syllable nouns ending in *\*\*ŋ* are found in sets 11, 17, and 40. The *\*\*ŋ* is retained in PZ, but becomes *\*w* in PM. In the words for 'trail' and 'jaguar' an additional morpheme *\*-au* is apparently added. PMZ *\*\*w* > OP *\*v*.

(h) In OP, final consonants have developed a preceding glottal. This usually seems to result from PMZ postvocalic *\*\*h* > OP /ʔ/. It may be that 'brother-in-law' (set 18) should be reconstructed with postvocalic *\*\*h*, i.e., as *\*\*kapahy*. Final nasal consonants, however, do not occur with postvocalic /ʔ/ in OP (sets 13, 40, 48).

### (3) Proto-Zoque reconstructions

Gloss	CZ	CHZ	RZ	SP	TXP	*PZ
1. bone	<i>pak</i>	<i>pak</i>	<i>pahk</i>	<i>pak</i>	<i>pak</i>	<i>*pahk</i>
2. moon	<i>poyah</i>	—	<i>poya</i>	<i>po:ya</i>	<i>po:y</i>	<i>*po:yah</i>
3. broom	<i>petkuy</i>	<i>petkuʔy</i>	<i>petkuy</i>	<i>petkuy</i>	<i>petkuʔ</i>	<i>*petkuʔy</i>
4. white	<i>popo</i>	<i>popoʔ</i>	<i>pobo</i>	<i>po:po</i>	<i>popoʔ</i>	<i>*popoʔ</i>

5. incense	<i>pomah</i>	—	—	<i>po:ma</i>	<i>po:m</i>	* <i>po:mah</i>
6. feather	<i>pik</i>	<i>pik</i>	<i>pihk</i>	<i>pik</i>	<i>pik</i>	* <i>pihk</i>
7. skunk	<i>paɕ</i>	<i>paɕ</i>	<i>paɕihi</i>	<i>paɕka:ŋ</i>	<i>paɕka:ŋ</i>	* <i>paɕ</i>
8. tongue	<i>toɕ</i>	—	<i>tohɕ</i>	<i>toɕ</i>	—	* <i>tohɕ</i>
9. rain	<i>tuh</i>	<i>tuh</i>	<i>tuh</i>	<i>tuh</i>	<i>tuh</i>	* <i>tuh</i>
10. house	<i>tik</i>	<i>tik</i>	<i>tihk</i>	<i>tik</i>	<i>tik</i>	* <i>tihk</i>
11. trail	<i>tun</i>	<i>tun</i>	<i>tuk</i>	<i>tun</i>	<i>tun</i>	* <i>tun</i>
12. tooth	<i>tiɕ</i>	<i>tiɕ</i>	<i>tihɕ</i>	<i>tiɕ</i>	<i>tiɕ</i>	* <i>tihɕ</i>
13. fruit	<i>tim</i>	—	<i>típ</i>	<i>tim</i>	<i>tim</i>	* <i>tim</i>
14. alacran	<i>kakwe</i>	<i>kakwe</i>	—	<i>kakwi</i>	<i>kakwe?ñ</i>	* <i>kakwen</i>
15. field	<i>kama</i>	—	<i>kama</i>	<i>ka:ma</i>	<i>ka:mu?</i>	* <i>kama</i>
16. salt	<i>kana</i>	<i>kana</i>	<i>kana</i>	<i>ka:na</i>	<i>ka:n</i>	* <i>kana</i>
17. jaguar	<i>kaŋ</i>	<i>kaŋ</i>	<i>kak</i>	<i>ka:ŋ</i>	<i>ka:ŋ</i>	* <i>kaŋ</i>
18. br-in-law	<i>kapay</i>	<i>kapay</i>	<i>kabay</i>	<i>ka:pay</i>	<i>ka:pe</i>	* <i>kapay</i>
19. head	<i>kopak</i>	<i>kopak</i>	<i>kobahk</i>	<i>ko:bak</i>	<i>kopik</i>	* <i>kopahk</i>
20. avocado	<i>kuytyim</i>	<i>kuytim</i>	—	<i>kuyt'im</i>	<i>kučim</i>	* <i>kuytim</i>
21. firewood	<i>kipi</i>	—	<i>kibi</i>	<i>ki:pi</i>	<i>ki:p</i>	* <i>kipi</i>
22. hand	<i>ki</i>	<i>ki?</i>	<i>ki?</i>	<i>ki</i>	<i>ki?</i>	* <i>ki?</i>
23. sandal	<i>ki?ak</i>	<i>ki?ak</i>	<i>ki?ahk</i>	<i>ki?ak</i>	<i>ki?igi</i>	* <i>ki?ahk</i>
24. crayfish	<i>ehsi</i>	<i>pesi?</i>	<i>ehsi</i>	<i>e:ši</i>	<i>e:še?</i>	* <i>ehsi</i>
25. lime	<i>ham</i>	<i>ham</i>	<i>hap</i>	<i>ham</i>	<i>ham</i>	* <i>ham</i>
26. smoke	<i>hokoh</i>	—	<i>hoko</i>	<i>ho:ko</i>	<i>ho:k</i>	* <i>hokoh</i>
27. cigar	<i>huki</i>	<i>huki</i>	<i>huki</i>	<i>hu:ki</i>	<i>huk</i>	* <i>huki</i>
28. star	<i>maɕa</i>	<i>maɕa?</i>	<i>maɕa</i>	<i>ma:ɕa</i>	<i>ba:ɕa</i>	* <i>maɕa?</i>
29. maize	<i>mok</i>	<i>mok</i>	<i>mohk</i>	<i>mok</i>	<i>bok</i>	* <i>mohk</i>
30. land	<i>nas</i>	<i>nas</i>	<i>nahs</i>	<i>nas</i>	<i>das</i>	* <i>nahs</i>
31. chili	<i>niwi</i>	<i>niwi</i>	<i>niwi</i>	<i>ñi:wi</i>	<i>d'e:w</i>	* <i>niwi</i>
32. water	<i>ni</i>	<i>ni?</i>	<i>ni?</i>	<i>ni</i>	<i>di?</i>	* <i>ni</i>
33. armadillo	<i>niɕ</i>	<i>niɕ</i>	<i>nihɕ</i>	<i>niɕ</i>	<i>diɕ</i>	* <i>nihɕ</i>
34. blood	<i>ni?pin</i>	<i>ni?pin</i>	<i>ni?bit</i>	<i>ni?ipiñ</i>	<i>di?ipeñ</i>	* <i>ni?pin</i>
35. sweet	<i>pa?ak</i>	<i>pa?ak</i>	<i>pa?ahk</i>	<i>pa?ak</i>	<i>pa?ak</i>	* <i>pa?ahk</i>
36. sand	<i>po?yo</i>	—	<i>po?yo</i>	<i>po?oy</i>	<i>po?oy</i>	* <i>po?yo</i>
37. swt.potato	<i>min</i>	<i>min</i>	<i>mit</i>	<i>min</i>	<i>bin</i>	* <i>nin</i>
38. meat	<i>sis</i>	<i>sis</i>	<i>sis</i>	<i>šiš</i>	<i>šeš</i>	* <i>sis</i>
39. fingernail	<i>ki?ɕus</i>	<i>kičus</i>	<i>ki?ɕus</i>	<i>ki:ɕis</i>	<i>ki?iɕu?ks</i>	* <i>kiɕus</i>
40. snail	<i>soki</i>	—	<i>soki</i>	<i>šo:ki</i>	<i>so:ke</i>	* <i>so:ki</i>
41. fiesta	<i>siŋ</i>	<i>siŋ</i>	<i>sik</i>	<i>siŋ</i>	—	* <i>siŋ</i>
42. beans	<i>sik</i>	<i>sik</i>	<i>sihk</i>	<i>sik</i>	<i>sik</i>	* <i>sihk</i>
43. bat	<i>tihsi</i>	<i>tisi</i>	<i>tihsi</i>	<i>tí:ši</i>	<i>tí:še</i>	* <i>ti:hsi</i>
44. snake	<i>ɕan</i>	<i>ɕahin</i>	<i>ɕat</i>	<i>ɕa:ñ</i>	<i>ɕa:ñ</i>	* <i>ɕahin</i>
45. rock	<i>ɕa?</i>	<i>ɕa?</i>	<i>ɕa?</i>	<i>ɕa</i>	<i>ɕa?</i>	* <i>ɕa?</i>

46. red	<i>ɕapas</i>	<i>ɕapaɕ</i>	<i>ɕabas</i>	<i>ɕabaɕ</i>	<i>ɕaʔpaʔɕ</i>	* <i>ɕaʔpaɕ</i>
47. coati	<i>ɕiku</i>	<i>ɕiku</i>	<i>ɕiku</i>	<i>ɕi:ku</i>	<i>ɕe:ku</i>	* <i>ɕiku</i>
48. pine	<i>ɕin</i>	<i>ɕin</i>	<i>ɕik</i>	<i>ɕi:ŋkuy</i>	<i>ɕe:ŋkuy</i>	* <i>ɕin</i>
49. horn	<i>waʔ</i>	—	<i>waha</i>	<i>wa:ŋ</i>	<i>waŋa</i>	* <i>waŋa</i>
50. front	<i>win</i>	<i>win</i>	<i>wit</i>	<i>wiŋ</i>	—	* <i>win</i>
51. hunger	<i>yuʔ</i>	<i>yuʔk-</i>	<i>yuʔ</i>	<i>yuʔu</i>	<i>yuʔ</i>	* <i>yuʔu</i>
52. thorn	<i>apit</i>	—	<i>abiht</i>	<i>a:pitʷ</i>	<i>aʔapeʔɕ</i>	* <i>apiht</i>
53. cedar	<i>akuy</i>	—	<i>ahkuy</i>	<i>a:kuy</i>	<i>a:kuy</i>	* <i>ahkuy</i>
54. canoe	<i>aʔ</i>	—	<i>aha</i>	<i>a:ha</i>	<i>aʔaha</i>	* <i>aha</i>

## (4) Proto-Mixe reconstructions

Gloss	TM	CM	TLM	SYP	*PM
1. bone	<i>pahk</i>	<i>pahk</i>	<i>pɔhk</i>	<i>pahk</i>	* <i>pahk</i>
2. moon	<i>poʔo</i>	<i>poʔo</i>	<i>poʔ</i>	<i>poʔ</i>	* <i>poʔo</i>
3. broom	<i>pə:tin</i>	<i>pə:t</i>	<i>pa:ht</i>	<i>pe:tan</i>	* <i>pe:tan</i>
4. white	<i>po:ʔp</i>	<i>po:p</i>	<i>po:p</i>	<i>poʔp</i>	* <i>po:ʔp</i>
5. incense	<i>po:m</i>	<i>po:m</i>	<i>po:m</i>	<i>po:m</i>	* <i>po:m</i>
6. feather	<i>pəhk</i>	<i>pəhk</i>	—	<i>pəhk</i>	* <i>pəhk</i>
7. skunk	<i>pa:ɕ</i>	<i>pa:ɕ</i>	<i>pɔ:hɔ</i>	<i>pahɕ</i>	* <i>pa:hɕ</i>
8. tongue	<i>to:ɕ</i>	<i>to:ɕ</i>	<i>to:hɕ</i>	<i>to:hɕ</i>	* <i>to:hɕ</i>
9. rain	<i>to:</i>	<i>tu:</i>	<i>tu:h</i>	<i>tu:</i>	* <i>tu:h</i>
10. house	<i>təhk</i>	<i>təhk</i>	<i>təhk</i>	<i>təhk</i>	* <i>təhk</i>
11. trail	<i>to:ʔ</i>	<i>tuʔu</i>	<i>tuʔ</i>	<i>to:u</i>	* <i>tu:ʔ</i>
12. tooth	<i>tə:ɕ</i>	<i>tə:ɕ</i>	<i>tə:hɕ</i>	<i>tə:ɕ</i>	* <i>tə:hɕ</i>
13. fruit	<i>tə:hm</i>	<i>tə:m</i>	—	<i>təhm</i>	* <i>tə:hm</i>
14. scorpion	<i>ka:ʔpyk</i>	<i>kaʔpy</i>	<i>kəhpy</i>	<i>kapin</i>	* <i>kaʔpin</i>
15. field	<i>kam</i>	<i>kam</i>	<i>kɔm</i>	<i>kam</i>	* <i>kam</i>
16. salt	<i>ka:n</i>	<i>ka:n</i>	<i>kɔ:n</i>	<i>ka:n</i>	* <i>ka:n</i>
17. jaguar	<i>ka:</i>	<i>ka:</i>	—	<i>kahau</i>	* <i>ka:hŋ</i>
18. br-in-law	<i>kap</i>	<i>kapy</i>	<i>kɔp</i>	<i>kapay</i>	* <i>kapay</i>
19. head	<i>kuvahk</i>	<i>kuwahk</i>	<i>kupɔhk</i>	<i>kopak</i>	* <i>kupahk</i>
20. avocado	<i>ko:yɔdum</i>	<i>kuty</i>	<i>kutpy</i>	<i>kuytim</i>	* <i>kuytim</i>
21. wood	<i>kip</i>	<i>kipy</i>	—	<i>kuhy</i>	* <i>kipi</i>
22. hand	<i>kəʔə</i>	<i>kiʔi</i>	<i>kiʔ</i>	<i>kiʔ</i>	* <i>kiʔi</i>
23. sandal	<i>kəʔəhk</i>	<i>kiʔik</i>	<i>kiʔik</i>	<i>kiʔak</i>	* <i>kiʔihk</i>
24. crayfish	<i>e:š</i>	<i>e:šy</i>	<i>e:šy</i>	<i>e:š</i>	* <i>e:šy</i>
25. lime	—	<i>ha:m</i>	<i>kahɔ:m</i>	<i>hahm</i>	* <i>ha:hm</i>
26. smoke	<i>hɔk</i>	<i>hi:nhok</i>	<i>hok</i>	—	* <i>hok</i>
27. cigar	<i>huʔuk</i>	<i>huʔuky</i>	<i>huʔuŋy</i>	<i>huʔk</i>	* <i>huʔuky</i>
28. star	<i>ma:ɕa</i>	<i>midzaʔa</i>	<i>mɔ:ɕaʔ</i>	<i>ma:hɕ</i>	* <i>ma:hɕaʔ</i>
29. maize	<i>mɔ:k</i>	<i>mok</i>	<i>mɔ:hk</i>	<i>mɔ:hk</i>	* <i>mɔ:hk</i>
30. land	<i>na:š</i>	<i>na:š</i>	<i>nɔ:hš</i>	<i>na:š</i>	* <i>na:hš</i>



31. chili	<i>ni:v</i>	<i>ni:y</i>	<i>ni:y</i>	<i>ni:u</i>	<i>*ni:u</i>
32. water	<i>nə:</i>	<i>ni:</i>	<i>ni:</i>	<i>ni?</i>	<i>*ni:</i>
33. armadillo	<i>nə:ɕ</i>	<i>ni:ɕ</i>	<i>niɕ</i>	<i>niɦɕ</i>	<i>*ni:ɕ</i>
34. blood	<i>ni:ʔpin</i>	<i>niʔpy</i>	<i>niʔhpy</i>	<i>nipin</i>	<i>*ni:ʔpin</i>
35. sweet	<i>paʔahk</i>	<i>paʔak</i>	<i>poʔɔk</i>	<i>paʔk</i>	<i>*paʔahk</i>
36. sand	<i>poʔo</i>	<i>puʔu</i>	<i>puʔ</i>	<i>poʔy</i>	<i>*poʔo</i>
37. swt.potato	<i>min</i>	<i>muñ</i>	<i>-miny</i>	<i>min</i>	<i>*miny</i>
38. muscle	<i>šiš</i>	<i>yšišy</i>	—	<i>šiš</i>	<i>*šiš</i>
39. fingernail	<i>šo:ʔk</i>	<i>šo:ky</i>	<i>šo:ky</i>	<i>šo:ɦk</i>	<i>*šo:ɦk</i>
40. snail	—	<i>šuhty</i>	—	—	
41. fiesta	<i>šə:</i>	<i>ši:</i>	<i>ši:w</i>	<i>šihw</i>	<i>*ši:hw</i>
42. beans	<i>šəhk</i>	<i>šihk</i>	<i>šihk</i>	<i>šihk</i>	<i>*šihk</i>
43. bat	<i>ti:š</i>	<i>ti:š</i>	<i>ti:šy</i>	<i>ti:š</i>	<i>*ti:šy</i>
44. snake	<i>ɕaʔn</i>	<i>ɕaʔñ</i>	<i>ɕo:ʔny</i>	<i>ɕanay</i>	<i>*ɕanay</i>
45. stone	<i>ɕa:</i>	<i>ɕa:</i>	<i>ɕo:</i>	<i>ɕaʔ</i>	<i>*ɕa:</i>
46. red	<i>ɕapɕ</i>	<i>ɕapɕ</i>	<i>ɕɔhpɕ</i>	<i>ɕabaɕ</i>	<i>*ɕahpɕ</i>
47. coati	<i>ɕik</i>	<i>ɕik</i>	<i>ɕek</i>	<i>čik</i>	<i>*ɕik</i>
48. pine	<i>ɕi:hn</i>	<i>ɕi:n</i>	<i>ɕe:n</i>	—	<i>*ɕi:hn</i>
49. horn	<i>vah</i>	—	—	<i>wah</i>	<i>*wah</i>
50. front	<i>vimpo:k</i>	<i>wimbok</i>	—	<i>wimbahk</i>	<i>*winpa:ɦk</i>
51. hunger	<i>yo:</i>	<i>yu:—</i>	<i>yu:</i>	<i>yuʔ</i>	<i>*yu:ʔ</i>
52. thorn	<i>apit</i>	<i>apy</i>	<i>ahpky</i>	<i>apit</i>	<i>*apit</i>
53. cedar	<i>ah</i>	<i>ah</i>	<i>kuɕy</i>	—	<i>*ah</i>
54. canoe	—	—	—	<i>ah</i>	

## (5) Proto-Mixe-Zoque reconstructions

Gloss	PZ	PM	OP	PMZ
1. bone	<i>*pahk</i>	<i>*pahk</i>	<i>paki</i>	<i>**pahk</i>
2. moon	<i>*po:yah</i>	<i>*poʔo</i>	<i>poʔa</i>	<i>**po:yah</i>
3. broom	<i>*petkuy</i>	<i>*pe:tan</i>	<i>pe:tan</i>	<i>**pe:t??</i>
4. white	<i>*popoʔ</i>	<i>*po:ʔp</i>	<i>po:poʔ</i>	<i>**po:poʔ</i>
5. incense	<i>*po:mah</i>	<i>*po:m</i>	<i>po:mi</i>	<i>**po:mah</i>
6. feather	<i>*pihk</i>	<i>*pihk</i>	<i>piki</i>	<i>**pihk</i>
7. skunk	<i>*paɕ</i>	<i>*pa:ɦɕ</i>	—	<i>**pa:ɦɕ</i>
8. tongue	<i>*toɦɕ</i>	<i>*to:ɦɕ</i>	<i>to:ɕi</i>	<i>**to:ɦɕ</i>
9. rain	<i>*tuh</i>	<i>*tu:h</i>	<i>tu:hi</i>	<i>**tu:h</i>
10. house	<i>*tihk</i>	<i>*tihk</i>	<i>tiki</i>	<i>**tihk</i>
11. trail	<i>*tuŋ</i>	<i>*tu:ʔ</i>	<i>tuʔaʔu</i>	<i>**tu:ŋ</i>
12. tooth	<i>*tiɦɕ</i>	<i>*ti:ɦɕ</i>	<i>ti:ɕi</i>	<i>**ti:ɦɕ</i>
13. fruit	<i>*tim</i>	<i>*ti:hm</i>	<i>timi</i>	<i>**ti:hm</i>
14. scorpion	<i>*kakwin</i>	<i>*kaʔpin</i>	<i>kape</i>	<i>**kakwin</i>
15. field	<i>*kama</i>	<i>*kam</i>	<i>kama</i>	<i>**kama</i>

16. salt	*kana	*ka:n	ka:na	**ka:na
17. jaguar	*kaŋ	*ka:hŋ	kahau	**ka:hŋ
18. br-in-law	*kapay	*kapay	ka?pa?y	**kapay
19. head	*kopahk	*kupahk	ko?pa?k	**kopahk
20. avocado	*kuytim	*kuytim	kuyti?m	**kuytim
21. firewood	*kipi	*kipi	kipi	**kipi
22. hand	*ki?	*ki?i	ki?	**ki?i
23. sandal	*ki?ahk	*ki?ahk	ki?a?k	**ki?ahk
24. crayfish	*ehsi	*e:šy	e:ši	**ehsi
25. lime	*ham	*ha:hm	—	**ha:hm
26. smoke	*hokoh	*hok	hoko	**hokoh
27. cigar	*huki	*hu?uky	-hu?ka?n	**hu?k??
28. star	*ma?a?	*ma:h?a?	ma:ʔa?a?k	**ma:h?a?
29. maize	*mohk	*mo:hk	mo:ki	**mo:hk
30. land	*nahs	*na:hš	na:ši	**na:hs
31. chili	*niwi	*ni:u	ni:vi	**ni:wi
32. water	*ni?	*ni:	ni:hi	**ni:
33. armadillo	*niʔ	*ni:ʔ	ni:ʔi	**ni:ʔ
34. blood	*ni?pin	*ni:ʔpin	ni?pin	**ni:ʔpin
35. sweet	*pa?ahk	*pa?ahk	pa?a?k	**pa?ahk
36. sand	*po?yo	*po?o	pu?i	**po?yo
37. swt.potato	*min	*miny	mini	**mini
38. meat	*sis	*šiš	—	**sis
39. snail	*so:ki	*šo:hki	šo:ki	**so:hki
40. fiesta	*siŋ	*ši:hw	šivi	**si:hŋ
41. beans	*sihk	*šihk	sihk	**sihk
42. bat	*tihsi	*ti:šy	ti:ši	**tihsi
43. snake	*ʔahin	*ʔanay	ʔana?y	**ʔanay
44. stone	*ʔa?	*ʔa:	ʔa:hi	**ʔa:
45. red	*ʔa?pa?	*ʔahp?	ʔapa?s	**ʔahpa?
46. coat	*ʔiku	*ʔik	—	**ʔiku
47. pine	*ʔin	*ʔi:hn	ʔinkuyi	**ʔi:hn
48. horn	*waŋa	*wah	vaha	**waŋa
49. front	*win	*winpa:hk	vimpa?k	**win
50. hunger	*yu?u	*yu:?	yu:hi	**yu:?
51. thorn	*apiht	*apit	api?t	**apiht
52. cedar	*ahkuy	*ah	—	
53. canoe	*aha	—	aha	**aha

(i) The word for 'head' (set 19), consists of a prefix and the word for 'bone' (set 1). The development of *oʔ* /*ʔ*/ from *\*\*h* is unexplained, except

for the hypothesis that **\*\*h** was lost when prefinal /ʔ/ developed. Note, however, that almost all word-final consonants in OP are preceded by /ʔ/ (sets 18–20, 23, 27, 28, 35, 44, 50, 52).

(j) There apparently was a difference between PMZ **\*\*VʔV** and **\*\*V:ʔ**, since there is a difference between the development of *kiʔi* ‘hand’ (set 22) and *yu:ʔ* ‘hunger’ (set 51).

(k) The word **\*\*kiʔahk** ‘sandal’ (set 23) is undoubtedly a compound of **\*\*kiʔi** ‘hand’ (set 22) and ‘skin’ (cf. TM *ak*, OP *aki*, CZ *naka*, RZ *naka*). The word **\*\*paʔahk** ‘sweet’ (set 35) is probably a single morpheme.

(l) PMZ **\*\*s** becomes PM **\*š**, as in **\*\*ehsi** ‘crayfish’ PM **\*e:šy** (set 24; see also sets 30, 38, and 43). In present day SYP, there is a distinction between /s/ and /š/; but all occurrences of /s/ can be attributed to Spanish borrowings or to what look to be recent developments. This also appears to be true of TM and CM. The loss of PMZ **\*\*h** resulted in length in PM and in OP *e:ši*.

(m) PMZ **\*\*ma:hqaʔ** ‘star’ (set 28) very probably consists of a preposed morpheme with **\*\*qa**: ‘stone’ (set 44), but the OP suffix is unexplained.

(n) The PMZ pattern **\*\*CV**: yields PZ **\*CV** (i.e., loss of length) in **\*niʔ** ‘water’ (set 32) and **\*qaʔ** ‘stone’ (set 45). In SP and perhaps other Zoque languages all final short vowels end in /ʔ/. Also in SP and perhaps other Zoque-Mixe languages, a long vowel followed by another vowel provides the context for development of an epenthetic /h/ between them. This may explain the /h/ in OP words for ‘water’ and ‘stone’.

(o) The word **\*\*ni:ʔpin** ‘blood’ (set 34) consists of **\*\*ni**: ‘water’ (set 32) plus a morpheme **\*\*pin**, which occurs elsewhere as well. The presence of **\*\*ʔ** is unexplained.

(p) In PMZ **\*\*poʔyo** ‘sand’ (set 36), medial **\*\*y** becomes PM **\*ʔ** (see also set 2); but the OP /u/ is unexplained.

(q) Modern forms of PMZ **\*\*sis** ‘meat’ (set 38) mean ‘meat’ in some Zoque dialects, ‘cow’ in SP, but ‘muscle’ in some Mixe dialects.

(r) In the proposed reconstruction of **\*\*tihsi** ‘bat’ (set 43), the loss of **\*\*h** apparently precipitates the lengthening of the first vowel in PM **\*ti:šy**.

(s) In PMZ **\*\*zanay** ‘snake’ (set 44), the element **\*\*ay**, while retained in PM and OP, was lost in PZ. The sequence /hi/ in modern CHZ, however, suggests the PZ reconstruction of **\*zahin**. It seems clear that the influence of either the **\*ay** or **\*hi** continued for a time in both branches, because /ñ/ turns up as the final consonant in both Mixe and Zoque languages.

(t) In PMZ **\*\*zahpaʔ** ‘red’ (set 46), the second vowel was apparently lost in PM and the **\*\*h** became **\*ʔ** in PZ.

(u) In PMZ **\*\*apiht** ‘thorn’ (set 52), the prefinal **\*\*h** is retained in PZ, but lost in PM.

Assuming the foregoing PMZ reconstructions to be approximately correct, we now consider the ways in which the protophonemes developed in some

of the languages of the ZM family. We omit Tapachulteco because the data are so limited, some of it not being accessible to me.

#### 4. The developments and position of the Popolucan languages

**4.1. Developments in Sierra Popolucan.** Sierra Popolucan phonemes are listed in (6).

(6)	<i>p</i>	<i>t</i>	<i>tʲ</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>b</i>	<i>d</i>	<i>dʲ</i>	<i>g</i>		<i>e</i>	<i>a</i>	<i>o</i>
		<i>ɸ</i>	<i>č</i>					
		<i>s</i>	<i>š</i>					
	<i>m</i>	<i>n</i>	<i>ñ</i>	<i>ŋ</i>				
	<i>w</i>		<i>y</i>		<i>h</i>			

The vowels are the same as the PMZ set. A syllable nucleus can have either a long or short vowel, and can be open or be closed by /ʔ/.

SP consonants reflect the PMZ consonant system quite well, except for voiced stops and palatal consonants. Of the latter, only /y/ belongs to the PMZ consonant system. This series, except for /y/, generally results from a consonant and an adjacent /i/ or /y/.

There are some native words, however, where no /i/ or /y/ is present next to a palatal consonant: *tʲaka* 'chick', *kučo:n* 'swing', *šo:ki* 'snail'.

There can be little doubt that Sierra Popolucan belongs to the Zoque group. Comparing Copainalá Zoque with Sierra Popolucan not only yields a large number of cognate forms, but also many identical forms. The chief differences, apart from lexical ones, seem to be that SP has developed vowel length, while PZ lost vowel length and CZ did not develop length again after the loss. Like SP, CZ has also lost postvocalic \*\*h before a final consonant, except in certain morphophonemic situations; both languages retain postsyllabic \*\*ʔ, as in *tʔt* 'earthworm' in both languages.

**4.2. Texistepec Popolucan (TXP) phonemes are as follows:**

(7)	<i>p</i>	<i>t</i>		<i>ɸ</i>	<i>č</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>b</i>	<i>d</i>		<i>dz</i>	<i>ǰ</i>	<i>g</i>		<i>e</i>	<i>a</i>	<i>o</i>
	<i>ʔb</i>	<i>ʔd</i>	<i>ʔdʲ</i>	<i>ʔdz</i>	<i>ʔǰ</i>	<i>ʔg</i>				
	<i>f</i>	<i>s</i>		<i>z</i>	<i>ž</i>					
	<i>m</i>	<i>n</i>			<i>ñ</i>	<i>ŋ</i>				
	<i>w</i>				<i>y</i>		<i>h</i>			

Vowels can be short or long or may be followed by /ʔ/.

The voiced stops derive from the PMZ voiceless set either after a nasal, as in *cz*, or sometimes between vowels, as in *sp*. The preglottalized voiced stops derive from PMZ syllable-initial nasals. Clark and Nordell (1980) list the preglottalized stops as a separate series from the regular voiced stops, as shown above. However, the two series appear to be in complementary distribution.

TXP also clearly fits with the Zoque group. It has large numbers of cognates with *sp* and *cz*. It is like *sp* in that it has both long and short vowels and is like *cz* in that /y/ metathesizes with a following consonant. *sp* *ɛa:n̄* 'snake', TXP *ɛa:n̄*, *cz* *ɛan*; *sp* *i-* 'his' + *-kuy* 'wood' > *ikuy* 'his wood'; TXP *y-* + *kuy* > *kyuy*; *cz* *y-* + *kuy* > *kyuy*.

**4.3. Developments in Sayula Popoluca.** Sayula Popoluca phonemes are listed in (8).

(8)	<i>p</i>	<i>t</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>b</i>	<i>d</i>	<i>g</i>		<i>e</i>	<i>a</i>	<i>o</i>
		<i>ɸ</i>	<i>č</i>				
		<i>s</i>	<i>š</i>				
	<i>m</i>	<i>n</i>					
	<i>w</i>	<i>l</i>	<i>y</i>	<i>h</i>			

Vowels can be either short or long and may also have either postvocalic /ʔ/ or /h/.

The voiced stops result, for the most part, from PMZ voiceless stops occurring between vowels. PMZ *\*\*s* becomes /š/, whereas modern /s/ comes primarily from Spanish borrowings, although there are some occurrences of /s/ in apparently native words, such as *leʔps* 'lick' and *pa:su* (local name of village of San Juan Evangelista).

Sayula Popoluca clearly belongs to the Mixe branch of the family. Cognate forms are derivable from the PMZ phonological system.

**4.4. Developments in Oluta Popoluca.** The phonemes of OP are listed in (9).

(9)	<i>p</i>	<i>t</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
		<i>ɸ</i>	<i>č</i>		<i>e</i>	<i>a</i>	<i>o</i>
	<i>f</i>	<i>s</i>	<i>š</i>				
	<i>v</i>						
	<i>m</i>	<i>n</i>					
	<i>w</i>		<i>y</i>	<i>h</i>			

Vowels may be either short, long, or short followed by /ʔ/.

As in some of the Mixe languages, PMZ **\*\*s** apparently becomes OP /š/, modern OP /s/ having developed subsequently, in some cases from /ç/, and probably influenced by Spanish. Again as in some Mixe languages, PMZ **\*\*w** > OP /v/ in some situations but apparently remained /w/ in others, and PMZ **\*\*ŋ** > OP /w/. PMZ postvocalic **\*\*h** was lost in some cases, and apparently became OP /ʔ/ in others.

## 5. The developments and position of Zoque languages.

**5.1. Developments in Copainalá Zoque.** The phonemes of Copainalá Zoque are listed in (10).

(10)	<i>p</i>	<i>t</i>	<i>tʲ</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>b</i>	<i>d</i>	<i>dʲ</i>	<i>g</i>		<i>e</i>	<i>a</i>	<i>o</i>
		<i>ç</i>	<i>č</i>					
			<i>ʃ</i>					
	<i>f</i>	<i>s</i>	<i>š</i>					
	<i>m</i>	<i>n</i>	<i>n̄</i>	<i>ŋ</i>				
		<i>l</i>						
		<i>r</i>	<i>r̄</i>					
	<i>w</i>	<i>y</i>		<i>h</i>				

Vowels are only short, but may be followed by /ʔ/ or /h/. Note also that the CZ central high vowel is lower than its SP equivalent.

PMZ stops (including the affricate **\*\*ç**) remained unchanged in CZ in word-initial position, but became voiced after nasal consonants. **\*\*ç** and **\*\*t** became /č/ and /tʲ/, respectively, when followed immediately by **\*\*y**. The great majority of occurrences of /š/ are the result of **\*\*ys** or **\*\*sy**. There are, however, a few cases of /š/ that cannot be explained in this way. PMZ nasals remained as they were, except that **\*\*n** became CZ /n̄/ when next to **\*\*y**.

**5.2. Other Zoque dialects.** Developments in other Zoque dialects are similar to those of Copainalá, except that Rayón retains postvocalic **\*\*h**, and exhibits some voiced stops between vowels, as in *kibi* 'firewood'. Chimalapa, on the other hand, does not have a palatalized series of consonants as do most of the other Zoque languages—[š] and [č] are allophones of /s/ and /ç/, respectively, when they occur before /i/ or after /y/. Francisco León Zoque is much like Copainalá. Differences seem to be mainly lexical.

## 6. Developments and position of the Mixe languages

**6.1. Developments in Totontepec Mixe.** The phonemes of Totontepec Mixe are listed in (11).

(11)	<i>p</i>	<i>t</i>		<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
		∅	č			<i>e</i>	ə	<i>o</i>
	<i>b</i>	<i>d</i>		<i>g</i>		æ	<i>a</i>	ɔ
	<i>f</i>	<i>s</i>	š					
	<i>m</i>	<i>n</i>		ŋ				
	<i>v</i>		<i>y</i>		<i>h</i>			

TM voiced stops derive from the PMZ voiceless set. PMZ **\*\*s** becomes TM /š/, the present /s/ derives from /ç/ in some cases. All of these, voiced stops and /s/ are reinforced by borrowings from Spanish; /f/ derives exclusively from that source.

TM vowels developed from PMZ as follows: **\*\*i** > /i/, **\*\*e** > /æ/, **\*\*i** > /ə/, **\*\*u** > /o/ unless there is a /y/ or /i/ present, and **\*\*o** > /ɔ/. This may give some indication of the pronunciation of the PMZ vowels, especially in view of the present pronunciation of *cz* /i/. The pronunciation of *sp* low vowels also approximates the lower set. The extra vowels in the vowel system—/e/, /i/, and /u/—result from /æ/, /ə/, and /u/ or /o/ next to /y/ or /i/.

**6.2. Developments in Coatlán Mixe.** The phonemes of Coatlán Mixe are listed in (12).

(12)	<i>p</i>	<i>t</i>		<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>b</i>	<i>d</i>		<i>g</i>		<i>e</i>	<i>a</i>	<i>o</i>
		∅						
			š					
	<i>m</i>	<i>n</i>		ŋ				
	<i>w</i>		<i>y</i>		<i>h</i>			

The CM consonant set reflects the PMZ consonant set, except for the voiced stops. These arise from voicing in intervocalic position and from following nasals. Their phonemic status is strengthened by Spanish borrowings. Note that in several of the Mixe languages, including CM, PMZ **\*\*s** has become /š/.

CM directly reflects the PMZ vowel system.

**6.3. Developments in Tlahuitoltepec Mixe.** The phonemes of Tlahuitoltepec Mixe are listed in (13).

(13)

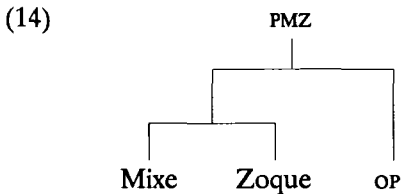
<i>p</i>	<i>t</i>	<i>k</i>	<i>ʔ</i>	<i>i</i>	<i>i</i>	<i>u</i>
	<i>ɸ</i>			<i>e</i>		<i>o</i>
	<i>s</i>	<i>š</i>			<i>a</i>	
<i>m</i>	<i>n</i>					
<i>w</i>		<i>y</i>	<i>h</i>			

TLM reflects the PMZ consonant system except that it has developed /s/, PMZ *\*\*s* having become /š/; and it has lost /ŋ/, which became /w/. Also TLM has a seventh vowel. The vowels develop as follows: /i/, /u/, and /o/ apparently remain as in PMZ. However, *\*\*i* > /e/, *\*\*e* > /a/, and *\*\*a* > /ɔ/, except in the presence of /y/ or /i/. For example, *\*\*ehsi* ‘crayfish’ > TLM *e:šy*, but *\*\*peht* ‘sweep’ > *paht* ‘broom’; *\*\*ɸin* ‘pine’ > *ɸen*, but *\*\*ni:wi* > *ni:y*; *\*\*pahk* ‘bone’ > *pohk*.

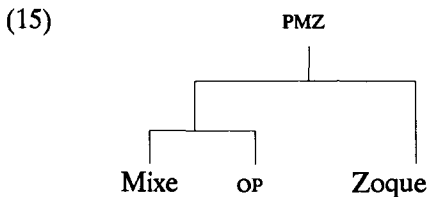
### 7. Suggested historical development

I suggest that there are two possible hypotheses for the development of the various Mixe-Zoque languages.

The first is that Oluta Popoluca broke away from PMZ before Mixe and Zoque split off from each other. This hypothesis would account for the development of the final vowel in OP in otherwise single syllable words. For example, PMZ *\*\*pahk* ‘bone’ > OP *paki*. There are ten other words in the sets listed above that function in the same way in OP.



The second hypothesis is that OP is part of the Mixe group, but split off very early from the rest of Mixe.

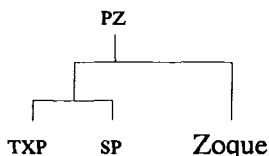




It is not clear to me which of these two hypotheses is to be preferred, although I lean toward the first.

In general, the Zoque dialects in Chiapas seem relatively close to each other. Sierra Popoluca and Texistepec Popoluca probably broke away from the main Zoque group before the various dialects diverged from each other.

(16)



The Mixe dialects show greater divergence from each other than the Zoque group, especially Chiapas Zoque (omitting Tapachulteca). The problem of Oluta Popoluca has been discussed above. Sayula Popoluca probably broke away from PM before the remainder of the Mixe dialects began to split up. Then Totontepec separated, later the other dialects of Coatlán and Tlahuitoltepec, although this suggestion is very tenuous.

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## **Afaka and His Creole Syllabary: The Social Context of a Writing System**

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The insistence that language phenomena be studied in their varied contexts has long been a hallmark of Robert Longacre's approach to descriptive linguistics (e.g., Longacre 1983:337ff.). His concern has primarily been with the contexts of sentences and discourses, but his plea for attention to context is nonetheless applicable to other language phenomena, including those, like writing systems, which are not themselves instances of language but of social systems relating to language. Writing systems are, in fact, notorious for their intertwining of linguistic structural and sociopolitical variables. Their origins, form, history, and continuation or demise reflect not only the phonological considerations dear to the descriptive linguist, but even more the social and political context of the language and the writing system in question. This paper attempts to summarize the social context of the AFAKA SCRIPT, an indigenous syllabary for the Ndjuka language of Suriname.<sup>1</sup>

Until the historical sketch provided in Dubelaar and Pakosie 1988, almost all the previously published material on the Afaka script has been available either only in Dutch or in difficult-to-obtain English publications. This paper, therefore, is partly concerned with bringing information in such

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<sup>1</sup>A previous version of this paper was presented at the annual meeting of the Linguistic Association of the Southwest, Dallas, Texas, October, 1987. See Huttar 1987 for an analysis of the phonological aspects of the Afaka script. The people call themselves /ndjuká/ (with initial syllabic nasal and high tone on the third syllable) and their language /ndjuká tongo/. The people's name should not be confused with /'djuka/, a Sranan word used with derogatory overtones for Bush Negroes in general (including the Ndjukas) or for anyone considered ignorant, countrified, or unsophisticated.

works to the attention of the English-reading linguistic community, and thus draws heavily on earlier work, in particular of the forester Justus Wilhelm Gonggryp and, especially, of the paleographer C. N. Dubelaar. It also comments briefly on the relation between the phonology of the Ndjuka language and the script, discusses a number of possible reasons for the script's lack of success among the Ndjukas generally, and closes with a comparison of the rise and subsequent history of the script with those of other indigenous scripts.

The interior of the country of Suriname is inhabited by, among others, six politically distinct communities of Bush Negroes. Of these the largest and politically dominant have been the Saramaccans, in central Suriname, and the Ndjukas, in the east. The language of each of these six groups is a creole, as is Sranan, which is spoken by blacks of the city and coastal regions. We are concerned here with Ndjuka (also known as Djuka or Aukan/Aukaans), the language of the Ndjukas and a language very similar to that of the Alukus and the Paramaccans, and to a great extent mutually intelligible with Sranan.

At the beginning of this century, the Ndjukas had been established in the central eastern and northeastern part of the country for over 175 years. Their contact with Europeans, largely the Dutch, had remained, by and large, uninterrupted from the days of the sugar plantations of the 17th and early 18th centuries. The hostile relations during the slave uprisings and escapes, the subsequent campaigns against the escapees, and the government's suing for peace in the treaty of 1760 eventually gave way to more peaceable, if not amicable, relations.

Ndjuka territory now included much of the lower Tapanahony—the Ndjuka heartland, the lower Lawa (just above its confluence with the Tapanahony to form the Marowijne), the upper and lower Marowijne, Sara Creek, and much of the Cottica and Commewijne rivers. The residence of the paramount chief (*gaanman*), was now Drietabbetje on the Tapanahony, located above the Great Hole Rapids and therefore in the territory of those referred to as the Upriver Ndjukas. A power conflict dating at least from the mid-eighteenth century (de Groot 1969:14) has divided the Tapanahony Ndjukas into Upriver and Downriver, with the Upriver Ndjukas looking down upon the Downriver Ndjukas, those living below the Great Hole Rapids. De Groot (1969:31) expresses this in terms of the Upriver Ndjukas considering themselves the patricians, the Downriver people the plebeians. To this day they characterize the speech of the Downriver Ndjukas as more markedly different from their own than it in fact is.

Mission work was undertaken in the interior by both Roman Catholic and Moravian workers, with a Christianized Matawai, Johannes King,

engaging in evangelistic journeys among the Ndjukas in the 1860s, even visiting the *gaanman* in Drietabbetje on the Tapanahony. The Moravian Church had managed at least a missionary visit to Sara Creek as early as 1840, establishing a congregation there by 1851. In the 1860s and 1870s several mission trips were made to the Cottica and Commewijne area of Ndjuka territory, but not until 1896 was a missionary permitted to reside on the Tapanahony. From 1896 to 1900 teacher-evangelist Johan Spalburg tried to hold a school in Drietabbetje itself, with few tangible results.<sup>2</sup> Another attempt at founding a school was made in 1909–1912, as well as others thereafter. A major reason for Ndjuka resistance to these schools was the recognized intention of the Moravians to use the schools as a means of introducing Christianity (de Beet 1979:9–10).

Ndjukas, both individual men and whole families, would leave the Tapanahony for temporary work in the coastal region as early as 1825 and, especially from 1850 onwards, with some of their camps developing into permanent villages (Vernon 1985:9). With the discovery of gold and rubber in the deep interior of both eastern Suriname and neighboring French Guiana in the 1870s and 1880s, many Ndjukas became more thoroughly involved in a cash economy, serving as expert boatmen for the transportation of supplies, gold, rubber, and prospectors along the Marowijne and Lawa rivers and their tributaries. This river transport business also brought many Ndjuka men to spend fairly extensive periods in Albina, the coastal town on the eastern border surrounded by Ndjuka territory on one side and Carib territory on the other. Ndjuka men also served as boatmen on extended expeditions to and through their territory to explore and map the southeast portion of the country.

The government had *POSTHOLDERS* (*posthouders*) stationed among the Ndjukas, whose location was specified in the 1760–61 peace negotiations and again in the renewed contracts of the 1830s to be near the *gaanman's* residence, although by the mid 1840s the postholder had moved to the coastal (Cottica-Commewijne) region (Mosis and Scholtens 1988:11). The government also had had police stationed at times in the interior, as well as its own mining establishment at the confluence of the Tapanahony and the Lawa (de Goeje 1908:23–24). It held at least nominal control of the activities of the missions and of those who had commercial interests in the area, such as gold miners, rubber harvesters, and the Ndjuka boatmen who provided their transportation.

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<sup>2</sup>Educational activities had already been going on for at least a few years in the coastal Ndjuka regions (Thoden van Velzen 1979:14). A Moravian evangelist is also mentioned as living in the village of the Paramaccan *gaanman* in 1907 (de Goeje 1908:19).

Although there was little in the way of medical services in Ndjuka territory, whether governmental or missionary, medical help was available at Albina. For more extensive treatment, Ndjukas could go to the national capital, Paramaribo. Travel to Albina and to Paramaribo for other reasons was not uncommon, especially for men. Besides the river freight traffic, trading for European goods took Ndjukas frequently at least as far as Albina. By 1894 the Moravians recognized Albina as a place where enough Ndjuka men were always to be found on at least a temporary basis that they took steps to establish a church there as a way of introducing Christianity into Ndjuka territory itself. In short, whether within or outside of Ndjuka territory, there was ample opportunity for many Ndjukas to have contact with Europeans and observe their ways, including their use of writing.<sup>3</sup>

It is in this setting that a Ndjuka by the name of Afaka, the developer of the world's only known indigenous script for a creole language, appeared on the scene. Afaka appears to have first come to the attention of Europeans indirectly, when a government doctor by the name of C. Bonne observed a brother-in-law of Afaka's, Abena, a patient at the time in a Paramaribo hospital, writing in an unknown script. Bonne reports<sup>4</sup>:

Bit by bit I got to hear that a Bush Negro named Afaka, from the District Marowijne, had thought up the script. According to Abena, Afaka knew the script for some time already, and when a comet appeared in the sky, evidently Halley's comet, Afaka felt called to share his knowledge with others . . . Abena was one of his students/disciples. (1920:391)

Bonne goes on to report that he later spoke repeatedly with Afaka himself, whom he describes as an "undeveloped" (*onontwikkelde*) Bush Negro, and who consistently claimed that he developed the script himself, something Bonne found hard to imagine. By the time of Bonne's writing, Afaka had already died (July 8, 1918), and Bonne reports that no one that he knew of knew anything more about the origin of the script than what he had gathered from Afaka himself and from Abena. From Abena he

<sup>3</sup>A Paramaccan humorous text (described in Huttar and Huttar 1988), well known among the Ndjukas, parodies the tribal captains in terms of "paper at mouth, writing implement in hand"—an allusion, I believe, to the role of captains as intermediaries in palavers. We see here a possible tie between writing and authority, or at least a recognition of the communicative role of writing. The age of this text is unknown to me, but it does contain references to other things about tribal officials that are no longer observed today, such as the captains' swallowtail coats and the *gaanman's* epaulettes and official hat.

<sup>4</sup>All translations from Dutch and Ndjuka sources are my own.

heard the account, to which we will return shortly, of Afaka's having received visions from God instructing him to develop the script and teach it to others.

It was also through Abena that knowledge of the script first came to Fr. F. Morssink, to whom we owe a good deal of our knowledge of the rise of the script and of the life of its originator. A colleague of Morssink's, Br. Bernard, observed Abena in Albina in 1915 reading in a school notebook "full of secret symbols" (Gonggryp and Dubelaar 1960:24). Remaining in Albina for some time for medical treatment, Abena asked Br. Bernard to dictate in "negro english" a number of Catholic prayers, the creed, and the like, all of which Abena recorded by use of the script, and soon knew by memory.

A visit to his mission area brought Fr. Morssink into contact with the script. He wrote to his bishop, "As a missionary who gladly takes to hand any means for the spread of the faith, . . . I learned the script. Through this, in my periodic visits to the Marowijne area I was approached more and more by all sorts of Aucaners [Ndjukas] who had applied themselves to the practice of the script." By this time the users of the script had grown in number to about thirty adults plus several children.

Finally, in 1917, Fr. Morssink met Afaka personally, when the latter was being treated at the Roman Catholic Hospital in Paramaribo. At this time Afaka told Morssink how he had seen someone in a dream who told him he would receive a burden (which turned out to be a disease of the palate) and also a task to do: tell his tribespeople that they must become holy and must believe in the one true God. When Afaka asked for a sign, he was given a white sheet of paper. When he asked for ink and a writing implement, he was told, "You will receive everything that is necessary."

The third European who came into contact with the script at this time was the already mentioned Justus Wilhelm Gonggryp, a Surinamer whose help Bonne solicited in transcribing and translating some of the first texts he was given in the script. Gonggryp's work as a government forester frequently took him to Ndjuka territory, where, both at Bonne's request and from his own interest, he sought for more information about the script, its use and its origin. He was surprised at the volatile reaction his inquiries evoked on the part of Gaanman Amakti. In Gonggryp's words,

Amakti was very indignant that Afaka, that downriver good-for-nothing (*na wisiwasiman fu bilo-nengre*), had taken it into his head to first understand how to develop a script, without the *gaanman*. If Afaka wanted to write, then he just had to learn the white man's script. I tried to persuade Amakti that he saw things wrong, that I had great respect for Afaka's understanding and that I thought

that he should be appreciated by him and certainly deserved no such scolding. But the lofty gentleman was so angry that I dared not go into it very extensively. (1958:25)

Similar negative reactions were experienced by Fr. Morssink, who also tried to persuade the *gaanman* of the worth of the script. The question of the script was raised at a palaver in Drietabbetje where the Ndjuka officials even went so far as to allow a Saramaccan elder, present there with Morssink, to speak on behalf of the script even though a member of another society. This elder, Antonio, reasoned that “a Frenchman writes in his way, a Dutchman in his . . . Chinese and Javanese each have their own scripts; but now God has wanted to give Ndjuka a script—so don’t reject it!” (Gonggryp 1958:26). According to Morssink, his argument made a visible impression, but the official opposition remained firm.

The above longer quotation from Gonggryp suggests two reasons why Afaka’s proposal that the Ndjukas use the script was not approved by the power figures of the Ndjuka community, particularly the *gaanman*. The first reason is that Afaka was a Downriver Ndjuka. Can anything good come from Downriver? Whether or not the *gaanman* actually thought that any idea from a Downriver Ndjuka was *ipso facto* not worth paying attention to, it is still likely that acceptance of such a major proposal from a member of that group would not enhance the *gaanman*’s status. This stereotype of Downriver Ndjukas on the part of the Upriver Ndjukas, however, may as likely have been an excuse for rejecting Afaka’s idea, with other reasons being the real motivation. The first of these reasons would be the second one alluded to by Gonggryp, namely, that Afaka did not go through the right channels, but came up with his notions without consulting the *gaanman*.<sup>5</sup>

But another likely factor was the close association of Afaka with the Roman Catholic Church, coupled with the possibility that Fr. Morssink, as already indicated, hoped to use the script as a tool in the Christianization of more Ndjukas. With traditional religion closely tied to the political structure of the community, such a conversion process could be seen only as a threat to the existing authorities. We have already seen how the Moravian attempt at establishing a school among them just a few years earlier was seen by the Ndjukas as an attempt at converting them to the God of the Europeans.

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<sup>5</sup>Contrast the procedure of the six young men who developed the Vai script, still in wide use today, 150 years since its invention: they brought one hundred parcels of salt as a gift to the king, who “declared himself exceedingly pleased with their discovery” (Dalby 1967:8).



Voorhoeve and van Renselaar hypothesize an additional reason for the *gaanman's* opposition, namely, that

during Afaka's time the script was already used in . . . [a] sacred function and that Afaka assigned phonetic values to its symbols. By doing so he in a sense profaned the sacred script. (1962:193)<sup>6</sup>

Opposition was not limited to that of community leaders. Afaka wrote the following in 1917:

There are some who say it's a good thing, there are some who say it's a worthless thing I'm doing. Even my family drives me away; they say I'm too clever. So I wanted to abandon the writing business . . . my family is at enmity with the Holy Spirit, they'd rather have me dead than alive. Pardon their sin, as you pardon all the time; for I had run and hid from my enemies, they were against me because of the writing. (Gonggryp and Dubelaar 1963:226–28)

Afaka's next comments support the notion that the script was perceived as closely tied to the Catholic Church:

However, the bishops of the priests, they saw the book, they liked the book, they took the book, they learned the book, they read the book . . . (Gonggryp and Dubelaar 1963:228)

And earlier in the same text we get a similar tie to the Church:

[God] brought some of the Africans to Suriname, then at the time He wanted He took some of them from Suriname [i.e., the city and coast areas] and took them to the bush, He called them Ndjuka, he said, "This is were you must live," and He gave them life. Then He waited a long time. Then He called the priests and they answered. He said, "The Africans who are in the bush, they must become holy in the faith that you have, with the sanction of the Lord God you must give them teaching, with laughter, with food, with drink, with rest." Then the priests began to give the teaching that the Lord had said. But when the Africans heard that, they were afraid, for they thought that the priests were deceiving them to impose punishment [slavery] on them again. For in the days when the crack of the whip was heard, the priests were there, in Suriname. That made the teaching so difficult for them, because if

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<sup>6</sup>See Dubelaar and Pakosie 1988:148 for arguments against this hypothesis.

we had all been in Suriname the teaching would not have been so hard for them. (220–22)

We see in Afaka's account here (which, we must remember, was being written out for a priest) not only a desire for general and religious instruction for himself and his people but also an explanation of his people's resistance to the Catholics' first attempts at such. He goes on to describe his own role in God's solution to this problem:

Then God laughed. He sent a spirit down to the Africans, and then he put Usa [Afaka's nom de plume] into a deep sleep. Then he went and called him, "Usa!" He answered. The spirit said, "I will give you a burden for you to carry; when you get to God's country you will receive your reward, there in God's country." He took a piece of paper and gave it to Usa without ink or writing implement. Usa said, "My lord, what am I to do with the paper?" The spirit came and said, "You will find everything that is necessary." Then he raised up a star, with fire [Halley's comet]. The Lord God revealed a sign. He said, "Eyes will see, ears will hear." So He gave the Aucaner Negroes paper. He began a big fight. In the month of the star the paper [writing] began.

It is the things that the star said, that the Lord God said: the Aucaners must become holy, and the Roman Catholics will come teach the Aucaners the holy life that we must have, with laughter and happiness and respect for the Lord God. Then life will become the way the Lord wants it; so that's how life must become, if it seems good to the holy Catholics to whom Jesus gave the faith of the world, and the Holy Spirit will give thanks because the white man's God has given the wisdom of the world.

I don't have the learning, I don't have the wisdom, I don't have the knowledge, but the Lord God knows everything, He knows that He must give the runaway Negroes paper for us to live. It is good for runaway Negroes. Oh, our Father, our Lord, our God, all Bush Negroes kneel down, we lift up our heads, but our eyes are still shut, our hands are still shut. Open us up, our Father, we pray, Lord God, with your permission and with all respect, your will must be [done] on earth. Give your teaching just like it ought to be. My Father, you gave me the school house for me to make, but oh!, I don't have wood, I don't have boards, I don't have leaves [thatch]. Oh, my Father, one finger cannot eat okra soup alone. Aukaners receive paper, they will receive learning, they will receive

wisdom, they will receive knowledge. We will live in the holy life, the clean way of living will come . . . (222–26)

The disapproval of the *gaanman*, of course, did not encourage the spread of the use of the script among the Ndjukas. But more fundamentally, literacy in any language or script had never been a part of Ndjuka life, and very likely few saw reason to make the effort to make such a change. Yet Willem F. Van Lier, a postholder attempting a little later to start a school on the Tapanahony, is quoted by de Groot (1969:32) as saying that “there is not a Bush Negro nowadays who does not hanker after education.” De Groot continues with a summary that highlights the Ndjuka priority of traditional religion over whatever advantages literacy and education may offer:

They believe that a knowledge of reading and writing will bring them material advantage in their contact with the world of foreigners. But a concern for their “spiritual welfare” surpasses all desire for material gain. By this Van Lier means that every effort to inculcate the Christian doctrine in addition to pure book-learning will come up against opposition.

She then goes on to cite the anthropologist Thoden van Velzen, who lived in Drietabbetje in the 1960s, to the same effect.

In light of this general Ndjuka avoidance of any European education that included any hint of Christian doctrine, it is perhaps surprising that as many took to the script as did—but not surprising that at least some of those who did so had dealings with European missionaries—in this case the Catholics rather than the Moravians. An early account of the origin of the script refers to ten book people (*bukuman*), or users of the script. As mentioned above, more than thirty book people are reported by about seven years after Afaka started his work. By the 1920s Morssink reports over one hundred users of the script. The script was passed on by the first generation to some younger Ndjukas, as seen not only from the above reference to children who knew the script around 1918 but also from the fact that outsiders such as Gonggryp and his colleague Dubelaar have used the script for correspondence with Ndjukas until quite recently. At least one Ndjuka who has used the script for some time is still known today, the Captain Alofaisie, who is referred to by Dubelaar (1976) as the current head of the book people. There are perhaps another dozen Ndjukas using the script today, primarily culturally and politically aware younger people interested in preserving or identifying with a unique and disappearing aspect of their culture (see, e.g., Dubelaar and Pakosie 1988:149).

Another factor which may have led to the decline of the script is that it leaves many phonological contrasts unrepresented. For most consonants, the same symbol represents both *Cu* and *Co*; frequently *Ci* and *Ce* are not differentiated either. Similarly, some consonant contrasts are not represented with certain vowels. Tone is never directly represented, length is represented rarely and then usually indirectly, and nasalization is almost never represented. While it is possible to understand almost all of many texts despite these ambiguities and despite the high degree of homonymity in the language, such success is probably often due to the predictability of the subject matter: most published texts deal with religious matters and use many fixed expressions, or consist of greetings and other banalities of routine friendly letters.<sup>7</sup>

Abena's account of the origin of the script contains a passage which some take as describing the manner in which the use of the script was propagated:

You must not leave us, for if it is your will, then the first will bring the second, the second will bring the third, the fourth will bring the fifth, the fifth will bring the sixth, the seventh will bring the eighth, the ninth will bring the tenth. (Dubelaar 1976:28)

Some have interpreted this passage to refer to the manner in which Afaka came up with his symbols: they were revealed to him, or he came up with them some other way, one at a time. It is, however, reasonable to interpret this passage in terms of how the script spread, in that just a few sentences after this passage, which stops with reference to "the tenth," Abena lists the names of exactly ten who "believed in God" in the sense that they had decided to "live with writing."

The strong religious overtones of the claims about the origins of the script are characteristic of other cases of development of indigenous scripts. For example, Basso and Anderson (1973:1013) report that Silas John Edwards, "a Western Apache shaman who was also a founder and leader of a nativistic religious movement . . . in the early 1920s," invented a writing system in 1904 "in order that an extensive set of prayers expressing the ideological core of his religion could be recorded in permanent form and disseminated among his followers." This script, like Afaka's, was claimed to have been conceived "in a 'dream from God'." Dalby (1968:161-62) compares accounts of origins of nine scripts of West Africa, and the Afaka script, and finds that "seven of the nine . . . make reference

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<sup>7</sup>See Huttar 1987 for details on the relation between the Afaka script and Ndjuka phonology and homonymity.

to an inspirational dream," the two exceptions being cases where the designer of the script had "an advanced Western education."<sup>8</sup>

Afaka's script resembles in some other ways most of those developed in West Africa in the early part of this century and described by Dalby. With regard to their structure, most of these scripts, like Afaka's, are syllabaries, rather than alphabets or full ideographic systems. Most of the languages concerned have a predominantly or exclusively CV syllable structure. This is true of Ndjuka, in which all syllables may be analyzed as CV, if we take V to include nasalized vowels and sequences of two or three like or unlike vowels.

With regard to their originators, many of these scripts were developed by men who, like Afaka, saw themselves or were perceived by their peers to be prophets, often active in the development of a new variety of local religion, which often was a fusion of traditional and outside (Christian or Muslim) beliefs and practices. With regard to the history of these scripts, most enjoyed an initial period of widening use, followed by a decline, until today there are few practitioners of any of them. It is possible that just as contact with outsiders—European Christians or Arabic Muslims—and their active written traditions may have contributed to the rise of all these scripts, subsequent competition with the more prestigious and more widely useful Roman and Arabic scripts may have contributed to their decline.

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## Standardization of Unwritten Vernaculars

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Linguists have long recognized the importance of the mother tongue in language development.<sup>1</sup> Even in multilingual situations where at least a second language is clearly necessary for education, commerce, and other integration into the wider community and nation, the continuing role of the mother tongue is critical to speakers. Haugen says, "Language is much more than an instrument: among other things, it is also an expression of personality and a sign of identity" (1971:288). He quotes Hjemselev (1953) as calling language "the ultimate, indispensable sustainer of the human individual, his refuge in hours of loneliness, when the mind wrestles with existence and the conflict is resolved in the monologue of the past and the thinker." Eastman suggests that language planners should "conceive of the language as a system of speech elements reflecting cultural heritage" (1983:72).

Thus both educators and governments have increasingly recognized the value of encouraging literacy in the mother tongue first, both as an aid in motivating literacy and also as a bridge, easing the way toward literacy in an official language or language of wider communication. Ghanaian linguist Gilbert Ansre recently spoke of the importance of understanding the use of different languages in diglossic situations—the language used in the family, the language used in worship, and even the language used in courtship—in considering what language should be used for different kinds

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<sup>1</sup>I am indebted to Ann Elizabeth Johnson (1990) for much of the illustrative material as well as references to the literature.

of literature.<sup>2</sup> The assumption is that though members of multilingual communities must learn the language of wider communication in order to function in many domains, they deserve to become literate in their own mother tongue on their way to literacy in the language of wider communication. The mother tongue is the vehicle for their emotions, identity, and even their self respect.

A common second assumption is that comprehension is the primary consideration in determining what dialects of a given vernacular need separate literatures and literacy efforts. Considerable effort has been devoted to developing means for measuring the degree of inherent intelligibility among the many groups of related dialects and languages around the world. A good deal of progress has been made and thresholds have been established whereby speakers of a given dialect testing below the threshold are assumed to need a separate literature. Making a similar determination with regard to bilingualism with a language of wider communication is a great deal more complex and difficult. In the case of inherent intelligibility, we can assume that a valid test of a small sample of the language community in a given domain will reflect the whole community in all language domains, since it reflects the dialect structure used by all in all domains. Bilingualism, however, develops in individuals or groups of individuals in single domains or groups of domains and testing thus needs to be over all relevant domains and of a larger sample of each relevant grouping in the language community.

Even assuming that we can successfully achieve adequate comprehension testing among all the language and dialect groups of the world, experience brings into question the assumption that comprehension is an adequate measure for determining where separate literatures and literacy programs should be promoted. Social and political factors often conflict with comprehension factors and, if not adequately taken into account, lead to the failure of well-motivated programs and in some cases resistance to further efforts, particularly in highly multilingual situations.

One factor is the question of feasibility. As comprehension testing has progressed, the realization of how diverse languages are, when measured by inherent intelligibility, has grown far beyond what had been imagined. The number of languages considered to be spoken in Mexico during the fifties, for example, was generally on the order of fifty. Based on intelligibility testing in the sixties and seventies that number grew eventually to well over 150, about half of them in the state of Oaxaca alone. Late in the sixties the government of Oaxaca desired to provide literacy in the ver-

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<sup>2</sup>Discussion at a conference on Language Assessment sponsored by the Summer Institute of Linguistics at Horsleys Green, England, June 1989.



nacular as a bridge to learning and becoming literate in Spanish. No matter how convincing the evidence regarding intelligibility, the resources of the State and the priority it could give would simply not permit it to sponsor the development of every language thus identified. The government of Cameroon, West Africa, officially recognizes at least 236 distinct indigenous languages spoken in that country of about ten million. Intelligibility testing now in progress almost certainly will not reduce that number significantly.

Governmental policy encourages the recognition and development of the indigenous languages as well as the official languages (French and English). President Paul Biya wrote in 1986:

At the ethnic level, we should encourage the development of the national (indigenous) languages which are the privileged mediums of ethnic cultures. It is important for each language to express the culture it embodies. Thus produced at the ethnic level, this cultural heritage will be translated into reality at the national level to the great benefit of the national community. (Biya 1986:104)

In spite of that ideal, Cameroonian linguists realize that it will probably be impossible, practically speaking, to develop all 236 languages and are proposing a goal of 100 for development. These two countries illustrate a very widespread situation around the world.

A second potential conflict is the unifying and separating function of language. National governments are rightly concerned with using a language to build a nation; developing local languages can be perceived as divisive and counter-productive to that goal. Similarly the perceived ethnic or cultural identity can easily be threatened when comprehension testing factors suggest multiplying the number of literature programs within a language or dialect group. Fasold (1984:8) refers to the nationalist-nationalist conflict discussed by Fishman (1968), the conflicting ideals of building a unified nation (nationalism) and supporting and building up ethnic cultures of which there may be many within one nation (nationalism). The social and political factors can be complex.

### 1. A possible direction

The concern of this paper is with the speakers of local languages in multilingual situations who live within larger political and linguistic communities both on the regional and national level. These languages constitute the large majority of the languages of the world and are mostly unwritten. The speakers have little political or economic influence and

must rely on a language of wider communication for most commerce, civic affairs, and education. They often function in three or more languages, including at least the local vernacular, a lingua franca of the region, and the official language used nationwide. These speakers face the dilemma of conflicting pressures: self-identity and comprehension factors pull them toward literacy in the local language; social, economic, and political factors push in the opposite direction, toward literacy in the regional or national language. Governments and others involved cannot cope with the diversity of ethnic languages in the light of limited resources and the pressure of other priorities. They must furthermore be concerned with nationhood and seek to overcome hostile divisions. These conflicting factors have too often resulted in inadequate effectiveness in language development programs—trying to stretch them over too wide a language area for adequate comprehension or, at the other extreme, dividing into so many separate programs on comprehension grounds that there were not enough involved in each to provide a viable program. Furthermore, the divisions violated other social or political perceptions.

Can the dilemma of conflicting pressures in multilingual societies of the type here considered be ameliorated by the promotion of literary standards that are designed to be used over broader dialect areas than comprehension suggests? The thesis of this paper is a tentatively positive answer to the question, providing that expectations are modest and more explicit attention is given to relevant factors in designing language programs than is typically given. In my opinion, it is at least worth the effort to try. To whatever extent this is successful, it will be of help to governments and others involved with such multilingual communities. The greater understanding of the factors involved that should result may well improve the attitude toward vernacular literacy of some who have seen ineffectiveness that resulted from the conflicting pressures we are discussing. Surely it will result in greater sensitivity to the culture involved in developing programs.

Though the evidence is largely from major written languages with long literate histories, there is some indication that literary standards can also be successful for unwritten languages in multilingual situations. Although I know of no formal documentation, surely the range of English dialects served successfully by the literate standard of English is well beyond the acceptable limits of inherent intelligibility recommended for unwritten language groups as measured by orally testing primarily illiterate speakers of those dialects via the widely used recorded text testing method. The same is doubtless true for German, French, Spanish, and other major languages with a literate history.

Students of language planning have identified social, political, and economic factors that lead toward a broadly used literary standard and

have determined which of the many dialects of each of the languages eventually became the standard. In each case the process occurred over a period of several hundred years. It was not something planned and brought about over a period of a few years. To the extent that that must be the case, the comparisons are irrelevant to current multilingual situations whose needs are immediate.

In recent decades there have been efforts to establish literary standards for some major languages, such as Malaysian, Indonesian and Swahili, with some evidence of success. But the process continues for all of them and it is difficult to know what the longer term outcome will be. A brief description of those for Swahili will illustrate.

Swahili is spoken in Eastern Africa, particularly in Kenya, Uganda, and Tanzania. Johnson (1990) reports studies of Ansre (1971) and Russell (1981). A widely used lingua franca, Swahili was an important language of missionary activity for both Christians and Muslims and became a prestige language for the Muslim community. When German colonial rule was established in what is now Tanzania, it became a vehicle for political communication and was further spread throughout the country. At the beginning of this century, the German administration began to provide some educational materials in the language and a Swahili newspaper was started. In 1925 a Committee for Standardization of the Swahili Language met in Dar es Salaam. Two dialects, Mombasa (in Kenya) and Zanzibari (now in Tanzania) were considered. The committee recommended Zanzibari. Since then successive committees have promoted the development, modernization, and use of a written form based on that dialect.

Around 1950, however, political developments began to create problems for that effort. Language policies of the three territories involved—Tanganyika (now Tanzania), Kenya, and Uganda—differed quite a lot and policies were independently planned. In Uganda, Swahili is mostly a second language, used as a language of wider communication, with English as the official international language. The spoken form varies from the written standard, which is used for literary purposes. In 1974, Kenya made Swahili its official language (in addition to English) but the written form has not been as well accepted. The Arabs around Mombasa in particular have resented the imposition of the written standard, arguing that it has been “ruined by the Europeans” (Russell 1981:57). They argue for a second standard in Kenya. In Tanzania, Swahili is spoken as a first language along the coast and in Zanzibar. The written standard is Tanzania’s official language and has been vigorously promoted throughout the country to the exclusion of the use of local languages. In all three countries numerous additional languages are spoken as mother tongues alongside Swahili and English.

Ewe, spoken in Togo, West Africa (and also in neighboring Ghana and Benin), provides a second illustration. Ewe is one of Togo's indigenous languages officially recognized for development. The official international language is French. A number of additional languages are spoken as mother tongues in Togo. Johnson reports Ansre's (1971) description of the literate development of Ewe. Two missionary bodies, the Norddeutsche Missions-Gesellschaft (Bremen) and the Roman Catholics, along with the German colonial authorities in Togo were involved in choosing which dialect would be the vehicle for writing, each arguing from their vested interests (Ansre 1978:685-6). The Bremen mission supported the Anglo dialect of Ewe since they had worked in the area where that dialect was spoken since 1847 and had produced Scriptures, school textbooks, and dictionaries in it. Meanwhile Roman Catholics worked in an area where the Anexo dialect of Ewe (also called Mina or Gen) was spoken. They had produced a Catholic catechism as early as 1858. Teaching books and collected texts were also produced but were never as well-known or widely circulated as works done in the Anglo dialects.

There were no clear linguistic reasons for using one dialect over the other but there were strong sociolinguistic arguments for both. Anexo was spoken along the coast, an important trading area, whereas Anglo was spoken in an obscure corner both of the language group and of Togo (with more speakers in Ghana). On the other hand, the national capital was moved from Little Popo, which was Anexo-speaking, to Lomé, which was mainly Anglo-speaking. Lomé later became the headquarters for education and a terminal for the proposed railroad, which has given Anglo-speaking Ewes more trading advantages (Ansre 1971:687). The strong support of the Bremen mission and the German colonial government for Anglo, as well as the fact that many educational materials had been produced in that dialect, led to the selection of Anglo for further development.

For a period of time, Anglo Ewe was taught in Togo's public schools, but today it is taught only in mission schools. It is one of three languages used in the national newspaper, and more literacy materials have been produced. There are approximately 630,000 speakers in Togo and 1,350,000 in Ghana. The Anexo (Mina) dialect is spoken by under 150,000 people as a first language but is used as a lingua franca throughout southern Togo and has from 500,000 to a million second language speakers (Grimes 1988:330). Mina is generally considered to be a separate language. One speaker of Mina<sup>3</sup> reports that Mina speakers generally see written Ewe (based on the Anglo dialect) as the language of the church and a separate language from Mina, though most Mina speakers have no trouble

<sup>3</sup>Maurina Lawson, in conversation with Ann Elizabeth Johnson.

learning to read the written variety. The situation is even more complex for those groups whose mother tongue is other than Ewe in the southern part of the country, where it functions widely as a *lingua franca*.

Ewe and Swahili are both spoken over relatively wide areas by relatively large numbers of people with strong political and economic influence. If their written development has been complex and painful, how much more so for local languages spoken in areas as small as a few towns, whose speakers have little political or economic influence.

A study of a standardization effort for the Luyia group of dialects in Eastern Kenya by Kenyan linguist Musimbi Kanyoro (1988) illustrates a situation closer to the concerns of this paper. Some three million people speak some dialect of Luyia, alongside Swahili (Kenya's official language) and English (the language of higher education). Kanyoro (1988) found that speakers who identified in a positive way with a written form of Luyia preferred that form over others even if those others were closer to their dialect.

A study of the factors involved in the development of literary standards, both in the major literary languages through history and in more recent attempts at language planning, leads to a few general conclusions that may prove helpful in promoting a broad-based literary standard for local languages in multilingual situations.

First, attitudes are at least as important as linguistic factors. Though increase in second-language proficiency in an unrelated language is difficult, it appears that adjustments to the written form of a related language are easier and, given a positive attitude toward that form, that form can be seen as one's own language even where differences are noted. The precise relationship between oral comprehension of related dialects and the potential for use of written materials is not known; we do not know how far written comprehension can easily be extended beyond immediate oral comprehension.

On the other hand, mere linguistic similarity is not adequate to make a single written form acceptable or usable. The perspective of the speakers regarding differences between dialects, which may contrast with that of language planners, may substantially affect their comprehension of the written form.

Secondly, any development of a literary standard follows sociological, political, and economic trends. These are, of course, closely related to and perhaps determinative of attitudes. Fasold comments:

The usual language planning methods are not likely to influence speakers' linguistic practices in unmonitored language use—unless they are designed to support the direction in which natural social forces are moving anyway. (1984:260)

Numerous sociopolitical and economic factors have been cited in describing how literary standards have developed. Perhaps the most pervading and inclusive are prestige and the perception the language community has of its own identity.

Prestige is attached to centers of power, trade, and learning. The written standard for English thus developed in the London metropolitan area where Cambridge University was located. Similarly, the French standard developed in Paris, seat of the royal court as well as of law courts and a university. St. Denis, nearby, was also an important spiritual center.

These factors influence the direction of language spread or shift and the domains of use in a multilingual society, all important factors in developing a written standard. They are instrumental factors determined by the need to communicate for trade, educational, or religious purposes.

Identity is more an affective factor, determined by how the speaker sees himself in relation to his community and wider environment. Wherever language is seen as a symbol of unity, it works positively towards acceptance of a written standard. This can be on a local, regional, national, or even larger level. Identity also separates a community from others perceived to be beyond the bounds of that identity. This factor is possibly the most critical one for local language groups in multilingual societies, which is the concern of this paper. The local group that sees itself as part of a wider group will be more ready to overcome dialect differences in a written standard than the group that does not, regardless of comprehension factors. The identity on the local or regional level in contrast to a national sense of identity is what justifiably concerns governments.

Political boundaries provide part of the sense of identity, in that it may stop at the political border. Norwegian, Swedish, and Danish are considered separate languages and have separate standardized forms even though linguistically they should probably be classed a single language.

Finally, the very complexity of the factors involved mean that predictability with regard to developing a written standard is low, even where there is conscious planning.

## 2. A modest proposal

Promotion of literary standards beyond adequate oral comprehension measures for local languages in multilingual situations is difficult and the potential benefits uncertain. Clearly it is not a cure-all for resolving conflicting pressures. The role of vernacular or mother-tongue literacy is nevertheless of sufficient importance that those involved in such situations should work at it. The following proposals, while modest, have, I believe,

the potential for substantially increasing the effectiveness of vernacular-language literacy programs in their cumulative effect. They are: (1) keep the perspective, (2) be modest in expectations, (3) take the long view, and (4) document for future use.

Keeping the perspective will help those involved to become aware of the potential that may exist in a given situation. Too often linguists have first made oral comprehension judgments, whatever their basis. They then focused on the individual groups that resulted when considering language or literacy projects, failing to consider other factors that might unify the larger group as a whole. The result is a static focus on information available about current comprehension among dialects, rather than a dynamic focus on what will be, or is desired, or what can be via a literary standard. In contrast, Kanyoro, in addition to comprehension testing, sought to understand the perceived identity factor by testing to determine both the peoples' self-perception vis-à-vis their own (inner) group, and the same peoples' perception of other (or outer) groups in the light of the linguistic evidence.

The importance of adequate study and analysis of the social and linguistic factors is recognized, but the study of both needs to continue beyond the fact-finding stage and into the strategy-development and implementation stage. Throughout this period the wider group of dialects or languages should be kept in focus and considered together, whether or not the immediate conclusion is that they can best be served by a single written standard. Given the complexity of the factors involved in multilingual situations with local languages there is no way to understand the potential scope of a written standard from an initial assessment, even if it includes extensive surveys, profiles, and political, cultural and demographic studies. That potential can only be seen over time in interaction with the community itself.

Consideration should be given, with the community, to the separate scopes of the written versus the oral domains of dialects. Where factors favor a single written standard for a group of dialects, the pronunciation in reading that standard may be dialect specific and that may indicate separate initial pedagogical materials in individual dialects, even though the literature will be in a broader standard. The community needs to be involved with the planner at every step, from the conception to the implementation of any program for development of a written standard. The planner can help members of the community achieve greater language awareness, both of their own dialect and of other dialects. One effective tool for this is the writers' workshop. This can also help build motivation to use written communication and show where written forms of the vernacular are seen as useful. It may reveal differences in the perceptions of

speakers from those of the planner. As nascent writers are exposed to each others' dialects in writing, their awareness of dialect differences can increase and suggest ways for them to share a common writing system without considering one better than another. Production of material in and about a language has been a factor in developing a written standard. Luther's translation of the Bible was an important factor in the standardization of German. The location of the printing press and the production of a grammatical description and dictionary facilitated the adoption of Parisian French as the standard. Similarly, Caxton's printing press, Johnson's dictionary, and the authorized version of the Bible were all involved in establishing the English standard.

On a radically different scale but following the same principle, perhaps the potential scope of a written standard can be discovered through encouragement of writing in and about the language using local dialects at the outset and until the communities see the advantages of a written standard.

Community involvement in the whole process is most naturally achieved through existing groupings and infrastructures: educational, government, or traditional authorities, church, clubs or societies or other. The disadvantage is that any single such grouping will tend to exclude those who are not part of that grouping (with the possible exception of government). This can be overcome via a language committee, such as described by Sadembouo (1988). Sadembouo sees the committee as including representatives of every segment of the society impacted by its activities: all the dialects potentially involved, the various age and sex groupings, all religious groups, social classes, professional teachers, and both literates and illiterates.

Such a committee should have overall responsibility for all decisions and the development and implementation of programs and activities. While this is certainly an ideal to be strived for, it may be feasible in many areas only after an extended period of work and promotion through less general and ambitious vehicles. Even where such an overall committee can function, it would be helpful to have smaller, dialect-specific committees which can promote writing and reading in the domains where the language is used without interference from dialect differences. These may function prior to the formation of the general committee, and then concurrent with it.

The point is to utilize the positive factors among the many variables in any situation, following the sociolinguistic trends, and always looking for ways to develop a written standard as inclusive of dialects as feasible, now or later.

My second proposal—to be modest in expectations—seems obvious in light of all that sociolinguists say and without an extensive record of successful attempts to establish a written standard that includes broad



language differences. It nevertheless needs to be said for two reasons. First, because of social and economic factors, unrealistic expectations have too often been adopted in attempts to develop and promote initial literacy in local languages. When these efforts fail it is too easy to conclude that the whole idea of literacy and literature in the vernacular is unrealistic. Too often those who consider comprehension as the key issue are not sufficiently aware of the complexity of the social factors involved. A logical conclusion is to limit the target community to a narrowly defined dialect group. But for the sake of effectiveness, the importance of a more broadly based written standard is such that we need to find ways to motivate those involved in language development toward as broad a base as is feasible.

Thirdly, I propose that we take the long view in any situation—a dynamic as opposed to a static view. In order to be realistic the dialect scope for a given project may need to be small. But those involved should plan in a way that looks to the possibility that the scope can be enlarged in the future. A more local written standard may be needed to provide for more immediate identification of new literates with it and thus more immediate acceptance, learning, and comprehension. At the start, speakers can be urged to write in this local standard.

As time goes on, where social trends permit it, planners can promote interaction with speakers writing in other dialects that may encourage them over a period of time to see the advantages of a more broadly based written standard in order to promote solidarity with the larger group—a larger pool of writers and readers sharing a larger pool of knowledge and experience, a greater production of literature, and eventually a more viable program all around. Historically such standardization has come about in stages over a long period of time. The idea here is to seek to facilitate that evolution over a shorter period. Perhaps such compromises can help reduce conflicts over comprehension, identity, and other social and economic factors. A long-term strategy for a broader written standard can be combined with a short-term strategy of initial materials in more dialects or languages along with transition materials to the proposed broader written standard.

Finally, we need to document efforts and progress for future use. Sadembouo (1988) has proposed eight fundamental criteria, six secondary criteria, and four marginal criteria to be used in selecting a reference dialect for developing a written standard. Apart from the three categories, he suggests no weighting in the application of the criteria. Assuming the validity of the criteria and the three categories, we need a record of how their application works out in specific situations, with the hope of eventually developing a valid way of weighting each criterion for use in new situations. A growing documentation of experience in standardization ef-

forts for local languages in multilingual situations will surely increase our understanding and effectiveness in approaching new situations.

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## Language in Context Essays for Robert E. Longacre

Publications in Linguistics Number 107

These essays are for Robert Edmondson Longacre, written by his friends, colleagues, and students, to honor him on his seventieth birthday. They reflect the varied, interdisciplinary interests which Longacre has had through nearly fifty years of work as teacher, consultant, translator, and scholar.

In *The Grammar of Discourse*, Longacre states that "language is language only in context," therein providing the title for this volume. More than half of the authors have dealt with this thesis in relation to both discourse topics ranging from storyline and systems of tense-aspect-mode to quote-formulas, topic, focus, the meaning of discourse particles, and switch reference. Other topics reflect Longacre's earlier interests in tone, historical linguistics, and clause and sentence structure. Consistent with Longacre's broad study of the world's languages, these essays span the globe with studies of languages of North America (Chinantec, Mixe, Mixtec, Popoluca, Trique, Zoque), South America (Amuesha, Araona, Guaraní, Guarayu, Ndjuka, Mbyú, Ticuna), Europe (English, French, German, Classical Greek, Koiné Greek, Italian, Latin, Polish), Africa (Hausa, Mofu-Gudur, Obolo), the Middle East (Biblical Hebrew), Asia (Shidong Kam, Korean, Thai), and the Pacific (Berik, Tok Pisin).

In his long career, Longacre has directly and indirectly influenced the compilation of impressive stores of language descriptions and the development of numerous theoretical insights. This volume continues that tradition.

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