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*Proceedings of the
Sixth Annual Meeting of the
Berkeley Linguistics Society*

FEBRUARY 16-18, 1980

BERKELEY LINGUISTICS SOCIETY

BERKELEY, CALIFORNIA

PROCEEDINGS of the
Sixth annual meeting of the
BERKELEY LINGUISTICS SOCIETY

16-18 FEBRUARY, 1980

BRUCE R. CARON ~ MEREDITH A. B. HOFFMAN ~
MARILYN SILVA ~ JEANNE VAN OOSTEN
and DANNY KEITH ALFORD,
KAREN ANN HUNOLD,
MONICA MACAULAY, and
JOHN MANLEY-BUSER,
~ EDITORS

BERKELEY LINGUISTICS SOCIETY
UNIVERSITY OF CALIFORNIA
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DEDICATED TO

MURRAY B. EMENEAU

PREFACE

This volume is dedicated to Murray B. Emeneau, Professor of Sanskrit and Linguistics, Emeritus, and former chairman of the departments of Linguistics and Classics at the University of California at Berkeley. Professor Emeneau's work has been influential in the fields of anthropology, folklore, Sanskrit, ethno-linguistics and California Indian languages; his contribution to Dravidian linguistics has been especially significant. His theoretical work on structural borrowing and the linguistic area hypothesis has contributed significantly to the development of modern sociolinguistics.

This year, our call for papers encouraged, as always, papers on all topics of general linguistic interest, but also especially encouraged submissions in those areas of linguistics in which Professor Emeneau has worked. BLS chose as its theme, "Language in its Everyday Setting" in honor of Emeneau's pioneering contribution to socio-linguistics.

The book is divided into three parts, "Language on the Indian Sub-Continent", "Language in its Everyday Setting", and "General Linguistics". It is a testimony to Emeneau's wide range as a scholar that authors in all three sections acknowledge their debt to him.

We are grateful to all participants in the annual meeting and to all authors who have contributed to this volume. We especially would like to thank John Gumperz, William Jacobsen, Wick Miller, and William Shipley for accepting our invitation to present papers at the meeting and to Bh. Krishnamurti, Bruce R. Pray, Harold Schiffman, and Kamil V. Zvelebil for accepting our invitation to publish their papers in these Proceedings. Due to problems with mail, the papers by Jane Falk and Bh. Krishnamurti appear at the end of the volume.

We would like to thank the faculty and staff of the Department of Linguistics (particularly Eileen Odegaard and LaRue Seegmiller) who have helped us organize the conference and produce this volume, and to the Institute of Human Learning which has allowed us to operate out of its facilities.

We also wish to express our gratitude to former conference coordinators and editors, particularly Christine Chiarello, for advice and support, to Eve Sweetser for the calligraphy and to all BLS members who helped organize the conference and who have been involved in the various stages of book production. But our greatest debt is to those members who have worked behind the scenes, keeping the day-to-day operations of the organization running smoothly, in particular, Catherine O'Connor, who has kept the books, and Marta Tobey, who has personally managed book mailing and who has given us much guidance

and advice in running this year's meeting. To all of these people, we express our deepest thanks.

The Executive Committee
of
The Berkeley Linguistics Society

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*We regret that mail delays made it impossible to include these contributions in the appropriate sections; they are listed twice, to aid the reader in locating them.

The following papers were presented at the Annual Meeting but are not included in the volume: Geoffrey Nunberg, "What do we mean by 'the same language'?"; Graham Thurgood, "Geminates: synchronic and diachronic patterns".

The following authors did not present their papers at the Annual Meeting but are published in this volume: B.R. Caron, J.H. Davis, Bh. Krishnamurti, A. Mishra, B.R. Pray, H. Schiffman, K.V. Zvelebil.

M.B. Emeneau's paper was retyped by the editors, who take responsibility for its format.

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Murray B. Emeneau: Descriptive Linguist and Scholar.
Bruce R. Caron
University of California at Berkeley

When it was suggested that this year's BLS meeting should be dedicated to Murray Emeneau, there was an immediate positive response. We discovered only later, when the issue of deciding upon a focus for the meeting came up, that people had admired Emeneau's work for several different reasons. The Indo-Europeanists were eagerly anticipating a conference dedicated to Murray Emeneau, the eminent Indo-Europeanist. Anthropological linguists were pleased that, at last, BLS was planning a conference focused on the work of an anthropological linguist. Students of American Indian languages were quick to point out that Emeneau was instrumental in the establishment of the Survey of California (and Other) Indian Languages. Southeast Asianists argued that Emeneau has made pioneering contributions to their area of study. If there had been a folklorist present he probably would have added that Emeneau has several notable publications in the field of Indian folklore. As for myself, (the lone Dravidianist present), I noted that Emeneau is also known for his work in Dravidian linguistics. Of course we were all aware of Emeneau's work on the linguistic area hypothesis.

It was only after much discussion that the group was able to reach a consensus on a focus for the Meeting. In the process we all discovered other areas of linguistics where Professor Emeneau has made significant contributions. "Language in Everyday Life," was chosen as the focus because it encompasses Emeneau's work in folklore and anthropological linguistics. By encouraging papers from other areas of interest to Emeneau, we hoped that the meeting would represent, at least in part, the career of Murray Emeneau.

We at Berkeley are fortunate to have access not just to Emeneau's work, but to Emeneau himself, since he has chosen to continue dwelling and working in Berkeley. Murray Emeneau came to Berkeley with his bride, Katharine, in 1940, as an Assistant Professor of Sanskrit and General Linguistics. The previous Professor of Sanskrit, Arthur Ryder, had died suddenly in 1938, and Emeneau was summoned from India by Franklin Edgerton who advised him to stop off in Berkeley and be interviewed for the job. In 1953, Emeneau was instrumental in the creation of the Department of Linguistics, and became its first chairman. He taught Sanskrit and various courses in linguistics until his retirement in 1971. Since then, he has continued to pursue his diverse interests in linguistics. This year alone, he has two books and several articles coming into publication. Although he is quite busy, Emeneau agreed to be interviewed for this article (all quotes are taken from these interviews, unless otherwise specified). While Emeneau's writings have been described elsewhere, e.g., in Bh. Krishnamurti's preface to the Professor

M.B. Emeneau Śaṣṭipūrti Volume of Studies in Indian Linguistics(Poonā, 1968), this article will try to provide a more personal description of the life and the work of Murray Emeneau.

Emeneau spent his undergraduate years studying the classics, first at Dalhousie University in Halifax, and then as a Rhodes Scholar at Balliol College, Oxford University. While he had had some exposure to linguistics, even in high school, it was not until he went to Yale as a graduate student that his nascent interest in linguistics developed under the tutelage of E.H. Sturtevant and Edward Sapir.

At Yale he began his study of Sanskrit with Franklin Edgerton, and developed what would become a lifelong interest in folklore. He studied linguistics first with Sturtevant, who was in the classics department, and held classes in his basement office, and then with Sapir, who had recently come to Yale from Chicago. While he received his PhD at Yale in Latin, Greek, and Sanskrit, he also attended Sapir's classes for five years. "I practically had a second PhD, as far as the coursework went." Emeneau first developed his field methods in these courses. "He [Sapir] used to bring informants to the Yale campus for practice in phonetics courses. You would sit down with an informant and practice on him. There was a Hopi Indian, who was a steel worker from New York. One winter he had a Wishram informant, named Philip. Several others and myself practiced on this Wishram informant;...I heard lots of Chinook [that winter]. Dell Hymes and Michael Silverstein have both used this informant who is quite old now."

Like most new Phds in the early Thirties, Emeneau did not find an academic position for several years. In 1935, with some support from Yale, the American Philosophical Society, and the American Council of Learned Societies, Murray Emeneau went to India. "They got together enough money to send me off to India, enough to keep me alive and happy. Once they got me there it was cheaper to keep me there than to bring me back; so I stayed for three years." He went to study the Todas, a tribal group in the Nilgiri Mountains of Southern India, on the advice of Sapir. "Sapir said, 'Why not study the Todas? The Todas are well known ethnologically, [yet] they are not well known linguistically, except that they speak a Dravidian language which is apparently very aberrant'."

Emeneau stationed himself at Ootacamund, a British hill station known for its salubrious climate, situated above seven-thousand feet in the Nilgiri mountains, and in the middle of the Toda homelands. Participant observation was ruled out in the study of the Todas, since the Todas were (and still are) very insular about their religious and familial activities. In fact, the Todas cannot invite a stranger into their homes without later having to ritually purify everything in the house. Yet, "many of the Toda ceremonies and rituals are conducted more or less publicly and out in the open." Also, the Todas were willing to go

to Ootacamund, and Emeneau was able to collect a large amount of data over many months. Working without the aid of a recording device (since none was available at that time), Emeneau collected songs, folktales, ethnographic information, lists of words, etc.. He also found the time to collect similar data for Kota (another tribal language). He travelled to Coorg to work on Kodagu, and to Madhya Pradesh, in Central India, to gather data on Kolami. The analysis of this mountain of often recalcitrant data has occupied a good amount of Murray Emeneau's time over the last forty years, and still only about two-thirds of the data has been analyzed and published.

Emeneau is a self-described empiricist. He is also an accomplished descriptive linguist and field worker. But, above all else, Emeneau is a scholar. For Emeneau, scholarship operates by the process of induction; moving from particulars, empirically observable data, to generalities, theories about the data. Scholarship begins with the data, which are carefully collected, analyzed and re-analyzed until any aberrances are isolated. Aberrances point to weak spots in the descriptive theory. The ad hoc analyses of aberrances, as they occur, slowly lead to more precise theories and methods of description, and finally to an explanation of the data in toto. But any improvement at the theoretical level is a direct response to difficulties encountered in the data.

Although Emeneau was a student of Sapir, he adopted Bloomfield's rigid delimitation of the scope of linguistic inquiry. "Bloomfield rigorously defined the scope of linguistics to include only what you can hear. You cannot pretend that you know what is going on inside the head, except insofar as you can hear the end result of it. Sapir did not talk that way at all. He talked in those terms which became old fashioned from Bloomfield until Chomsky. Chomsky pretends to know what goes on inside the head, I don't. I feel very Bloomfieldian about this in spite of the fact that I was a student of Sapir."

In his 1949 Presidential address at the 24th Annual Meeting of the Linguistic Society of America, (published as "Language and Non-Linguistic Patterns," in Language 26, 1950.199-209), Emeneau describes his empiricist reasoning.

Important as are the non-linguistic stimulus-reaction features connected with an organized part of the environment, it is doubtful whether we can find any such pattern or subsystem apart from its linguistic identification by the community which reacts to it. To investigate the linguistic side of these patterns is our particular problem, and I shall shy away from the further vexed and vexing question whether it is philosophically valid to talk at all of the existence of a pattern apart from

its linguistic identification. In any case, for those of us who are Bloomfieldians in our linguistic discourse, the question need not be raised; we hold that epistemological matters are to be left to the epistemologists and that we can talk about language without raising these matters. This may sound uncompromisingly behavioralistic; yet it seems that we can profitably say something without trespassing further on the philosopher's territory (1950a, p.200).

Emeneau's empiricism is not so much dogmatic as it is pragmatic. It represents a pragmatic, first-things-first, attitude toward linguistic inquiry. With the belief that something can be done using only empirical data, the correct procedure is clear; the first task is to gather and analyze this data. Only after the mass of empirical data has been thoroughly analyzed, and only then if fundamental problems of analysis remain, should there be any recourse to non-empirically based theories. The hope is that an adequate explanation can be achieved from the analysis of empirical data. This, of course, requires that the structure of this data be empirically discoverable. Indeed, Bloomfieldians do posit that the structure of language can be discovered empirically, i.e., that techniques can be developed which will isolate the underlying structure of language.

Emeneau's Bloomfieldian mode of inquiry contrasts sharply with that of his teacher, Sapir. Yet, while Emeneau did not inherit Sapir's "mentalist" position on methodology, he was very much influenced by Sapir's emphasis on data collection and organization. Sapir stressed the need for descriptive studies in his students' training; "sending them out to do a language that was going to become extinct tomorrow and had to be done." Sapir's students went off to the field armed with the newly forged notion of the "phoneme", first to describe individual languages, and then to do comparative work. "That particular period saw a vast and profound concern with how each language actually worked within itself...which is something rather different from what happened after the Chomsky revolution."

The "Chomsky revolution," with its indictment of empiricism, and of empiricist "discovery techniques", broke with the descriptivist tradition. By its emphasis on English, on mental language acquisition devices, and formal universals, Chomsky's mode of linguistics (in its original form and subsequent "new-improved" models) attempted to overturn the tenets of Bloomfieldian linguistics. The last score of years, during which transformationalists gained control of the major linguistics departments and organizations, was a difficult time for Bloomfieldians. "I did not relish being cast into outer darkness by the M.I.T. people," Emeneau admits. Yet he is more disturbed

by the effect the "Chomsky revolution" has had on the process of scholarship, for the work of previous generations of descriptivists has often been uncritically pre-judged, or simply ignored, by many young linguists. "I find that it is possible to criticize the younger people on the ground that they know nothing of what their predecessors did, even about the same language; which seems to me to be a negation, an absolute negation, of how scholarship ought to be conducted, or how advances in knowledge can be obtained."

A major task of any descriptive work is to organize and publish data. As more data are gathered, the need to order them increases. Early attempts at comparative Dravidian were hindered by the lack of an ordered body of data for the various languages. It was obvious to Emeneau that, "anyone who was doing comparative Dravidian had to have a lot of etymologies." Emeneau had himself amassed a large amount of data from various non-literary Dravidian languages. He also knew that a British linguist, Thomas Burrow, was working on several literary Dravidian languages. Realizing the potential value of an etymological dictionary for comparative Dravidian, Emeneau travelled to Oxford in 1949, and convinced an initially reluctant Burrow to collaborate with him in this undertaking. The Dravidian Etymological Dictionary, (DED), by T. Burrow and M. B. Emeneau, was published by the Clarendon Press in 1961 (1961a). It is perhaps the most valuable work done in Indian linguistics since Grierson's Linguistic Survey of India. Together with its Supplement, the DED contains over five-thousand numbered entries, each consisting of items from two or more languages. It includes data from about twenty Dravidian languages and/or dialects and is thoroughly cross-referenced and indexed.

Those of us who have used the DED continue to realize its usefulness. Yet sometimes we also wonder about the tremendous effort which went into it. The following is Emeneau's description of how the DED came to be.

"I decided in 1949 to go to England in the summer to meet him [Burrow] and discuss it with him. He had spent an awful lot of time during the War as a curator of some of the British Museum collections, and especially the collection of Dravidian books, which had been moved out of London to the North of England. He spent the war reading Tamil texts and reading dictionaries: Tamil dictionaries, the Kannada dictionary by Kittel, and all the rest. He has a phenomenal memory. In those days, once he read a dictionary he knew the words in it. So he had a very extensive set of collectanea... for the literary languages. I had similar collectanea for the non-literary languages. [At first], he did not think it [the DED] could be done without much more work than we might want to put into it.

The first thing I did when I got back [to Berkeley] was to get an ad hoc research grant to have a stack of forms printed up -- thousands and thousands of forms with the languages on the margin and ruled lines. I sent Burrow half of them and we began

to fill them in from the data that we had available, and whatever other data there were in print, Gondi grammars, bad as they were, Bray's vocabulary [of Brahui], etc.. We filled in language by language; I took some of the languages, Burrow took some of the languages, and we filled in what we had. I sent my sheets to him, and he would fill my material into his. He sent his sheets to me, and I would fill his material into mine.

In 1952 he came here for one summer. We looked over what we had and we wrote up in full the first few sheets. The first one was the word for moonlight, "nilavu" in Tamil. I went over to spend the year 1956-57 at Oxford. Fortunately, he had light teaching duties that year, and was able to give me a half-day every weekday. He fitted up an office for us, with a heater because I was an American. We had a porter who would provide us with tea in the mornings, strong tea you could stand a spoon up in. My wife provided a set of nice china. We went through the whole file and filled in the gaps. I typed the final draft in the evenings, except for the indexes. I brought back the printer's copy [to Berkeley]. Catherine Callaghan, a graduate student at the time, was put to work on the indexes, a long and tedious process. When the indexes were finished, in 1958, I sent it off to the printer. The proofreading took over a year, and it came out in 1961. We continued to gather collectanea which went into the next volume, the Supplement. We have been accumulating more and more material, and are doing a revision now. Burrow came over last summer for two weeks and we surveyed the situation. I have about four-fifths of it put into proper shape....Now we have to re-number and cross-reference, and then the indexes need to be done again."

So the DED, which Burrow and Emeneau began in 1949, still occupies a good part of their time, and Dravidianists can look forward to an even larger and more useful Dravidian Etymological Dictionary in the near future.

If the DED can be considered Emeneau's greatest substantive contribution to linguistics (not forgetting his various full-scale grammars), his greatest theoretical contribution has been in the development of the "linguistic area hypothesis". Emeneau, however, denies any claim to being a theoretician, and insists that it was the data which forced him to support the hypothesis that morphological features can diffuse across genetic boundaries.

There seems to be a lot of evidence of such diffusion between Indo-Aryan and Dravidian languages in India. Emeneau quickly points out that it was Jules Bloch who first noted several areal features for Indian languages in Bloch's book, "L'indo-aryen du Véda aux temps modernes" (1934). But it was Emeneau who substantiated these features, and more features which he found, presenting empirical data to support his claims. Since his original 1956 paper, "India as a Linguistic Area", Emeneau has continued to search for areal traits. "There are many more traits

to be identified. I have spent much of my time over the last twenty years to identify them, and at the same time, write in general enough terms to be of interest to non-Indologists."

Emeneau's work on linguistic areas demonstrates the potential value that any language family might have for linguistic theory. Evidence for morphological diffusion is not readily apparent in Indo-European, yet such evidence is quite abundant in Indo-Aryan and Dravidian. Once the possibility of morphological diffusion is admitted for one language area, it cannot be absolutely discounted elsewhere. As a result, all comparative studies must allow for the possibility of such diffusion. This means that Emeneau's work on the Indian Sprachbund should have wide ranging effects on the theories and methods of comparative linguistics.

It is Sapir's mode of comparative linguistic inquiry which is adversely affected by Emeneau's work on linguistic areas. "For theoretical reasons of his own, Sapir had to say flatly that it [the diffusion of morphological features across genetic boundaries] is an impossibility. After all, Sapir was much more interested in tracing genetic relationships. Sapir wished to say that, if languages have a trait in common, it is for genetic reasons. If you can prove in any instance that that is not so, that there has been diffusion, then Sapir's method has a hole in it....In fact, one finds that traits do diffuse over an area, no matter what the languages or dialects involved. ...You find it, there it is, you cannot say it is an impossibility or a monstrosity, because there it is."

While there is much more that can be said about Murray Emeneau's life and work, fifty years of prodigious effort and prolific writings cannot be covered in the space of one article. Emeneau's works stand on their own merits. They are the products of careful, thorough scholarship. Rooted in the data they describe, they will endure long after the theoretical fancies of many of today's linguists are forgotten. Bh. Krishnamurti aptly praises Murray Emeneau with the following: "There is hardly a student of Emeneau, whether Indian or American, who has failed to be impressed with the kindness, modesty, thoroughness, and clarity in thought and writing of the man and the scholar. He has always inspired his pupils to work hard by his very example which symbolizes a rare devotion to scholarship of a very high order" (op cit).

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(EXCLUDING REVIEW ARTICLES)

Abbreviations

<u>AA</u>	American Anthropologist
<u>AUDLP</u>	Annamalai University, Department of Linguistics Publications
<u>BSOAS</u>	Bulletin of the School of Oriental and African Studies, London
<u>DLEF</u>	Dravidian linguistics, ethnology and folktales: collected papers by M. B. Emeneau (1967a)
<u>IJJ</u>	Indo-Iranian Journal
<u>IL</u>	Indian Linguistics
<u>JAF</u>	Journal of American Folklore
<u>JAOS</u>	Journal of the American Oriental Society
<u>JAS</u>	Journal of Asian Studies
<u>LEW</u>	Literature East and West
<u>Lg</u>	Language
<u>PAPS</u>	Proceedings of the American Philosophical Society
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<u>UCPL</u>	University of California Publications in Linguistics

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INDIAN DEMONSTRATIVE PRONOMINAL BASES--A REVISION

M. B. Emeneau

University of California, Berkeley

A volume of papers which is to be published in memory of the late Sudhibhushan Bhattacharya will contain my contribution entitled "Demonstrative pronominal bases in the Indian linguistic area". It is an attempt to deal with a feature of such bases which occurs in some languages of all three major families of the Indian sub-continent, Indo-Aryan (IA), Dravidian (Dr.), and Munda. The paper unfortunately, as soon as sent off, needed thorough revision, since the most important work on this topic for a Munda language, although published in 1972 by Zide, only came to my attention after my paper was written in January 1980. The present paper, then, presents the required revision.

The demonstrative bases of Dravidian have not been treated in searching detail in any of the major treatments of Dravidian comparative grammar. The accompanying table gives a summary of the bases in the various languages.

A series of three bases, *i 'proximate', *u 'intermediate', *a 'remote', is evidenced for PDr. in a number of languages, including some in all of the subgroups, either in full working order or with *u obsolescent.

Three of the Central Dravidian (CDr.) languages clearly have *e 'intermediate' in a series with *i 'proximate'. The 'remote' forms are *a in Pengo and Kui, with an 'even more remote' o in Kui. Two of the recordings of Kuwi have series beginning with i e; Schulze's continues with he hu, Israel's (1977) with u he hu; Fitzgerald's account has only i u a. These CDr. languages obviously are independent in detail by language and/or dialect. Their common 'intermediate' *e seems to be attested in Gondi also, certainly in the Sironcha dialect's form eke 'in that direction' (Voc. entry 328), and possibly in the forms with ē- for 'this man, these men' (Voc. entry 390).

Most puzzling in several of the CDr. and North Dravidian (NDr.) series are those items with initial h-. In two of the recordings of Kuwi, bases he- and hu- are recorded. Schulze's series is: i e he hu, he- meaning 'that at a greater distance (than e-)', hu- 'that at the greatest distance'. Israel's series is: i e u he hu, with increasing distance indicated by the successive items.

In Kurux one member of the series has initial h; the series is: i hu a. But intensive search in Grignard's grammar (Grignard 1924, pp. 108-109) has discovered several adverbs of place in which, without any meaning variation, there occur alternative forms with and without initial h-, viz. isan/hisan 'here', asan/hasan 'there', in series with husan 'there' (without a parallel *usan); iyyā/hiyyā 'in this place', ayyā/hayyā 'in that place' (but only huiyyā); ittrā/hittrā 'this side, in these parts', attrā/hattrā 'that side, in those parts' (but only huttrā).

Similar to these last items in Kurux are items in several of the CDr. languages, in which no difference of meaning is recorded as correlating with the presence or absence of h-.

Pengo has the series: i e a, but a few forms are recorded in the grammar (Burrow-Bhattacharya 1970, p. 7 and vocabulary) with base: he- and ha-; it is possible that they generate complete sets of forms and even that there are differences of meaning, but the grammar (p. 7) treats the occurrence of h- as something 'sporadic' or idiolectal.

The Gondi vocabulary of Burrow and Bhattacharya (*Voc.*) records a smattering of forms with h-. The Adilabad and Yeotmal dialects (i.e. in the west central area of Gondi) have several forms with h- based on i and a, viz. Yeotmal and also Adilabad as recorded by P. Setumadhava Rao id/hid 'this woman or thing', iv/hiv 'these women or things'; Adilabad ad/had 'that woman or thing', av/hav 'those women or things'. The Adilabad dialect as recorded by P. S. Subrahmanyam (1968) has several case and adverbial forms with h- (pp. 233-4), viz. handāl 'from that side', hāpē 'with that', hindāl 'from this side', hīkē 'here', hīpē 'with this'. The Mandla dialect (in the northern layer of dialects as recorded by Phailbus has hag(g)ā 'there' (in contrast with ag(g)ā of other dialects).

In Brahui the series is: dā ō ē. Bray's grammar (1909, p. 214) and his vocabulary record that in several adverbs and compounds ē is (as he puts it) 'not infrequently aspirated'. The items are: ēng/hēng 'that direction' and its case forms: ēngī/hēngī 'in or to that direction', ēngāi/hēngāi 'towards that direction', ēngān/hēngān 'from that direction'; ē-mōn/hē-mōn 'that side, the other side'; ē-pār/hē-pār 'that side, the far side'. This alternation, however, has nothing to do with the matter in hand. It forms part of the problem presented in general by Bray's writing of initial h, of which he says (p. 29): 'in ordinary conversation it is often hardly perceptible, and even dropped altogether'. Etymological study (Emeneau 1962, p. 62) has made it clear that Bray's h- is never represented by any phoneme in a PDr. form. In other words, it is, like the German glottal stop, merely the beginning of a vowel in initial position (and in hiatus). It has been reported also, but with no detail, that various dialects have h-, ʔ-, or zero in this position, and that contiguous dialects of Balochi show comparable alternation (Emeneau 1964, p. 75). Whatever the historical origin of this phenomenon, it is irrelevant in the present context.

These Dravidian data are restricted to some of the languages and even to some of the dialects in the central languages. The presence of h- is not restricted to any one of the demonstrative stems. In two dialects, or recordings, of Kuwi it is attended by meaning differentiation. In Kurux one of the bases always has h-, so that it is correlated with meaning. Otherwise, the presence of h- would seem to be a free variant of its absence--if, that is, we can trust our sources. Certainly it seems impossible to reconstruct anything for proto-Dravidian from the data at hand, or for proto-CDr., or even for proto-Kuwi.

A paper by De Vreese (1968) pointed out parallel phenomena in modern Indo-Aryan (NIA) and Munda, without mentioning the Dravidian phenomena. Some dialects of Maithili, Bhojpuri, Bengali, and the Bhatrī dialect of Oriya have demonstrative forms with initial h-; these languages belong to the Magadhi subgroup of NIA. De Vreese

collected these forms and compared with them many parallels in the northern Munda languages, Santali, Mundari, Ho, Korwa, Kharia, etc., notably the Santali series, which I discuss below.

Geographically, these NIA and Munda languages treated by De Vreese are in the same large area, i.e. the eastern end of the Ganges valley and the contiguous hilly areas to the south (i.e. the northern part of the Eastern Ghats and the Central Indian hills). Some of our Dravidian languages are in the same area, viz. Kuṛux, Kuwi, Pengo; Gondi is marginal to it. We would like to know whether there is contact within the area between speakers of the various languages and dialects of the three families. So far, however, it is impossible to establish this matter in any detail, or even in part to plot it roughly on a map. Occasional snippets of information do inform us that, e.g., the speakers of Pengo live in an area where Bhatras live, i.e. the speakers of the Bhatri dialect of Oriya already mentioned. Kurux speakers (Dravidian) and Mundari speakers (Munda) are co-inhabitants of Chota Nagpur. No information is at hand concerning contact of Kuwi speakers with speakers of Munda languages, even though collation of various maps seems to show that Kuwi is spoken in the same area as Juang or Bhumij.

This topic of geographical contiguity has been touched upon since De Vreese found that the convergence in the Magadhan NIA languages and the northern Munda languages is due to 'borrowings from Munda' in the NIA languages involved. His argument is based on the unconvincingness of suggested IA origins for the phenomena in these IA languages.

It would be well, before examining this areal hypothesis further, to look at the IA side in wider perspective. Outside this area there are parallel IA phenomena involving initial *h* in demonstratives. E.g. the Sindhi demonstratives have initial *h*- (*hi*-/*he*- *hu*-/*ho*- the Marathi proximate demonstrative has *h*- (sg. masc. *hā*, fem. *hē*, nt. *hē*). For the latter an IA explanation seems possible: **eṣakah* > *Apabhraṃśa* (Hemacandra) *ehau* > *hā* (Master 1964, p. 92). This probably gives warning that IA origin for the *h*- in the areal linguistic trait may have to be seriously considered.

Jules Bloch, moreover, collected numerous instances of *h*- in pronominal forms in IA, characterizing them as 'not justified by the etymology'. The forms listed (Bloch-Master 1965, p. 70) are, in the inscriptions of Aśoka: *hevaṃ* 'thus' (= *evaṃ*), *hemeva* 'just thus' (◀ *Skt.* *evam* *eva*), *hida* 'here' (= *Skt.* *iha*, *Pali* and Aśoka *idha*), *hedisa-* 'like this' (= *edisa-*, *Pali* *edisa-*), *hesā* 'this (fem.)' (= *eṣā*, *Skt.* *eṣā*). In addition, he lists *Pali* *hevaṃ* (= Aśokan *hevaṃ*), *Marathi* *hā* 'he', *Sinhalese* *hē* 'he', *hō* 'she' (beside *ē* and *ō*), and *Bengali* *hethā* 'here' (*Pkt.* *ettha*), *hothā* 'there'. Presumably this is where the Magadhan forms collected by De Vreese should be classed. Bloch's explanation was that *h*- was 'intended only to reinforce the expressiveness' of these words.

We find, then, rather numerous instances of demonstratives with initial *h*- in IA, from the Middle Indo-Aryan of Aśoka (3rd century B.C.) down to the present, in widely scattering geographic areas from the Indus Valley to Ceylon, but with a major concentration in

various dialects of the Magadhan area. Explanation in genetic IA terms has proved difficult, with rather divergent explanations given by various scholars. Contiguous with the Magadhan area of concentration are occurrences of forms with h- in several of the Dravidian languages, again with several other languages outside this area showing similar phenomena, and again with no explanation appearing in genetic Dravidian terms. Finally, as De Vreese pointed out, the northern Munda languages i.e. those contiguous with the IA and Dr. languages in the area of concentration, also have demonstratives with h-. He, noting the difficulty of explaining the IA forms historically, took the phenomenon to be explicable in terms of linguistic area diffusion and plumped for Munda as the source.

Since De Vreese wrote, Zide (1972, pp. 267-74), in a paper entitled "A Munda demonstrative system: Santali", has provided a deep analysis of the Santali system as presented by P. O. Boddling in 1929. The system, as characterized by Zide, has 159 forms. The deep analysis presents three demonstrative roots: o- 'this', i- 'that', a- 'yonder', each of which occurs with one of three pre-demonstrative qualifiers: n- 'near', ϕ - 'unmarked', h- 'far'. There are then basically 'nine degrees of relative distance'. Other specifications occur, with which we shall not be concerned further: lateral, i.e. to the side, with infix -Vh-, vs. non-lateral unmarked, intensification ('this very', infix -VK+), sensory modality (-n ϵ - 'visual' vs. -t ϵ - 'non-visual, e.g. aural'), number, and gender (animate vs. inanimate). Zide states that these combinations, with one or two constraints, yield a total of 159 forms, and demonstrates that the deep-lying construct yields actually-spoken, surface forms by a complex set of rules. The forms show initially, with increasing distance, the initials: nu-/no- u-/o- hu-/ho- ni-/n ϵ - i-/ ϵ - hi-/h ϵ - na- (not in Zide's tables, but quoted, p. 271, from Boddling as a variant) a- ha-.

Zide (p. 272) says that only Santali and Mundari-Ho (the Kherwarian sub-branch) have these 3 X 3 combinations of qualifiers and roots. The other northern Munda languages have a scattering of h- and n- forms, and 'the general scheme ... fits the data in the other languages fairly well'. Zide promises comparative treatment elsewhere but, so far as I know, we do not yet have it.

Detailed comparison between Santali-Mundari and the Dravidian data in terms of possible borrowing from the complex, but well-organized system on the Munda side into the less well-organized systems of the Dravidian languages, requires attention to the geographical contiguities.

Kurux, contiguous with Mundari, has in its series (i hu a) t 'intermediate' base hu, which is explicitly said to mean 'intermediate between near and far, or close to the person addressed'. This agrees well enough with Santali-Mundari hu-/ho-, which indicates the farthest distance within the proximate zone, and we might think of straightforward borrowing of the item, since Kurux is unique in having this item in this place in the series. The adverbial items of Kurux in which hi- alternates with i- 'here' and ha- with a- 'there', might show borrowing of ha- from Mundari ha- which indicates the most remote

distance; but hi- 'here' cannot be borrowed from Mundari hi- which indicates the most remote point in the intermediate zone.

The Kuwi items look prima facie like borrowing from Munda, with their longish series showing increasing distance. Unfortunately, the order is wrong. Both Schulze's and Israel's series have he- hu-, whereas the Santali series has the reverse order: ... hu-/ho- ... hi-/hẽ - ..., hu- being farthest in the proximate zone, while Kuwi's hu- is most remote in the whole series. We do not yet know the semantic characteristics of this trait in the Munda language or languages with which Kuwi might be or have been in contact, but unless it should turn out that such language has a very different system from that of Santali-Mundari, the use of the Santali system to establish borrowing by Kuwi has little to be said for it.

To attempt to save the hypothesis of areal diffusion we might think of borrowing of merely initial h- as a marker of the more remote. This would explain Kuwi very nicely, and would do well enough for Kurux hu-, as based on the Dr. intermediate u-, if we are not to take hu- as a straightforward borrowing. Again unfortunately, the accounts for the other Dravidian languages--Pengo and Gondi are involved--have h- alternating with absence of h- without difference of meaning (if the accounts are to be trusted).

On the IA side, the Magadhan accounts show (in De Vreese's account) in Maithili and Bhojpuri what seems to be free variation between forms with and without h-. They have bases, in Maithili i/e- ~ hi-/he- 'this' and o/u- ~ hu- 'that'; in Bhojpuri i- ~ hi- 'this' and u- ~ hu- 'that'. This reverses what is found in Santali, and agrees in general more with the Kuwi data, though even there the meanings of the demonstratives with front vowels do not agree very closely. The other IA languages cited earlier have h- either as obligatory initials of morphemes (as in Sindhi and Marathi) or as variations (as in Sinhalese).

Explanation in terms of borrowing of morphemes then has come to very little, since the semantics in almost all instances seems to have gone wrong. Could we speculate in another direction?

Earlier I quoted Bloch as finding the initial h- of IA to be 'expressive'. This may be promising, but considerable restatement is required.

It has been noted often enough about demonstratives that 'deviations from the phonetic pattern sometimes occurs in deictic words'; I am quoting Bloomfield (1933, p. 147), who gives as examples that in English initial [ɛ] occurs only in the series they, this, that, the, then, there, etc., and that in Russian the phoneme [e] occurs initially only in demonstrative words (e.g. [e'to] 'this'). In Vietnamese, in roughly the same class of words a departure from normal phonology is seen, in that difference of tone alone distinguishes 'proximate' and 'remote'; e.g. đây 'here' vs. đây 'there' (Emeneau 1951, p. 136; Thompson 1965, p. 142); Thompson analyses these words into smaller significant elements, a procedure which is not possible for most of the lexicon (except for 'expressive' derivatives). The point at issue is that in these demonstratives there is a departure from the normal monolithic phonological independence of words. Is it possible

that we have here an approach to a 'universal' tendency, that there is a greater probability that demonstratives (in the broadest sense) will show divergences from the phonological norm of the language, than will other elements in the language--a tendency that they share with 'expressives'? And as a corollary of this, there is a greater probability that they will in their historical development show phonological divergences from the norm. The latter is seen e.g. in the syllabic losses in the historical development of French demonstratives. Another example is shown by the demonstratives' departure from the 'apical displacement' rule of development in the CDr. languages (e.g. *iraṇṭ- 'two' : Telugu reṇḍu, Gondi re/and, Pengo rinḍ-); the demonstratives have displacement, even though the consonant involved is not apical, but v or d (e.g. Telugu vāḍu 'that man' : Tamil avan; Telugu adi, oblique stem dāni- 'that woman or thing' : Tamil atu).

I would suggest then that the initial h- in demonstratives in some of the CDr. languages is an instance of this tendency. The point will not be a descriptive one, since h- otherwise occurs from various sources in these languages, but a historical one, since no reconstruction of a PDr. h- is possible for the demonstratives, nor is h one of the PDr. phonemes. It might be possible to posit a reconstructed h- in demonstratives for a group of CDr. languages. How to go further remains at this point an unsolved problem. If for the IA languages from Aśoka down, h- is unexplained in genetic terms, or only with great difficulty, even with improbability, so explained, are all the IA forms instances of a common tendency in demonstratives? We do not yet know for Munda much beyond the analysis of Santali-Mundari; very specifically, we do not know whether this one Munda system is something explicable from Austroasiatic, or whether it is an innovation. Putting all together, we would be tempted to find an areal trait. But does it have its origin simply in one of the language families, e.g. Munda? Or, if it is a universal of the linguistic area, seen from Aśoka to the present, and from Sind to Bengal and Ceylon, what are the specifics of its origination temporally and locally?

If this is as far as we can carry the research, we have achieved a piece of typology. To identify it as a 'universal' as exemplified in this area, gives it a name. It still leaves the historical question wide open, and that I must own we have not been able to push very far--we have only suggested several points at which further research might be able to find the direction of diffusion. This is perhaps disappointing, but it is typical of the difficulties of areal linguistics.

The earlier paper of which this is a revision went on to investigate in detail some of the CDr. series of stems. This need not be repeated here. However, my last words on the aberrant Brahui series dā ṁ ē may be summarized. The first two items, dā 'this' and ṁ 'intermediate', are now clearly to be regarded as borrowings, dā from Pashto, ṁ from Persian (in the archaic pronunciation found in Afghanistan-Baluchistan-India) or from IA Lahnda-Panjabi. The last item, ē 'remote', is to be linked with CDr., i.e. Kui-Kuwi, Pengo, and even Gondi, *e.

Another item, so far not brought into the picture at all, is a Malto item, which has in my earlier researches led me astray. This language has a series i u a. In addition, beside a there occurs na, which means usually 'that one [remote] who is present'. Not only are we forcibly reminded of the Santali qualifier n- 'near (within the zone of the demonstrative to which it is prefixed)', but Santali has na- for 'near within the remote zone'. The whole morph is undoubtedly a borrowing from Santali into Malto (the languages are contiguous).

Konḍa has four derivative bases from demonstrative stems with ni- and na- instead of i- and a- which are to be expected both within the Konḍa system and etymologically. They are: nini- 'this type or manner', nani- 'that sort of', niso- 'this much/many', naso- 'that much/many'. No explanation for this n- is at hand within Dravidian. This language is spoken in Koraput district of Andhra Pradesh. Neighboring Munda languages (Sora, Gutob-Remo) may have some parallel phenomena, but analysis is not yet available. Zide (p. 272) has promised analysis for other Munda languages and comparative statement; when we have this, much more clarity is probable for the phenomena with which we are concerned.

Table

i	u	a	OTa. Ka. Kuwi (F.); (with u obsolescent) Ma. Konḍa Malto		
<u>i</u> u		a	Ko. Tu. Pa.		
i		a	Ta. To. Koḍ. Te. Kol.-Nk. Ga.		
i	hu	a	Kurux		
i	e/he	a	Pengo		
<u>i</u> e		a	Gondi		
i	e	a	o	Kui	
i	e	he	hu	Kuwi (S.)	
i	e	u	he	hu	Kuwi (Israel)
dā	ō	ē		Brahui	

Dravidian demonstrative bases
(from proximate to remote)

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ADAPTATION AND NATURALIZATION IN A LINGUISTIC AREA: SINHALA FOCUSED SENTENCES

James W. Gair
Cornell University

Murray Emeneau's (1956) paper "India as a Linguistic Area" has become a classic in that it set the direction for one of the dominant trends in South Asian Linguistic scholarship in the last two decades. It has led to a by now considerable body of scholarship aimed not only at further defining that area, but uncovering the processes involved in the formation of such areas. (Thus, for example, Southworth and Apte 1974, Masica 1976 and the references therein among numerous others.)

Sinhala (Sinhalese) as an Indo-Aryan language isolated from its sister languages and long in contact with South Dravidian, is especially interesting in this connection, since it not only exemplifies the processes involved, but points to the formation of subareas within the larger South Asian one. This paper focuses on one particular subsystem within Sinhala, the focused (or "cleft") sentence, which not only exemplifies the kind of syntactic borrowing that leads to a linguistic area, but also shows how internal processes may give the borrowing, once adapted, a unique character within that area.

Sinhala focused sentences, exemplified by the following non-interrogative and interrogative examples, are characterized by a special, emphatic, tensed form of the verb (EMPH), and commonly, though not invariably, rightward placement of the focused constituent (Sinhala is an SOV language):

- S1 *gunāpaalə* *yanne* *gaməṭə*
 Gunapala go-PRES-EMPH village-DAT
 'It is to the village that Gunapala is going.'
- S2 *siripaala* *giyee* *kohaṭə* *də*
 Siripala go-PAST-EMPH where-DAT Q
 'Where did Siripala go?'

Such sentences bear a striking formal and semantic resemblance to constructions with a nominal form of the verb in the major South Dravidian languages Tamil, Malayalam and Kannada (Lindholm 1972 and Schiffman 1979) as well as Telugu (Krishnamurti 1974), as exemplified by T1 and T2 from (Sri Lanka Jaffna) Tamil:¹

T1. naan poonatu yaalpaanattukku
 I go-PAST-NOM Jaffna-DAT
 'It was to Jaffna that I went.'

T2. cuppiramaniyam ceyyiRatu enna
 Subramaniyam do-PRES-NOM what
 'What is it that Subramaniyam does?'

In contemporary colloquial Sinhala² the emphatic verb form has only one use outside focused sentences, as the form regularly occurring before naa, the usual negator for verbal sentences, as in S3 and S4:

S3. miniha vaeda karanne naa
 man work do-PRES-EMPH naa
 'The fellow doesn't work.'

S4. mama giyee naa
 I go-PAST-EMPH naa
 'I didn't go.'

These two functions of EMPH are difficult to subsume under any single syntactic rule, and no syntactic study has done so, as far as I am aware. EMPH has thus been specialized to two uses, one of which is its function in focused sentences.

The verb form used in focused sentences seems to constitute an important difference between Sinhala and the Dravidian languages, since the latter utilize a nominal form of the verb derived by the addition of a pronominal form, generally third person neuter, to the attributive (i.e. "relative") participle. However, although the origin of the Sinhala form is not entirely clear, (contrast Geiger 1938, 134-135 with Paranavitana 1956 clviii) it did function earlier as a nominal form with a third person masculine/neuter ending, and derivation from the same participial sources as the Sinhala attributive (tensed) verb forms seems likely. Thus the resemblance between the Sinhala and the Dravidian constructions would have been even closer at an earlier stage.

I have been unable to find such constructions in any other Indo-Aryan language, and this lack, together with the unmistakable resemblance to Dravidian, justifies the conclusion that the construction was a syntactic borrowing from Dravidian (probably Tamil-Malayalam given the geographical and historical circumstances). It thus affords another instance of the frequently noted Dravidian influence upon the language (See Gair 1976, De Silva 1979 esp. pp. 211ff and associated references).

The probable date of borrowing is not yet clear. Sinhala affords a virtually continuous written record from the second or third century B.C., but evidence up to the twelfth century is inscriptional, with the exception of the Dhampiyā Atuvā Gaṭṭapadaya, a glossary on the Dhammapada commentary. Although I have not as yet made an exhaustive investigation of this evidence, a general survey shows that it is not of such a nature as to include the discourse conditions conducive to the kind of construction under consideration. Evidence from the 8th to 10th century Sigiri Graffiti, in poetry, but often more conversational in tone, is somewhat inconclusive. Sentences with the nominal forerunner of the EMPH form are much in evidence (Paranavitana 1956 clxiii), but it is difficult to identify any of them conclusively with the focused construction, despite some examples that can be interpreted as pointing to the existence of that construction in some form (see Gair 1980 for details). By the twelfth century Amāvatura of Gurulugōmi, the oldest surviving extended prose text, the construction is quite clearly present, as exemplified by Ama 1:

Ama 1. sokaśālya buduhu udurāpiyannaṭa nissaha
 sorrow-thorns Buddha pluck-out-NOM-DAT(=INF) suitable

 yi sitannaṭa ya utsaha upanne
 COMP thinker-DAT COP effort born-EMPH (Ñāṇaloka p. 282)

 'It is to him who thinks 'The Buddha is suitable
 to pluck out the thorns of sorrow' that effort is
 born.'

In present-day Sinhala, however, the focusing construction interacts with a number of other grammatical phenomena so as to constitute an important and intricate subsystem in the grammar, and that subsystem clearly had not yet developed by the time of Amāvatura. Before proceeding, we must briefly characterize the present focusing subsystem.

Sinhala focused sentences, also referred to as "cleft" or "emphatic" sentences, have been treated in various ways in recent syntactic studies (chiefly Gair 1970, Fernando 1973, De Abrew 1980). For present purposes, however, we can characterize them on the basis of a number of largely surface features, given as 1-6 below. It is important to note that we are concerned here primarily with focus as a syntactic phenomenon, leaving the semantic aspects for later treatment.

1. The emphatic verb form (except in the use before na alluded to above) indicates that the focus of the sentence is some sub-

stretch that does not include the verb. Put otherwise, the following situation, where FOC is the focus and CONST is some constituent, requires the emphatic verb form (assuming for simplicity's sake that the basic SOV order underlies focused sentences with rightward placement occurring subsequently).³

[_S X [_{FOC} CONST] Y V] (X and Y may be null)

The non-focused declarative sentence S5 may be compared with the focused sentences S6-S8, in which the focus is underlined. (SIMPLE is the tensed finite verb form most commonly occurring in independent sentences. Colloquial Sinhala does not show gender-number agreement in such forms.):

- S5. ee davasvala gunapaala vaḍuvæḍa keruva
those day-PL-GEN Gunapala carpentry do-PAST-SIMPLE
'Gunapala did carpentry those days.'
- S6. ee davasvala gunapaala keruve vaḍuvæḍa
those day-PL-GEN Gunapala do-PAST-EMPH carpentry
'It was carpentry that Gunapala did those days.'
- S7. ee davasvala vaḍuvæḍa keruve gunapaala
those day-PL-GEN carpentry do-PAST-EMPH Gunapala
'It was Gunapala who did carpentry those days.'
- S8. gunapaala vaḍuvæḍa keruve ee davasvala
Gunapala carpentry do-PAST-EMPH those day-PL-GEN

2. There are a number of focus-marking forms, including -yi 'emphatic' tamaa or tamay 'emphatic', 'certainly', lu 'reportative', 'it seems', which only occur at the end of the focus. It follows from 1 above that when one of these has as its scope some stretch not including the verb, then the verb will be in the emphatic form:⁴

- S9. mama ganne meekay
I take this-one-yi(emphatic)
'I'll take this one.'
- S10. gunapaala dæn karanne vaḍuvæḍa tamay
Gunapala now do-PRES-EMPH carpentry tamay(emphatic)
'It is most certainly carpentry that Gunapala is doing now.'

- S11. gunāpaalā kāranne vaduva dā lu
 Gunapala do-PRES-EMPH carpentry it-seems
 'They say that it's carpentry that Gunapala is
 doing now.'

Syntactic focus in Sinhala might thus be defined as that stretch on which one of the focus marking forms either appears or could appear without a change in verb form (as it could, for example, in the examples S6-S8 under 1.)⁵

3. Placement of the focused constituent to the right of the verb is common, but not invariable, as shown by S12:

- S12. dānuy yanne
 now-yi go-PRES-EMPH
 '(I'm) going right now.'

The conditions under which rightward placement does or does not occur are not entirely clear, but involve considerations of both semantics and surface form which we need not define more narrowly here. It is important to note, however, that common but not invariant rightward positioning of the focused constituent is also true of Tamil and Malayalam (Lindholm 1972).⁶

4. Focusing intersects with interrogative formation in two ways:

a) the interrogative marker dā (referred to here as Q) used in forming yes-no questions is a focus marking form in the sense of 2 above. Thus compare S13 in which the questioned constituent is not a substretch that includes the verb, with S14, in which it is:

- S13. gunāpaalā hetā enava dā
 Gunapala tomorrow come-PRES-SIMPLE Q
 'Is Gunapala coming tomorrow?'

- S14. gunāpaalā enne hetā dā
 Gunapala come-PRES-EMPH tomorrow Q
 'Is it tomorrow that Gunapala is coming?'

b) Sinhala WH questions require the cooccurrence of a WH form and dā (Q). WH forms are characteristically focused, and thus dā commonly occurs following them with the verb marked with EMPH, as in S15 and S16.

S15. oyaa gaməṭə yanne kohomə də
 you village-DAT go-PRES-EMPH how Q
 'How do you go to the village?'

S16. ee dawasvəḷə gunəpaalə keruve monəva də?
 Those day-PL-GEN Gunapala do-PAST-EMPH what-PL Q
 'What did Gunapala do those days?'

The association of WH form with də is so strong that some widely used dictionaries (Carter 1924, De Zoysa 1964) give WH forms together with də as units: kohomədə 'how', koheedə 'where', etc. The focusing of WH forms has only a semi-obligatory character, however, since there are two classes of exceptions: First, Quantifier WH forms such as kiiyak 'how many-indef', koccarə 'how much', may occur focused or unfocused, with a difference in meaning, as in S17 and S18:

S17. gunəpaalə koccarə gatta də?
 Gunapala how-much take-PAST-SIMPLE Q
 'How much did Gunapala take?'

S18. gunəpaalə koccarə də gatte?
 Gunapala how-much Q take-PAST-EMPH
 'How much was it that Gunapala took?'

Secondly, other WH forms may occur unfocused, and hence separated from də, under two semantically related conditions: as object complements of verbs such as dannəva 'know', teerenəva 'understand' when negated, and in independent "dubious questions" i.e., roughly 'what on earth', 'how the hell', 'can it be that...', as in S19 and S20:

S19. miniha monəva karəṇəva də danne nəə
 man what-PL do-PRES-SIMPLE Q know-EMPH nəə
 'I don't know what the fellow's doing.'

S20. miniha monəva karəṇəva də
 man what-PL do-PRES Q
 'What(on earth) is the fellow doing?'

5. Focusing intersects with negation in two ways. First, the negative nəə, the usual negative in verbal sentences, has itself an EMPH form nətte, used in the same 'focus elsewhere' condition described for verbs in 1 above.

- S21. gunāpaalā kāranne nætte vaḍuvæḍḍa
 Gunapala do-PRES-EMPH n -EMPH carpentry
 'It's carpentry that Gunapala doesn't do.'

Secondly, the negative form novey (or its dialectal variants such as nevi, nemee) is a focus-marking form in the sense of 3 above and thus serves as a 'narrow focus' negator, as in S22:

- S22. gunāpaalā kāranne vaḍuvæḍḍa novey
 Gunapala do-PRES-EMPH carpentry novey
 'It's not carpentry that Gunapala does.'

The difference between nææ and novey in function is clearly shown in sentences in which they cooccur, as in S23:

- S23. gunāpaalā kāranne nætte vaḍuvæḍḍa novey
 Gunapala do-PRES-EMPH nææ-EMPH carpentry novey
 'It isn't carpentry that Gunapala doesn't do.'

Nææ also serves as an existential negator and novey as the negator in nominal equational sentences, as in S24 and S25:

- S24. ee kaḍee pot nææ
 that shop-GEN book-PL nææ
 'There are no books in that shop.'
- S25. eekā potak novey
 that-one book-INDEF novey
 'That one is not a book.'

This is reminiscent of the distinction found in the Dravidian languages, as exemplified by the Jaffna Tamil distinction between allay (=novey) and illay (=nææ), a distinction that is paralleled in Malayalam and Telugu as well, though apparently lost in other Tamil dialects. It is tempting to look for Dravidian influence here as well, though the structure is complicated by the existence of clearly Indo-Aryan parallels.⁷ The retention of the distinction in Jaffna Tamil could equally well be an example of influence in the other direction; i.e., of Sinhala on Sri Lanka Tamil.

6. The focusing system has been extended to sentences with non-verbal predicators. Some, like nææ mentioned in 5 have emphatic forms. Adjectives occurring as predicators in focused sentences mark "focus elsewhere" by occurring without the -yi that is

obligatory on adjectives that are vowel-final (as most are) in non-focused sentences:

S26. meekə hoṇḍay
this-one good-yi
'This one is good.'

S27. hoṇḍə meekə
good this-one
'Is it this one that is good?'

The characteristics given above as 1-6 clearly define a complex focusing subsystem with a kind of centrality in the grammar of the language in that it intersects crucially with a number of other grammatical phenomena. Sinhala focusing has been treated in various ways in recent syntactic studies (especially Gair 1970, Fernando 1973 and De Abrew 1980) and presents a number of as yet unresolved problems, but it is clear that no treatment of Sinhala syntax can deal with such basic processes as negation or yes-no and WH question formation without also dealing with focusing.

Returning now to the historical development: It was noted above that the present system had not evolved by the 12th century, although the focusing construction was clearly present. For example, WH forms then occurred with and without da (=da=Q) and the semi-obligatory focusing of them did not apply as shown in Ama 2 and Ama 3 from Amāvatura. Note the occurrence of person number agreement rather than EMPH:

Ama 2. mohu koyāṭa yeti
these-people where-DAT go-PRES-3sg
'Where are these people going?' (Kōḍagōḍa Nāṇāloka 136)

Ama 3. dən pəvijī vɛ kumaṭa kiyam da
now ordained become what-DAT say-PRES-1 sg Q
'Why would I say it now that I am a monk?'
(Kōḍagōḍa Nāṇāloka 76)

Furthermore, available evidence from the Dravidian languages mentioned shows that the full system does not apply in any of them. For example, the nearest Tamil equivalents to the Sinhala focus-marking forms, though called "clitics-of focus" by Lindholm (1972) are not such in the sense defined for Sinhala since they do not obligate clefting, as illustrated by T4 and T5 with taan 'emphatic' and -aa 'question' (note the verbal agreement):

T4. avartaan naaLaykku koLumpukku pooRaar
 he-emphatic tomorrow-DAT Colombo-DAT go-PRES-3sgMASC
 'He is going to Colombo tomorrow.'

T5. avaraa naaLaykku koLumpukku pooRaar
 he-Q tomorrow-Dat Colombo-DAT go-PRES-3sgMASC
 'Is it he who is going to Colombo tomorrow?'

Of the characteristics given for Sinhala, the only ones shared by the Dravidian languages as a whole are those with which we began, i.e., verb marking and rightward placement. We may thus safely assume that the original borrowing was limited to these features, with, of course, associated semantics.

There are, however, at least two interesting and apparently parallel developments in Sinhala and specific Dravidian languages. In Kannada, the interrogative clitic -aa, like Sinhala da, requires obligatory clefting (Schiffman 1979, pp. 103 and 129-130), as in K1:

K1. avnaa naaLe uurg hoogoodu
 He-Q tomorrow town-DAT go-PRES-NOM-NEUT
 'Is it he who is going to town tomorrow?'
 (Schiffman p. 133)

Also, the Malayalam emphatic and copula aaNu behaves much like Sinhala yi as a focus-marking form. In fact, aaNu must occur on the focused constituent if tanne 'emphatic' does not (Lindholm 1971) whereas Sinhala yi like the other focus-marking forms is optional. In this respect, Malayalam is like Literary Sinhala, which reflects an earlier stage in which a copula was required in both equational sentences and focused sentences. I have elsewhere suggested that this parallel helps to explain the origin of the colloquial Sinhala emphatic focus marker yi.⁸

It is clear, then, that Sinhala has elaborated the focusing construction in an intricate and interesting way. The detailed history of that elaboration remains to be worked out on the basis of the written evidence, but its general result is clear and may be summed up as a "lowering of the semantic threshold of syntactic focusing". This lowering has two interconnected aspects: The focusing of specific kinds of forms and a widened set of conditions under which focusing, or clefting, is called for. We will examine these two briefly.

The syntactic and semantic aspects of focus (often with different meanings of the term) have been much discussed in recent linguistic work. For present purposes, however, we need only

note that in its semantic aspect, "focus" has commonly been paired with "presupposition", as in Chomsky 1971 and in much subsequent work by him and others, that is: as one term of a presupposition-focus semantic structure.

Now, it seems clear enough that forms like negated, questioned and reported constituents of a sentence are very likely to be opposed as focus to the remainder as presupposition; and thus to involve, perhaps to varying degrees, a kind of inherent focus. Something like this underlies Lindholm's remark in relation to Tamil and Malayalam that "emphasis and interrogation essentially involve focus quite independently of the cleft formation process" (1972, 301).

In Sinhala, this is given explicit syntactic recognition through the obligatory or semi-obligatory clefting of such forms. That is, their occurrence is sufficient to trigger clefting, without any additional degree of focus or emphasis being necessary. Note that Kannada has gone part way in the same direction in its obligatory clefting for questioned constituents, as opposed to Tamil where the interrogative clitic *-aa* may occur without it as in T5 earlier or T6. Compare S28 which is focused and note that unfocused S29 is ungrammatical:

T6. avar naaLaykkaa koLumpukku pooRaar
 he tomorrow-DAT-Q Colombo-DAT go-PRES-3sg-MASC
 'Is it tomorrow that he is going to Colombo?'

S28. eyaa heṭṭa da kolamḃaṭṭa yanne
 he tomorrow Q Colombo-DAT go-PRES-EMPH
 'Is it tomorrow that he is going to Colombo?'

S29. *eyaa heṭṭa da kolamḃaṭṭa yanawa
 he tomorrow Q Colombo-DAT go-PRES-SIMPLE

The pragmatic and discourse conditions under which syntactic focusing is appropriate in Sinhala are relatively wide. Focusing in Sinhala declarative sentences generally relates to what Chafe has called "focus of contrast" (Chafe 1976, 37-38). The degree of contrast required for syntactic focusing to occur, however, is less than that in Tamil (or for that matter, English). This is illustrated strikingly in segments of dialogues like the following, from a recent trilingual text designed to teach Tamil to Sinhala speakers. These have the virtue of keeping discourse and pragmatic conditions as constant as possible since they were designed for that purpose (Gair, Suseendira Rajah and Karunatillake, in press). Focusing in Sinhala is indicated by +FOC:

(Tamil) Q. yaIpaaNattukku ovvoru naaLum pileen
Jaffna-Dat every day-EMPH plane(s)

irukka
be-PRES-3-NEUT-Q

A. illay. tihkal, putan, veLLi kiLamayililay
no. Monday Wednesday Friday day-PL-LOC

mattum pileen irukku
only plane(s) be-PRES-NEUT

(Sinhala) Q. yaapaneeta davasaagaane aasyatraa tiyenava da
Jaffna-DAT daily plane-PL be-PRES-SIMPLE Q

+FOC A. naana. sanduda, badaada, sikuraada vitaray
no Monday Wednesday Friday only

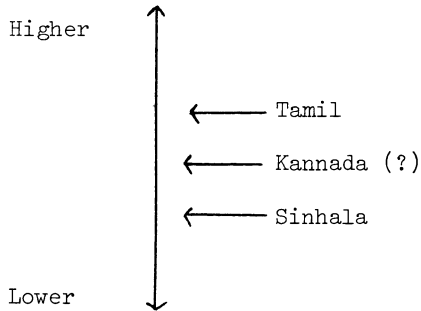
aasyatraa tiyenne
plane-PL be-PRES-EMPH

(English) Q. Are there planes from here to Jaffna every day?

A. No. There are planes only on Monday, Wednesday
and Friday.

Examples such as this could be easily multiplied.

The lowering of the threshold of focusing has thus resulted in both a wider range of forms for which focusing is required and a relatively high frequency of focused sentences in discourse. Cross-language comparison here also leads to the interesting implication that while syntactic focus, as reflected in processes such as Sinhala focusing or clefting, may be a binary all-or-none phenomenon, the semantic focus associated with it may be gradient, i.e., scalar. Viewed from this perspective, what I have here called "threshold of focus", represents different points of intersection of syntactic focusing with the semantic focusing scale. We will reserve this point for treatment elsewhere, but it may be impressionistically illustrated by a diagram like the following, in which the vertical line represents strength of semantic focus and the arrows the point of intersection with syntactic focusing, i.e., in this case the degree of focus required to trigger clefting:



The term "adaptation" has been used in historical linguistics to refer to the process by which borrowed material is adapted to the structure of the borrowing language, generally with reference to phonology (thus Hockett 1958, 417ff.) but it is easily extended to other levels of structure. Thus any syntactic borrowing or calque that makes use of native morphological material exhibits adaptation. The Sinhala borrowing of the focusing construction and its subsequent history goes beyond mere adaptation, however, to illustrate a process for which I have suggested the term, "naturalization" (on the analogy of immigration and naturalization) by which a borrowed form enters into the grammar of the borrowing language in an intimate way, participating in its rule structures and even, as in this case, serving as a model for further internal change. The Sinhala instance of naturalization we have examined has important implications for linguistic area studies. If we were to look only at the relevant linguistic characteristics of Sinhala and the Dravidian languages, without considering the known cultural-historical facts and the evidence of the northern Indo-Aryan languages, we might erroneously assume that the greater elaboration of the focusing construction in Sinhala and its centrality in the grammar points to borrowing from Sinhala into the other languages, a conclusion that is of course obviously contravened by the other evidence alluded to. In short, we should remember the lesson that anthropologists learned long ago that greater frequency or complexity, and in this case integration in the grammar, does not necessarily mean greater age or source of borrowing, but that it may be the result of naturalization or its cultural analogues, and we should proceed with the same careful attention to evidence and detail that has always distinguished the work of Murray Emeneau.

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I would like to thank several of my colleagues, particularly Leonard Babby, John Bowers, Wayne Harbert and Barbara Lust for a number of helpful discussions on matters dealt with in this paper, and Milan Rodrigo for her help in dealing with Sinhala examples, particularly from earlier texts. A paper covering much of the same material but from a different perspective was presented earlier as Gair, 1980.

FOOTNOTES

¹Examples from Tamil are from Sri Lanka Jaffna Tamil, since that is the variety for which I have the fullest data, as reflected in Gair, Suseendira Rajah and Karunatilake, in press. Examples from other Dravidian languages are from the sources cited.

²Sinhala is a diglossic language with sharply distinct written and spoken varieties. (Gair 1968, Da Silva 1979, esp. pp. 39-42 and associated references). This paper deals only with the colloquial spoken variety unless otherwise noted.

³This bracketing says in effect that some constituent is the focus of the sentences. While this is amply justified by the facts presented, showing Sinhala focusing as a quite clear-cut phenomenon with identifiable syntactic aspects, it does sidestep the difficult question of the precise nature of focus as a node or constituent when CONST is also one. This problem is intimately connected with how one derives focused sentences and it is by no means restricted to Sinhala. It has received considerable attention in the literature without, as far as I know, receiving any thoroughly convincing solution. In any event, it is not necessary to settle it for purposes of this paper, despite its important theoretical implications.

⁴There are also forms expressing various kinds of "emphasis", such as m, 'emphatic', nan 'topicalizer', -(u)t 'also', which are not focus-marking forms in the strict sense used here. There is also "focus by intonational prominence", as pointed out by

De Abrew 1980, but it also differs from the focus dealt with here, particularly in the range of discourse conditions under which it is appropriate. It is important to distinguish focus in Sinhala from topicalizing and various sorts of emphasis, a subject of work in progress to be dealt with elsewhere.

⁵This definition is essentially unchanged from Gair 1970, p. 49, in which the focus was "a form followed by any of these [focus-marking forms], or to which any of them may be added (without being removed from another form elsewhere in the clause)". That definition presumed the non-change in verb form here made explicit. It quite properly allows for focus in non-focused sentences, as in straightforward questions, in which də will follow a non-EMPH verb: dən yanəwa də 'now go-PRES-SIMPLE də' = 'Are (you) going now?', but in this paper we need deal only with focus in focused sentences, i.e., when the verb is not included in the focus.

⁶Some of the factors affecting rightward placement are sketched in Gair 1980, but further investigation is necessary. Judging from Lindholm's statements, the conditions for rightward placement (or lack of it) are different in Tamil/Malayalam from those in Sinhala, though it is optional in all of them.

⁷The difficulties of deciding between syntactic inter-language convergence and internal development within Indo-Aryan in relation to the existence of two negatives is well summarized in B. Lakshmi Bai's paper, 'A Note on Syntactic Convergence between Dravidian and Indo-Aryan Languages', presented at the Second International Conference on South Asian Languages and Linguistics at Hyderabad, January 9-11, 1980.

There is also a negative prefix no- which occurs with (generally non-finite) verb forms. It may occur on the EMPH form, but since its effect will be that of the verb plus the emphatic form of naə, it does not affect the argument here. It is interesting though that it can co-occur with naə, resulting in a double negation of the verb both syntactically and semantically. For details, see De Abrew 1980.

⁸i.e., in Gair 1980. Briefly, the colloquial development involved loss of the obligatory copula in both focused and nominal equation sentences, leaving it as an optional focus marker.

⁹Gair, 1980. Note that just as adaptation may be used on other than the phonological level, so naturalization is not restricted to the syntactic. One thinks for example, of those cases of phonological borrowing in which the result is not a "co-existent system", but increased symmetry in the borrowing system, and, in morphology, the productivity of borrowed affixes such as -ize in English.

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Prosody, Linguistic Diffusion and Conversational Inference

John J. Gumperz and Hannah Kaltman

Murray Emeneau is one of the first among American historical linguists to go beyond the mere listing of individual instances of areal diffusion and to provide detailed documentation of how and under what conditions areal borrowings can affect the grammatical system of a language. Prosody, the subject of this paper, has only begun to be incorporated into grammatical analysis and is rarely, if ever, studied in historical linguistics. What we would like to suggest is that prosodic systems, contrary to what has been assumed by some, are basically areally distributed and that studies of the interrelation of prosodic and grammatical signalling in conversation may provide important insights into pragmatic and interactive constraints on linguistic diffusion and change.

We use the term prosody to include: intonation, i.e., pitch levels on individual syllables and their combination into contours; changes in loudness; stress, a perceptual feature generally comprising variations in both pitch and loudness: variations in vowel length; phrasing, including utterance chunking and accelerations and decelerations within and across utterance chunks; and shifts in overall pitch register. These are perceptual confluences of variations in the three basic phonetic dimensions of frequency, amplitude and duration. Conversations are seen as made up of sequences of interactive exchanges in which both speakership and listenership in several channels contribute to the production of meaning.

Prosodic phenomena have been studied within the discipline of linguistics at the level of the word (Pike, 1945; Trager and Smith, 1951), the sentence (Halliday, 1967; Crystal, 1969) and the utterance (Brazill, 1975; Liberman and Sag, 1974,75) and have been examined as elements of syntactic (Berman and Szamosi, 1972) and pragmatic competence (Ladd, 1976; Liberman and Sag). Linguists and phoneticians, in spite of disagreements in detail, have reached a general consensus on which prosodic features have semantic or prosodic salience. Their work, which has revealed a great deal about the conventions of English prosodic usage and about the nature of the semantic information conveyed by prosody, forms the basis of our analysis. The basic question we ask, however, is one which has received relatively little attention so far: what sorts of information do speakers and listeners require prosody to provide in interpreting what is intended at any one point in a verbal exchange?

This concern with conversational inference raises problems

which are quite different from those ordinarily encountered in grammatical analysis. The data for grammatical analysis consists of sentence or clause units which have known boundaries. Furthermore, while such units may or may not derive from longer texts, the very fact that the analyst has singled them out for study assures that they receive the reader's attention. In everyday verbal interaction neither of these two conditions hold. Participants in a conversation, if they are to be heard at all, must actively create and maintain conversational involvement. That is, speakers have to induce potential listeners to attend and remain attentive until the message is complete, while listeners must signal their cooperation through choice and timing of verbal and non-verbal responses. This means that all participants must share a system for chunking the stream of talk into appropriate subunits, for signalling what is likely to happen, for managing turns of speaking, for distinguishing new information from qualifying remarks, and for negotiating the many subtle shifts in topic, focus or emphasis which characterize most types of everyday talk.

We assume that the maintenance of conversational cooperation requires judgments made simultaneously at several levels of generality through an inferential process which both interprets what has transpired and generates expectations about what is to come. Interpretation begins with informed guessing, based on knowledge of the extralinguistic situation and participants' goals and background. This yields general contextual expectations about what the activity is likely to be, its goals and possible outcomes, and what topics might be discussed. As soon as talk begins, however, these initial presuppositions are sharpened and modified by information signalled through both the form and the content of speech. We want to examine the role of prosodic signalling cues in this latter process of inference and to consider how prosody interacts with other modalities to signal thematic connections and contribute to interpretations of communicative intent.

Example One illustrates the kind of issues we intend to deal with. The passage comes from a videotape of an informal discussion among graduate students in anthropology, all of whom had participated in an advanced survey course covering various anthropological subdisciplines. The discussion revolves around the extent to which these subdisciplines were or continue to be related.

EXAMPLE 1

- Tl. 1 A: ...and then you could see where / you could see more in
 2 depth where / how things are related // but 'I think
 3 that you absolutely have to see how / ..where the rela-
 4 tionships are //

- T2. 5 B: yeh but / sometimes I get wonder'n whether /..
 6 its all related // {cause
 T3. 7 A: [but "ultimately it is / right //
 8 I mean 'everybody started out -- (overlapping talk) --
 9 'people who were in nineteen hundred / they 'did every-
 10 thin / right //
 T4. 11 B: yeh but 'that's then / , that's not now // now
 12 A: {but ultimately it
 13 they it / so its 'all spread out now // but it, all came
 14 from somewhere / right //
 T6. 15 B: yeh its like ,saying "we're all related / ,if you go back
 16 far enough / probably but / you have to go pretty far
 17 back // really I ...
 T7. 18 A: don't you think it should be /
 T8. 19 B: [I don't know if you can/
 20 ,ever recapture it / ,that's what I think / I think its
 21 we'd be ,looking back [to a golden age /
 T9. 22 A: [you 'can't recapture it / but
 23 you can / you can at 'least see / where the ,things that
 24 are now / came from //

Listeners familiar with American English discourse conventions have no difficulty in identifying the above example as a typical instance of a lively and relatively informal discussion. Participants express differing opinions and interrupt each other on a number of occasions, yet their talk revolves around a single theme which is jointly developed. The passage is cohesive in the sense that each contribution is interpretable and was interpreted by the interlocutor as a response to the preceding discourse. All turn taking transitions occur at or shortly after clause boundaries; apart from rhetorical pausing, there are no noticeable

interruptions of the rhythmic flow of talk. Speaker A sets the theme in line 2 with his claim that the subfields of the discipline are related and that the relationships become evident if you look for them. B questions A's claim and A counters by suggesting that current divisions did not exist in the early stages of the discipline whereupon B goes on to dispute the relevance of this historical argument.

What do A and B do that makes their utterances reasonable sequential contributions to continuing conversation? First of all, each turn has lexical and grammatical markers of cohesion such as have been discussed by linguists interested in discourse (Halliday and Hasan, 1976). For example T1 and T2 are both phrased in the first person. Turns T2, T3, T4 and T5 all start with "but." This use of "but" has three components: 1) negation, although not necessarily total negation; 2) that the speaker has something to add which changes matters -- "not only that, but"; and 3) a claim for the floor -- "but wait a minute." These four turns are all related in similar ways to the prevailing theme of the conversation. They both counter the previous turn and justify or add new support to the speaker's position. At the lexical level topical continuity is signalled by repeated use of key terms such as "related," "relationships," in turns T1, T2 and T6 and of phrases such as "did everything" in T3 and "its all spread out" which have related referents. Yet these and other cohesive markers do not simply exist. They are made salient and in a very real sense given their situated interpretation through their syntactic placement within the clause and through prosody.

The basic characteristics of English prosody that make this possible have been most clearly described by Halliday (1967). Halliday describes intonation in terms of three components, each the realization of separate "systems of meaningful choices" (Smeall, 1976) which he calls tonality, tonicity and tune.

Tonality provides the basic unit of analysis, the tone group or breath group, a smooth, continuous intonational contour, set off from other units by features of timing similar to what is called phrasing in musical performance. The tone group as Laver has pointed out, is the basic unit of speech planning or cognitive processing and thus corresponds to what has been called an information or idea unit (Chafe, 1980; Pawley and Syder, 1978). Linguists have observed that tone group boundaries tend to correspond to clause and sentence boundaries, and distinguish between minor tone groups which indicate that more is to come and major tone groups which signal finality (Trim, 1976). Where an expression is syntactically ambiguous prosody can function to provide information that is not otherwise available in the spoken sentence. For example:

My sister who lives in New York is very nice // (i.e.,
I have more than one sister, and the one who lives in
New York is very nice.)

My sister / who lives in New York / is very nice //
 (i.e., I have one sister, who both lives in New
 York and is very nice.)

Tone grouping here is a cue which distinguishes a restrictive relative clause from a non-restrictive relative clause. In line 10 of our passage tone grouping separates "right" from the preceding clause and gives it the force of a tag question. Crystal (1975) discusses the further possibility of tone grouping conveying additional affective or rhetorical connotation in cases such as:

I said sit down //
 vs.

I said / sit / down // (e.g., I am very angry, or
 I think maybe you didn't hear me, or it is very im-
 portant to me that you sit down, etc.)

In lines 3, 5, and 6 of Example 1 the speakers' use of tone grouping followed by pausing conveys the effect of conscious reflection or active planning.

Tonicity in Halliday's work refers to the placement of the tonal nucleus, or tonic, within the tone group. For purposes of this placement, the tone group can be seen as divided into a number of sub units or 'feet' corresponding either to items of lexical content or to syntactic phrases, each of which can potentially carry a tonic accent on its most prominent syllable.

Crystal's formulation is that the norm is for the nucleus to be on the final lexical (as opposed to grammatical) item in the main NP-VP clause. Thus it is possible to find clear instances of tonicity disambiguating syntactic minimal pairs. This is in the case of utterances whose surface ambiguity is the result of lexical ambiguity. Such cases have been the principal focus for the analysis of intonation in generative-transformational analyses, since such sentences reflect two possible underlying deep structures, and they are also likely to have (but don't have to have) different nuclear placements:

George has ¹plans to leave // (he intends to leave)

George has plans to leave // (he has blueprints to
 deliver)

The final lexical item rule accounts for 80% of Crystal's data. In most of the remaining cases, the tonic is on a grammatical item which operates clearly as a member of a closed system, and tonicity then signals a contrast between the marked item and some other member or members of the system, for example:

I want it in the garden / near the fence / and not
behind anything //

Some cases do not involve systemic contrast, and can only be accounted for by considering the speaker's attitude. As for non-final tonic lexical items, Crystal has found five cases which can be "related unequivocally to a specific feature of syntactic structure." However, "the vast majority of cases of pre-final lexical tonic can be accounted for only by referring to some kind of semantic or lexical conditioning," such as lexical presupposition, or the distribution of new and given information.

Bolinger (1958,72) provides further insights into the semantics of intonational signalling in pointing out that longer tone groups in American English are characterized by two peaks or accents, and that the relative height of such peaks can signal attitude and distinctions between new and old information.

Tune, the pitch treatment of the nucleus, appears not to have any purely syntactic disambiguating function at the level of clause structure, but can indicate illocutionary force, as in:

John's going // (statement)
 John's going // (question)

This is a pragmatic distinction, rather than a purely syntactic one -- "John's going?" is likely to be an echo question, meaning "Did you say that John is going?", and not the literal question "Is John going?" In general, options of tune, and of total contour, have been found to have some correlation with the speech act functions of utterances. However, apart from the question-statement distinction, the only examples which show any similar regularity are highly formulaic.

These formulaic uses of intonation have received particular attention because contour supplies information that is not predictable from the lexical material and thus there appears to be a 'lexical' meaning intrinsic to the contour or to features of the contour. Examples which have been studied are introductions, as in:

John Mary Mary John (Rogers, 1978)

and warnings:

John ny (Ladd, 1978)

Attention has also been directed at the question of whether intonation is used to differentiate direct from indirect speech acts (literal vs. non-literal questions -- Liberman and Sag, 1975; neutral predications from imperatives -- Bolinger, 1972). But apart from this the literature on the semantics of prosody is relatively scant.

In addition to intonation proper, there are other features of prosodic signalling which are most frequently discussed under the heading of paralinguistic or expressive signs, but which

nevertheless are of considerable importance in conversational inference. These include pitch register shifts, i.e., lowering or raising of overall pitch level; increases or decreases in loudness; speech tempo. In contrast to intonational features which apply to syllables these latter features apply to longer stretches, usually whole tone groups or sequences of tone groups. They often serve as signs of emphasis or deemphasis or as attention getting devices, as in line 7 of our passage:

┌ but "ultimately it is

where the raise in pitch combines with tonicity to convey strong disagreement.

We can now return to a systematic analysis of the conversation in Example One and examine the signalling load of these clause-level devices in longer stretches of discourse. We must note that any conception of prosodic meaning derives in large part from method of analysis, which in the case of linguistics has been that of looking for minimal contrasts at the single-utterance level. In this way, one can separate cases where prosodic phenomena are predictable from other aspects of linguistic structure from cases where they are not. A large proportion of prosodic usage thus becomes predictable from grammar. In conversation the situation is clearly more complex.

Note for example the placement of the tonic in the three tone groups in T1 containing the verb "see," in lines 1,2, and 3. In its first occurrence "see" stands alone, in the second it is a constituent of the phrase "see more in depth," and in the third the phrase is "have to see." It is evident that simple binary distinctions such as those between marked and unmarked or contrastive-noncontrastive do not fully account for how A's intent is signalled here by shifts in tonic placement. In the first tone group one might argue that the tonic placement is unmarked (and that "where" is simply the beginning of an abandoned tone group). The fact that "see" is not accented in the second and third tone groups might be explained by an argument similar to that made in Halliday's discussion of anaphora (1967b). But we need other considerations than mere contrastivity to explain what the stress on the elements which are stressed accomplishes. Halliday argues that since anaphora reflect known information they are inherently unstressed, and that whenever they are stressed they are consequently contrastive. On this basis we would expect either that the entire phrase "see more in depth" would be unstressed, or that the major stress would fall on "depth." Instead the stress falls on "more," which clearly does not contrast here with its opposite, "less." What is signalled here by this stress on "more," along with the minor tone group boundary again after "where," is that this second tone group, being a recycling of the first, is therefore a correction or a qualification of what has been said before. This is accomplished, in a way which would not have been effective had "depth"

received major stress, due to the evaluative function of "more." Similarly, the emphatic stress on "have to," by highlighting modality, signals that the listener must look at the situation under discussion in a certain way if he is to understand the speaker's argument. This is quite different from a simple contrastive statement about the existence or nonexistence of an obligation. Thus tonic placement, when viewed in these relational terms, allows us to trace speakers' thought processes, and their strategies in developing a theme.

Similar arguments apply to the use of tune on "related" and "relationships" in lines 2,3-4, and 6. The first "related" is introduced with an especially emphatic fall-rise (marked phonetically both by contour and by slowed rhythm and vowel elongation). "Relationships" in lines 3-4 has the less emphatic high fall, which serves both to keep the topic in focus and to continue the line of argument. The final "related" in line 6 continues to carry the tonic, thus maintaining the theme, but the pitch movement is reversed, highlighting the question. The topic of relationships is firmly established in the transition from T1 to T2, in which B chooses the topic, places it in focussed position, and addresses it with a question. B could have responded to the issue of whether it is important to see the relationships rather than questioning their existence. His response is framed around material which is implicit in A's utterance; the subject "it" in line 6 only makes sense on the basis of the presupposition that A has indirectly asserted that "it's" all related. A's reply in line 7 has the syntactic form of answers in such pairs as "Is it related?", "Yes, it is," where the main verb is elided. Here, syntactic knowledge enables us to fill in the elided verb; in addition, the low falling tune on "is" copies the falls in A's previous turn and therefore prosodically emphasizes that A is reasserting her claim in the face of B's question. In all these cases, tonic placement and tune, along with syntax and lexicon, guide the listener in inferring relationships among utterances and supplying nonlexicalized information.

The expression "they did everythin'" in lines 9-10 illustrates another aspect of prosodic signalling. Particularly in informal conversation, prosody is a factor which allows participants to use a minimum of lexical specificity to tie together parts of an argument. Here, it is clear that the speaker is saying something like that for earlier anthropologists the subfields were unified (that is, related). The very general expressions "to do everything" and "everything" have specific and obvious referents in this conversation ("doing" anthropology and doing "everything" contained in its current subdisciplines). Obviously these referents do not inhere in the words "do everything" but must be inferred. The phrase is highlighted syntactically by being the comment in a topic-comment structure, and prosodically by the heavy final, falling, emphasis on "everything." Given that nothing has intervened in the conversation, the prevailing theme is still that of

relationships, thus the relevance of "everything" -- a single term grouping 'related' referents -- and what people "do" as a means of discussing what "is."

In lines 11-14 the stress on a series of related words ("then," "now"; "now," "came") emphasizes the thematic link between turns T4 and T5, and marks out the four steps of an argument. When B first stresses "then" in line 11 he singles out one aspect of the preceding discussion, the temporal. The stressed "then" signals that this first phrase of B's will be balanced by forthcoming material; this opposition is signalled when it occurs in the second phrase, both by the parallel prosodic structure, with nuclear stress on the temporal adverb "now." A then repeats the internally-parallel structure in her T5, and uses this structure to reverse the argument. That is, she starts with a phrase describing and stressing "now," so that "now" becomes the first rather than the concluding member of a pair. Her final counter implicitly refers to "then," although it does not repeat it, both because her parallel intention has been signalled, and because of the past tense on the stressed verb "came."

In this sequence of turns, prosody signals rhetorical structure by highlighting key thematic items. The argument is stated in very abstract terms, but involves a fairly intricate set of inferences concerning concrete facts and situations. Let us look more closely at the first half of T4, "that's then." "That" in this passage has what Traugott (1979) calls its 'discourse meaning' rather than its lexical meaning. We can go further and say that in this usage it acquires a sort of double discourse meaning. The referent of "that" is 'what you have said.' This expression points to both 1) the act of having said what you said, and 2) the propositional content of what you said. The implication carried by "that" is that there will be a 'this,' a what I am going to say; i.e., that the speaker is going to say something further and that what s/he says will be related in a certain way to what has already been said.

"Then" also signals multiple levels of meaning. First of all, it is anaphoric within the discourse to "back in nineteen hundred." Then, given this temporal frame in the text, "then" also takes on a somewhat formulaic connotation: back in the old days. Thus "back in nineteen hundred" is paraphrased by "then," a structurally simple reference which also adds further connotations, connotations which are signalled in part by the prosodic prominence of the word. The entire expression, "that's then" signals proleptically, i.e., signals information about what the speaker will say next. As we have observed, "that" implies a "this." It is similar with "then": while "back in nineteen hundred" could have been responded to by talk about any time period, "then" can only be contrasted with "now."

B's utterance is an instance of a class of phrases which could be considered as providing a formulaic discourse strategy for some speakers: statements with a "that's..., that's not..." construction, where the contrasted objects of the two clauses are

opposing pairs of either general adverbs or pronouns. The proleptic signalling value of "that" plus an element which is one of a contrasting pair can be so strongly conventionalized that hearers can be expected to be able to fill in the completion; therefore in some contexts the second clause may be optional.

To summarize, we have been arguing through this example that interpretation at the level of conversation is a function of an inferential process which has as its input syntactic, lexical, and prosodic knowledge, and that judgments of intent are based on speakers' ability to relate the information received in these channels. To understand how this inferential process works, we can go back once more to the linguists' discussion of marked and unmarked tonic placement. Recall Crystal's example:

I want it in the garden / near the fence / and not
behind anything //

Broadly speaking one might argue that in uttering this sentence, a speaker violates prosodic rules such as: "the tonic falls on the last lexical item in the tone group" or "anaphora, prepositions, conjunctions, etc. are normally unstressed." But what is at issue here is the definition of terms such as 'rule' and 'normal.' The sentence as spoken is neither ungrammatical nor necessarily inappropriate. The speaker is selecting among available options and the resulting inferences are similar to those conveyed by pragmatic processes like topicalization or passivization.

This does not mean that notions like grammaticality and appropriateness are not relevant to the interpretation of prosodic signalling. Tone grouping, tonic placement and tune are clearly grammatically constrained. But the study of conversational inference provides a different perspective on what these constraints are and what they signal than does sentence by sentence analysis. Thus an utterance like

I want / it in the garden

with a falling tune and a tone group boundary after "want" would clearly be odd, but an articulation like:

I / want / it / in / the / garden

would be perceived as expected, only if the activity called for listing. In an informal conversation like Example 1 it would be odd unless a shift in activity were signalled in previous talk.

Perhaps the best way to describe this interpretation process would be as an instance of Gricean implicature. A shared interpretation therefore relies on a shared understanding of a limited or closed set of options that can be chosen, and of how these are constrained by the nature of the linguistic and extra-linguistic context.

In a sentence by sentence analysis, it is the total available corpus of utterances or the analyst's impressions of what sounds or is judged by native speaker to be acceptable that determines an assigned interpretation. In the analysis of conversational inference the frame, the subset of available option, and the interpretations they convey are all determined by preceding talk. The first step in such an inferential process is the participants' perception of what is highlighted, what previous bits of information it is most likely related to, and how it is related. It is on the basis of such perceptions that participants call on their knowledge of the semantic range of the terms used, of interclausal syntactic relations, and of conventional discourse strategies, to arrive at an interpretation of communicative intent and to trace the line of argument. Shared assumptions about how tonality, tonicity, and tune interact with grammar and lexicon to suggest relationships are thus a precondition for shared interpretation and for the maintenance of conversational involvement.

We opened this paper by suggesting that prosodic conventions are differentially distributed. In other words, that the rules and assumptions governing the interaction of prosody, grammar, and lexicon, and the consequent signalling functions of prosody in discourse may vary across subgroups of speakers of English. To illustrate this point we will draw on both conversational and elicited data, collected in England and in the U.S., from bilinguals who are native speakers of North Indian languages such as Hindi, Urdu, Punjabi, or Gujarati, but who regularly communicate in English both with others of similar backgrounds and with native English speakers in the surrounding community. We have pointed out elsewhere (Aulakh et al., 1978) that the differences in question are not simple instances of interference such as one finds in second language learning situations. The individuals concerned are not isolated speakers of English trying to learn a new set of language skills. Rather they have their own systematic conventions of using English which are highly effective within their own communities, and which are likely to persist as long as they remain effective and are reinforced by ingroup use.

Our initial observations on what these differences are are based on close analysis of natural conversations, and especially of breakdowns in conversational cooperation as indicated by disruption of conversational synchrony (Erickson and Schultz, 1980).

Our theoretical conceptions of signal-guided inference and our observations of natural conversation suggested that such breakdowns were the result of differences involving two sorts of communicative effect: (1) the use of prosody in signalling normal information flow, and the differentiation of 'normal' from contrastive and expressive intentions; (2) the use of prosody to signal various kinds of intra and intersentential relations such as subordination, or utterance finality or non-finality. We therefore constructed a list of single sentences which in terms

of their grammatical structure and the nature of their contents embodied this range of communicative intention: the list starts with simple existential propositions, goes on to compound constructions, complex constructions, parallel contrastive statements, and expressive items (e.g., "That's fantastic! Really beautiful!") (the list is given as an appendix). The list of items was read by two main informants, both women, one British and one Punjabi. Two observations regarding representativeness and naturalness of this data: Firstly, informants of the same backgrounds as these subjects, who knew the speakers personally, confirmed in each case that the recording represented a 'normal' style of speech; that is, neither of the subjects spoke with an obvious 'reading' intonation. Secondly, particularly in the case of the Indian speaker, as our hypotheses developed we supplemented the initial data with samples from other speakers.

Starting with the simple sentences, we can make several observations which carry over onto the more complex ones and acquire additional consequences. In English, the grammatical 'basic sentence' is a single clause, consisting of a subject noun phrase (NP) and a predicate verb phrase (VP), each of which can contain optional modifying elements, and optional qualifying phrases in the predicate, either adverbials or prepositional phrases. This level of syntactic organization is directly reflected in Western English prosody, where the 'basic' prosodic unit is also the clause. Thus in the case of a simple, i.e., one-clause sentence: 1) the sentence will comprise one tone group; 2) the tone group will have a smooth, unified contour; 3) the tone group will have two or more most-prominent syllables, corresponding to peaks of information; one will be the nucleus; 4) the contour will end in a distinct fall or rise.

Indian English systematically contrasts with Western English in its prosodic treatment of simple sentences in all but the first of these characterizations; that is, 1) the sentence will probably be spoken as a single tone group (that is there will be no pauses), but 2) there will be no 'unified contour'; rather, there will be two or more subunits separated by fairly abrupt changes in pitch; 3) there will be no clearly-defined nucleus; 4) the pitch change on final syllables will be much narrower; frequently they will be held high and level. For example,

2) W.E.: This is a book

I.E.: This () a book (the "is" was not pronounced by the subject)

3) W.E.: John is reading a book

I.E.: John is reading a book

Transcription conventions here: the lines above the utterance are perceived intonational contour, the subscripts indicate stressed syllables, (underlining, to be used in later examples,

indicates more emphatic or heavily stressed items.) In the Western English versions, the sentence as a whole has a steadily falling 'envelope' contour, with small peaks corresponding to stressed syllables. In the Indian English examples, in contrast, there is no real tonal contour in this sense. Instead each sentence is divided into several 'sense units' or prosodic pieces. Each of these has relatively level pitch on the central information-carrying items. There are sharp boundaries between the pieces. In these two examples, these are achieved by the occurrence of a sharp fall after a level syllable, occurring on unstressed items ("is" or "a"), with the pitch then rising somewhat more gradually to become level again on the next stressed item. Thus there is a succession of level tones, each of which is higher in pitch than the immediately preceding environment.

Furthermore, in the Indian English versions there are no nuclear syllables. Two factors are at work here. First of all, there is the breakup into sense units just described; thus, at least intonationally almost every content word is highlighted. Secondly, the distribution of stress in Indian English differs significantly from that of native Western speakers. Paradoxically, to Western ears, Indian English can sound either full of stress, and staccato, or droning and monotonous. This is because on the one hand Indian English speakers rarely reduce syllables and pronounce almost all consonants with a higher degree of articulation than native speakers, thus in one sense employing a great deal of stress; on the other hand, no syllables are stressed significantly more than any others.

Thus two of the striking features of Indian English in contrast to Western English are: the subdivision of utterances into small chunks; the rhythmic marking by stress of several words, with no one syllable made tonally prominent. There is some evidence that both of these phenomena have a basis in the languages of North India. In "A Reading Transcription for Hindi," W.E. Jones says, "...each syntactic piece -- of one or more words in length -- is spoken with a sub-contour" (1971b). A 'syntactic piece' consists of each NP or VP in a sentence, and adjectival or adverbial phrases may also be separate syntactic pieces. Hindi also has a large number of particles and verbal auxiliaries, and there are syntactic rules which incorporate these into either the NP or VP to make syntactic pieces. Prosodically, each subcontour rises in a sequence of level pitches, or consists of a single rise if a piece is monosyllabic. It should be apparent that this description exactly fits our description of the Indian English treatment of simple sentences.

As for stress, and the concomitant question of the existence of nuclear syllables, there are three important factors to note. First of all, it has been noted that, while there is word-level stress in Hindi, the differences in intensity between stressed and unstressed syllables are much less than for English. Secondly, as in Indian English, reduced syllables are almost non-existent in Hindi (Ohala, 1977; Jones, 1971a). Thirdly, the

intonational correlates of perceptual stress differ between English and Hindi. In Hindi, a stressed syllable is either high or rising in pitch, and the following stressed syllable falls. In English, no such simple statement can be made, but in general a stressed syllable will have a markedly greater degree of pitch movement than surrounding syllables -- thus frequently stressed syllables will contain a change in direction of pitch movement (i.e., a rise/fall), or else will fall or rise more sharply than preceding and following syllables.

Thus, to summarize, in comparison to Western English, Indian English bases its prosodic conventions on (a) different syllable-level phonology; (b) a different level of syntactic breakdown; (c) different phonological means for making prosodic distinctions and relations.

One result of these differences shows up in simple statements with a contrastive focus. In workshops in communication skills with Indian English speakers we have used the following exercise, which points up these differences and their automatic, habitual nature:

Instructor: A (student's name), what's your phone number:

A: 834-9578

I: 835-9578?

A: No, 834-9578

When Western English speakers take the role of A, they automatically stress the "4" the second time they repeat the number, by giving it increased pitch and loudness. This pattern in effect signals, "You got something wrong, this is the digit that you had wrong, and this is what it should have been." The Indian students, on the other hand, tended to repeat the phone number exactly as it had been said the first time. If they made any change, it was to shift up in pitch register, starting on the corrected digit and continuing in high register to the end. When the different Western English strategy was pointed out to them, and they tried to duplicate it, they were unable to highlight the single digit. Instead, they combined stress in the form of increased loudness with the raising of pitch register, and again continued both to the end of the string: "eight three FOUR NINE FIVE SEVEN EIGHT." Sometimes they anticipated, and began the stress on the numeral preceding the one which should have been marked.

This example also illustrates one general level difference in the allocation of signalling function among the various channels which make up prosody. In Western English broad pitch register movements tend to be used at boundaries to indicate shifts in

the nature of the speech activity, or in degree of intimacy, or as attention-getting devices. In Indian English these shifts seem to carry some of the 'grammatical' load which in Western English is carried by tonicity and tune, that is, the marking of points of information structure and flow.

This picture extends to longer sentences. In Western English, the choices deployed in the placement of stress and pitch changes signal the relevance of items of information in the light of what has gone before -- unexpected or new or qualifying information will be focussed. Tonal nuclei tie together semantically related items, given the focus and communicative intent of the whole. We build on tonal wholes at the clause level to build relations in connected sequences, where we can develop prosodic parallels and contrasts. For example, in a compound coordinated sentence:

- 4) Do you ¹want a cup of ₂tea / or do you ¹want a cup of
 coffee //

The two clauses are prosodically similar in several respects. Each clause has a head on "want" and a tonic on the object -- the main verb and the main noun are in focus. While each clause is smooth both rhythmically and intonationally, there are two sub-parts in the phrasing: "do you want" and "a cup of X." In each of these rhythmic groups the accent is on the last syllable. Thus "do you want" signals the speaker's focus on the addressee's intent and the illocutionary questioning function. "A cup of X" contextualizes the utterance as being involved with the selection of items to fill the slot indicated by "want," and signals that there has been a change in that item in the second clause. The two semantically critical dimensions here -- concern with desire, objects possibly desired -- are those which receive prosodic prominence.

The two halves of the sentence also contrast with each other in several respects. "Tea" rises, while "coffee" falls. This contrast closes the list -- nothing else will be offered. In addition, the second contour is lowered as a whole with respect to the first. The effect is almost a metaphor for the two-option choice presented in the utterance: 'on the one hand, and on the other' -- the 'hands' being 'pointed to' by the two pitch registers.

In Indian English, as we have said, each 'sense unit' is in some way made distinct -- with this example we'll see better how this can be done, and how the prosodic reflection of semantic integrity is different.

- 4) ¹Do you ¹want / a / ¹cup of ¹tea / or / ¹do you ¹want /
 a / ¹cup of ¹coffee

Like (4), here each clause is phrased in two parts. Analyzing

these as poetic feet, in the Western English example we had "do you want" and "(a) cup of tea" as two anapests, with the accents on the last syllables. Here in the Indian English version we have these phrases as two dactyls with the accents on "do" and "cup." The two feet are much more independent here than in the Western English version -- there is a complete rhythmic break, and "a" and "or" each are a separate tone group. There is a sharp downward pitch movement in addition to stress on "do" and "cup" each time these words occur, followed by a slight rise extended over the next, unstressed, syllable. The final words, the ones we saw accented in the (4) are not stressed here. However, they are set off prosodically -- each is spoken at a level pitch, which is the highest level reached in its segment. The parallel units, "do you want" and "cup of X," are prosodically parallel as in (4). The contrast between the two halves is signalled by the second clause as a whole being at a slightly lower pitch. Two changes occur between the first and the second clauses of this utterance: a change in the object noun, and a change in the degree of closure to the utterance. In (4) these were signalled by tonicity, accenting the noun, and tune, contrasting a rise with a fall. To Western ears, the emphases in (4) are 'misplaced,' so that the utterance appears not to signal these changes.

In contrastive constructions, Western English uses tonicity, tune, and stress placement together: the nuclei are placed on the two elements which frame a contrasting pair, and these are contrasted by having different shape and/or differing relative heights. The items focussed by tonicity need not be the words which carry the change; if not, this word or words will also be highlighted. Thus for example:

5)WE: If you don't give me that cigarette / I will have to
 "buy a cigarette //
 or If you 'don't give me that cigarette / ...

6)WE: If you 'take this course / you won't have to take the
 "other course //

In Indian English we have:

5')IE: If you don't give me [┐]that 'cigarette / I will have to
 buy [┐]a 'cigarette //

6')IE: If you take [┐]this 'course / you won't have to take the
 [┐]other 'course //

In (5') the contrasting phrases "don't give" and "have to buy" are not picked out, as they are in (5), by stress. The main emphasis seems to be on "cigarette" both times. In comparing (6) and (6'), "this course" and the "other course" get identical prosodic

treatment in (6'). In (6), in the first clause, the qualifier is not stressed, and is, contrastively, in the second.

In complex sentences the Indian English pattern continues -- either stress or raised pitch or both on each sense unit. The interrelation of these sense units gets more intricate -- they can be simple subject-predicate sentences, noun phrases, verb phrases, adverbials, conjunctions. We won't go into predicting how an utterance will be broken up, but we'll give examples of breakups at each of these levels and consider the contrast with Western English signalling strategies in these examples, and follow with some generalizations. Subject-predicate phrases as sense units:

7) I think / he said ...

8) I heard him say / she thought ...

In these cases the S-P unit in each tone group gets parallel prosodic treatment, with the emphasis on the subject. In contrast, in Western English the distributive nature of the main verb in such embeddings is prosodically reflected. The main verb will get the tonic. Succeeding subordinated S's will either continue in the same contour, or, if it gets triplicate as in (8) a new contour will start with emphasis on the third verb, but at a lower pitch level -- there will be an overall envelope effect.

These differences have more pronounced effect when an embedded sentence is relativized. Here in Indian English a tone group boundary will be placed before, i.e., setting off, the embedded sentence:

9) What he said was that / he wouldn't come //

An example of an isolated VP:

10) When he [↑]came home / the book was gone //

Both these examples sound contrastive to Westerners. In (9) the first tone group ends abruptly on "that," sounding like, "and not this." In (10) the emphasis is created by the pitch rise starting on "came," which could be implying contrast with some other possibility such as "left." A similar example:

11) [↑]Did you see anything / [↑]when you came home //

The pitch rise emphasizes "did," sounding like a contrast with "didn't."

There appears to be a logic at work in all these examples which is different from the contrastive interpretation which Westerners would derive from the Western unmarked emphatic patterns. Here relationships are signalled by picking out items, and the content of the relationship picked out derives from

lexical content -- an aspect of the literal meaning of a word or phrase is being pointed to and which that is is dependent on the verbal context. Thus in an S with a "when" introducing a relative modifying clause, the "when" will be highlighted to point to the relativizing function, as in (11). In a case like (10), on the other hand, where the relativized clause as a whole is topicalizing (not modifying), if "when" were stressed, the effect would be to point again to an element of grammatical function, and with "when" at the head of the utterance, this would make it a question. This is what is happening with the stress on "did" in (11) which points to the question function. (These phenomena can be related to the functional particles in Indian languages, see Aulakh et al.) The converse of this is what happens when an Indian English speaker is using extra-emphatic stress to signal a contrastive intention. In these cases, Westerners hear the intended emphasis, but the dimension of content being pointed to is different, so that a Westerner will derive a different reading from what is intended (Mishra, 1980).

There are also some seemingly formulaic illocutionary and/or expressive usages which distinguish Indian and Western English. For example, in Western English tag questions will be set off by pitch register from the question they follow -- usually they'll be lower, sometimes higher (we're talking about the start of the tag, not whether they rise or fall -- distinguishing confirmation-requests, semi-imperatives, etc.) In Indian English tag questions continue at the same level reached in the main question. Direct questions frequently are said with pitch steadily rising over the utterance:

12) Did he leave his key at home?

13) Where did he leave his key?

Our findings on Indian English concern the origin of contextualization conventions in the structure of these speakers' native languages. However, we will advance the hypothesis that the differences in question are not language-based in the sense this word usually has but are distributed in accordance with what anthropologists call cultural or linguistic areas (Emeneau, 1964). The balance in signalling loads among channels reflects the need for verbal communication to do all the following: satisfy cognitive constraints of attention, memory, and information processes, reflect participants' shared perceptions of their physical and mental experiences, and be intelligible as an activity with a discernable function. This balance, and the roles of each of the various relational mechanisms, is the outcome of the history of a communicative tradition, in the sense of the nature of the communication for the accomplishment of which language has been shaped: the pragmatic presuppositions involved in norms for verbal communication in its social context, reflecting status

relations and paradigms of face-to-face or of distanced communication.

Thus contextualization conventions reflect long-established economic, political, and religious networks where speakers of historically distinct languages have been in contact for hundreds of years. Our data indicate that the contextualization conventions of Indian English will hold for many native speakers of Indo-Aryan languages such as Hindi, Urdu, and Punjabi, as well as for speakers of the generically unrelated Dravidian languages such as Telugu. We also have initial evidence from English conversations collected in Hong Kong and Southeast Asia that the prosodic conventions of Southeast Asian English show some similarity to those of Indian English (see Young, 1980). These statements about areal distribution are of course very preliminary and need to be tested through empirical investigation. However, if it is true the prosodic conventions we have described for speakers of North Indian languages speaking English result in part from the mapping of prosodic conventions of the speakers' native languages onto English, and if social conditions are such that these mappings are maintained and institutionalized over time, then the conversational behavior of Asian bilinguals can be seen as an area where language-based grammatical systems meet with areally-based prosodic and discourse systems. The study of the interaction of these systems in conversation can provide important insight into processes of semantic change, the grammaticalization of lexical items, and other basic historical processes of linguistic change.

* * * * *

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Partial List of Elicited Sentences

1. This is a book
4. He is an engineer
5. John is reading a book
8. That big table is standing in the corner over there
10. That chair is the biggest in the room
13. Do you want a cup of tea or do you want a cup of coffee
14. He went home sat down and had a cup of coffee
17. When he came back the book was gone
18. There was nothing in the house when he came home
19. Did you see anything when you came home
20. I think he said he was going home
21. I heard him say she thought it was alright
22. It's very hot today isn't it
23. He left his key at home didn't he
24. Where did he leave his key
25. Did he leave his key at home
27. All he said was that he was not going to come back
29. I don't know if he wants to come along or if he would rather stay.
31. I'm telling you now and I wouldn't tell you again I will not go
33. If you don't give me that cigarette I will have to buy a cigarette
34. If I can't read that book I will have to read another book
37. Whatever they can do I can do also
39. If you are busy at the moment you don't have to come You can do what you want
40. I wasn't driving too fast I was going slowly Why do you ask
41. Mister Smith knows John He can tell you all about him
47. He didn't eat the food He cooked the food He wasn't supposed to eat the food
48. John there's a telephone call for you
49. That's fantastic Really beautiful
53. I wanted to send you the book but I have only just received it myself and I haven't had time to look at it
56. Yesterday you said it was five pounds Today you say it costs six pounds Why is it so much more
57. It was marked down for the sale and when the sale was over we put it back to the regular price
59. I understand your problem Why can't you understand my problem
61. Without looking into it how can you know it's all right
66. Please don't bother to come with me I know the way out

APPENDIX TWO:

Transcription of Example One

The notation used here is based on the system developed by John Trim (1976). Minor tone group boundaries (/) indicate breaks in rhythm or contour; major tone group boundaries (//) signal finality. Heads (' high pitched; , low pitched) indicate stressed non-nuclear syllables. Nuclear syllables are indicated by diacritics showing both the direction and relative onset height of the pitch movement (` , ` , ´ , ´ , ˇ , ^ , ˇ , ¯ , ¯). By convention, the contour initiated on the tonic extends to the end of the tone group. Additional notations indicate pitch register shifts (\sqcap upwards; \sqcup downwards), acceleration (acc.) or decelerations (dec.), and increases (f) or decreases (p) in loudness.

Is Brahui Really Dravidian?
David W. McAlpin
University of Pennsylvania

There has never been any serious doubt in the field that Brahui is in some way related to the Dravidian family of languages.¹ Even the founder of Comparative Dravidian in the nineteenth century, Robert Caldwell, held Brahui to be related if not properly Dravidian. He was working in a larger framework of genetic connections which allowed such a view and thought that the morphological relationships were not direct enough for inclusion in the family. By 1880, Ernest Trumpp had shown that some connection was irrefutable. However, the exact nature of the connection has been open to considerable doubt and reinterpretation, particularly after all external connections had come to be rejected. The early solution (cf. Grierson and Konow in the Linguistic Survey of India, Vol. 4) generally had Brahui as the first branch off on the Stammbaum. Following the publication of Denys Bray's (1909, 1934) grammar of Brahui, the greater detail and reliability allowed a new formulation. This is implicit in Thomas Burrow's 1943 article on initial k in Dravidian and explicit in Murray Emeneau's book, Brahui and Dravidian Comparative Grammar. They connect Brahui with the closely related Kurux and Malto to form a group called North Dravidian on the basis of several perceived shared innovations.

As presented by Emeneau in this work (1962), the evidence for North Dravidian can be summarized as follows: In phonology, the shifts of (1) *k -> x except before i, (2) *v -> b initially, and (3) *c -> k before ū and ē. Of these, only the first is well established. The second is found elsewhere, and the third is poorly attested and overlaps phonologically with the first. Shifts (2) and (3) would not be sufficient evidence for shared innovation without (1) establishing the primary case. In morphology, while specific traits are shared with Kurux and Malto, Brahui shows no particular pattern of morphological similarity with them or any other specific group of Dravidian languages, but rather a scattering of traits usually with the more conservative languages. Similarly there is no particular pattern of shared lexical retentions. Out of just over 250 Dravidian etyma with reflexes in Brahui, only 11 are uniquely shared with Kurux-Malto, while in comparison 9 are uniquely shared with Tamil-Kodagu in South India. By contrast, Kurux and Malto uniquely share over 150 terms.

Thus, in reality, the North Dravidian hypothesis rests on a single shared phenomenon, the *k -> x shift, which has long been attested as such in Brahui and Kurux. For many years, the exact nature of Malto's evidence was

ambiguous at best. In 1973, A. Sisir Kumar Das's work on Malto made it certain that Droese (1884) had been literally correct. Malto had a true uvular stop [q] as its reflex of PDr *k-. Since the shift of [q] to [x] is common and phonetically reasonable, while its reverse is not so, and since Kurux and Malto are clearly closely related, it follows that the *k- > x shifts of Brahui and Kurux must be independent. This argument is supported by the observation in Pfeiffer (1972:149-50) where he makes it clear that PDr *k- remains k in Kurux before both i and u, while in Brahui this is the case only before i. Thus, the environments for the changes are different in Kurux and Brahui. Furthermore, there are no shared etyma with k- in these languages. As a result, the one last good piece of evidence for the North Dravidian hypothesis has been called into question. The case for it is no longer a prima facie one. In other words, while Brahui shares features with Kurux-Malto, it does not do so in such a way or with a frequency that would clearly indicate a shared stage. Nor is the evidence any different to a significant degree for any other grouping of Dravidian languages. Brahui seems to show random retentions, but no shared innovations with any Dravidian group.

Over the past eight years, I have been able to demonstrate a cognate relationship between the Dravidian languages including Brahui and Elamite, a major language of ancient West Asia. This has included systematic phonological correspondences (McAlpin 1974) and partial, but detailed, morphological correspondences (McAlpin 1975). In my forthcoming work, I have been able to show that almost the entire morphological system of Proto-Dravidian is either cognate or clearly an innovation and that over half of the attested Elamite lexicon is cognate. I do not intend to argue the details or validity of the hypothesis here, but it does set the background for a reexamination of the position of Brahui and the meaning of the term Dravidian.

There are only a few morphological systems which can be reliably reconstructed for Proto-Dravidian. Foremost among these is that of the personal pronouns. While there are minor disagreements on a few details, all Dravidianist would agree with the system given in Table 1. All branches of Dravidian concur in the specific details of singulars in -n, plurals in -m, nominatives with long vowels, and obliques with short ones. Most of this morphology is unique to the personal pronouns. Significantly, Brahui deviates from this system particularly in the first person singular and in having a third person nonresumptive form.

Table 1 -- Personal Pronouns

	Proto- Dravidian	Brahui	PED		Elamite
			a.	b.	
1s 'I'					
N	yāṇ	ī	i	i(k)	u (<*i)
O	yaṇ	kan	ḷen	ikan	un*
1p(ex)'they and I'					
N	yām				
O	yam				
1p(in) 'we'					
N	nām	nan	naN(kə)	nikə(m)	nika,nuku
O	nam	nan	naN(kə)	nikəm	nukun
2s 'thou'					
N	nī(ṇ)	nī	ni		nu (<ni)
O	niṇ	nē,n-	nin		nun*
2p 'you'					
N	nīm	num	nim		num
O	nim	num	nim		numən
3 'he,she,it'					
N	---**	---**	i		i,ir
O	---**	ī...ta	i		i,ir,in
3rs 'self'					
N	tāṇ	tēn	ta		tu
O	taṇ	tēn	tan		tun (?)

*From oblique n plus accusative n, i.e. n + n → n.

**Replaced by deictic appellative pronouns.

All other Dravidian languages use the deictics for third person pronouns as does Brahui in the nominative.

All of the basic personal pronouns are attested in Elamite which has a nominative/objective contrast partly cognate and partly paralleling the nominative/oblique one in Dravidian.² It is very noteworthy that Middle Elamite agrees with Brahui as much as Brahui agrees with Proto-Dravidian. Note the first person nominative where *i > u shifts are common for Elamite and the third person forms in i. If only the Proto-Dravidian and Elamite forms are used, it is still possible to reconstruct the personal pronouns for Proto-Elamo-Dravidian (PED). These are given in the column marked PED-a in Table 1. Comparing the forms, it is soon obvious, that with the partial exception of the second person form nī, Proto-Dravidian singular nominatives are not cognate with the Elamite nominatives but rather with the Elamite objectives, the -ṇ

of which is fundamentally cognate with the final n seen in the Dravidian obliques. Thus, the Proto-Dravidian singular nominatives are best seen as the result of an innovation in which the previous nominatives were replaced by the oblique forms which were then lengthened by regular morphophonological processes.³ The details of this innovation are as follows: PED reconstructs simple monosyllabic nominatives which form their oblique in -n after full vowels and -ən elsewhere and their plural in -m with the plural oblique somewhat ambiguous but probably not having any additional morphology. The first person plural is uncertain in its form in that a morpheme -kə, which is also a first person marker, seems to be optional.

Proto-Dravidian loses the inherited nominatives and replaces them with the obliques. Only the second person singular *nī is a partial exception since both variants are attested widely. An automatic rule of vowel lengthening (Zvelebil's rule) comes into play and the free standing nominatives are lengthened while the obliques with following morphology are not. Thus, Proto-Dravidian ends up with alveolar n's in the nominative (a unique example) and with vowel length alternation between the nominative and oblique stems. It also innovated a first person exclusive plural pronoun by pluralizing the singular form. Thus, the completeness and formal balance of the Proto-Dravidian personal pronouns comes from their being a new system. In all Dravidian languages the third person pronominals are handled by another system on the deictic bases except for the resumptive/reflexive *tān. Elamite added the accusative -n explicitly to the plural objectives and has tended to shift i to u. The first person plural forms are a minor problem.

The forms in Brahui are consistent with this PED pattern. If, however, we take Brahui as a third essentially independent branch of PED, different forms must be reconstructed for the first person. These are given in the column labeled PED-b in Table 1. Basically, a velar k must be added to the reconstruction. This explains the Brahui oblique kan (including in part its aberrant initial k), possessive and verbal forms in Brahui and Elamite in -ka, and helps explain the k of the Elamite first person plural pronouns. In any case the first person plural forms are awkward to reconstruct. In this case, Pre-Dravidian took its oblique *ikan to *yan following a well attested tendency for intervocalic lax k to weaken. While still tentative, this second set of forms seems the more likely.

In a parallel vein, Proto-Dravidian reliably reconstructs a small number of case endings. Among these is the dative in *-kkə. It is widely attested throughout Dravidian and usually remains distinct although occasionally it falls together with the accusative to form an objective case. When this happens in Dravidian, as in Konda and Pengo, remnants of the velar morphology of the dative are always present. Brahui has a different pattern. Here there is an objective case which is formed in -e and a separate adessive in -ki. This is parallel to Elamite where there is no marking of direct or indirect objects (except for the pronominal accusative) but there is an adessive postposition in -ikki/-ikku. Note the forms in Table 2. In the general context of their cognation and since Elamite and Brahui agree as compared to Proto-Dravidian, it is clear that Proto-Dravidian has had an innovation in which the older adessive added the function of marking the indirect object to its function of indicating motion toward. The result is the Proto-Dravidian dative case.

Table 2 -- Dative and Related Cases

	PDr.	Brahui	PED	Elamite
Adessive	-kkə	-ki	-əkkə	-ikkə
Indirect Ob.	-kkə	-e	?	Ø
Direct Ob.	-əŋ	-e	-n	-n

There are other phonological correspondences such as the loss of PED *ǵ and morphological features such as the system of plurals which would tend to link Brahui and Proto-Dravidian more closely than Brahui and Proto-Elamite. While its exact relationship remains the object of future detailed study, Brahui is functionally equivalent to a third independent branch of PED for these purposes.

Thus, in the framework of the most current research, it is quite clear that Proto-Dravidian, as a unit, has had two distinct independent innovations that are not shared by Brahui. Since there are two of them and since they are major and almost universally attested, it seems that this was a major formative stage of development and that it and its later stages would have the label Dravidian. Even if it should prove true that Brahui and Proto-Dravidian in this sense share some other specific innovation, i.e. that there is a Braho-Dravidian grouping, it seems better to limit the term Dravidian closely and to put Brahui outside of it.

These morphological innovations completely swamp any arguments for a North Dravidian grouping which would include Brahui. This grouping has been found to be a very weak hypothesis at best although at one time it was clearly the choice on the basis of the best available evidence. Thus, Brahui returns to the not Dravidian, but closely related, status that Robert Caldwell gave it over 125 years ago.

Notes

¹In many ways, this paper is a reply to M.B. Emeneau's chapter on the position of Brahui in Brahui and Dravidian Comparative Grammar (1962:62-70). This should be consulted for further information on background and sources.

²The evidence is somewhat indirect in Elamite since an overt accusative ending exists only in the personal pronouns, much like Modern English. In the singulars the attested forms in -n come from the merger of an oblique in -n with an accusative in n. There are citations of forms with both n's attested; note unan 'me' beside the more normal un. Also the oblique n is found in other cases; note Achaemenid Elamite unina 'my' (← un + na). Both the oblique n and the accusative n are cognate with Dravidian forms. In the plural pronouns the attested n in Elamite comes only from the accusative.

³See Zvelebil (1970:185-87) for a discussion of the process involved. While not universally accepted and overstated by some, it is clear that a basic ancient morphophonological principle is involved in the personal pronouns.

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DISCOVERING CONNECTIONS

Arpita Mishra

University of California, Berkeley¹I. GOALS AND ORIENTATION

This paper attempts to answer some basic questions of cross cultural communication, in particular, the role of prosody in signalling and interpreting thematic continuity in discourse. Conversations in Indian English (IE) and British (BE) collected in interethnic contact situations constitute the primary data. The theoretical framework of conversational analysis is that proposed by John Gumperz.² This framework integrates linguistic and sociological approaches to conversation, focussing on conversational inference and on the participant's use of perception and interpretive processes learned through previous communicative experience to negotiate frames of interpretation (i.e., co-occurrence expectations). Using this perspective, it is possible to account for both shared grammatical style and knowledge that characterize our modern culturally diverse societies.

II. BACKGROUND

Immigration from South Asia to England increased in the 1950s and reached its peak during the 1960s. Gradually, South Asian immigrants have established themselves in a number of industrial suburbs throughout South England and the Midlands. In day-to-day work situations, these immigrants have had to deal with a number of official workers, most of whom are British. Since 'communication is power' in modern post-industrial society, it is very important that these immigrants communicate effectively when dealing with members of the bureaucratic world. An Indian must not only be skillfull as a craftsman, technician or office worker, but must also be able to demonstrate his abilities to the members of the dominant group who judge him by their own system of values and communicative strategies.

Contrary to traditional acculturation theory, evidence shows that as settlement is progressing, interethnic relations are deteriorating and communication difficulties are growing rather than diminishing. These problems become crucial in key situations like job interviews, committee meetings, industrial disputes, etc., in which members of the minority group regularly find themselves being misunderstood. They see their intentions misread, find it difficult to predict the reactions of others and feel an increased sense of powerlessness in managing their own lives. In particular, they see a discrepancy between what they know is their own considerable technical skill and the judgments others make of their work. Seeing no explanation of this discrepancy, they believe they are victims of racial discrimination. Members of the majority group, on the other hand, have come to form fairly rigid stereotypes of Indian workers.

Since Indians and Pakistanis are not native speakers of Eng-

lish, one might assume that their communication problems are simply due to their lack of knowledge of the language, but the problem is more complex. To begin with, English has long been an official medium in India and Pakistan and is spoken by a fair number of the educated population. With time, IE has achieved a status of its own among the several other languages of India. Many of the South Asian immigrants have therefore learned English in schools in India.

After living in Britain for two decades the vast majority of the immigrants, with the exception of those who spend their entire time within local neighborhoods, have at least a functional control of English. Moreover, language instruction is available either through local community centers or through the state education system. Studies have shown that difficulties in communication do not necessarily disappear as the workers gain control of basic English grammar and vocabulary (see Gumperz et al., 1979). In many cases, language teachers are quite satisfied with a worker's progress in the classroom; yet in the industrial situation, foremen and supervisors find little improvement in their language performance. The question is not simply one of foreign accent: we have found that Greek and Cypriot immigrants often have accents which, if measured in purely linguistic terms, are even more deviant than those of Indians and Pakistanis, yet they have less difficulty than Indians in communicating with English people.

III. PROBLEM

When we study the Indian speaker's English, we find that IE diverges from the standard British English³ in ways which, when examined at the sentence level, make it occasionally odd but rarely incomprehensible. These oddities can present severe problems in signalling connections between utterances.⁴ Indian speakers of English systematically differ from native speakers of English not only in the accent and stress pattern, but more importantly, in the devices they use to signal 'communicative intent'.⁵ They differ in ways of chunking and lexicalizing kinds of information and meanings and in the mode of establishing interrelationship between syntax and semantics and prosody. What appears to be 'stylistic variation' is in essence a difference in the way an Indian speaker uses the language, i.e., in fulfilling tasks like differentiating main and subsidiary information, tying different arguments together, ways of structuring and connecting sentences, signalling turn-taking during a conversation, signalling change in the focus of the argument and in the nature of the ongoing speech activity, etc. These are some of the tasks that a speaker has to accomplish in order to be comprehensible. Recent sociolinguistic studies (e.g., Hymes, 1974) have shown that a command of the language in terms of structure and grammar, even though basic to language, is not a sufficient condition for communication. The studies show that communication is a two-party transaction in which both parties have to negotiate at every step in order to reach a mutually agreeable interpretative meaning of the different speech utterances and of the discourse at large. A considerable amount of

research has been and is being done on the sociological aspect of this issue. Little has been done however to show exactly how speakers communicate intended social meanings through the use of linguistic and paralinguistic features.⁶

Various aspects of prosody and paralinguistics have been investigated by acoustic phoneticians as well as by linguists (e.g., Bolinger, 1972; Crystal, 1976; Halliday, 1967; and Trim, 1976). Their work has concentrated almost exclusively on isolated sentences. Work on intonation proper has concentrated mainly on the internal intonational structure of the clauses. Very little effort has been done to show how both intonation and prosody in the wider sense (e.g., register shifts, rhythm) serve as cohesive ties and thereby contribute to the interpretation of communicative intent. However, I shall attempt to interpret these findings in relation to communicative intent and social meaning, i.e., I shall show how prosody and paralinguistic cues function in signalling interpretive meaning.

IV. DATA BASE

To do the above, I have analyzed an interaction between an Indian school teacher (I) and a British staff member (B) in a teaching center. The school teacher has an M.A. in Mathematics from an English college in England. He has held several probationary posts but has always been released before achieving tenure. Although the principal assured him that he was doing fine, the Indian teacher subsequently found out that he was to be fired, and would be required to take a language training course before obtaining another position. At this point he went to see a staff member in the teaching center. A critical part of the interaction between the Indian teacher and the British staff member is presented below.

Interaction⁷

1. I: In the ¹third school/ in which I ²had been transferred //
2. B: yes //
3. I: I had been / ... I ¹contacted / during the ²half / ... and
^{acc.} during the / during the ³term //
4. B: Yes //
5. I: when / I had completed the ... ¹training / ²ten ³day training
^{acc.}
6. B: [at the ¹language school //
7. I: [at the ¹language school / and ²you know that ³... what happened there..
^{acc.}
8. B: [yes what happened there
9. I: and there was ¹another / ²week / for the / ³vacation //
10. B: Yes //
11. I: and during that vacation [I ¹contacted the ²union / and ³union
^{11b.} person contacted
12. B: [you ¹contacted /

13.
 I: the his / representative / at the school and / that repre-
 sentative / contacted the headmaster / and headmaster / had
 contacted the authority // But before ^{13b.} that instance / in
 the morning / first day / of the term / I had met him /
 and told him that / I am worried ^{13c.}
14. B: yes //
15. I: and / I don't know where I stand / ...
16. B: hū //
17. I: He told that / its alright / you are okay / I'm happy /
 you're happy /
18. B: th...th..the headmaster said this //
19. I: h...headmaster yes //
20. B: before he contacted the authority //
21. I: before he contacted the authority / and before he learned /
 that I have seen / another union person //
22. B: From / you mean from a different union //
23. I: [different union person //
24. B: 'which' union was it //
25. I: it was uhm...it was not NAS / it was uhm ...
26. B: NUT //
27. I: NUT //
28. B: NUT // and you were a member / of .. of the NAS / yes /
29. I: no I I was NAS member / uhm
 so uh..uh..
30. B: so you contacted the NUT //
31. I: and so / ... during this time /
32. B: yes //
33. I: because the / headmaster didn't know / that I have seen the
 other union /
34. B: hm
35. I: and uhm / he didn't had cont / ..he hadn't contacted the /
 education office / so he had the impression that / every-
 thing is okay //

36. B: Before he¹ contacted the office //
37. I: yes // when / the union person / told him that / he² has /
^{acc.} he has contacted our union representative
38. B: yes //
39. I: and he³ has / asked / for his help and /
40. B: yes
41. I: I want to see what is / so⁴ he⁵ contacted the advisor / told
^{acc.} th the advisor / that .. this is the situation he⁶ has con-
 tacted →
42. B: yes
43. I: another union member / so^{43b.} he⁷ was annoyed //
44. B: who //
45. I: advisor math math advisor //
46. B: the math advisor / yes /

V. ANALYSIS

If we examine I's English, his sentences are grammatical, yet, they are not normal English sentences. We can clearly see I is trying to relate a series of events, but we cannot exactly follow the lead. The sentences are connected in such a way that we are not surprised when the female staff member is confused and asks in the end "who?". This may be because relatively few tying-in phrases are used to link any two arguments and secondly, the links that are lexicalized do not seem to meet British listener's expectations. Our previous work with IE shows that Indians have different ways to mark these discourse functions, such as use of prosody. If we examine characteristic prosodic features used by I in this passage to signal thematic continuity, the obvious question to ask is "what kind of prosodic cues is I using to tie his arguments?" I assume, like all other conversational analysts, that what I is saying makes sense and is important for analysis. Since there are no impartial criteria to accept or reject his account as incoherent, we begin by accepting it as having some kind of semantic relevance which seems to bypass the British speaker's understanding.

I have analyzed the conversation from the view point of I and B, on the basis of (a) some of the possible explanations of each of the utterances, (b) any supporting evidence that we may get from the conversation itself, (c) personal interviews with the participants and (d) research with other speakers of the same background, thus reaching the most likely explanation of each of the utterances. Thus we are not only able to get to the intended meaning at each step in the conversation, but are also able to delineate when and why the intended meaning was misunderstood and resulted in miscommunication. (See Table 1.)

In Table 1 we will deal with Ss 1-21 to illustrate the different interpretations that can arise during conversation:

TABLE 1
Alternative Views of the Conversation

S#	B's View	I's View	Comments
1.	<u>"In the third school/in which I had been transferred//"</u> Ambiguous. Two possible explanations: i) 'in the third school, in spite of what you may have thought, I had really been transferred' and ii) Same as I's.	'In the third school, against my wishes, I had been transferred.'	I is stressing the auxiliary "had." By overstressing the passive form and de-accenting the agent, I is showing his helplessness in the action thus taken.
3-5	<u>"I had been/...I contacted/ during the half/...and during the/during the term//"</u> 5 seems to qualify 3 contributing to the act "contacted" in 3.	3 is complete by itself. 5 refers to a new event.	Pause after "when" in 5 indicates to BE speaker that the sentence following it is somehow related to the previous sentence.
11-11b	<u>"at the school" = '...union person contacted his representative (not when he was at home or anywhere else, but) at the school.'</u>	'...union person contacted the representative who was a representative at the school.'	Ambiguity not clarified by syntactic markers.
13c	<u>"I had met him"</u> Peculiar stress <u>"I am worried"</u> Peculiar intonation.	I took initiative and went to see him personally. I is quoting.	Extra stress on "met." I is using high pitch vs. normal pitch to distinguish between a quotation and a statement resp. I constantly has high pitch on 13c and flat tone on "worried." Flat nucleus sounds odd to BE speaker. Similarly in 17, I is quoting

Table 1 continued

S# B's ViewI's ViewComments

13c
cont.

4 short sentences, all on low pitch as against the pitch and high head in the previous segment of the statement.

21 "another union person" =
Ambiguous. Two possible readings: i) 'person from different union'; ii) 'another union person from the same union'.

'person from a different union'.

In IE, one way of contrasting information is not by contrasting single words (as in BE) but by contrasting a whole phrase as one unit with another phrase as another unit through the use of prosodic features like high pitch and stress. In such cases we find that the stress begins from the linguistic unit just before the main content words. E.g., in 21, from "seen" to the next phrase, thus segmenting the phrase "another union person" after "union" i.e., (another union (person) as opposed to (another) (union person). This also explains the high stress on "at" in "at the school" in 11b. The semantic emphasis is on "school" but prosodically the stress begins from the beginning of "at the school."

Sentences 21-46 cause special problems in understanding for a BE speaker, mainly because: (a) a number of "he"s are being used with no specific clarification of their referents; (b) the relationship between sentences and parts of sentences is not clear.

Just what do all the "he"s refer to? As we can see from the passage, before I and B are half-way through I's story, I has already used several "he"s referring to different people. As the talk progresses, I gradually comes to the crucial point referring to all the events, which have mainly consisted of several two-party conversations taking place at different times. I refers back to most of the people involved in these events by using the same pronouns "he", so much so that at the climax of the interaction B is forced to ask "who?" (S-45). The problem lies in the fact that these anaphoric pronouns are frequently ambiguous and the ambiguity is not cleared up by the syntax.

What and where are the connections? The passage also seems incoherent to a speaker of BE because he has problems connecting the arguments and is unable to figure out what the central issue is. The British speaker looks for syntactic cues in the passage to determine the relationship between two parts of the message, but they are absent in this conversation. With analysis we find that semantic functions referring back to given information, links of effects, subgrouping one or more facts as part of a major argument, etc., are instead indicated through intonation and prosody. In the absence of syntactic markers to indicate semantic relationships between arguments how does I (1) signal old and new information, (2) arrange events in a temporal sequence, (3) indicate distinctions between personal opinion and a general fact, and (4) signal a change in the focus of the argument?

We can begin to answer some of these questions by looking first at how I relates different arguments. The first step includes dividing the entire conversation into several blocks such that each block consists of one major new piece of information. For instance, sentences 1 and 3 pertain to one major piece of information, namely 'in the third school in which I had been transferred, I contacted (somebody)'. Therefore, 1 and 3 can be grouped into one block. Further, Ss 5 and 7 jointly furnish another major piece of information, namely 'I had completed the ten day training at the school'. Since the information given in Ss 5 and 7 is crucial to I's narrative and is different from the information given in 1 and 3, and is one separate piece of information, 5 and 7 can therefore be grouped into another block.⁸ In this manner, the entire passage is divided into ten blocks (see Table 2).

TABLE 2 : Blocks of Information

<u>Block</u>	<u>S#</u>	<u>Sentences</u>
A	1,3	In the third school in which I had been transferred, during the term I contacted ().
B	5,7	I had completed the ten day training.
C	9,11	There was another week for the vacation and during that vacation, I contacted the union.
D	11b	And union person contacted his representative at the school.
E	13	That representative contacted the headmaster.
F	13c,15 17	But before that instance, in the morning, first day of the term, I had met him and told him that "I don't know where I stand." He said that "it's all right. You're okay. I'm happy. You're happy."
G	21,23 25,27 29,31 33,35	Before he contacted the authority and before he learned that I have seen another union person. (During this time because the headmaster didn't know that I have seen the other union and he hadn't contacted the education office, so he had the impression that everything was okay.)
H	37,39	When the headmaster told him that he has contacted our union representative and he has asked for his help,
I	(13b) 41,43	(headmaster contacted the authority) he contacted the advisor. Told the advisor that this is the situation. He has contacted another union member.
J	43b	So he was annoyed.

Now that the different pieces of information supplied by I are clearly recognizable, the next question can be posed, namely, how are these different blocks arranged by I to make one cohesive piece of argument? As mentioned earlier, the account relates several incidents that took place at different points in time. The problem is not in understanding the literal meaning of the individual sentences, but in comprehending the right temporal sequence. The listener is unable to link these different pieces of information supplied by these sentences either logically on the basis of literal meaning they imply or sequentially on a real time scale. Thus we ask ourselves, why is it that the account makes sense to I but seems to be so confusing to B?

Looking at the account for the chronological order of information and from the point of view of the story schema, we find that I switches to and fro in time frame very frequently. He presents, in the same time frame, events that really happened much

earlier and much later, thus creating an unclear picture of the actual sequence. If we represent the time scale of events on the horizontal dimension and the major steps in the development of the story on the vertical scale, we can summarize the basic discourse structure of I's account of the events in the form of a diagram. (See Figure 1.)

VI. OBSERVATIONS

Below is an account of the observations we can make about the story based on (a) a knowledge of IE, (b) participants' comments.

1. Going back and forth: If we mark the direction of the arrows joining two blocks, we find that I not only goes backward in time, but also constantly refers to events that took place much later in the real time sequence, shifting from one event to the other. For instance, he goes from block A to B, which in a real time scale is going backward in time and then from B to C, thus returning to the original point of time, then moving on further ahead in time, to D to E, then to I and then suddenly going back in time to F and G and so on and so forth.

2. Mentioning events in disjointed order: The events mentioned in A, C, F, G all occur at the same point of time but they are arranged out of sequence as is evident from their alphabetical order. In other words, instead of giving one complete picture of the events at one time, I relates parts of them at several different occasions.

It is not uncommon to refer back and forth to several events when telling a story (say, the plot of a movie), but in that circumstance the speaker must clearly spell out the shifts so that the hearer can easily follow the connections and can relate the different events together.

It is important to ask the question — "Does I relate these different blocks together and if he does, how does he connect and differentiate them?" As indicated earlier, in IE discourse, we find a surprising lack of syntactic constructions to indicate relationships between successive sentences. Hence a valid question to ask is -- "If the relationships between sentences are not lexicalized, then how exactly are the relationships indicated?"

On carefully scanning through each of the sentences of the passage spoken by I, we are surprised to find that as the story progresses I is using some very definite and regular prosodic cues, not only to mark these different blocks but also to indicate the relationships between them whenever an explicit mention of the connection would be necessary. Prosodic markings of a definite nature are also used to indicate the 'sudden shifts' in the line of argument, or of perspective, which occur when there is a change in the focus of the discourse. In these instances, prosody serves as a marker for these shifts and thus serves as a signalling mechanism for the building and the maintenance of the discourse. Figure 2 displays the specific prosodic characteristics of each of the sentences semantically crucial to the block they are part of.

After specifying prosodic markings for all of the crucial sentences, some very interesting observations can be made:

Figure 1

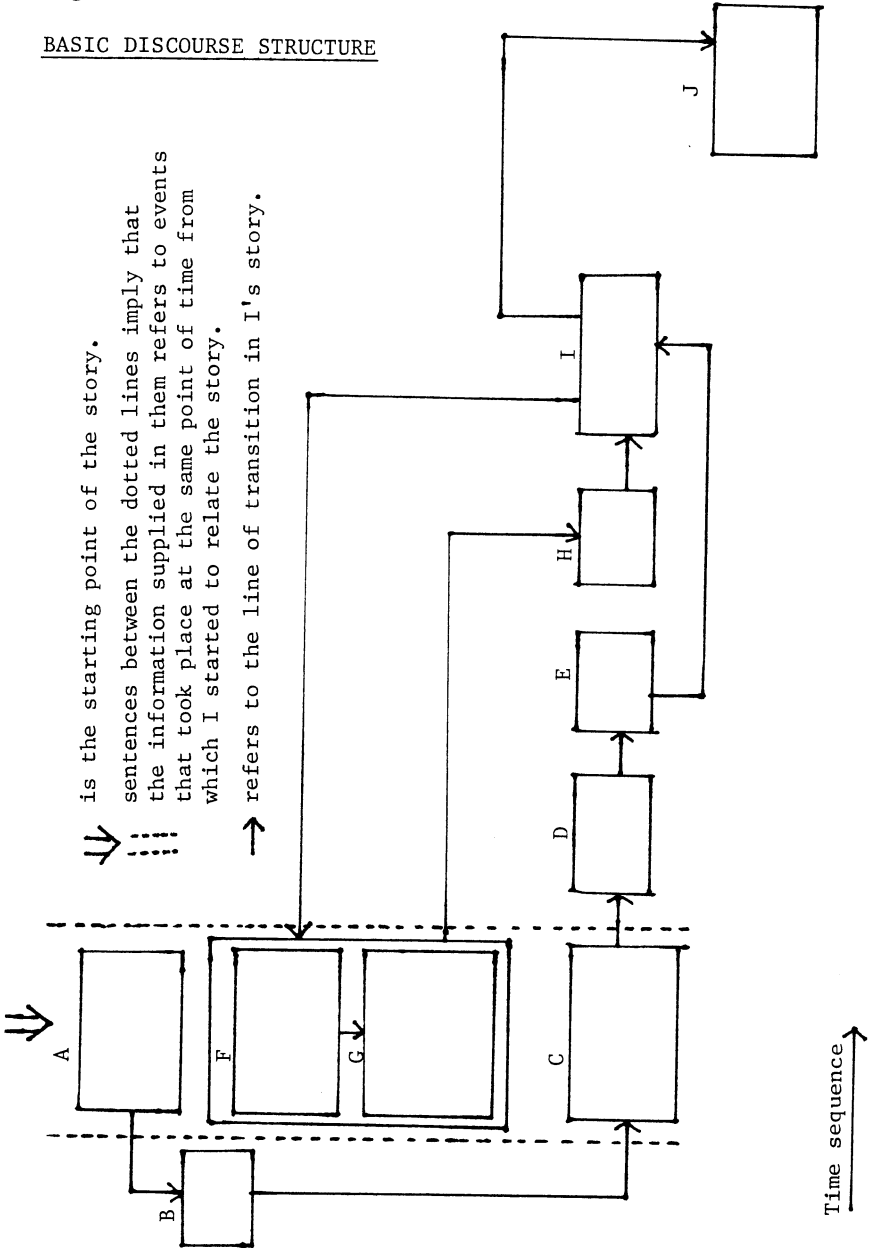
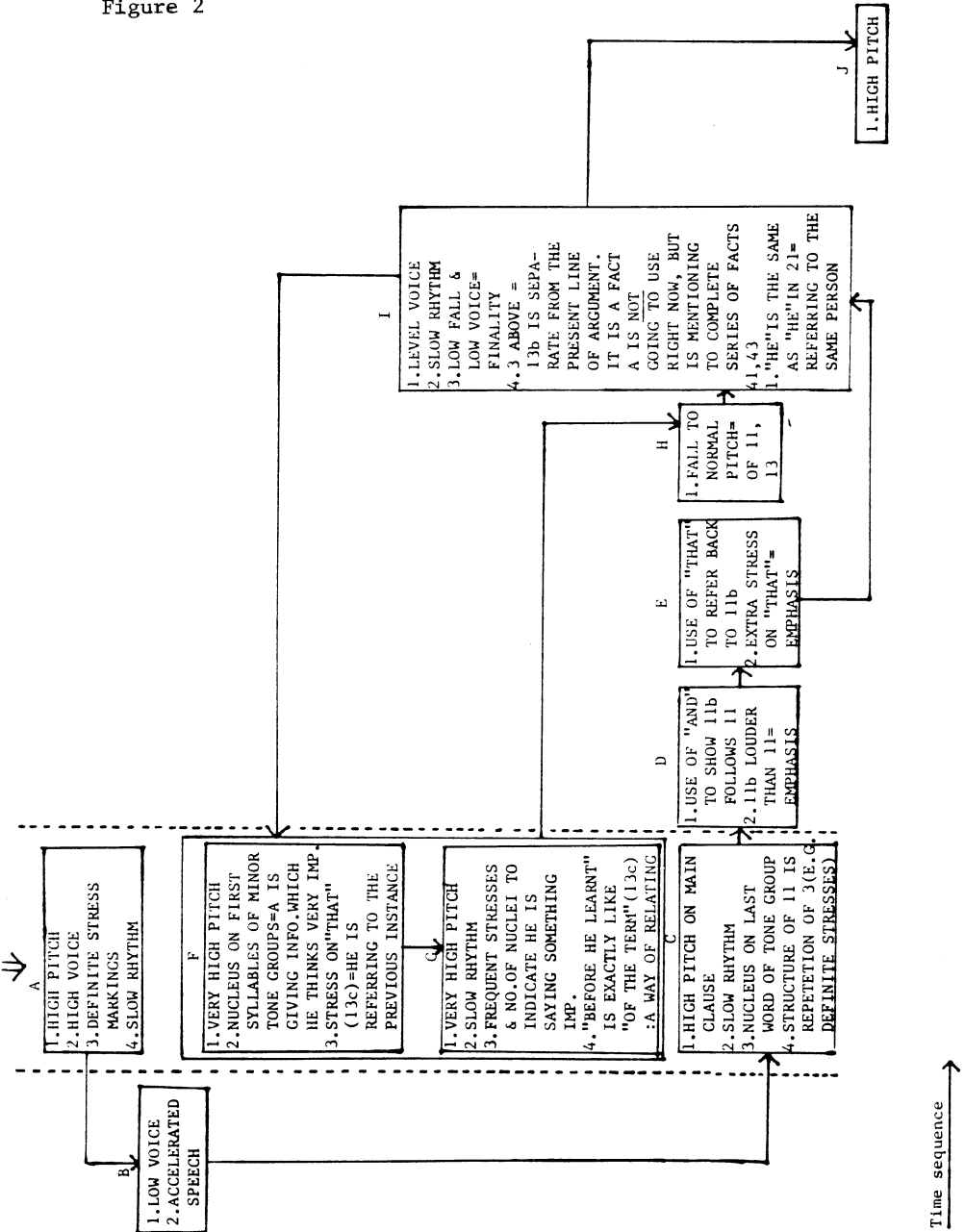
BASIC DISCOURSE STRUCTURE

Figure 2



1. Sentences that are grouped together in the same block on the basis of commonality of one major argument share the same prosodic characteristics. For instance, in block B, Ss 5 and 7 are both in low voice and in accelerated speech. Similarly in block F, Ss 13c and 15 together make one complete statement of fact. They both also share prosodic markings, viz. they are spoken on very high pitch, and the first set of syllables of minor tone groups are set off from the following ones.

2. Shifts in the focus are marked prosodically. Given that each of the blocks constitute one complete statement of fact or one argument, the blocks that appear next to each other which do not follow each other logically, are marked prosodically to indicate the shifts in the focus of the argument. The blocks are set off from the previous block either through a different intonational pattern or through a different rhythmic pattern. For instance, block A is differentiated from B by a change in the voice level and in the speech rhythm.

COROLLARY:

Blocks that do follow sequentially on the time scale do not receive any characteristic prosodic markings. We can see that block E directly follows after D in the sense that they are connected by an arrow with no intervening block. We see that the two blocks are not marked prosodically in any significant way either. The stress is on the main content word, namely, "that" of 13, a way of indicating that I is referring back to the "representative" mentioned just before 13.

3. Repetition of prosodic pattern: a way of relating information. The prosodic structure of 3 (high pitch on main clause, slow rhythm, definite stress markings) is repeated in 11, and of 13c (high pitch and staccato) is repeated in 21. Figure 2 shows that blocks consisting of these sentences have the same time reference (between the dotted lines). It is interesting to note that the main clauses of the sentences of all these blocks receive high pitch. It appears that the use of high pitch is a way of suggesting transitions in the development of the story which refer to events that occur at the same point in time. Hence, it appears that repetition of the prosodic characteristics relates two or more sentences which occur at different points in the discourse but which refer to events occurring at the same point in time.

COROLLARY

A shift in the prosodic pattern indicates the speaker's intention to convey that the current information is not immediately related to the previous information. (Note: this is similar to the observation indicated in 2).

At times I uses an utterance consisting of several pieces of information, with several minor tone group boundaries and with only one major tone group boundary at the end. In such cases, a British speaker is likely to interpret these several pieces of information as part of one whole argument; or at least, may see them as being closely related semantically and temporally, lacking any syntactic information to the contrary. For example, the utterance

represented by 13 and 13b has 3 minor tone groups, with a major tone group boundary after the word "authority." Ss 13 and 13b, although falling within the same major tone group, refer to two separate incidents that occurred at two different times. 13 starts with high pitch register on "that" and also receives extra stress and high tone on the last word; 13b, on the other hand, starts with a flat nucleus and has no heads at all. By treating these segments differently on the prosodic level, I indicates the difference in the time of the occurrence of two events. Similarly, there is a shift in the pitch register of 13b and 13c and we see from Figures 1 and 2 that the two incidents occurred at two different times.

To summarize, after we consider the prosodic features that I uses to mark semantic functions of discourse, we see that I not only distinguishes between two semantically different arguments but also uses definite prosodic cues to tie in several different messages in whole or in part. Without specifying the main point, he gets into several minor details (a typical characteristic of Asian discourse, not explained in this paper), so that by the time he comes to the main point, the staff member is thoroughly confused. Moreover, his **ways** of indicating main and subsidiary information are so different from a Britisher's linguistic system that they are constantly ignored.

VII. A REAL-TIME REARRANGEMENT

Having resolved the basic question regarding I's method of signalling communication intent, we are tempted to ask another question: Would I have made himself clear to a BE speaker if he had followed his line of narration according to the real time sequence, as depicted in Figure 1?

Now, if we were to substitute the blocks by the topic sentences of each of the blocks, keeping the temporal sequence of the blocks as is (i.e., B→A→F→G→C→E→H→I→J), we get the following passage:

<u>S#</u>	<u>Verbatim</u>	<u>After minor modification</u>
5	when I had completed the ... training / ten day training at the language school	when I had completed the ten day training
1	in the third school in which I had been transferred	I had been transferred to the third school
13c	I had met him	at the language school, I met the headmaster
11	during that vacation, I con- tacted the union	later, during a vacation, I contacted the union
11b	and union person contacted his representative at the school	and the union person con- tacted his representative at the school
13 ¹⁰	that representative contacted	that representative con-

<u>S#</u>	<u>Verbatim</u>	<u>After minor modification</u>
	the headmaster	tacted the headmaster
37	when the union person told him that he has contacted our union representative	when the headmaster came to know that I had contacted the union
41	so he contacted the advisor, told the advisor..he has contacted another union member	the headmaster told the advisor that I contacted the union
43	so he was annoyed	so the advisor was annoyed

If we read through the column with the modified passage, we get a cohesive narrative and the account makes sense. The chain of events seems to follow in a logical order; the cause and effect relationships are explicit, and the hearer gets a complete picture of the line of argument as presented by I. (Note that I have not made changes in the grammatical structure of I's constructions.)

This points out that in spite of the fact that I gave all the relevant information, B could not process it because of the way I framed and marked it. The problems in this conversation are typical of problems Indian speakers have in communicating with British speakers. Thus minority speakers tend to feel that their opinions and views are not taken seriously and see themselves as being subjects of racial discrimination. The Britishers, on the other hand, think of minorities as inefficient workers who make excuses and speak incorrect English. The problem lies not in the knowledge of grammar, of syntactic constructions or of accent for that matter, but in the way they use linguistic and paralinguistic cues to signal syntactic and semantic functions of day to day discourse.

To summarize, we can say that speakers of different linguistic and ethnic background may use different linguistic processes to convey similar conversational intent. They may draw upon a different set of conventions to process ongoing conversations. The preceding analysis shows that the nature of prosodic process has a great deal to do with the kinds of inferences we draw in conversations.

This analysis has implications for studying the role of socio-cultural knowledge in interpreting linguistic forms in conversations; for studying the process by which we form conventions and expectations about conversations and are able to negotiate interactional meanings with co-interactants; and for examining the manner in which methods of interpreting communicative intent become part of our linguistic behavior. Detailed research is needed in the area of interaction among diverse people in different social settings. Findings of such research should have important bearings on these issues.

FOOTNOTES

1. The work reported here is part of an ongoing project supported by NIMH 26831. The conversation analyzed in this paper is part of the data collected in Britain by Dr. John J. Gumperz, the principal investigator of the project. I am grateful to Celia Roberts and Marilyn Silva for some very useful comments.
 2. See John J. Gumperz: Sociocultural Knowledge in Conversational Inference, 1977. Also, et al., Interethnic Communication (Volume, Cambridge University Press, forthcoming).
 3. These differences may also be applicable to American English.
 4. There is not much research literature available on IE. Whatever there is is limited to the study of accent (e.g., Susan Taylor, 1967); stylistics (e.g., Braj B. Kachru, 1970); or lexical peculiarities of IE. To my knowledge, there is no study on IE in interactive situations.
 5. The term used by Gumperz (1979) to "designate ... implicitly shared perception, which is a prerequisite for the maintenance of conversational continuity."
 6. For a more extensive discussion of this issue, see Mishra (1980).
 7. Prosodic and paralinguistic cues are transcribed using a simplified form of a system developed by Dr. Gumperz and his collaborators on the project. In this system, speech sequences are first divided into tone groups or intonational phrases. A phrase can be marked by a minor, non-final boundary "/" or a major or final boundary "//". Within a tone group we indicate : 1. location of the nuclei (i.e., the syllable or syllables marked by change in pitch " \ " low fall, " \ " high fall, " / " low rise, " / " high rise; 2. other accented syllables in the tone group, " | " high head, " | " low head; 3. paralinguistic features such as (a) shift to high register " F " or shift to low pitch register " L ": both apply to the entire tone group and (b) rhythm and speed of speech: "acc" refers to an accelerated speech, "ret" a slow speech, and "stac" refers to staccato. These features also apply to the entire tone group. Doubling of one of the above feature-signs means extra stress.
- When working with IE data, it is difficult to mark nuclei. This is so because there are no sharp intonational contours on single words. Instead the semantic function of a nucleus is fulfilled by the shifts in pitch register over groups of words or clauses. Running IE data through pitch extractor attests these observations. See Gumperz et al., Interethnic Communication (forthcoming).
8. I would like to note that three of the blocks (e.g., F, G & H) do, however, contain more than one piece of information. These blocks could have been broken into several separate blocks, but since the several different sets of information provided by the sentences included in these different blocks are not problematic to the BE speaker (either because they consist of direct questions and answers, or because they relate events sequentially with overt

- syntactic markers), all these sentences are considered as single blocks for reasons of simplicity and brevity (e.g., block G).
9. Although I have attempted to present the original text, I have had to make a few additions to clarify it. For example, blocks G and I.
10. Information in block G seems redundant to the argument; hence the block is omitted.

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EVIDENCE OF GRAMMATICAL CONVERGENCE IN
DAKHINI URDU AND TELUGU

BRUCE R. PRAY

UNIVERSITY OF CALIFORNIA, BERKELEY

Introduction. The interaction between Indo-Aryan and Dravidian languages has been an important feature of the linguistic situation in South Asia and has undoubtedly contributed to the formation of many of the characteristics which define South Asia as a linguistic area. The processes by which semantic and syntactic structures diffuse and adapt constitute an important area of study. However, for most Indo-Aryan languages the period of active contact with Dravidian languages belongs to a very early stage of their development in South Asia.

More recent examples of the interaction between Indo-Aryan and Dravidian languages can be found where large and stable communities of Indo-Aryan speakers have taken up residence among Dravidian speakers and have maintained their identity and language over long periods. This is the case with Dakhini Urdu, an Indo-Aryan language originating in North India, which has been spoken by sizeable communities throughout Southern India since the 16th, and even the 15th century. During this period Dakhini Urdu has undergone a number of changes which have resulted in a grammatical system more similar in many respects to that of the Dravidian languages with which it has been in contact. This is in addition, of course, to extensive lexical borrowings between the two languages.

For several reasons, Dakhini Urdu provides an especially fertile field within which to study the processes of interaction and transmission of semantic and syntactic structures between two genetically unrelated languages. The migration of the speakers of the antecedent of present-day Dakhini Urdu to South India is well documented in terms of time and geographic distribution. There is also literary and other evidence for the history and development of the relevant Dravidian languages. Of special importance are literary texts in early Dakhini Urdu dating from the 16th to the 18th century.

The main purpose of this paper is to bring together linguistic data to demonstrate the extent and variety of the structures which Dakhini Urdu shares with Telugu, but which are strikingly different from Standard Urdu and Hindi. The evidence is primarily of convergence of Dakhini Urdu toward the Telugu pattern, although there is some evidence of convergence in the other direction as well, particularly in certain varieties of Telangana Telugu.

Dakhini Urdu and Telugu. The language names Dakhini Urdu (DU) and Telugu (Te) denote a number of dialects which exhibit a wide range of geographic and social variation. In this paper a single variety of each has been taken as the basis for comparison. The type of language which each represents may best be described in terms of the personal backgrounds of my two informants.

The Dakhini Urdu forms represent the speech of a native of the city of Hyderabad who speaks both Dakhini Urdu and Standard Urdu (SU). His education has been in Standard Urdu and English and he is actively involved in Urdu literature and journalism. He understands Telugu well, but uses it only in very limited situations.

In any attempt to uncover possible influence or convergence between Dakhini Urdu and Telugu, it is natural to begin with that form of Telugu which is spoken in and around the city of Hyderabad. This form is called Telangana Telugu (TTe) and differs from the standard literary form of Telugu which incorporates characteristics of the coastal Telugu dialects. My main informant was from Bhongir, a town about thirty miles from Hyderabad. Although his education has been through English and Standard Telugu, by preference and conviction he speaks only his local form of Telangana Telugu even with Telugu speakers from other areas. He understands some Dakhini and Standard Urdu, but his active use of these languages is limited to occasional contacts with non-Telugu speakers.

It should be noted that there is practically no grammatical difference between Standard Urdu and Standard Hindi, so that all statements about Standard Urdu apply equally well to Standard Hindi. The material on which this paper is based was gathered in 1971-1972 in Hyderabad, India while on a Fulbright-Hays Research Grant. The following sections present some of the evidence of grammatical convergence between Dakhini Urdu and Telugu, more specifically, Telangana Telugu.

Echo Compounds. These are compounds of the form $X + X'$, where X' is a phonetically modified form of X , the modification most often being the substitution of a fixed consonant or syllable for the initial segment of X . Echo compounds have the approximate meaning of X and those things which customarily go together with X , a meaning indicated by 'etc.' in the following examples.

In SU, the most productive process is the replacement of the initial consonant by v. For example:

SU	khaanaa vaanaa ¹	'food, etc.'
	caay vaay	'tea, etc.'
	mez vez	'tables, etc.'

Echo compounds in Telugu are formed by replacing the first syllable (C)V of a word with gi if V is short and by gii if V is a long vowel.

TTe	Dabbu gibbu	'money, etc.'
	illu gillu	'a house, etc.'
	maaTa giITa	'words, etc.'
	suuTu giITu	'Western-style suit, etc.'

Dakhini Urdu follows the Telugu pattern

DU	khaanaa giinaa	'food, etc.'
	caa giI	'tea, etc.'

suuT giit	'Western-style suit, etc.'
basaaN gisaaN	'buses, etc.'
xaraz giraz	'loans, etc.'

Both Dakhini Urdu and Telugu also have a construction in which the negative is repeated with each member of the echo compound to make an emphatic negative construction.

TTe	paisalu giisalu	'money, etc.'
	paisal leev giisal leev	'There is no money whatsoever.'
DU	caa gii	'tea, etc.'
	caa naiiN gii nahiin	'There isn't tea or anything.'

The parallel expression *caay nahiin vaay nahiin does not occur at all in Standard Urdu. It appears, then, that Dakhini Urdu has not only adopted the phonetic pattern on which echo compounds are formed, but has also taken over a syntactic pattern involving these compounds.

First Person Plural Pronouns. In Dakhini Urdu a distinction is maintained between an exclusive and an inclusive first person plural pronoun, a distinction found in Dravidian languages and some Indo-Aryan languages, but not Standard Urdu and Hindi.

exclusive 'we'	DU	ham logaaN	TTe	meem
inclusive 'we'	DU	apan logaaN,	TTe	monam
		apal logaaN		

Possessive Pronominal Adjectives. In SU there is a reflexive possessive adjective apnaa which refers to the subject of the clause in which it occurs. For example:

SU	maiN <u>apni</u> kitaabeN becuuNgaa	'I will sell <u>my</u> books.'
	vo <u>merii</u> kitaabeN becegaa	'He will sell <u>my</u> books.'
	vo <u>apni</u> kitaabeN becegaa	'He ₁ will sell his ₁ books.'
	vo <u>uskii</u> kitaabeN becegaa	'He ₁ will sell his ₂ books.'

In Dakhini Urdu and Telugu no separate reflexive possessive adjective exists for the first and second persons. In Dakhini Urdu the third person reflexive does occur, but it can always be replaced by the non-reflexive uskaa even when referring to the subject. The Telugu tana 'his own, her own' functions in much the same way.

DU	maiN <u>mere</u> kitaabaaN becungaa	'I will sell my books.'
	une <u>apne</u> kitaabaaN becingaa	'He ₁ will sell his ₁ books.'
	une <u>uske</u> kitaabaaN becingaa	'He ₁ will sell his ₂ (his ₁) books.'

Gender Contrast. In Telugu, as in other Dravidian languages, adjectives do not show gender or number agreement with the noun they modify. Verbal agreement, however, does show a distinction between masculine and feminine in the singular, but between human (masculine

and feminine) and non-human in the plural. For example:

TTe	vaaD occinDu	'He came.'
	aam occindi	'She came.'
	vaall occinru	'They (m. and/or f.) came'

In SU, the masculine/feminine contrast is maintained in both the singular and the plural.

SU	vo aayaa	'He came.'
	vo aaii	'She came.'
	vo aae	'They (m.) came.'
	vo aaiiN	'They (f.) came.'

In Dakhini Urdu, the masculine/feminine contrast is maintained only in the singular; in the plural a single form refers to both masculine and feminine nouns. This applies to verbal agreement as well as attributive and predicate adjective agreements. For example:

DU	une aaya	'He came'
	une aaii	'She came.'
	bacce aae	'The boys came.'
	bacciaaN aae	'The girls came.'
	meraa ghar	'my house'
	merii kitaab	'my book'
	mere gharaaN	'my houses'
	mere kitaabaaN	'my books'

The loss of gender contrast in the plural may have other explanations than direct influence from Telugu, but the fact that Telugu has a gender contrast between masculine and feminine only in the singular may be a significant factor.

Demonstrative Pronouns and Adjectives. In SU, the same form functions both as a demonstrative pronoun and as a demonstrative adjective. In Dakhini Urdu and Telugu, demonstrative pronouns and adjectives always have separate forms.

SU	vo kitaab	'that book'
	vo aayaa	'He came.'
DU	vo kitaab	'that book'
	une aayaa	'He came.'
TTe	aa pustakam	'that book'
	vaaD occinDu	'He came.'

Only in SU do demonstrative adjectives and pronouns have separate oblique forms with postpositions.

SU	ye kitaab	'this book'
	is kitaab meN	'in this book'

DU	ye kitaab	'this book'
	ye kitaab meN	'in this book'
TTe	ii pustakam	'this book'
	ii pustakam la	'in this book'

Form of Subject Noun Phrase. In SU the subject in participial or nominal constructions is either deleted or obligatorily marked by a postposition, usually the possessive kaa/kii/ke.

SU	gopaaL kii likii huii kitaab	
	'the book written by Gopal'	
	aap <u>kaa</u> kiaa huaa kaam	
	'work done by you'	
	us <u>ke</u> aane tak	
	'until he comes (until his coming)'	
	un <u>ke</u> jaate hii	
	'as soon as they went'	

In both Dakhini Urdu and Telugu, however, the subjects of such clauses are retained in their nominative (non-oblique) forms without a postposition.

DU	<u>maiN</u> likhaa so kitaab	'the book written by me'
	<u>aap</u> kie so kaam	'work done by you'
	<u>haamid</u> aae talakkaa	'until Hamid comes'
TTe	<u>neen</u> raasina pustakam	'the book written by me'
	<u>miir</u> jeesina pani	'work done by you'
	<u>haamid</u> occe daaka	'until Hamid comes'

Parallel Construction. In Dakhini Urdu many constructions appear to be modelled almost exactly on the Telugu patterns. The equation of the DU conjunction kii 'that' with the Telugu enclitic -oo is a particularly interesting example which results in wide-spread restructuring within Dakhini Urdu. This will be discussed in detail following examples of several other constructions.

DU vaisaa corresponding to TTe aTTu. In Dakhini Urdu there is a construction involving vaisaa 'like that, as' which occurs as the predicate of the verbs hai 'is', thaa 'was', dikhnaa 'to seem' or maaluum honaa 'to seem, appear'. Before vaisaa the verb occurs with the suffix -e, the entire construction meaning 'it seems that...'. Several examples are:

DU	paanii paRe vaisaa hai	
	'It looks like it will rain.'	
	une fel hue vaisaa dikh raae	
	'It appears that he'll fail.'	

The Dakhini Urdu construction has an exact counterpart in Telugu with the element aTTu corresponding to vaisaa. The first sentence above in Telangana Telugu is:

TTe vaana occet aTTu goDtunnadi
 'It looks like it will rain.'

The Standard Urdu equivalent of such constructions would involve a complement marked by the conjunction ki 'that' to the right of the main verb.

DU une paas hue vaisaa dikh raae
 SU aisaa lagtaa hai ki vo paas ho jaaegaa
 'It appears that he will pass.'

Contrary-to-Fact Sentences. In Telangana Telugu, but not Standard Telugu, a form of the verb consisting of the imperfective suffix plus the definite past occurs in both a past habitual sense and in the 'then' clause of contrary-to-fact sentences. For example from the stem kalus- 'to meet' may be formed kalustunTi 'I used to meet' or 'I would have met' as illustrated by these two sentences:

TTe prati roozu neen vaanni galustunTi
 'Every day I used to meet him.'
 neen aaDiki voote, vaanni galustunTi
 'If I had gone there, I would have met him.'

In both SU and DU a verb form consisting of the imperfective suffix -taa plus the past thaa has a past habitual meaning. For example, SU and DU maiN detaa thaa 'I used to give'.

This form is also used in Dakhini Urdu for the 'then' clause of contrary-to-fact sentences, something which never occurs in Standard Urdu. An example is:

DU agarce une ye kaam kartaa to maiN us kuu das ruupie
 detaa thaa 'If he had done this work, I would have
 given him ten rupees.'

In Telangana Telugu there is another verb form consisting of the imperfective participle plus the pronominal base which also shares these two meanings and uses. For example:

TTe occetooDu 'he used to come/he would have come'

It seems reasonable to suppose that in Dakhini Urdu the verb form -taa thaa which originally only meant 'used to do' came to be used in contrary-to-fact sentences on the pattern of Telangana Telugu which has a single verbal form in both cases.

Correspondence of DU kii with TTe -oo. The conjunction kii 'that' is a complementizer in both SU and DU with similar functions.

DU mere kuu naiN maalum kii une kyaa bolaa
 'I don't know what he said, lit. to me
 it is not known that what he said'

In Telugu, indirect questions like this take the complement marker -oo.

TTe naak erkaleedu 'I do not know.'
 vaaD een jeppinDu 'What did he say?'
 vaaD een jeppinD-oo naak erkaleedu
 'I don't know what he said.'

The DU sentence above has an alternate form in which the typical Indo-Aryan complement structure kii S has been replaced by the Dravidian pattern S kii.

DU une kyaa bolaa kii mere kuu maalum naiiN
 'I don't know what he said.'

This is only the first piece of evidence that the complementizer kii of DU is to be equated with Telugu -oo. Consider these 'whether-or-not' indirect questions:

DU mere kuu naiiN maalum vo logaaN aae kii naiiN kii
 TTe vaall occinr-oo leed-oo naak erkaleedu
 'I don't know whether they came or not.'

The form of the 'whether-or-not' sentence is identical in both languages:

DU	aae	kii	naiiN	kii
TTe	occinr-	oo	leed-	oo
	'came	or	not	or'

The occurrence of kii...kii in Dakhini Urdu corresponding so closely to the Telugu -oo...-oo suggests again that the Dakhini Urdu construction has been patterned on that of Telugu. In Standard Urdu the second occurrence of kii is completely ungrammatical.

One of the characteristic expressions of Dakhini Urdu is the phrase kyaa he kii which translates 'perhaps, maybe, I'm not sure.' It turns out to be an exact equivalent of the Telugu eemoo which has the same meaning and usage. These forms consist of the interrogative 'what' (TTe eem and DU kyaa) plus the complementizer (TTe -oo and DU kii). In DU the verb 'is' is included in the form he for hai. The forms TTe eemoo and DU kyaa he kii may therefore be analyzed as indirect questions and paraphrased as 'I don't know what it is'.

An exact parallel can also be seen in pairs such as these:

DU une aaya kii kyaa he kii
 TTe vaaD occinD-oo eem-oo
 'I wonder if he came or not.'

Indefinites and Interrogatives. In all three languages, there is a systematic relationship between interrogative pronouns and indefinite pronouns. In SU, indefinite pronouns are formed either by

the addition of the exclusive particle hii or ii to the interrogatives or they are reflexives of earlier such forms. In Telugu, the indefinite forms are regularly derived from interrogatives by the same enclitic particle -oo which forms indirect questions. Dakhini Urdu, not surprisingly, shows the Telugu pattern and forms indefinites from interrogatives by the addition of kii. The corresponding forms in all three languages are as follows:

TTe	eem	'what'	eemoo	'something'
DU	kyaa		kyaa kii	
SU	kyaa		kuch	
TTe	evaru	'who'	evaroo	'someone'
DU	kaun		kaun kii	
	kis		kis kii	
SU	kaun		koii	
	kis		kisii	
TTe	ekkaDa, eeDa	'where'	ekkannoo	'somewhere'
DU	kaaN		kaaN ki	
SU	kahaaN		kahiin	
TTe	eppuDu	'when'	eppuDoo	'sometime'
DU	kab		kab kii	
SU	kab		kabhi	

The elements -oo and kii are not as closely bound to the interrogative as is the corresponding formative hii/ii in SU. This is clearly shown when the indefinite form is followed by a postposition, in which case the postposition occurs between the interrogative and the enclitic.

TTe	evariki	'to whom'	evarikoo	'to someone'
DU	kis kuu		kis kuu kii	
SU	kis ko		kisii ko	
TTe	ekkannunci	'from	ekkannuncoo	'from somewhere'
DU	kaaN se	where'	kaaN se kii	
SU	kahaaN se		kahiin se	

Verbs of Saying. Perhaps the first thing which strikes a speaker of Standard Urdu or Hindi when hearing Dakhini Urdu for the first time is the frequency and variety of constructions involving the verb bolnaa 'to say, speak, talk' and its related forms bolke 'having said' and bole to 'if one says/asks'. The DU verb bolnaa corresponds not only to SU bolnaa 'to speak, talk' and kahnaa 'to say', but often to socnaa 'to think' and caahnaa 'to want' as well.

The Verb kate. The DU verb form kate appears to be the only remnant of the verb stem kah 'to say' which has been retained in the language. It is a third-person present tense form meaning 'they say,

it is said' and its presence in a sentence implies that the speaker is relaying information heard from others and thereby disavows any responsibility. Again, an exact parallel is found in the Telugu form aTa.

DU une aaya kate
TTe vaad occinD aTa 'He came (so they say)'

Equivalence of DU bole to and TTe anTe. The TTe verbal form anTe is the stem an 'say' plus the conditional suffix -te with the sandhi n + t > nT. The meaning of anTe is therefore 'if one says then...' The DU form bole to is a precise parallel to anTe since it is compled of the third person singular subjunctive/conditional of bol 'say' and the conjunction to which links the conditional clause with the result clause in both SU and DU. With the formal identity of bole to and anTe established, several parallel constructions in Dakhini Urdu and Telugu may be noted.

In all three languages there is a close relationship between the interrogative 'why' and the form meaning 'because'.

TTe	enduku	'why'	enduk anTe	'because'
DU	kaaekuu		kaaekuu bole to	
SU	kyoN		kyoNkii	

In both Dakhini Urdu and Telugu these forms occur with embedded imperative sentences, with or without a concluding clause. An example of the first case is:

DU karo bole to naiiN karaa
TTe ceyyam anTe jeeya leedu
 '(Even though) he was told to do it, he didn't.'

Imperative verb forms occur with bole to and anTe without a concluding clause have a meaning of insisting or urging that action.

DU	dekho	'look'
	dekho bole to	'come on, have a look'
TTe	suuD	'look'
	suuDum anTe	'come on, have a look'

In both Dakhini Urdu and Telugu, sentences which express a definition, A is defined to be B, are expressed with bole to and anTe.

DU	bhot duur bole to kittii duur
TTe	caana duuram anTe enta
	'How far is "very far"? , lit. when one says
	"very far", how much is it?
DU	šer bole to jangal kaa baašaa
TTe	peddapul anTe aDvi-ki raazu
	'The lion is the lord of the jungle, lit. if
	one says "lion", it is the lord of the jungle'

The Quotative bolke. In form and in many of its functions, bolke corresponds to Telugu ani, the quotative particle or participle which is characteristic of all Dravidian languages. The DU form, like Telugu ani, Tamil enru, etc., is the perfective non-finite form of the verb 'to say'. Compare the Standard Urdu sentence with the complementizer kii with the Dakhini Urdu and Telugu sentences:

DU maiN ye kaam karaa bolke bolaa une
TTe neen ii pani jeesinn an jeppinDu
SU us ne kahaa kii maiN ne ye kaam kaaa
 'He said that I did this work.'

DU une ye kaam karaa bolke mere kuu maalum hai
TTe vaaD ii pan jeesinD an naak erkee
SU mujh ko maalum hai kii us ne ye kaam kaaa
 'I know that he did this work.'

Causal Use of 'bolke'. The quotative participle in all Dravidian languages also occurs in a number of cases with a clear causal meaning. In Dakhini Urdu the meaning of bolke has been extended so that it is now the chief means for expressing the relationship of cause and result. A bolke B therefore means 'because A, then B' or 'A, therefore B'.

DU une vaaN naiiN hongii bolke maiN naiiN gayaa
TTe aam aaD unDaa ani neem boo leedu
 'She wouldn't be there, therefore I didn't go.'
 'I didn't go because she wouldn't be there.'

Onomatopoeitic Use of bolke. An extension of bolke parallels the use of ani in Telugu to report sounds accompanying certain actions.

DU taT bolke lakRii tuuTii
 'The stick broke with a "taT"
TTe paTm ani kaTT irgindi
 'The stick broke with a "paT"

These are but a few of the pervasive parallels and similarities which can be shown to exist between Dakhini Urdu and Telugu. Such examples provide particularly clear evidence for the modification and accommodation of Indo-Aryan grammatical structures in the direction of Dravidian patterns within relatively recent times.

1 In representing Urdu and Telugu forms, a double vowel letter indicates the corresponding long vowel, except for Urdu e and o which are always long; N represents nasalization of the preceding vowel; T D R are retroflex stops.

The Tamil Liquids

Harold Schiffman
University of Washington

Tamil and some other South Dravidian languages are somewhat unique in that they possess three phonological contrasts in the area of what are usually referred to as r-like segments (continuants, trills, flaps, etc.) as well as two contrasts in the lateral area (and in some of the languages, more). Because of an unfortunate lack of uniformity in the transcriptional systems that have been used to describe these segments, and because of some other tendencies that are difficult to group under one rubric, the question of what is an "r" and what is not an "r" has been historically unclear. It is the purpose of this paper to attempt to clear up the question of both the phonetics and the phonology of continuants and laterals in Tamil and to some extent in the other South Dravidian languages that have similar contrasts.

The question of what is or what is not a phonetic contrast in Tamil is, as always, complicated by the diglossic situation, since contrasts that are maintained in the literary language are not always maintained in the spoken dialects; furthermore, since many speakers learn to make contrasts in Literary Tamil, they often feel that they should (or that they even actually do) make them in spoken Tamil, even if the general population (and in fact they themselves) does not usually make such contrasts. It will be necessary throughout this paper to distinguish the literary dialect from the spoken dialects, and also to point out where certain phonetic contrasts are only normative, and are not maintained in normal casual speech.

Before discussing the Tamil situation, it would be perhaps instructive to review the literature on r and l in other languages, i.e. the general phonetic and phonological distinctions that are found in a universal way to distinguish these classes of segments. It is naturally to be hoped that previous research will have found a principled basis for distinguishing these sounds, so that we could then apply any such universal criteria to the situation at hand.

In the standard works in phonetics, however, things are not particularly clear. Most works group l's and r's together as a class of consonants ("sonorants", "liquids") that seem to share certain features but in the final analysis there is often little basis for any grouping on phonetic grounds. (The phonological grounds are fortunately somewhat stronger, as we shall see). Thus for example Heffner (1950) groups l's (lateral consonants) with nasals, fricatives, and other r-sounds under "open consonants" (pp. 139-62). Within this latter group he makes a primary distinction between laterals and fricatives:

"Consonants produced by the occlusion of the central region of the oral passage while the breath stream is made to flow over the sides of the tongue, through the teeth and thence forward to the lips are lateral consonants. The other open consonants may be grouped together as fricative consonants, unless one wishes to segregate from the others of this group

the fricative "r" sounds and those few which are particularly marked by the relative prominence of their third or final phase." (Heffner 1950:141).

Heffner, like many other phoneticians, stresses that the primary articulatory feature that distinguishes l's from other consonants is

"the production of an occlusion along the median line of the roof of the mouth in such a way as not completely to stop the flow of the breath stream but to force it to escape over the lateral margins of the tongue, through the teeth, and along the inside of the cheeks to the lips." (1950:143-4).

As for a definition of r-sounds, since Heffner classifies them as being of two sorts, namely "intermittent stops" and "open consonants", there is little that can be said about them in a general way, except perhaps that if sounds are ranged along a continuum from consonants with complete occlusion to vowels with none, r-sounds are found on two points somewhere in the middle, with "intermittent stop" r's closer to stops, and other r-sounds closer to the vowels:

"...there are in various languages a number of open r-sounds of the fricative type, some of which indeed have so far lost their friction as to become very much like vowels." (p. 146).

Heffner goes on to stress that r-sounds of both types can only be classified together on historical or "linguistic" grounds (i.e., phonological), because "phonetically, [r], and [R] and [ɹ] are very different sounds." (p. 147).

Ladefoged (1971) classifies r's and l's as some of the many kinds of manners of articulation that can accompany sounds produced at various points of articulation. In fact, in Ladefoged's table 25 (p. 46) r-like sounds are included under five of the ten different kinds of manners he lists (although he admits that this list of ten is not complete): there are approximant r's, e.g. [ɹ], trilled r's, e.g. [r, R], tapped r's [ɾ], flapped r's [ɾ̥, ɾ̬], and central and lateral r's [ɹ, ɹ̥]. Laterals are, of course, another category of manner. He contrasts lateral with central as being mutually exclusive, as are in fact all the categories listed in each "group": an oral vowel cannot be nasal, or vice versa; a tap cannot be a flap. But of course there can be some cross-classification between the groups, as for example lateral and flap (as seems to be the case with the Tamil retroflex lateral, especially before low vowels, as we shall see below).

But as we have already pointed out, r-like sounds can be found among many of the different manners, so while some kinds of r-like sounds, e.g. the central, "American" r, or [ɹ], cannot be by definition lateral, other r-sounds are more difficult to pin down to one or another category, i.e. there is no feature "r-like" that is a distinct manner or articulation. As with Heffner, we find no justification in Ladefoged's discussion of r-sounds (as indeed none is intended) for the notion that r-sounds are a phonetic class, which is not the case with l-sounds, which are clearly and always lateral.

Ladefoged considers the possibility that some of these sounds might be grouped together on the basis of their auditory similarity, even if a physiological basis for so grouping them can not be found, but he does not propose that r-sounds might be so grouped.

Chomsky and Halle (1967) have also discussed r and l in an attempt to decide which phonological features might be applied to distinguish them, but as we have already hinted, while r and l can easily be distinguished on phonological grounds, the phonetic grounds for so doing are not obvious. Their discussion does not add much to our understanding of the phonetics of r and l. (Chomsky and Halle 1963:18).

Clearly more work needs to be done on the phonetics of r and l, particularly the acoustic and auditory characteristics of these sounds. To my knowledge, there are no cross-language auditory or acoustic studies of these sounds, and although there is beginning to be some work on infant recognition of these sounds cross-linguistically, there are no conclusions to date that will help us clarify the problem.

It seems obvious to me that in general, l's can often be distinguished (in a language that has a contrast between r and l) but that the r-like sounds are sometimes more difficult to classify. That is, if a continuant has lateral occlusion, then it is a lateral; but no particular distinguishing feature emerges to clearly mark r's; they are a typically minus marked class of sounds--not lateral, not nasal, not fricative (although even here some languages e.g. Czech, display a fricative r that is very close phonetically to [ʒ].) Furthermore, the question of r's and l's is fraught with the problem that many East Asian languages, notably Japanese, Chinese, Korean, and some Tibeto-Burman languages, and others, do not distinguish phonologically between r and l at all, having only one phoneme that sometimes has allophones that are r-like, and others that may be lateral.

Turning to the Tamil situation, let us first deal with the supposed phonetic contrast between the two alveolar r's, *ɾ* and *ɽ*. In the dialects of Tamil that are influenced by Malayalam (those spoken in Kanyakumari district), and in Malayalam itself, there seems to be a genuine contrast between these two historically different sounds, even though the phonetic contrast in Malayalam is quite different from that of Tamil dialects that maintain a contrast. Ladefoged characterizes the Malayalam distinction as being that of

"one being more dental and the other more alveolar. A recent palatographic investigation showed that these trills are probably further distinguished by the action of the back of the tongue." (Ladefoged 1971:50)

My own impression of this phonetic distinction is that in the dialect of the speaker of Malayalam I investigated, the more forward ("dental" of the two r's also has a palatalized character, or at least a forward movement of the tongue that produces an effect similar to that of palatalization in, e.g., Russian. In dialects that maintain a contrast in Tamil, however, the difference between *ɾ* and *ɽ* seems to be that the first is a flap or tap, while the second is a trill

(Ladefoged 1971:51). Phonologically and historically the two sounds are quite different, as I have attempted to show in an earlier paper (Schiffman 1975:69-85) even if some reflexes of the alveolar /t/ do merge phonetically with /r/ in most dialects. In my analysis the alveolar /t/ shares many features with the stops /t/ and /t̪/, except that /t̪/ is [-anterior] and /t/ is [+distributed]. I reproduce here the feature matrix given there for the six underlying stop consonants of Tamil.

	p	t	t̪(r)	t̪(T)	c	k
coronal	-	+	+	+	+	-
anterior	+	+	+	-	-	-
distributed	-	+	-	-	?	(-)
high	(-)	(-)	(-)	(-)	+	+

In my analysis I have tried to keep /r/ and /r̪/ phonologically separate in order to handle certain morphophonemic alternations that /r̪/ is subject to, such as oblique stems of nouns, certain past tense formations, etc., while /r/ is immune to such changes. Phonetically as I am trying to claim, /r/ and /r̪/ merge in intervocalic position so that in most dialects there is no contrast.

This issue, however, is complicated by certain sociolinguistic factors. The Tamil orthography distinguishes these two sounds, and literate people are taught that there is a distinction between them, e.g., that /r/ is mellina ra ("soft" r) while /r̪/ is valina ra ("strong" or "forceful" r). This distinction seems to imply that there is a phonetic contrast between them of mellow vs. strident or 'soft' vs. 'hard' or whatever. Many speakers of Tamil claim to make a distinction based on this terminology, but if pressed may admit that they trill /r̪/ when speaking "correctly" (i.e. when speaking Literary Tamil) but do not do so when speaking spoken Tamil. Other than with speakers of Kanyakumari dialect, therefore, it is very difficult to find illiterate speakers of Tamil who make a phonetic distinction between these two r's. The distinction therefore, seems to be an artifact of literacy. Furthermore, the existence of a "folk" system for referring to them is evidence for the wide-spread problem that Tamil speakers have of keeping them straight. I refer here to the terms cinna ra 'little r' and periya ra 'big r' that children and others use to refer to them in spelling words correctly, since if there were a true phonetic distinction, there would be no need for a labeling system based on the size of the graphemes.

For an example of a recent study of Tamil phonetics that makes a claim for a phonetic distinction between the two, we have the statement that /r/ is

"...produced by a single quick flap of the tongue at the alveolar arch. The breath escapes between the tip of the tongue and palate. The vocal cords are vibrated. The soft palate is raised. This sound is known as the voiced alveolar flap." (Rajaram 1972:35)

whereas /r̪/ is described as

"...produced by the rapid vibrations by the tip of the tongue against the middle of the alveolar ridge. The soft palate is raised to close the nasal passage. The vocal cords are vibrated. This may be described as a voiced alveolar trill." (ibid. p. 36)

The examples given for this and all other specimens of Tamil in the whole work are in fact from Literary Tamil, that is, the spelling pronunciation of the literary language.

By contrast, most descriptions of spoken Tamil, and in fact all textbooks used to teach spoken Tamil to foreigners, (except those based on the Kanyakumari dialect, e.g. Shanmugam Pillai 1965), do not claim a phonetic distinction between /r/ and /r̥/, since there is in fact none in any dialects other than those influenced by Malayalam..

The British phonetician Firth did a brief study of Tamil phonology entitled "A Short Outline of Tamil Pronunciation" (Firth 1934) and this is worth examining since the specimen of Tamil he studied is obviously the literary dialect with some concessions toward spoken, i.e., with no phonetic contrast between /r/ and /r̥/, although some reflexes of geminate /rr/ and /nr/ occur in the sample. The former, he states, are often realized as [ttr] (but also [tt̪]), while /nr/ is realized as [ndr], a more literary pronunciation. He concludes the description of r-sounds by stating that

"In this brief sketch the Tamil r-sounds cannot be fully investigated, but it appears probable that the use of the two written characters ர and ற, does not correspond to any parallel habits of speech." (Firth 1934:xvi).

By contrast, the specimen of Tamil given in the Principles of the International Phonetic Association (IPA 1949:38-9), although labeled "Tirunelvalli, spoken language", is almost completely Literary Tamil, except for some items that are possibly the result of transcriptional mistakes, or hypercorrections on the part of the informant. In any event, /r/ and /r̥/ in intervocalic position are not phonetically distinguished in that sample even though only one instance of /r̥/ occurs, i.e. அரவம் /e_ravum/, transcribed there [e:ravum]. This is yet another example of the tendency to err on the side of literary pronunciation that Tamil speakers exhibit when they are in a "formal" situation--having one's speech recorded and preserved forever in the publication of the IPA has apparently led this speaker to claim that his Tirunelveli dialect actually maintains contrasts and lacks other changes not found in any true spoken dialect of Tamil, while the usual contrast between /r/ and /r̥/ are not maintained, or at least recorded.

In the area of laterals, the distinction between [l] and [ɭ] is historically and phonologically important, with many minimal pairs and varying morphophonemic results dependent on the contrast.

kallu 'stone'
puli 'tiger'
palli 'lizard'
niilam 'blue'
vaal 'tail'

kallu 'toddy, country liquor'
puli 'tamarind, sour'
palli 'school, room, chamber'
niilam 'length'
vaal 'sword'

Nevertheless, some speakers do neutralize the contrast between these two sounds, with the retroflex lateral being lost. This is particularly true of dialects in the Trichy-Tanjore-Madurai area, i.e. central Tamilnadu, but also observed even in Coimbatore and South Arcot districts. Literate speakers of course learn to make the contrast, but like the contrast between the r's, the process of learning to keep them separate is for some a difficult one.

The question of how to distinguish phonetically between alveolar and retroflex l's is fairly simple--[l̠] is a true [l̠]-quality lateral, i.e., with the tongue close to the position of the vowel [ɪ], and the back of the tongue lowered. For [l̠] the blade of the tongue is retracted to touch the hard palate. Firth describes this sound as

"retroflex and flapped, like intervocalic t and n. The tip of the tongue must be curled back and flapped very quickly forward, the under edge just catching the teeth ridge on its way forward and down. The main body of the tongue is not drawn back as for ɹ. (Firth 1934:xiv-xv).

The flapped quality that Firth mentions is particularly noticeable when the following vowel is [a], since the tongue then strikes the base of the mouth with an audible slap that is not so noticeable when the tongue returns to a high-vowel or especially back-vowel position.

To distinguish /l/ and /l̠/ phonologically, we are faced with the same problem as with other retroflex consonants, that is, existing descriptions of retroflexion do not adequately capture the kinds of generalizations we would like to capture, as I have tried to point out earlier (Schiffman 1975). However, if we are just talking about the distinction between [l̠] and [l̠], then the feature [anterior] can be used to distinguish retroflex consonants from their non-retroflex counterparts, i.e. [l̠] is [+ant] and [l̠] is [-ant], which is the solution chosen by Ramaswami (1979:43).

The final segment to be dealt with in this discussion of l's and r's is a problematical one. This sound, symbolized ɻ in the Tamil orthography (and also found in Malayalam), has been transcribed variously as [ɹ, ɻ, ɻ, z, zh, ɹ, R, ɹ] and perhaps even some others. The Tamil Lexicon uses [ɻ] while Burrow and Emeneau (1961) use [ɹ] (I prefer the latter, the reasons for which will become more evident in the rest of the discussion). As is perhaps evident from the wealth of transliterations, various scholars have not come to agreement on either the phonetics or phonology of this segment.

For example, Firth (1934) transcribes it as [ɹ] and describes it as

"A frictionless continuant having an obscure unrounded back-vowel quality. ɹ is made by drawing back the whole tongue, and spreading the blade laterally, making it thick, short and blunt, so to speak, so that it approaches the middle of the hard palate. The result is a very retracted liquid sort of r-sound. Sometimes the under side of the tip of the tongue is raised towards the mid palate." (Firth 1934:xvi)

Ladefoged (1971) briefly mentions this sound in Tamil, calling it a "voiced postalveolar approximant" and transcribing it, like Firth with [ɹ], but describes the same sound in Malayalam as a retroflex approximant, and transcribing it with [ɻ]. (Ladefoged 1971:50-1). It is not clear to me that these sounds are that different in the two languages, nor that Tamil's [ɹ] is more forward than Malayalam's [ɻ].

Rajaram's 1972 booklet on the phonetics of Tamil is not much more helpful. He transcribes it with [ɹ] and describes it as produced with

"...the tongue...curled back and the tip of the tongue... placed very near the roof of the mouth but not touching it. The air stream is allowed to pass through the sides of the tongue as well as in between the tip of the tongue and the roof of the mouth... . This sound may be described shortly as a voiced retroflexed palatal lateral (Rajaram 1972:33).

It is Rajaram's unfortunate use of the term "lateral" that unnecessarily complicates the categorization of this sound, since by his own description, the tongue is not touching the palate anywhere in its production, so that the terms palatal and lateral are completely inaccurate. As we have already seen, most phoneticians agree that for a sound to be lateral, there must be occlusion between the center of the tongue blade and the alveolum or palate, with the air escaping to one or both sides of the tongue. This is clearly not the case here.

It is perhaps worth citing here the description given by Tol-kāppiyār in his grammar of Tamil, believed to be the oldest extant work in Tamil and to date from the early centuries of the modern era. He states in sutra 95 that

"nūnīnā vaṇari yaṇṇam varuṭa
rakāra lakāra māyiraṇṭum piraṅkum."

"r and l are produced by the tip of the tongue being raised and allowed to gently rub against the hard palate."
(Subrahmanya Sastri 1930, I:14).

Aside from not distinguishing these two sounds from each other, this description also seems to indicate that /r/ is a palatal sound, and that there is contact between the tongue and the palate; in fact Tol-kāppiyār's phonetic description of most of the lateral, nasal and continuant sounds is inadequate, because the only distinction between /r/ and /l/ on the one hand and /r/ and /n/, on the other, for example, is that in the latter, the tongue "gently touches" the hard palate, while for the former pair, the tongue "gently rubs" against the hard palate. Fortunately, as we shall see later, Tol-kāppiyār's description of phonology is more accurate than his phonetics.

We have now seen four different descriptions of /r/, none of which comes completely to terms with this sound. My own impression is that Firth's description is the most accurate, despite his characterization of it as having an "obscure" quality. On phonetic grounds it is clearly not a lateral, and should probably be grouped with r-sounds.

despite the tradition of transcribing it as [ɻ]. However, in the absence of straightforward acoustic and auditory studies, which might perhaps show us that /ɻ/ belongs squarely with r-sounds rather than with laterals, glides, fricatives, or whatever, it seems to me we must look for support from phonology.

Before discussing the phonological patterning of /ɻ/ in Tamil, it should be noted that the occurrence of /ɻ/ in modern spoken Tamil is, like the occurrence of /r/, complicated by sociolinguistic factors. That is, this sound has been lost from most spoken dialects and is only used in Literary Tamil, where it has acquired the reputation of being a very difficult but distinctly Tamil kind of sound, such that if a person can pronounce it, he can be said to speak Tamil well, whereas if the opposite is the case, he does not know Tamil.¹ Thus one's ability, or lack of it, to pronounce /ɻ/ has become a kind of shibboleth for Tamils, such that a great deal of attention is paid to its production and correct occurrence in Tamil words. Indeed the final segment of the name of the language itself (/tamiɻ/) is an instance of /ɻ/, even if it is transliterated as /l/ and many people pronounce it [ɻ]. It seems to be a phonologically unstable sound in many ways, since it has been lost or modified in all the Dravidian languages (which all had it in earlier stages) except, of course, in Tamil and Malayalam. In most of the other languages, it has merged with /l, lh, l, w, r, g, y, d, s, ʃ, r, rr, or s/.² That it has gone in so many divergent directions seems to be a testimony both to its instability and its phonetic vagueness; even in Tamil dialects that have lost it, it has merged with segments as different as /l, k [g], and /y/, i.e. IT /maɻai/ 'rain' can be found in various dialects as [male], [mage], [maye], and for dialects that lose /l/, even [male]. In any event, /ɻ/ has become a sociolinguistically marked segment, preserved in most Tamil dialects only by the pressure of literacy and because of its supposed "uniqueness" in Tamil. Thus it differs from /r/ in that the latter has no "unique" status since trilled r's are to be found in many languages of the world.

Phonologically it seems clear to me that [ɻ] is to be grouped with r-sounds. Tolkāppiyār gives some very interesting phonotactic reasons for this, as he himself groups it with /r/, which we have seen in sutra 95. In sutra 29 he says:

"yaralā vennum pulli munnar
mutalā keluttu nākaramōṭu tōṇrum.

Y, r and l can be followed by those consonants which can stand as the initial members of a word (i.e.) k, t, n, p, m, c, v, ñ, y, and ṇ." (Subrahmanya Sastri 1930:5)

In sutra 30 he says that all consonants except /r/ and /ɻ/ can be geminated:

"meynnilai cutti nellā veluttun
tammur rāmvarūm rāḷavan kaṭaiyē.

All consonants except r and l can be followed by the same consonant." (Subrahmanya Sastri 1930:5).

In sutra 48 he groups it with /y/ and /r/ as consonants that can precede stops and nasals, whereas /l/ and /ɭ/ may not precede them, while in sutra 49 he states:

"kurumaiyu netumaiyu maḷavir kātāḷir
roṭarmoli yellā neṭṭeḷut tiyala.

r or ɭ at the end of toṭarmoli is considered in the same way as if it follows a long vowel irrespective of its being followed by short or long vowel"(S. Sastri 1930:8)

In addition to these environments and rules for occurrence or non-occurrence of /ɻ/, which are still valid in Literary Tamil today, there are some other facts about /ɻ/ that should be noted. Although /ɻ/ is retroflex and obeys other constraints on retroflex consonants, such as not occurring initially, it does not have the same effect on dental consonants that other retroflex consonants do, i.e., causing them to assimilate to retroflexion. For example, retroflex /ɭ/ in a verb-stem like /keel/ 'hear, ask' causes the past tense formative /t/ to retroflex: /keel-t-eeṇ/ → /keet-t-eeṇ/. In other cases, /l/ assimilates to nasality, but also causes past tense /t/ to assimilate to retroflexion: /aal/ 'rule' → /aaṇ-ḍ-aan/ 'he ruled'. Stems with final alveolar lateral also have a similar effect: /nil/ 'stand' → /nin-r-aan/ 'he stood'; /vil/ 'sell' → /vir-r-aan/ 'he sold'. Stems with final /ɻ/, however, do not have this effect--no assimilation to retroflexion is ever caused by the presence of /ɻ/: /aaɻ/ 'be deep' → /aaɻ-nt-atu/ 'it was deep'; /taɻ/ 'let down, deepen' → /taɻ-tt-at/ 'it let down'; /paar/ 'go to ruin, become decayed' → /paar-tt-atu/ 'it became decayed'; /aɻu/ 'weep' → /aɻu-t-atu/ 'it wept'.

In spoken Tamil, of course, /ɻ/ usually merges with /l/, so that the contrast between /aal/ 'rule' and /aaɻ/, 'be deep', even if lost on the surface when in isolation, is preserved in the morphophonemics until a very late rule merges them (otherwise the rule that assimilates past tense dentals to retroflexion in the presence of /l/ would do the same in the presence of /l/ from underlying /ɻ/.) As it is, the contrast is evident only in pairs like /aaṇ-ḍ-atu/ 'it ruled' vs. /aal-nt-at/ 'it was deep'.

It thus seems clear that /ɻ/ is phonologically a very different kind of sound from /l/, sharing more features in common with /r/ than with any kind of lateral. There are in fact no environments or constraints that apply to it and to laterals, but not to /r/. It thus forms a natural class with other sonorants, but within the sonorants it forms a natural sub-class with /r/ only. It therefore shares most distinctive features with /r/ but differs from it in that it is retroflex. A feature matrix for /l/, /ɭ/, /ɻ/, and /r/ would probably look something like the following:

	l	ɭ	r	ɻ
sonorant	+	+	+	+
continuant	+	+	+	+
lateral	+	+	-	-
anterior	+	-	+	-
coronal	+	+	+	+
retracted		(+)		(+)

One of the reasons for writing this paper has been to try to be more precise about the phonetics and phonology of /r̥/, since transcriptions of it using /l̥, ʒ/, or whatever, have been both phonetically inaccurate and phonologically misleading. What then are we to use as a symbol for this sound?

/l̥/. As we have shown, the use of a symbol like l̥ (or l̥ or lh) is misleading as it tends to perpetuate the notion that /r̥/ is a kind of lateral sound. It has been used in the Tamil Lexicon and in many other sources, particularly in India, where it seems to be clear to those who use it since they know the language. To scholars outside the area l̥ is definitely confusing.

/r̥/ is inaccurate because it leads one to think that one is dealing with the Indo-Aryan, particularly Hindi, flapped retroflex r̥, which is far from the case. A phonetic [r̥]-like sound is found in many Dravidian languages, of course, often as an allophone of /t̥/ or /d̥/, intervocalically, e.g. /viiṭu/ is phonetically [vā:r̥u] 'house'.

/ʒ/ and /zh/ are unfortunate and inaccurate because they obscure the affinity and patterning of /r̥/ with /r/. There is a tendency among French scholars to equate /r̥/ with French [ʒ] and to transliterate French words with [ʒ] with Tamil /r̥/, etc. Some scholars have used /ʒ/ because of its 'unambiguous' nature, and because of its vagueness as a historical cover symbol for this sound in Proto-Dravidian. Latter-day uses of zh are to be found on public signs for place names, e.g. kozhikodu for Calicut, Sirkazhi for /cirkaari/, etc.

[ɹ], although phonetically correct is not found on anyone's typewriter unless one puts the paper in upside down, and R, although found on everyone's typewriter has consistently been used only by Americans; it is easily confused with the same symbol used by others for /r̥/, and in the IPA system it suggests a phonetic uvular quality, which /r̥/ of course does not have.

The only symbol left that makes phonetic and phonological sense is /r̥/, as should be clear by now. /r̥/ was first used by Burrow and Emeneau in their DED (1961) and used consistently by Emeneau since. Its only drawback is the lack of a unique symbol for it on many typewriters, although the present machine makes a very decent /r̥/ by underscoring r with an umlaut.

As Tolḱāpiyār in effect has pointed out, classifying l̥ as an r-sound means that Tamil has a symmetrical system of liquids--an alveolar l and r, and a retroflex l̥ and r̥. Such a system is of course rare in the languages of the world, but an interesting parallel is found in Proto-Altaic, where scholars have concluded two kinds of l's and two kinds of r's must have existed (Poppe 1960). The nature of the phonetic difference between Proto-Altaic l¹ and r¹ on the one hand and l² and r² on the other, is not clear, since what is being dealt with is a reconstructed Proto-language, but Poppe notes, for example that

"Es ist gewiss möglich, dass es nicht ein *r̥ sondern ein *ř von der Art des Tschechischen ř gewesen ist." (Poppe 1968)

It would probably be instructive to see whether individual etyma from the Dravidian corpus with any of these liquids bear any resemblance to Proto-Altaic etyma with corresponding liquids, but this is a matter for another paper.

Notes

1. This of course ignores the fact that phonetically this segment occurs in Malayalam as well, where it is in fact better preserved than in most Tamil dialects.
2. For various historical developments of *ɾ see Krishnamurti 1958, Burrow and Emeneau 1961, and Emeneau 1971.

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Jēnu Kurumba
First Report on a Tribal Language of the Nilgiri Area
Kamil V. Zvelebil, University of Utrecht

During my recent field-work on the Irula language (the Nilgiris, South India), I had the opportunity, in March 1978, to interview a couple of Jēnu Kurumba informants at Teppakāḍu, Mudumalai Wild Life Sanctuary (Gudalur Taluk, Nilgiri District).

1. There is a very meagre ethnographic literature on the Jēnu Kurumbas alias Kāḍu Nāyikas¹⁾ and nothing at all has been published on their language, with the possible exception of a few notes by U.P. Upadhyaya who incorrectly regards "Jenu Kurumba" as a dialect of Kannaḍa.²⁾ Early ethnographers were not even aware that the Jēnu Kurumbas and the Kāḍu Nāyikas³⁾ were in fact one and the same tribe, going under several designations⁴⁾. All my Kāḍu Nāyika informants were adamant in their assertion that they were indeed Jēnu Kurumbas. They considered as ridiculous the suggestion that Jēnu Kurumbas and Kāḍu Nāyikas were two different communities. The identity of Jēnu Kurumbas and Kāḍu Nāyikas as being one tribal group was confirmed independently by Paṇiyan and Shōlega informants⁵⁾.

The Kāḍu Nāyikas (=Jēnu Kurumbas) of the larger Nilgiri area were enumerated in 1881, 1891, 1901, 1911, 1921, 1931 and 1941 as 1418, 1085, 2486, 2475, 4017, 1581 and 1520 souls respectively. The 1961 Census mentions the surprisingly low figure of 612. A rough present estimate for the Gudalur Taluk of the Nilgiri District is about 1300. In Kerala State, there may be about 4000 Kāḍu Nāyikas. Hence, the total population of the tribe may be 5300 in 1980.

Nowadays, Kāḍu Nāyikas live in small, rather isolated settlements in the Gudalur Taluk. A few cultivate small plots of land assigned to them by the government. Some of them work as farm labourers. A number of their men work as forest guards and elephant mahouts in the Mudumalai Wild Life Sanctuary. Hunting of small and bigger game (wild boar) and collecting forest produce (honey, bulbous roots) is still practiced. The women possess basket-making skills. There is limited rearing of poultry, pigs and goats.

Their huts, some of them still very simple, and deep in the forest, are long, low, the floor level with the ground, walls made of flattened bamboo, roof covered with grass or straw. Kāḍu Nāyikas

belong to the tall, long-armed, dark to very dark-skinned among the Wynaad tribes. The hair is curly or wavy. Both sexes wear earrings. The females wear long cloth of dark colours (red, indigo, green) and knot it over their right shoulder.

My informants who were professional elephant mahouts at Teppakāḍu were friendly and communicative but possessing a certain amount of dignity, pride and reticence which I did not find with the Kasabas or most Irulas.

2. Kāḍu Nāyikas call their language which I prefer to designate Jēnu Kurumba (JKu.)⁶⁾ naṇa ma·tu 'our speech'.⁷⁾ It is an independent South Dravidian tribal language, possibly closely related to Ālu and Pālu Kurumba, rather Kannaḍa-like, but less 'Kannaḍoid' than Shōlega.

2.1. The phonological features of JKu. manifest a few specific developments, but on the whole characterize the language rather as Kannaḍa-like with some typical Nilgiri areal traits. Among these traits, the most prominent is strong contrastive (phonemic) centralization of vowels which JKu. shares with Irula, e.g. ākki 'paddy', kā·riyā·wu 'a kind of snake', giṇan 'parrot', ciṇṇa 'small', enṇu 'woman', kēre 'pond, tank', bē·re 'different', pūli 'panther', iḱkūṭṭi 'hiccough', gōlu 'roof/ceiling'.

In a few items, JKu. has nasalized \tilde{a} and $\tilde{ā}$, always in the neighbourhood of -w-, cf. $\tilde{ā}$ ·we 'tor-toise', mā·wumara 'mango-tree', ji·wa 'life, soul' (for -w-, see below).

Kannaḍa-like is the development of v-> b- which JKu. shares with Shōlega, Kannaḍa, Koḍagu and Tulu: cf. bara 'coming, next', bale 'net', ba·le 'plantain', biculu 'heat', billu 'blow', belluḷi 'garlic', bē·ṭṭe 'hunting', bē·re 'different'.

Kannaḍa is alone among the larger SDr. languages in its development of *p- to h-; in this feature, JKu. agrees in many items (certainly not borrowings) with Kannaḍa and Badaga; in almost an equal number of items, h- has disappeared altogether; however, there is also a number of words in which p- has remained.

*p-> h- : haji 'hunger', hani 'drizzling rain', haḷe 'old', huy-d- 'to rain', hoḷe 'river'.

*p-> *h-> Ø-: asu 'cow', aṇa 'money', ani 'sew', alli 'house-lizard', uḷu 'worm', uṭṭu 'ant nest', o- 'to go'.

p- remains e.g. in pa·ne 'clay-pot', pūli 'panther', pu·cce 'cat', podice 'bush'.

In some items, h- reappears in emphatic or care-

ful pronunciation: a typical instance is *ennu* 'female', pronounced emphatically as [ʏennu] or [hennu].

Original *k- before front vowels is preserved, cf. *kennay* 'red dog (*Canis dukhinensis*)' (8) and *kemmalu* 'coughing, cough'. This feature points rather in the Kannaḍa (and Toda) direction than to Ta.-Ma.

Very interesting and, as far as I can say, specifically JKu. phonological features are

a. the existence of a bilabial nasalized fricative semivowel which is demivoiced, and occurs with nasalized *ā*, *ā̃*; it is a sound 'between' half-voiced [m] and [w], resulting from various developments;

b. the replacement of *-ḍ- by -r-.

For a), cf. **pāmpu*, Ka. *pāvu*, *hāvu*: JKu. *ā̃.wu* 'snake'; **māmara* or **māvumara*: JKu. *mā̃.wumara* 'mango-tree'; **yāmay*, Ka. *āme*, *āve*, *ēve*: JKu. *ā̃.we* 'tortoise'; **nām*, Ka. *nāvu*: JKu. *nā̃.wu* 'we (incl.)'; IA **jīva-*: JKu. *jī.wā* 'life, soul'.

b) The development of *-t->*-ḍ-> -r-: **nōt-* (Ko. *no.t-*, To. *nwi.t-*, Ta. *nōtt-*, Ka. *nōḍ-*): JKu. *no.r-* 'to see' (e.g. *no.rḍenu* 'I see/saw'); Ko. *go.r*, Ka. *go.ḍe*: JKu. *go.re* 'wall'. Not all -ḍ-> -r-, cf. *mo.ḍa* 'cloud, sky'.

-ñ- is phonemic at least in one item: *mañan*/*mañanu* 'son'. JKu. shares this form with some other Kurumba languages and with Irula.¹⁰⁾

-ḍ-, -dd- and -nn- are strongly palatalized when followed by front vowels: *o.ḍenu* [ʷo.ḍenu] or [ʷo.ḍenu] 'I go/went'; *no.rḍenu* [no.rḍenu] or [no.rḍenu] 'I see/saw'; *leḍḍi* [leḍḍi] 'elephant-dung'; *bannenu* [baññenu] or [baññenu] 'I come/came'.

2.2. In the sphere of derivational morphology the most striking feature is the highly productive derivational suffix -an, phonetically [-ʌn] or [-ən] forming substantives from noun-stems: *akkan* 'elder sister'¹¹⁾, *tamman* 'younger brother'¹²⁾, *ku.ran* 'mouse-deer' (cf. Ma. *kūran* 'hog-deer'), *giṇan* 'parrot' (DED 1318), *ca.regan* 'roe, gazelle', *noṇan* 'kind of fly', *muccan* 'black-faced monkey'. None of these items is apparently borrowed.

Composition, too, is interesting. It is characteristic for some Nilgiri languages (e.g. Irula) that the first member of the compound remains unchanged (unlike in Tamil); JKu. follows this model, cf. *ka.ḍupu.cce* 'wild cat', *ha.ḍu hēṇḍi* 'wild boar', *ka.ḍuna.yika* 'name of a people'.

2.3. In inflectional morphology, JKu. manifests some highly interesting features, and stands about midway between Ta.-Ma. and Ka. This is the pronominal system:

Sg.
 1. na·nu
 2. ni·nu
 3. m. avanu/avan
 f. ava
 n. adu

Pl.
 1. incl. nã·wu, obq. naña-
 excl. na·nga, obq. eña-
 2. ni·nga
 3. m. + f. avaru
 n. (adu)

Among the pronouns, 1.p.sg., 2.p.sg., 3.p.sg.m. and n. are identical with the pronouns of mod.Lit. Ka. (nānu, nīnu, avaru, adu); however, the fem. ava is like Irula or Spoken Tamil (whereas Ka. has avalu; this form was vehemently denied by JKU. informants). More striking is the plural. JKU. manifests the inclusive: exclusive dichotomy. The incl. pl. is quite obviously related to Ka. (JKu. nã·wu : Ka. nāvu, OKa. nām)¹³), whereas the excl. pl. is identical with the spoken Ta. 1.p.pl.excl. (JKu. na·nga : Spoken Ta. nānga, Lit.Ta. nāṅkaḷ). We would expect 2.p.pl. *nīmu or *nīvu (cf. Ka. nīm, nīvu, Ir. nī·mu), but instead we again have full agreement with Spoken Ta. (JKu. ni·nga : Spoken Ta. nīnga, Lit.Ta. nīṅkaḷ). 3.p.pl.m.f. corresponds to Ka. avaru.

The case-terminations manifest a similar situation. Accusative, like in Irula, has two allomorphs, -e and -ne, cf. ku·ran-e no·rdenu 'I see a mouse-deer', a·ne-ne no·rdenu 'I see an elephant'. Dative -gu and -ku (e.g. ka·ḍugu 'to the forest', u·ṭiku 'to Ooty') is again rather like Ta.-Ma. (Ka. has -ge/-ke). Loc. -(i)le is like Spoken Ta. (JKu. ka·ḍile 'in the forest'). However, ablative is formed like the Ka. ablative-instrumental in* -iṇda, cf. JKu. ka·ḍinda 'from the forest', maneyinda/maninda 'from the house' with Ka. maneyinda 'from the house'. The absence of a separate gen.-obq. form in JKU. is shared with Ir., cf. JKu. ka·ḍile 'in the forest', Ir. ka·ḍili 'in the forest-garden' (in contrast to Ta. kāṭṭil-ē 'in the jungle').

It is of course impossible to offer a more precise characterization of JKU. grammatical structure without a thorough study of many more data. However, it seems to me that the basic grammatical structure is about midway between Kannaḍa and Tamil, perhaps with a slant towards Kannaḍa. Even when there is Tamil-like construction the phonology is more Kannaḍa-like, e.g. o·da va·ra u·ṭik' o·y ban-nenu 'last week I went to Ooty', na·nu ninag' aṇa koḍtenu 'I will give you money'. This last example shows the most striking feature of JKU. verbal morphology: the past-stem¹⁴ was extended so as to form the bases for both the past tense and the non-past tense. In this important matter JKU. agrees

with Toda and Kota. Is the extension of this S² as basis for the past and non-past tenses a typical innovation of a group of Nilgiri languages, and hence a Nilgiri areal feature - or, perhaps, to be more precise, a feature manifested in the 'autochthonous, aboriginal' Nilgiri languages (Toda, Kota, Kurumba) ? Examples: no·r- 'to see' : stem no·r-d-; o·- 'to go' : stem o·-d-; koḍ- 'to give' : stem koḍ-t-; ba-/ba·- 'to come' : stem ba-nd-/ba-nn-; ir- 'to be' : stem idd- (iddenu 'I am/was'). Cf. nenne na·n' ninag' aṇa koḍtenu 'I gave you-sg. money yesterday' : na·n' naḷega ninag' aṇa koḍtenu 'I'll give you money tomorrow'; bara va·ra u·rugu o·denu 'I'll go home coming week' : o·da va·ra u·rugu o·denu 'I went home last week'; nanagu i·ga ta·nondadu 'I have pains right now'; na·n' kaṇḍiṇa bannenu 'I will certainly come'. These instances were checked and rechecked and glossed in Tamil, Baḍaga and Kannaḍa.

The extension of the 'past stem' S² to both past and non-past tenses in JKu. cannot be doubted; it is a striking feature, but, as manifested by Toda and Kota, not an isolated phenomenon.

Another important feature is the inclusive : exclusive distinction in the suffixes of l.p.pl.: bannewu 'we-incl. come/will come, came' : bannemu 'we-excl. come/will come, came'.¹⁵⁾

A thorough investigation and description of the JKu. language of Kāḍu Nāyikas must only begin. However, even a brief sketch like the foregoing shows that it is a tribal speech of independent status, and that its investigation may play an important role in Nilgiri areal linguistics as well as in the historical-comparative study of Tamil and Kannaḍa.

In conclusion, I give a sample word-list of JKu. lexical items selected from several hundred entries gathered during my brief field-work.

1. arcanaṇara s.cpd. 'yellow/orange colour'. Cf. Ka. arisiṇa/Skt. haridrā- etc. + DED 3047 Ta.Ma. nīram, Ko. nerm.

2. ariyan, aliyan s. 'son-in-law'. Cf. AKu. aḷia (DBK) 'son-in-law etc.', Shōl. aḷiya id. DED 256 Ma. aḷian 'brother-in-law', Ko. aḷ 'brother-in-law, male cross-cousin', Ka. aḷiya 'son-in-law'.

3. ā·we s. 'tortoise'. DED 4232 Ta. yāmai, āmai, Ka. āme, āve, ēve 'tortoise, turtle'.

4. i·ga adv. 'now'. DED 351(a) Ka. iḡa.

5. i·ruḷi s. 'onion (Allium cepa)'. Cf. Shōl. iruḷi, Ta. Ma. īrulli, Ka. īrulli, Tu. nīrulli, prob. DED 3057 + 605.

6. ulu s. 'worm'. DED 3537 Ta. pulu etc., Koḍ. pulu.
7. uttu (t=alveolar occlusive) s. 'white-anthill' DED 3556 Ta. purru etc., Ka. puttu, huttu, uttu.
8. ettanu s. 'grand-father'. Cf. Ir. ettappan etc., AKu. ettappa (DBK), Ka. hettappa, hetappa 'grand-father'.
9. ouve s. 'mother'. Cf. Ir. (different dialects) auve, avve, agve, oggwe, AKu. avve (DBK) id. DED 232 Ta. avvai, Ko. av, Ka. avve, avva etc.
10. ojja adj. 'new'. DED 3511 Ta. putu etc., Ko. ock 'ritually new after purification', Ka. hosa etc. 'that which is new'.
11. olle adj. 'good'. DED 855 Ta. oli 'excellence', Ka. olle 'goodness'.
12. akki s. 'paddy'. DED 178 Ta. ari, Ko. aky, Ka. akki id.
13. ikki s. 'bird'. Prob. DBIA 233 b Skt. pakṣin-, Pa. pakkhin-, Pkt. pakkhi-. Cf. Ka. pakki, hakki, Ko. paky, Ma. pakṣi, pakki, Ta. pakṣi, paṭci, pakki.
14. eru s. 'ant'. Cf. Ir. urumbu. DED 734 Ta. erumbu, Ko. irb, To. irb, Ka. irumpu etc.
15. endru s. 'wife'. Cf. OTa. penṭir, OKa. pen-dir, Ir. poṇḍiru 'women', Bad. en 'female'. DED 3608(a).
16. endrugandaru s. cpd. 'husband and wife'. DED 3608(a) + 986 Ta. kaṇṭan 'warrior; husband', Ka. gaṇḍa 'husband' Ko. gaṇḍ 'male'.
17. ennu, pl. ennumakka s. 'female, woman'. DED 3608(a) Ta. Ka. peṇ, Mod.Ka. henṇu, Bad. eṇ.
18. kaṇṇa s. 'water-well'. DED 1663 Ta. kiṇaru, Ma. kiṇaru id.
19. katte s. 'ass'. DED 1149 Ta. kaḷutai, Ka. karte, kate id.
20. ka·ne neg.v. 'is not'. Cf. Ir. ka·ne 'don't know, don't see; is not'. DED 1209 Ta. kāṇ etc.
21. kurkan s. 'jackal'. Cf. DED 1496 Ta. kurai 'to bark'; kukkal, kukkan 'dog'/Skt. kurkura- etc. 'dog'.
22. koḷalu s. 'oboe'. DED 1511 Ta. kuḷal 'flute, pipe', Ko. koḷ 'clarinet, Ka. koḷal 'flute' etc.
23. ko·dan s. 'large white-faced monkey'. Cf. Ir. ko·ḍa, ku·ḍag. DED 1820 Ta. kōṭaram 'monkey', Ko. ko·ṛṇ 'small monkey', To. kwī·ṛṇ 'monkey', Ka. kōḍaga 'monkey, ape', Kod. ko·ḍe 'monkey'.
24. kēre s. 'pond, tank'. Cf. Ir. kēre, AKu. kēre (DBK). DED 1648 Ko. ker, Ka. kēre, Koḍ. kere, 'tank'.
25. gaṇucu s. 'root, tuber'. DED 1314 Ta. ki-laṅku, Ka. geṇasu, geṇisu etc.
26. cōlle s. 'mosquito'. Cf. DED 2296 Ta. cellu

'flea, tick' etc., To. ~~to~~ 'flea'.

27. ~~tin~~nu (tind-, tinbade) v. 'to eat'. DED 2670(a) Ta. tin.

28. danamari s.cpd. 'calf' : Skt. dhana- 'property, riches' > NIA 'herd, cattle'; Bad. dana 'cattle' (CDIAL 6717) + DED 3901 Ta. Ka. mari 'young of sheep etc.'.

29. da·ri s. 'way, road'. DED 2589 Ta. tāri, Ka. dāri.

30. nenne adv. 'yesterday'. Cf. AKu. nenne (DBK). DED 3109 Ta. nerunal etc., Ka. ninne.

31. no- (nond-) v. 'to ache'. DED 3143 Ta. nō (nont-), Ka. nō (nond-).

32. no·r- (no·rd-) v. 'to see'. Cf. AKu. no·d- (DBK). DED 3144 Ta. nōkku, Ko. no·t-, To. nwī·t-, Ka. nōdu 'to look, look at'.

33. podice, podce s. 'bush'. Cf. AKu. pode (DBK). DED 3686 Ta. putai 'to be covered etc.', putal, putar, potai 'bush', Ka. podisu 'to cover etc.', podar 'bush', Ko. pot 'bush'.

34. ba-/ba- (band-/bann-) v. 'to come'. DED 4311.

35. ba·du s. 'meat'. DED 4380 Ka. ba·du 'flesh', Ta. vāṭṭu 'roasted or fried flesh or vegetable'.

36. bīnki s. 'fire'. No etymology ?Ka. beṇki.

37. be·li s. 'fence'. DED 4556 Ka. bēli id.

38. mane s. 'house'. DED 3911 Ka. mane id.

39. maḷe s. 'rain'. DED 3893 Ka. maḷe, maḷe id.

40. mola s. 'hare'. DED 4071 Ka. mola, mala, Ko. molm id.

41. haji s. 'hunger'. Cf. DED 3165(a) Ta. paci etc.

42. haṇdi s. 'pig'. DED 3326 Ta. paṇri etc., Ka. pandi, handi.

43. huy-(huyd-) v. 'to rain'; maḷe huydadu 'it rains'. Cf. DED 3610 Ta. pey-, Ko. oy-.

Notes

1) In the Draft Project Report for the Development of Primitive Tribes in the Nilgiris, Govt. of Tamilnadu Confidential Report, s.d. (but presumably 1977), there is passim some very superficial information on Kāḍu Nayikas. Further bibliography: Irudaynath, Philo, 'Kāṭṭunāyakkar' (in Tamil), in: Palāṅkuṭimakkal, Madras 1965, 34-43; Luiz, A.A.D., 'Kāṭṭunāyakan', in: Tribes of Kerala, New Delhi 1962, 86-90; Raghavan, M.D. 'Jain-Kurumbas - An Account of Their Life and Habits', Man in India 9, Ranchi 1929, 54-65; Sakthivel, S. 'Kāṭṭunāyakkar'

- (in Tamil), in: *Tamiḷaṇaṅku*, Pondicherry 1971, 10-14.
- 2) Upadhyaya, U.P. 'The Jenu Kurumba Dialect of Kan-nada', *Linguistic Survey Bulletin* 4, Poona 1968. However, Upadhyaya's Jenu Kurumbas live in the "forest ranges of the hilly district of Coorg".
- 3) Alternative forms: Jēnu Kurubas, Jēnu Kurumas, Tēnu Kurumbas, Jain Kurumbers; Kāṭṭu Nāyakkār, Kattunaicker. The first name means "Honey-Kurumbas", the second "The Lords of the Forest" (eulogistic self-designation).
- 4) E. Thurston (1909, IV: 165) and A.A.D. Luiz (op. cit. p.86) identified the two correctly as one tribe, but, incorrectly, 'added' the 'Shola Nayakans' (=Shōlegas) to them as the same ethnic group. The Shōlegas are an entirely different tribe.
- 5) My Paniyan informant Chemban told me on 20.3. 1978: "There are two jātis known as Nāyakkas: the Shōlanāyakkas living e.g. at Ānegāṭṭi, called also Shōlegas; and the Kāṭṭunāyakkas who live at Teppa-kāḍu, and are also called Jēnu Kurumbas. These two are different communities. They speak two different languages, and I don't understand either of the two". My conversation with Chemban took place in Tamil.
- 6) There are at least six more or less different Kurumba languages known in the larger Nilgiri area. JKU. is one of them. Hence the preference for the designation of the language as JKU.
- 7) Cf. DED 3960 To. mo-t 'words, speech (in songs)', Ka. mātu 'word, language', Te. māṭa.
- 8) DED 1607 To. keno-y, Ta. cennāy.
- 9) DED 1634 Ka. kemmu, Ta. cerumu.
- 10) Cf. Ālu Kurumba māṇā 'son' (DBK), Irula muṇe [muṇɛ] 'son' (KVZ, IL II, Index 505, and p.23).
- 11) Cf. DED 24 Old Ta. akkaṇ, To. okn.
- 12) DED 2513 Ka. tamma, Koḍ. tammanṣ.
- 13) Does the JKU. nasalized \tilde{a} in this item, followed by the semi-voiced bilabial nasalized fricative w preserve what might have been an intermediate stage between Old Ka. nām and mod. Ka. nāvu?
- 14) Or should we rather say the S² stem in agreement with M.B. Emeneau? Cf. his 'Toda, a Dravidian language', TPS 1957, 15-66, and especially 'The South Dravidian Languages', JAOS 87, 4, 1967, pp. 366-7.
- 15) When our tape-recording session was over, one of my informants said to me: na-ṅga tṭinbade oḍemu 'we-excl. are going to eat', indicating that I was 'excluded' from the lunch and that he meant only himself and his Kāḍu Nāyika companion. At the same time, the utterance shows the extension of

S2 (o.d-) to the 'future' (i.e. non-past + definite) tense-aspect.

Abbreviations

AKu.	-	Ālu Kurumba.
Bad.	-	Badugu (Badaga).
CDIAL	-	(Sir) R.L. Turner, A Comparative Dictionary of the Indo-Aryan Languages, London, 1962-6.
DBIA	-	M.B. Emeneau and T. Burrow, Dravidian Borrowings from Indo-Aryan, Berkeley and Los Angeles, 1962.
DBK	-	Ālu Kurumba data provided by D.B. Kapp.
DED	-	T. Burrow and M.B. Emeneau, A Dravidian Etymological Dictionary, Oxford, 1961.
DEDS	-	T. Burrow and M.B. Emeneau, A Dravidian Etymological Dictionary - Supplement, Oxford, 1968.
IA	-	Indo-Aryan.
Ir.	-	Irula.
JKu.	-	Jēnu Kurumba.
Ka.	-	Kannada.
Ko.	-	Kota.
Kod.	-	Kodagu.
KVZ, IL II	-	Kamil V. Zvelebil, The Irula (Ērla) Language, Part II, Wiesbaden, 1979.
Lit.Ta.	-	Literary Tamil.
Ma.	-	Malayalam.
OKa.	-	Old Kannada.
OTa.	-	Old Tamil.
Pa.	-	Pali.
Pkt.	-	Prakrit.
SDr.	-	South Dravidian.
Shol.	-	Shōlega.
Skt.	-	Sanskrit.
Ta.	-	Tamil.
To.	-	Toda.
Tu.	-	Tulu.

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PROFICIENCY IN STORYTELLING

Ruth Bennett

Humboldt State University

How to measure oral language proficiency is a key question in the education of American Indian school children. Measures of language proficiency based on written language norms may not be adequate to assess true achievement among these children. Two reasons for the inadequacy are that the home language is often not English, and the cultural background carries a strong oral tradition. Written norms for language proficiency for such children are not based on the language of everyday life.

In an attempt to measure language proficiency in terms of everyday use, I am focussing the analysis on a predominant mode of discourse. Storytelling in American Indian culture is a formal oral tradition with a cast of characters, an array of plots, and a repertoire of formulaic expressions to refer to the characters and their activities. Storytelling is a mode of discourse because it involves stretches of speech longer than sentences with some identifiable unifying features. The intent of the analysis is to analyze stories in a way compatible with the analysis of any mode of oral discourse. Such an analysis can with more certainty be said to measure oral language proficiency because it is generalizable across different modes.

Data Collection

Stories were collected from fourteen Hoopa Indian children, ages three to ten. The children lived on the Hoopa Indian Reservation in Northwest California, and were of Indian ancestry. Their collective Indian ancestral backgrounds were Hupa, Yurok, Karok, Navajo, and Cherokee. Having mixed ancestry is typical of Indian people in Northwest California.

Data was collected from the children in their homes and yards. Data was collected in as natural a way as possible;

it was collected primarily in the mornings after preliminary study indicated mornings were a time when most stories were told. The investigator was present during data collection, since the children tended to gravitate to her. To keep data collection spontaneous, the investigator acted naturally while trying to minimize her participation to the greatest extent possible.

Approximately 130 stories were collected. These stories were not usually ancestral Indian stories; most were personal experiences. Some retellings were non-Indian stories, as when movies or television shows were retold. The data distribution of types of stories indicated that younger children told mostly of personal experiences; six year olds did retell books or television stories. Only older children told Indian stories; this group also told a moderately high percentage of personal experience

stories.

Distribution of stories according to age level and type is depicted in Table I:

TABLE I

Data Distribution: Personal Experiences, Ancestral Retellings, and Retellings of Books, Television Dramas, and Movies.					
	Personal Experiences		Retellings		
	Recent	Long Ago	Ancestral	Non-Ancestral	
Age Group				Books	TV, Movies
Younger (ages 3-6)	44	0	0	7	0
Older (ages 7-10)	39	18	6	11	15

Possible explanations for the predominance of non-ancestral stories are (1) the children hear more non-ancestral stories; (2) ancestral stories are reserved for special occasions. In addition to ancestral/non-ancestral distinction for retellings, personal experiences were classified as recent or about the more distant past. Stories not occurring in the more distant past were considered recent experiences. Younger children did not use temporal markers referring to the more distant past. Older children used markers such as, "long time ago", "when I was (a baby)", and "one time".

Preliminary Analysis

After stories were transcribed, a sample from each age level was chosen on the basis of representativeness and completeness. These stories were compared and contrasted for the purpose of identifying developmental trends. Other stories were also tentatively analyzed. One of the primary guides for preliminary analysis was previous research; another was the investigator's intuitive impressions of marked discourse features. A discourse unit approach was arrived at, wherein stories were seen to consist of combinations of discourse units. Units were identified through discourse patterns; these patterns were comprised of underlying syntactic structures and surface features. No one-to-one correspondences between underlying structures and surface features were observed; rather certain syntactic structures were found more easily in more stories and certain discourse phenomena were observed to combine with some elements in underlying structure.

Underlying syntactic structures have been the concern of previous researchers on storytelling. Three approaches have been developed. These approaches are narrative syntax (Labov, 1972),

story grammar (Rumelhart, 1975), and vertical organization (Chafe, 1977). These three approaches are not necessarily exclusive; they may be complementary. They view underlying structural units from three different perspectives. The following diagrams set forth the different approaches:

Narrative Syntax

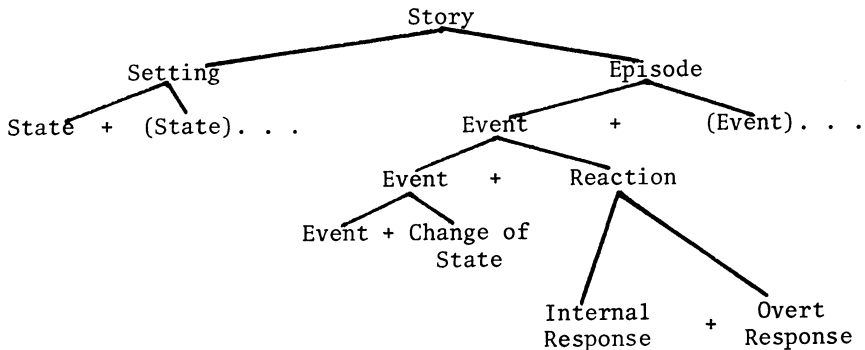
Syntactic slots arranged in a prescribed sequence:

Request + Abstract + Orientation + Complicating + Resolution + C
 Introducer Action

The above units are derived from Labov's model, with the Request Introducer being added. One characteristic of narrative syntax analysis is that all units are on the same level of abstraction. They center on plot structures. In addition, these units include preliminaries and endings, marking stories as special events in ongoing conversation.

In the story grammar model, syntactic slots are hierarchical:

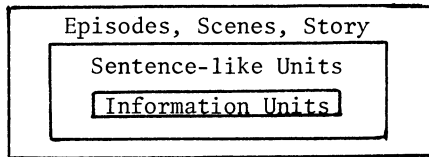
Story Grammar



The tree above represents just one possibility for the hierarchical structure of a story. Other possibilities hinge primarily on different plot structures, such as an Event leading to another Event prior to a Change of State. One similarity between the narrative syntax model and the story grammar model is that both allow for background information and plot. "Orientation" in narrative syntax is similar to "Setting" in the story grammar. Episode includes Complicating Action and Resolution. The difference from the narrative syntax model is that in the story grammar some elements are more general, while others are incorporated as constituents. The higher elements in the hierarchical structure are inclusive of the constituent elements at the lower nodes.

Vertical Organization

Slots are not sequential, but rather smaller ideas contained within larger ones.



The smallest units are complete thoughts. These units may be complete sentences, but most typically the information unit is a clause or phrase, or an elliptical expression. The sentence-like unit, in contrast, may only be a single clause, but most typically is a compound or a complex sentence; this unit spans information units. The largest unit in our data is the story; in other types of narratives, there may be an intermediary unit termed an "episode" or "scene".

Sample Stories

Texts of two stories are presented below. The older child's story appears first, followed by the younger child's story. These two stories are a basis for locating developmental differences in underlying structures.

The Ten Year Old's Story: Carla, 10.9

- (1) C: Could they be stories about Indian devils and all that?
- (2) R: Oh, yeah. (.7)
- (3) C: All right. (.8)
- (4) C: Um (.4) Deanna's mom (.5)
- (5) When she was um (.8) young (1.0)
- (6) Um (.4) her her she had a uncle (.8)
- (7) And he uh a friend of her uncle's um (.5)
- (8) You know Deanna's mom's (.8)
- (9) R: Gwen. (.4)
- (10) C: Uh-huh. (.5)
- (11) Of her Gwen's uncle (.4)
- (12) Um her uncle had a friend and (.5)
- (13) He came over and (.5)
- (14) And Gwen was chopping acorns
- (15) And he came over (.5)
- (16) And he said, "That's a good girl," (0.0)
- (17) You know he was patting her all over on her shoulders (.5)
- (18) Saying, "that's a good girl, (.4)
- (19) Um chopping acorns for your mom." (.7)
- (20) And that next morning (.6)
- (21) Um she woke up (.8)
- (22) And she couldn't move her shoulders or nothing. (1.9)
- (23) She couldn't move at all her arms (.5) and her shoulders (1.5)

- (24) R: /Wow./
 (25) C: /Where/ that guy touched her. (.8)
 (26) R: Wow.

The Three Year Old's Story: Derrick, 3.9

- (1) D: Look it. (.9)
 (2) Look it. (.9)
 (3) Hey. (8.1)
 (4) () two trucks. (.4)
 (5) I got two dump trucks. (0.0)
 (6) R: You do?
 (7) D: Uh-huh. (.4)
 (8) R: Where are they? (1.0)
 (9) D: That (.4) that orange one right there (.9)
 (10) Been playing with it. (0.0)
 (11) R: Oh. (1.0)
 (12) D: Dad bought this new car for me. (.6)
 (13) R: He did? (.5)
 (14) D: Yeah. (1.0)
 (15) Dad bought this (1.1) this thing (.6)
 (16) Knock this guys down. (1.1)
 (17) Whole bunch. (.5)
 (18) R: Knock the guys down?
 (19) D: Mm-hm. Knock 'em down.
 (20) R: Oh.
 (21) D: I got this car.

Transcription notation is as follows:

Pauses

Pause notation refers to seconds and tenths of seconds; digits to the left of the decimal are whole seconds, while digits to the right are tenths of seconds.

Non-medial pauses co-occur with grammatical boundaries; medial pauses occur within grammatical units. Unit (15) contains a medial pause after "this".

Lines not designating pauses are left unmarked because they are not being analyzed for temporal organization unit structure.

The three year old's story is probably not intentional; it occurs during talk that combines comments of ongoing events with recall from the past. The ten year old clearly intends to tell a story; she requests permission to tell a certain type of story. The three year old's story provides evidence for the definition of a minimal story: it is constituted of at least one momentary event situated in the past. The older child's story is illustrative of a more elaborate form. It is a retelling of an Indian devil story; further, it is the type of Indian devil story that is told as a personal history. Such stories gain impact from the storyteller being able to claim that they are "really true".

Alternate Approaches to Underlying Structure

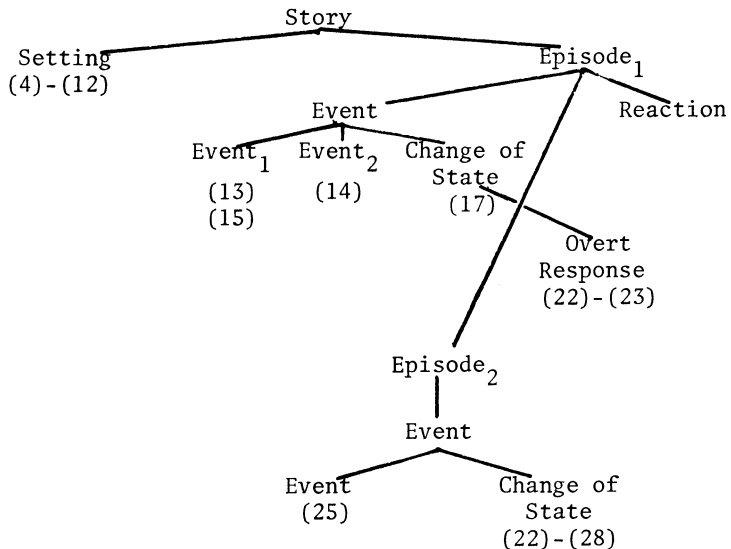
The three approaches will be compared with illustrative diagrams from Carla and Derrick's stories. Using the narrative syntax model, Carla's story would be diagrammed:

Request Introducer	+ Abstract	+ Orientation	+ Complicating Action	+ Resolution
(1)-(3)	(1)	(4)-(11) (20)	(12)-(19) (21)	(22)-(25)

The Request Introducer may be entirely separate from the story; in the example above, it is identical to part of the Abstract. The Abstract prepares for subsequent elements; it summarizes the entire story. The Orientation describes background activities preparing for the Complicating Action; the final action is the Resolution.

One of the advantages of the narrative syntax model is simplicity. There is only one level of underlying structure. The request to begin, the abstract, and the background activities are a preliminary to the action sequence. The action focuses on an encounter; there are actions and consequences. The Resolution is stated in terms of adverse consequences to the girl.

Carla's story would be diagrammed in a tree structure according to the generative story grammar:

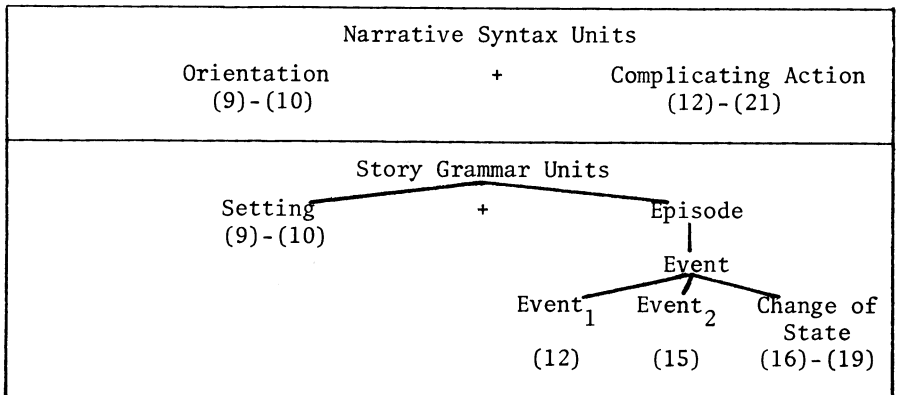


One of the advantages of the story grammar model is that separate episodes are recorded; also, event chains are noted. Events that result in changes of state, for example, are noted. These events are distinguished from events where no definite contingencies are established. The events in units (13) and (14)

are not contingent: the girl is chopping acorns, the man comes over. the Event of chopping acorns neither causes nor allows the event of coming over. Events (13) and (15), however, do have a bearing on (17). Coming over allows the man to be close enough to touch the girl. Contingencies sometimes exist across episodes, as in (22) when the girl is unable to move.

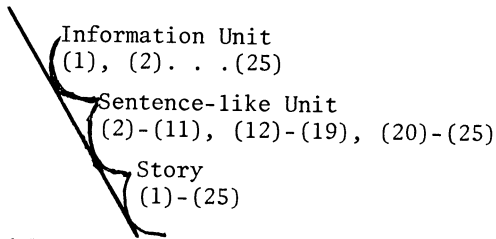
The primary disadvantage of the story grammar model is that it is not easily adaptable to stylistic analysis; formulaic markers, introducers, and other elements are not accounted for. Such elements may be important within a cultural tradition. The story grammar covers essentially what is termed Orientation and Complicating Action and Resolution in the narrative syntax model. The narrative syntax model is preferable for our data because it is more simple and more complete.

The two models are similar in reflecting a story's plot structure. A comparative analysis of Derrick's story indicates the similarity:

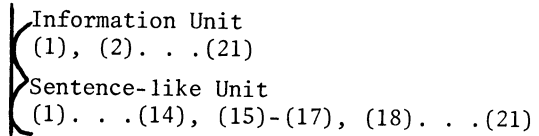


The younger child's story lacks the optional units in the narrative syntax analysis. The narrative syntax model is useful in pointing out the addition of units as one trend in development. The story grammar model can also show an increase in units, but is more limited to events and characters' reactions. Neither model can show developmental changes in surface features.

The vertical organization unit structure takes in the relative span of ideas, from an idea taking the fewest number of words to ideas spanning sentences. With this model, Carla's story would be described:



Derrick's story would be diagrammed:



The basic difference reflected in the comparison is that in Carla's story, information units are combined into sentence-like units. These larger units in turn make up a story. Derrick's story, in contrast, is made up primarily of information units. There is one sentence-like unit, but his story lacks the component structure of the story of the older child.

Underlying Structure and Surface Features

The pause cluster was found to be a central tie between underlying discourse structure and surface features. Pause clusters were found by Chafe to occur at places in stories where planning was taking place. Planning requires a slowing down of the pace of the story, as the storyteller is taking time to think as he talks. Pause clusters can be expected to occur more predictably in older children's stories, rather than in stories told by younger children. Young children are not thought to organize their stories, whereas older children have the verbal ability to introduce their stories, provide background information, and then proceed with the action.

Pause clusters can be expected to correlate with those units of underlying syntax where planning is most logical; the Orientation, for example, would seem to involve planning, since background information is presumably a preparation for a series of actions.

Developmental Hypothesis

The developmental hypothesis aimed at identifying a criterion for oral language proficiency. This criterion was arrived at through correlations between underlying discourse syntax and surface features, since pause clusters were found to be evidence of planning, and Orientations to involve planning almost by definition.

It was hypothesized that pause clusters would co-occur with Orientations in the stories told by older children, and that such a Discourse Unit could be considered a criterion for oral language proficiency.

Descriptive Analysis of a Ten Year Old's Story

The developmental hypothesis was explored in a story told by a ten year old. In addition, the story was analyzed line-by-line for other unifying features. This section will present that analysis; it is based on Carla's story, the text of which is printed above.

The unit that begins the story is a question: "Could they be stories about Indian devils and all that?" This unit summarizes the story. It is an Abstract in Labov's terms; but the unit is more than an Abstract. It is embedded into a request to tell a story. Since it functions as a request, it fills two syntactic slots.

The simultaneous use of two underlying syntactic slots with one utterance is a characteristic of an older child's story. The form of Carla's Request Introducer has also been identified as characteristic of the more advanced speaker. Its form is marked syntactically as a permission request; it involves knowledge of the proper use of models and the ability to use the first person subject when making a request. The earlier appearing forms are imperatives and elliptical expressions (Ervin-Tripp, 1977).

Another characteristic of the story that marks a developmental advance is the use of a turn-taking exchange at the beginning. Such an exchange elicits the listener's assent. The structure of the exchange is as follows:

Request Exchange	Transcript
REQUEST	(1) Could they be stories about Indian devils and all that?
RESPONSE	(2) Oh, yeah.
ACKNOWLEDGMENT	(3) All right.

In the next section, the Orientation, the characters are introduced:

- (4) C: Um (.4) Deanna's mom (.5)
 (5) When she was um (.8) young (1.0)
 (6) Um (.4) her her she had a uncle (.8)
 (7) And he uh a friend of her uncle's um (.5)
 (8) You know Deanna's mom's (.8)
 (9) R: Gwen. (.4)
 (10) C: Uh-hum. (.5)
 (11) Of her Gwen's uncle (.4)
 (12) Um her uncle had a friend and (.5)

Characterization is accomplished through a series of interwoven references. These references create an element of unity in

the passage, since they form a pattern. The following diagram illustrates:

TABLE IV Referencing Ties for Three Characters in a Ten-Year-Old's Story			
Information Unit	Characters		
	Girl	Uncle	Uncle's Friend
(4)	Deanna's mom		
(5)	she		
(6)	she, her, her	uncle	he
(7)	her, her	uncle's	a friend
(8)	Deanna's mom's		
(9)	Gwen		
(11)	Gwen's, her	uncle	
(12)	her	uncle	a friend

Referencing ties provide a unit structure through creating ties between information units. Frequently, referencing ties create unity through character configurations. A group of characters will be mentioned throughout a sequence of information units, identifying them as mutual participants in the action. When a storyteller makes use of referencing ties to establish characters, he is using discourse phenomena as a stylistic device.

In the above example, a stylistic pattern is created through frequent mention and through the use of pronouns and other substitutions. The girl is mentioned most frequently: **eight** times. Four times she is identified through the possessive pronoun, "her". An interesting facet of this method of identification is that the girl and uncle are referenced virtually simultaneously. Another interesting, but curious, feature is that although the uncle is mentioned four times, he does not appear in the action. The mention of the uncle suggests another stylistic technique. The storyteller used the device of kinship linking to create a character "set". The man who approaches the girl is not a stranger, nor just a friend. He is a friend of a close relative.

Kinship as a device to create character is also used in connection with the girl. When Carla wants to check to be sure the listener knows who "Deanna's mom" is, she is referring to the character in terms of a kinship linkage.

Stylistic techniques and character-creating devices can be seen as developmental trends. These trends are realized through

reference phenomena put to various functions. The turn-taking exchange forming the Request Introducer is another developmental trend; this trend involves the creation of an underlying discourse structure. Such structures can potentially correlate with patterns of pauses.

The pattern of pauses during the character identification passage constitutes a pause cluster. There are four pauses of .8 seconds or longer. Also, there are three medial pauses in the first three units. Finally, the pauses occur during what amounts to different ways to say the same thing. Repetition of the same idea also performs the slowing down function of the pause cluster. Pauses, repetition, and fillers are included in the more general category, "hesitation phenomena" (Chafe, 1979).

The next series of lines contains a change in the pattern of pausing. In this passage, there are no pauses longer than .7 seconds and no medial pauses. This passage marks a transition from background information to event sequence. The sequence of events is a chain of activities with an implicit cause and effect. The cause and effect is implicit in the sense that no explicit statement of action and consequence is made; the implicit nature of the presentation relies on the listener's knowledge of the Indian devil tradition. In these stories, one character is the Indian devil; he is typically devious in his manner and possessing ill intentions. In Carla's story, he is a so-called friend of the girl's uncle. In one series of events, the initial actions occur:

- (12) Um her uncle had a friend and
- (13) He came over and
- (14) And Gwen was chopping acorns
- (15) And he came over
- (16) And he said, "That's a good girl,"
- (17) You know he was patting her all over on her shoulders
- (18) Saying, "that's a good girl,
- (19) Um chopping acorns for your mom."

In terms of underlying syntax, this passage is Complicating Action. The man comes over, pats the girl on the shoulders and tells her she is a good girl. The inappropriate nature of the behavior comes across through intensifying expressions, such as the phrase "patting her all over". An innuendo of misbehavior is also projected through the repetition of the man's words, "that's a good girl." The storyteller underlines his mannerisms in an attempt to convey his ill intentions.

In the next passage, there is a brief return to Orientation, and then the final action occurs. Orientation appears in the form of a new setting, "that next morning";

- (20) C: And that next morning (.6)
- (21) Um she woke up (.8)
- (22) And she couldn't move her shoulders or nothing. (1.9)
- (23) She couldn't move at all her arms (.5) and her shoulders. (1.5)

- (24) R: /Wow./
 (25) C: /Where/ that guy touched her.
 (26) R: Wow.

The fact that the girl is unable to move is a sign that she has been devilled. Immobility is typically an occurrence in Indian devil stories. According to underlying syntax, the consequence of the man's actions would comprise the Resolution. This is not a Resolution in the sense of a happy ending; however, it is a Resolution in being a typical ending in an Indian devil story. A listener without a knowledge of typical cause and effect sequences in Indian devil stories would doubtlessly experience the story as disconnected and precisely lacking a Resolution.

In the Resolution unit, there is a slowing down of the pace. Pauses of 1.9 seconds and 1.5 seconds occur, and a medial pause occurs also. This pause cluster could be correlated with the Resolution, although the notion that pause clusters are connected with planning would have to be put aside. There is no evidence of planning at the end of the story. Another, more plausible, explanation for the pause cluster at the end of the story is that it is a function of the communicative situation. The storyteller appears to be waiting for the listener's reaction after unit (22); none is forthcoming, however. She then repeats herself in a further attempt to elicit a listener response.

Findings in the analysis confirmed the hypothesis regarding pause clusters. Other findings were that additional surface features were operative in the story. Specifically, referencing phenomena, turn-taking exchanges, and repetitions were found to be unifying devices within narrative syntax slots. The more general finding was, then, that surface features do combine with underlying syntactic structures in stories told by more advanced storytellers and that such correlations represent developmental trends. Correlations between surface features and underlying syntax then become good criteria for measuring oral language proficiency.

Implications for Education

The data presented here has been the basis for demonstrating how criteria for oral language proficiency can be developed. The approach developed has been stated in terms generalizable to other modes of discourse and therefore can be used with other areas of oral language. Arguments, role play activities, and other speech events engaged in by American Indian children can provide supportive evidence for the criteria for oral language proficiency presented here in storytelling. The analysis of modes of discourse can provide the basis for arguing that language should be assessed as it is actually used. Such assessments can be utilized by educators interested in culturally-appropriate methods of determining language proficiency among American Indian children.

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The Language of "Born-Again" Christianity

Linda Coleman

University of California, Berkeley

One of the problems with analyzing the effect of worldview on language is that it is difficult to find a case where differences in these two areas are not accompanied by other differences, e.g., social, cultural, historical, etc., which complicate the data. In this paper I will take an introductory look at the language use of a group which shares the history, culture and language of the larger society but which holds a very different worldview. The group is generally referred to as "Evangelical (or "Born-Again") Christians." An Evangelical is someone holding strong, orthodox Protestant beliefs based on a conversion experience (being "born again") in which they accepted Jesus Christ as their personal savior (Christianity Today, 21 Dec. 1979, p. 13). The Baptists are generally considered the most typical Evangelical denomination (Borker 1974:45).

I will begin by considering one area in which the Evangelical worldview (and some social constraints stemming from it) affects syntax. Secondly, I will point out some of the ways in which both the worldview and pragmatic assumptions of shared knowledge affect semantics, with special attention to the use of the language as in-group speech. Finally, I will examine an instance of language performing both these functions within a subgroup of Evangelicals. Because Evangelical belief is based on the Bible as the ultimate authority, I shall document assertions about specific doctrines with the Bible references normally cited as the bases for these doctrines. In all cases, the interpretations have been provided by Evangelicals.

A basic point of Evangelical belief is that human beings are at least partly depraved (exactly how much is a matter of theological argument). Therefore, we are incapable of doing good on our own, and anything good that one does is really a matter of God working through one (Rom. 7:18-20; II Cor. 4:7). Since a lot of language involves talking about people doing things, we would expect to find this reflected in Evangelical speech. For example, when an Evangelical says that he "had fellowship with" someone (necessarily another Christian), he may mean that they went out for coffee. He may also mean that he put them up for the night, gave them dinner, sent them money--in brief, helped them in any one of a number of ways. By phrasing it in this way, however, the Evangelical avoids claiming to have performed a specific good action. In other words, "have fellowship with" is a euphemism. It is, furthermore, a euphemism for something which most non-Evangelicals have no hesitancy about claiming responsibility for, since the broader culture would not perceive such a claim as an unwarranted boast.

What is concealed, however, is not merely the nature of the action, but the speaker's part in it as well. "Have fellowship

with" appears to describe a symmetrical relationship like analogous phrases such as "have a conversation with"--if A is having fellowship with B, then B is presumably simultaneously having fellowship with A. The actual relationship, however, is not at all symmetrical.

Most Evangelicals will admit that there is something euphemistic about their use of this term. However, a number of them have pointed out to me that it reflects--non-euphemistically--another aspect of their worldview. To the Evangelical, everything he has comes solely by the grace of God and is intended, in part at least, to be used to help other people, especially other Christians. And giving carries at least as much benefit to the giver as the receiver (Acts 20:35). Therefore, the relationship can be viewed as symmetrical in terms of deeper spiritual reality, since the receiver, by being in need, is also conveying some "blessing" to the giver merely by enabling him to fulfill a Christian responsibility. Again, in the view that everything is planned by God, the Evangelical can consistently hold that his large house, for instance, which enables him to "have fellowship with" someone by putting them up for the night, may have been given him by God solely because God knew that there were going to be people around who would need such accommodations, and that but for that he might be living in a one-room apartment. Thus, the Evangelical can view himself as having the benefit of a material excess given him precisely so that it can be used to benefit the Christian community.

There are, then, three reasons for the Evangelical to talk about "having fellowship with" someone, rather than doing them a favor. (1) Simply as a matter of politeness, it is inappropriate to claim credit for good actions, since God is the real agent. (2) The relationship is in some sense symmetrical below the surface, since the giver benefits at least as much as the receiver. (3) It is inaccurate to claim credit for an action when, in terms of the deeper spiritual reality, one was merely a go-between.

Another term with roughly the same meaning is "minister to." This term does not negate the agenthood of the surface subject, but there is a curious syntactic constraint on its use. While it is permissible if the subject is second or third person, most Evangelicals find it inappropriate in the first person.

- (1)a You/She/He/They ministered to them.
- b *I/We ministered to them.

In other words, it is inappropriate to talk about what good actions one has performed oneself, but it is quite all right to praise someone else.

However, embedding sentences like (1)b with "God" as higher subject--either implicitly or explicitly--produces acceptable utterances, even though the speaker is still talking about his or her own good action:

- (2)a I was enabled to minister to him in some small way.
- b God enabled me to minister to them.

Embeddings of this sort are, in fact, quite common in Evangelical language:

- (3) We have been enabled to give some encouragement and help to a number of young people.
- (4) Ward's . . . teaching has been used by God to draw people and keep families coming. (Hadley 1980:6)

Like the second and third reasons for using "have fellowship with," (4) indicates that there is more than polite diffidence involved. In fact, Evangelical language use shows a general tendency to avoid referring to human beings as independent agents. It does this in a number of ways. We have already seen the use of embeddings in (1) - (4).

In addition, passives are frequently used where a non-Evangelical would use an active verb, e.g.,

- (5) I feel/felt led to do X.
- (6) I have been exercised about X lately.

are equivalent to standard "I decided to do X" and "X has been bothering me lately," respectively. "God" is, of course, the agent in (5) and (6).¹ The other side of the coin is the active use of normally passive verbs, e.g.,

- (7) God has privileged us to partake of this remembrance feast. ("Remembrance feast" = communion) Standard language, of course, allows "I was privileged to attend a tea at Buckingham Palace," but not *"The Queen privileged me. . . ."

In some cases, not merely is the human not perceived as agent, but an action is described as a quality or state of mind attributed to the human:

- (8)a God gave me/I have a burden for your health.
- b The Lord burdened H. to apply for a station permit. (Buckwalter 1980:18)

"To have a burden for" something can mean to think about it a lot, to pray about it, to be concerned about it, or to decide to do something about it. The implication is that the human subject would not ordinarily have been concerned about the matter.

Social taboos also have something to do with the use of constructions of this sort. It is inappropriate to judge others (Matt. 7:1-5), and sentences like (9) and (10) can be used to avoid imputing a potentially sinful action to someone else:

- (9) He's having doubts.
- (10) She had/developed a bitter and rebellious spirit.

It is acceptable to refer to doubting something--although (9) conveniently avoids having to say what it is precisely that is being doubted--or to refer to being bitter or rebelling. However, these active forms are more likely to be used of oneself than of others, as, for example, in "giving one's testimony," which involves describing the effect conversion has had on one's life.

Finally, human importance can be reduced simply by lexical selection. The Plymouth Brethren, a (non-charismatic) Evangelical group, believes strongly in getting constant guidance from the Holy Spirit. For this reason--and in part to distinguish themselves from other Evangelicals--they do not in reference to themselves talk about "preaching a sermon," but rather about "delivering a message." The activity, as they quite frankly admit, is the same; it is the concept underlying the activity which is different. It is possible to "preach a sermon" without any reference to God whatever; people who talk about "delivering a message," however, are stressing a total reliance on God's guidance rather than on their own abilities.

From what we have seen, then, it appears that a good deal of the Evangelical grammar, if we can call it that, seems designed to avoid reference to human beings as primary agents and to introduce God as the moving force behind all good actions. This is what we should expect, of course: the Evangelical needs to be able to talk about events in a way that members of the broader society generally do not, since the Evangelical is trying to reference two levels of reality which impinge on each other. However, there are cases where theological questions seem irrelevant to the choice of phraseology:

- (11) John has been active in Open Air Evangelism. . . .
- (12) We value the prayers of all the saints in every place that the work will prosper and continue until the Lord's coming.
- (13) We have been blessed to experience six young people make professions of faith and two return for renewal.

(11) means that John preaches on streetcorners. (12) counts as a request for prayer. The stative form in (11), which is very common, does not serve to introduce God in any way, and in (12) it would have been perfectly acceptable to request prayer directly--in fact, it is done all the time. (13) describes a situation in which the speaker was at least partially responsible for the conversions. The use of the passive of "bless" corresponds to some of the cases we have already looked at, where God's activity is emphasized, but the use of a verb like "experience" implies even less participation on the part of the speaker than is warranted by the Evangelical worldview.

What is evidently happening here is that various elements of the worldview have combined with a number of social constraints involving what sorts of things one may and may not say about oneself and others to produce a sort of pragmatic conspiracy--if I may borrow a term from generative phonology--towards reduction of human agenthood, which, when appropriate, counts as a "more holy" way to talk. This then spills over into areas where neither the worldview nor the social rules require less active forms, but where they nonetheless occur.²

Academics and other writers of expository prose are also notorious users of passives, embedded sentences, etc. (with somewhat less justification, perhaps, than Evangelicals). The

Evangelical tendency towards forms typical of written speech may also be a function of the fact that Evangelical speech is really the oral reflex of a basically written dialect. The (King James) Bible is the primary authority, and the "church fathers" of Protestantism tended, if writing in English, to imitate it. The style of these documents is apparently associated with authoritative religious utterances, and it is this style that Evangelicals imitate in their speech.

We have already noted the euphemistic treatment of good actions. While, by and large, Evangelicals share the euphemisms of the broader culture, their view of death is different, and so therefore is the pattern of euphemisms they use to refer to it. The most common way of describing death is with reference to "going home" (to heaven):

(14)a Brother Grant went home to be with the Lord.

b The Lord has called Brother Grant home.

However, Evangelicals have no hesitancy at all about using terms like these in conjunction with the straightforward "death" and "die," which suggests that what is involved here is not euphemism, but simply a different definition of the event. To the Evangelical, death is "going home to be with the Lord" (II Cor. 5:8), so there is no real difficulty in talking about it, except such as arises in the broader culture in talking about something like going to the dentist. It's an unpleasant experience, certainly, and one doesn't bring it up gratuitously, but to the Evangelical the only really unpleasant part is that the survivors will miss the deceased (Phil. 2:21-24). As with a trip to the dentist, they have every expectation of seeing the person again, and that in a healthier state than when they last saw them. The freedom in referring directly to death, however, operates only as long as the death in question is that of a Christian. In talking about the death of someone whose qualifications for heaven are at best questionable, the subject becomes unpleasant, and they revert to all the standard euphemisms of the broader culture--"pass on," "pass away," "leave us," etc.

As some of the above examples show, Evangelical language contains some terminology which is not immediately understandable to the non-Evangelical. In fact, it functions in some ways as an in-group jargon. Examples of this range from simple selectional restrictions to obscure metaphors which require a good knowledge of biblical trivia to parse.

An instance of selectional restriction violation occurred when a recent convert made the following announcement in an Evangelical church: "A new organ has been donated to our church. We pray that the Lord will lift up someone to play it." The long-time members tried hard to repress their smiles. It is, in fact, incorrect to talk of God lifting people up; he raises them up. People lift other people up (in prayer), but they cannot raise them up. While sometimes synonymous in standard language, the

two terms are not interchangeable in Evangelical speech.

Example (15) contains the text of a woman's apology--or non-apology--for her messy house:

- (15) I know you'll understand about the house. This is how far the Lord allowed me to get this morning. So this is just where I need to be. You'll just take it from his hand with me, I know. (Daniel 1980:14)

While (15) provides a clear example of the Evangelical worldview applied to what is generally considered a secular situation, the last sentence is particularly odd, as it is impossible to conceive of taking a state of messiness from anyone's hand, especially from the hand of someone who is not active in physical form. "To take something from someone's hand," however, is simply a special case of "accepting" it, which is what the speaker means here. This is a common Evangelical phrase and occurs also in a sermon cited by Borker (1974:367) in which the Christian is described as "[having] accepted the gift of life" and the non-Christian as "[having] neglected to reach out his hand and take it."

A more convoluted example of, among other things, a special case substituted for a general category occurs in (16):

- (16) The ordinance of the Lord's Supper . . . still speaks to every circumcised ear and every spiritual mind the same deep and precious truth. (Mackintosh 1976[1897]:798)

Circumcision symbolized the Jews' position as chosen people, and when Christians claimed this status, they eliminated those features of its meaning that involved a physical state (this is overtly done in Col. 2:11). "Circumcised" then had as its primary meaning in the Christian vocabulary "related to God's people" in general, therefore "Christian," as in (16).

Example (17) is from Christianity Today, the most popular Evangelical magazine:

- (17) . . . the way in which the mantles of evangelicalism's Elijahs will pass to the shoulders of successors has not yet been established. (Brown 1979:22)

Properly understanding (17) requires knowledge of the obscure occasion in the Bible (II Kings 2:13) where Elisha picks up Elijah's mantle as the latter ascends into heaven and promptly works a miracle with it, thereby giving indication that he has taken Elijah's place as the primary prophet of the time.

- (18) There is now a large assembly in A. with a testimony like that of Thessalonians chapter one.

First Thessalonians chapter one is a congratulatory note from St. Paul to a church which had a widespread reputation for faith in particular. ("Assembly" = Plymouth Brethren church)

(17) and (18) exemplify the sort of specialized biblical background knowledge the competent Evangelical is supposed to control--in one case a detail from a story and in the other the

contents of a chapter. Since the Pauline epistles comment variously on a number of different churches, there is no way that the salient feature "faith" can be deduced by someone unfamiliar with the text. The assumption of this kind of shared knowledge allows Evangelicals to create metaphors as in (17) and to communicate by oblique reference as in (18).

Danny Alford (personal communication) has pointed out that the sorts of correlations illustrated in (15) - (18) bear a peculiar resemblance to those of some secret languages, notably rhyming slang, where a word is replaced by a phrase that rhymes with it, and the last (and rhyming) part of the phrase is dropped. Thus "twist" = 'girl' from the original rhyme "twist and twirl" (Flexner 1975:607). The difference is that in Evangelical language the connection is logical rather than phonetic. The hearers' ability to interpret an utterance depends on their ability to reconstruct the rhyme or, in the case of Evangelical language, the sequence of logical connections.³

In addition to the syntactic and pragmatic peculiarities we have observed, Evangelical language differs from the standard semantically as well, containing a number of elements of specialized terminology--lexical items which simply don't occur elsewhere or which occur with different meanings. For example:

(19) Difference in Category

- a "to disciple someone" = to train someone to be a disciple (= a competent Evangelical), i.e., to socialize them
- b "to shepherd" = to serve as leader and teacher
- c "to fellowship" = to take communion (Plymouth Brethren)
- d "to purpose" = to intend

(20) Difference in Meaning

- a "carnal" = worldly (used of Christians only)
- b "partake" = take communion
- c "uphold" = pray for (cf. "lift up")
- d "wisdom" = advice ("I went to him for wisdom lots of times.")

(21) Unique Evangelical Terms

- a "covet" (in "I/We covet your prayers") counts as a request for prayer
- b "stewardship" = (good) management of money (time, talents)
- c "remember the Lord" = take communion (Plymouth Brethren)
= attend a service (other)

Many of these, e.g., (19)d, (20)a-c and (21)a and b, are clearly holdovers from King James English. (21)c is a partial quote from Luke 22:19, "this do in remembrance of me," and has the same distribution and meaning as "worship."

The competent Evangelical, then, must be able not only to recall obscure biblical information and recreate logical connections, but must also control a vocabulary which differs in many ways from that of standard English. As (15) shows, the line of demarcation between religious and non-religious contexts is not always clearly drawn, and so competence is displayed by knowledge

of when to use Evangelical language as well as how to use it.

My final example comes from the Plymouth Brethren, a group which refuses to use that name--or any other which cannot be applied to all born-again Christians. They call themselves therefore "believers," "Christians," "saints," etc., all terms which they use as well of all other Evangelicals, which makes things very confusing when they try to specify someone in their own group rather than, say, a Baptist. A "new meeting" announcement reads:

- (22) . . . Evening meetings are held in homes of the believers. They welcome the Lord's servants and other believers who desire Christian fellowship. (Interest, Feb. 1980, p. 13)

Where we might expect "in the homes of believers" we find the definite article attached instead to the word "believers." This signals that this reference is to Plymouth Brethren. The second occurrence of "believers" in this text refers to non-Plymouth Brethren Christians. As another example, if a member says that he "met with" (= worshipped with) "some Christians" in a city, it is not clear whether he attended a Plymouth Brethren assembly or another Evangelical church. If, however, he says that he met with "the Christians" there, he can only be referring to the Plymouth Brethren. Informants agreed that this analysis was accurate, although they had been unaware that the signal lay in the definite article until I mentioned it. Many of them commented on the fact that, while it is possible either to specify Plymouth Brethren or to leave the matter ambiguous, there is no way to talk about "non-Plymouth Brethren Christians." Not only do they find the implication disturbing in itself, but some of them remarked that they frequently needed to refer to precisely that group of people but had found no way to do so and were forced to rely on very indirect cues at best to get their hearers to make the right identification.

Evangelicalism is a strongly proselytizing religion. Given the amount of biblical, social and linguistic information the hearer must control, however, we can ask why Evangelicals allow their language to remain so different from the standard and hence so opaque to the very people they are trying to reach. Part of the reason, of course, is simply that Evangelical language allows its users to say the sorts of things they want to say about how the world works. From a broader point of view, however, I suggest that there are three primary reasons, all closely interconnected.

1. Evangelical language functions as in-group speech. Evangelicals realize that they are a minority, holding a relatively unpopular view of the world, and so have a stake in maintaining solidarity as well as some degree of psychological, although not physical, separation from "the world."

2. Evangelicalism is a participatory religion--most of the work is done by laypersons, and giving new converts responsibility is considered a good way to start them off. However, the group needs to be able to keep track of the degree to which the new convert is socialized into the group in order to gauge the appropri-

ate amount of responsibility to give them. The convert's ability to handle these sorts of lexical, semantic and syntactic rules, as well as the pragmatic assumptions and obscure references in the jargon, provides a good, observable index of the extent to which they have accepted and understood the worldview which is tied in with these linguistic phenomena, and hence the degree to which they can be treated as a fully socialized, competent and responsible member of the group.

3. This, finally, is possible because the elements of Evangelical language reflect aspects of the worldview in a much broader way than merely allowing Evangelicals to talk about the sorts of things they want to talk about. What we see in Evangelical language, I suggest, is a sort of fallout from a particular worldview (which includes notions like the sovereignty of God, the depravity of humanity, the authority of the [King James] Bible, the special status of the Christian, an understanding of the Christian community, and so on) into the language use of the people who hold that worldview. Evangelical language, in other words, functions as a "worldviewlect," with influences from the worldview appearing in nearly every area of language use.

Not only does the language reflect the worldview, furthermore, but it can also apply it. "We must understand that there are different ways of talking that are appropriate to different realms of human experience, but we must also understand that different forms of speech (seen in their totality) contribute to making an event" (Samarin 1972:216). Evangelical language use not merely helps to create and sustain an already defined religious event, such as a church service, but can also be used to transform a basically secular situation, such as the messy house in (15), into a religious one by evoking the worldview.

Notes

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¹In this case the standard form, with the problem, "X" as subject, implies more passivity than the Evangelical form, which puts X in an oblique case and has God (understood) as the affecting entity. This makes perfect sense from the Evangelical point of view where a problem is seen less as existing in itself than as a means by which God communicates with a cooperative human or teaches an uncooperative one (Borker 1974:78; II Cor. 2:12, 12:8-10).

²There are three areas where verbs are likely to be active in Evangelical language: (1) verbs referring to sin--"steal," "kill," "lie," etc.; (2) verbs associated with conversion--"repent," "confess," "accept Christ," "make a profession," etc., although forms like "get saved" and "be born again" are also associated with this event; (3) verbs expressing activities carried on towards God, especially in services--"pray," "thank," "worship," "praise," "offer," etc. (I am grateful to Ruth Borker [personal communication] for bringing this last group to my attention.) In worship services a great deal is made of the fact that the humans are carrying out God's instructions to perform precisely those actions; this holds for conversion also.

³Halliday comes close to making just such an observation, although he does not deal with current Christianity, when he points out the similarity between early Christian society and modern antisocieties (1978:171), i.e., societies "set up within another society as a conscious alternative to it" (164). Antisocieties use antilanguages--a classification which includes rhyming slang--which have as one of their functions the creation and maintenance of an alternative social reality (171).

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The importance of conversational discourse strategies
in the acquisition of literacy

James Collins and Sarah Michaels

University of California, Berkeley

0. The recent literature on discourse analysis suggests that conversational inference is a matter of multi-level linguistic signalling whereby speakers process intonational and rhythmic cues along with lexical and syntactic options. There is further initial evidence that this inferential process is subject to developmental constraints as well as subcultural differences (Gumperz & Cook-Gumperz, 1976). In learning to become literate in school the child has to learn to shift from his or her home-based conversational discourse strategies to the more written-like strategies of discursive prose. To the extent that the home-based discourse strategies differ from those of the school, this transition to literacy is made more difficult.

1. In this paper, six oral narratives from young school children are examined for evidence of this process. Four narratives are from first graders; two are from fourth graders. Our data were elicited in a one-on-one interview situation in which the narrative was "for the record" rather than conversationally embedded. While this is experimentally elicited rather than naturally occurring discourse, our study can perhaps best be seen as a naturalistic experiment, in that it derives from a much larger, long-term ethnographic study of speech events in classroom and home settings. The interviewer who elicited the narratives studied here had served as a teacher's aide in the children's classroom throughout the entire school year. As a participant observer, she was very much a familiar figure to these children, working with them individually and in small groups in and out of the classroom and even visiting them in their homes on occasion. Moreover, in her role as ethnographer, she had observed and catalogued the various recurring speech events that the children encountered on a daily basis, in and out of school. Many hours of conversation in various contexts, both formal and informal, had been recorded and indexed. On the basis of detailed linguistic analysis of selected episodes of this naturally occurring talk, a number of hypotheses were generated having to do with the children's use of intonation and various discourse strategies in school-related discourse tasks. To test out some of these preliminary hypotheses, we needed a more controlled setting and stimulus whereby we could channel the topic of discourse and minimize complicating interactive elements. Having the children tell us about a single, specific topic would provide us with comparable data from a large number of children and would also allow for replication by others. Our ethnographic study indicated that a common

topic of one-to-one adult/child conversation involved the adult probing the child about some specific past event. Questions like, "What did you do on the field trip?" or "What was the movie about?" were found to occur frequently both in informal home settings as well as more formal classroom interaction.

In order to have some control over what "past event" the children were to talk about, we showed them all a six-minute film made by W. Chafe in conjunction with a narrative discourse project. This film had already been shown to a wide number of adults from a variety of cultural backgrounds. This then provided us with extensive baseline data on adult narrative styles and strategies with which to compare our own findings.

The participant observer attempted to limit her influence on the speaker while he or she was narrating. However, interaction did occur. She involuntarily provided listenership cues: nodding, back channel vocalizations, laughter, etc. (Erickson, 1976). It is interesting to note that more of this listenership interaction occurred with some children than with others, and the timing of these cues was more rhythmic and regular with some than with others. The presence or absence or degree of rhythmicity of these cues may well have had an effect on the amount of talk or even on the complexity of the discourse elicited from the child. Further study on this topic is now in progress.

2. Our goal in asking the children to organize a monologue recounting the events in the film was to pose an exercise which would give us some control over what was being reported and yet place few other conditions on narrative strategy. As the first graders were not yet fluent writers, we also included two fourth graders in our study, from whom we could get both oral and written narratives on the same topic. Our design thus permitted us to do systematic comparisons across different children performing essentially the same task, as well as providing us with comparable data from the same children at contrasting discourse tasks.

Our theory and analytic methods derive from that tradition of conversational analysis which focuses on the notion of thematic cohesion as developed by Gumperz and his collaborators (Gumperz, Kaltman & O'Connor, 1979). By thematic cohesion we mean the processes by which a text, whether spoken or written, is tied together. These include the devices and strategies, at all levels of discourse, by which people chunk information so as to highlight certain parts and background others, signal topic shifts, and establish and maintain perspective within a topic. Our approach is to examine how prosodic, lexical and semantic devices are used to establish thematic cohesion and progression in the six oral narratives. This analysis then provides a basis from which to investigate the relative transferability of oral discourse into discursive prose, as exemplified by the fourth grade written narratives.

Given the different channel constraints that obtain across written and oral modalities, we were particularly interested in

the functions served by prosody and other paralinguistic cues in the oral narratives, as it is these features that are not available in written language.¹ Furthermore, research in interethnic communication has shown that the ways of combining prosody with syntactic and lexical forms are frequently specific to ethnic and social groups. This work has also suggested that some speakers rely more heavily on prosodically based signals than do others to achieve and maintain discourse cohesion.

3. Our approach in analyzing the oral narratives was to isolate systematic differences in the signalling of thematic cohesion and specifically to study the relative reliance on prosody as a cohesive device. We found that of the four first grade narratives, two use a wide variety of lexical and syntactic devices to signal agent focus, causal connections, old vs. new distinctions and co-reference relations. For ease of reference, we will call this a "literate" discourse style, as it bears closer resemblance to the oral style of middle class, literate adults (Chafe, 1980). The other two narratives rely more on prosodic cues such as rhythm and cadence to signal similar relations and distinctions. We refer to this as an "oral" discourse style (again for convenient reference). The two fourth grade narratives are more fluent and complex, but reflect the same "literate" vs. "oral" style contrast seen in the first grade narratives. Furthermore, this stylistic dichotomy is reflected in their written versions of the same narrative. Let us now examine in more detail the distinctions we are making between oral and literate style.

3.1 When we analyzed the narratives for number of nominals and verbals and number and types of nominal and verbal complements, no conclusive pattern emerged. While one of the "oral" style narratives has the fewest number of nominals and verbals and the fewest intraclausal complements, and one of the "literate" style narratives has the greatest overall number and variety of these constructions, the other narratives overlap on these dimensions. Hence, raw counts of items and constructions gave us little insight into narrative style and strategy. However, when we looked at the deployment of complements within and across clause boundaries with regard to the work they did to provide ties between events in the narrative, we did find clear differences. In the "oral" style narratives, complements tend to be verbal complements -- that is, they add information about a given verbal process.² For example,

- (1) and then he dro--ve off with 'em
- (2) and he had a wreck on his bike
- (3) and the peaches fell out on the ground

In 1-3, the various prepositional phrases add information about the verbal activity. In contrast, in literate style narratives, complements are frequently embedded against key nominals denoting

major characters in the overall narrated event. For example, in these phrases taken from the first grader, Jenny,

- (4) a man . . . that was pickin' some ... pears
- (5) this boy on this bike came along
- (6) he um . . . saw 'em with the pea--rs

In 4-6, the that-complement and the prepositional phrases add information about the nominals and the pronoun. The embedded information is then used to maintain explicit reference identity throughout the narrated episodes.

We find that the two groups of narrators employ different strategies for identifying a character in the film and then referring back to the character at a later point in the narrative. The children with a "literate" style use complex nominal syntax to describe a new character. Then in referring back to this character, after other events or characters have been talked about, these children again use complex syntax, as well as lexical and grammatical parallelism, to reestablish the character's identity. For example, the "literate"-style speaker, Jenny, says:

- (7a) . . . there was a man /
 . . . that was . . . picking some . . . pears //

Twenty-four lines later she mentions him again, saying,

- (7b) . . . and then / . . . they . . . 'walked' by the man /
 who gave / . . . wh-who was picking the pears //

Here Jenny signals that the second mention of "the man" is old information through the use of the definite article "the." She then goes on to provide explicit identification of the character through the use of lexical ties and parallel syntactic structure.

Contrast this with the "oral"-style speaker, Merle, as he introduces the same character:

- (8a) it was about / . . . this man /
 he was um / . . . um . . . takes some um . . .
 peach-- / . . . some . . . pea--rs off the tree /

Here Merle uses two independent clauses where Jenny used a single relative clause. In isolation the difference is of little communicative importance; one uses embedding where the other uses apposition. However, if we now look at how the children refer back to characters already introduced and reestablish character identity, we find that the "oral" style strategy makes very different

interpretational demands on the listener. Where the "literate" style narrators use embedded nominals to signal identity and non-identity of major characters, the "oral" style narrators are less inclined to do so and instead employ prosodic conventions.

An example will clarify this point. In the beginning of his narrative (example 8a above), Merle introduces the pear picker, describes him as such, and then leaves him and proceeds to talk about other characters and events in the film. Twenty-five lines later Merle again mentions this character, saying,

(8b) . . . and when that . . . when he 'pa--ssed /

, by that ma--n / . . . the man . . .

the ma--n came out the tree /

Here he uses vowel elongation and a high rise-fall contour on "man," which serves as a cue that he's talking about old information, almost as if to say, "you know what man I mean, that man I already told you about." We emphasize that this is not an isolated instance, but a recurrent strategy. While our claims about the communicative intent of such cues are hypotheses which need further testing, we do find other instances: all three "oral" style narrators employ this signalling device at some point in their narrative.

3.2 When we shift our attention from nominals, verbals and intra-clausal complements to inter-clausal syntactic structures -- i.e., infinitives, that complements and various relatives -- we do find a difference of frequency across the narratives: among the first graders, one "oral" style narrator, Wally, has no inter-clausal complements; the other, Merle, uses only one. One "literate" style narrator, Jenny, uses four such complements. The other, Joel, uses seven.

In the light of what we've said about differing channel conditions in spoken and written language, inter-clausal complements are significant because they enhance cohesion in both spoken and written language, explicitly mapping hierarchical relations onto clausal structure. In substituting relations of super- and subordination for simple conjunction, they serve two purposes: on the one hand, they order two clauses with respect to one another; on the other hand, they provide additional information about a given noun phrase; the information can then be used as a "tag" -- establishing co-identity in a later utterance. It is this latter use and function that we regard as the most important aspect of these syntactic constructions' contribution to discourse cohesion. It is the tendency to use complements to establish co-identity which distinguishes the "literate" style from the "oral" style.

The differing strategies -- the use of complements as opposed to prosodic cues to accomplish similar communicative tasks -- can also be seen in the fourth grade narratives. The "literate"

style narrator Paul uses an abundance of complements -- of-phrases, participials and that-sententials -- to keep track of referents. For example, he opens his narrative with:

(9) this man / he was collecting / some kind of fruit /

and ten lines later refers to

(10) . . . the guy / .. collecting fruit //

and thirty-eight lines later uses a participial embedded in a that-sentential:

(11) . . . the man that was um / . . . that was collecting the
fruits //

Paul's "oral" style counterpart, Geoffrey, makes far less use of these devices. Although Geoffrey opens his narrative like Paul, with the use of an appositional construction,

(12) this guy . . . this 'man was pickin' pears

he resembles the first grader Merle in that he refers back to this character later in his narrative not with a complement, but rather with a prosodic cue: vowel elongation with a low rise-fall contour on "the mann."

3.3 If we consider yet another level of supra-clausal discourse organization, that of inter-clausal connectives, we can again contrast the use of lexicalizations as against the use of prosodic cues. Clausal connectives such as but, so, on the other hand, conversely, etc., serve to orient a clause or series of clauses with respect to a preceding clause or series. In written language they serve to integrate meaning, despite the absence of prosodic and situational cues (Hirsch, 1977: 24). In spoken language they serve a similar function of semantic integration. Either replacing an intonational or contextual cue or reduplicating its function, they make the semantic relationship between clauses fully explicit. The use of lexicalization as against prosodic cues can be seen if we compare two passages which use so-pronominals with a passage where the pertinent information is signalled solely by intonation.

The first example is from the first grader Jenny:

(13a) . . . he um . . . 'saw 'em with the peann-rs

so
✓

. . . 'he thought / . . . that . . . they

stole . . . his peaches //

The second example is taken from the fourth grader Geoffrey:

(13b) and he saw them eatin' pears /
so he thought they did it //

In both examples, the use of *so* lexically encodes a causal relationship between an act of seeing and an act of judgment. Compare this with a closing segment of the same episode taken from the speaker Merle.

(13c) . . . the man came out the tree /
saw the pears was go-ne /
and then . . . 'he know who had got 'em /

Note that the form *then*, with a stressed high fall, serves as an implicit intonational signal, functionally equivalent to lexicalized forms, *so*, *therefore*, *hence*. The chain of events and inferences is related, not with a lexical connective, but with a prosodic cue superimposed on what is ostensibly a temporal connective.

Studies of Black conversational style and of Caribbean Creole have shown that lexical meanings are often relatively fluid and depend on prosodic conventions for assignment of a given situationally specific meaning (Hansell & Seabrook, 1978; Reisman, 1970). Given this state of affairs, proper interpretation depends on speaker and listener awareness of the signalling potential of a given prosodic cue. In line with these findings, we emphasize that it is the use of the high fall intonational contour which imparts the causal inference to 'then.'

While this causal inference does come across in Merle's oral presentation, in writing the prosodic contours are lost and consequently the precise force of 'then' would be unclear. This contrasts with the narratives of Jenny and Geoffrey, where the use of 'so' provides an explicit causal connection which *would* carry over into writing.

3.4 We will now examine in detail another case in which the meaning of a specific discourse feature is extended by a prosodic cue. Two of the oral style first graders use 'then' with prosodic marking to disambiguate reference relations where anaphoric pronouns do not provide sufficient semantic distinctions. The episode described is the most complex in the entire film. It involves several participants and an exchange in which the key figures are both boys. (As background: in this scene, three boys come upon a hat in the road, which belongs to a boy with a bicycle, whom they have left. One of the three boys whistles to this boy,

gets his attention, and approaches him, hat in hand. He gives the boy with the bicycle the hat and in return is given three pears, to share among his friends.)

All first grade narrators rely predominantly on surface pronominals in referring to a character who has already been introduced and who remains in focus as an agent. In this particular scene, however, the anaphoric pronoun 'he' does not suffice to distinguish between the two boys. There are several distinct strategies for avoiding referential ambiguity in this case. One is to fudge somewhat on the actual details of the scene and exploit the number distinction between the three boys and the lone boy on the bicycle. The anaphoric pronouns he/him vs. they/them are then sufficient to keep the two sides separate. This strategy is employed by Joel:

- (14) . . . they gave him ¹back the hat /
 and for 'giving him ¹back the hât/he gave 'em three
 pears //

A second strategy is to use nominal complements to provide enough identifying information about the two boys to keep them separate. This is done by the literate style fourth grader Paul, who says:

- (15) a--nd uh . . . the boy / . . with the hat /
 . . . um, handed him the hat //
 and . . . um / . . . the boy on the bicycle /
 gave him . . . 'three fruits //

As noted earlier however, both oral-style first grade narrators make no use of embedded nominal complements when talking about key characters. Additionally, as both narrators attempt to be factually precise in this episode, the strategy of exploiting the singular/plural distinction is foreclosed. As a result, the passages suffer from apparent ambiguity, as can be seen in the following excerpt from Merle's narrative:

- (16a) and then . . . the . . . the ¹boy_j had ¹blowed his
¹whistle and then /
 b . . . he_i had . . . then . . . 'gave him_i his_i ¹hat /
 c . . . and then . . . he_i had 'gave 'em some 'pear /

In lines b and c there is no way of knowing, short of having seen the film, whether the subject in b and c is co-referential with

one of the three boys mentioned in line a, or with the earlier subject, the boy on the bicycle. (We find a similar ambiguity, in the same passage, in the first grader Wally's narrative.)

If our interpretation of this passage is guided solely by the general rules for cross-clausal co-reference and deletion, then Merle's recounting is ambiguous and confused. The ambiguity can be ascribed to the speaker's over-reliance on surface pronouns that do not carry enough semantic information to differentiate the characters. Additionally, the most plausible interpretation of the passage is at variance with events depicted in the film.

If however the general rules are temporarily held in abeyance and a more context-specific set of cues and patterns is considered, then the interpretation is very different. With regard to these patterns, we should first point out that within a given episode-unit, 'he' is used predominantly with the same agent (a strategy which serves to create consistent agent perspective). Second, the form 'then', with a low falling pitch contour, marks an attempt to shift agent in most of its occurrences in the first grade narratives. In other instances, it appears to mark a more general attempt to shift "focus" of the narrated event to a new scene or location. It is rarely used solely as a temporal connective. These observations suggest that in Merle's passage, the occurrence of 'then' between "he had" and "gave him his hat" in line 16-b signals that 'he' is being rejected as a possible subject, putting "the boy" (blowing the whistle; line 16 -a) back in focus as a subject. The use of 'then' in 16-c signals another change, this time with 'he' (the boy on the bicycle) back in focus as subject.

While this analysis requires manipulation of the normal rules for anaphoric deletion, it has three virtues: 1) it accords well with the strong tendency of all first grade narrators to use 'then' as a perspective shifting device, and in particular to signal shifts in agent perspective, 2) it accounts for the pattern of using 'he' to refer to the same agent throughout a given episode-unit, and 3) it allows us to "reconstruct" from the narration the actual sequence of events depicted on the film.

All three speakers with an oral style rely heavily on anaphoric pronouns and prosodic cues to signal referential identity and contrast. In describing this particular episode, where anaphoric pronouns do not sufficiently distinguish between actors, the temporal connective 'then' with prosodic marking was used by both Merle and Wally as an ad hoc agent shifter. This strategy succeeds only if you share either in-group or circumspect analytic awareness of this signalling convention. Furthermore, this strategy does not transfer to writing where the accompanying prosodic cue on 'then' would be lost. In contrast, the literate style speaker Paul relies much more on lexical elaboration and clausal embedding to achieve referential clarity in describing this episode. This strategy works equally well in written or oral discourse.

3.5 Finally, when we compare the relative transferability

of signalling devices to written discourse, we find that the fourth grader who uses a discourse style that relies heavily on prosodic cueing has more difficulty expressing himself in writing than does the fourth grader who uses more lexicalized cohesive ties in his oral discourse. It is in just those cases where Geoffrey uses prosodic cues to distinguish major characters in his oral narration that his written text fails to make the necessary lexical distinctions and hence is ambiguous. Paul, on the other hand, uses lexical complements to distinguish major characters in both his oral and written narratives; his written version is unambiguous.

4. While some of our findings are reminiscent of those of Bernstein and his collaborators (Bernstein, 1964; Hawkins, 1969) and Black dialect researchers in this country (Hess & Shipman, 1965), our methods and assumptions are different. With regard to method, we attempt a fine-grained linguistic analysis of various levels of discourse. This goes well beyond the frequency counts of lexical items and syntactic structures used by these researchers as the basis of their characterization of restricted and elaborated codes. Additionally, we do not regard our findings as indicative of differences in cognitive capacity, nor do we wish to suggest that they are somehow characteristic of an entire social class or minority group.

In our investigation of communicative background and speech activity we rely heavily on the concept of conversational inference: the situated process of interpretation by which participants in a conversation assess other participants' intent and respond on the basis of that assessment. This interpretive process relies on multiple levels of verbal and non-verbal signalling -- kinesic, paralinguistic, prosodic, lexical, and syntactic -- and embraces all levels of discourse: intra-sentential relations, inter-sentential co-reference, participant affect (humor vs. seriousness), activity frames (chat, discussion) and so forth. Through our ethnographic work and detailed linguistic analysis which focuses on the interplay of prosodic, lexical and syntactic signals in naturally occurring conversation in the home and classroom we have identified community-based differences in conversational norms and expectations. These we refer to as differences in discourse style.

In comparing these styles with regard to the creation and maintenance of thematic cohesion, we do not assume that any one style is inherently better, more complex or more appropriate than any other. In fact, all the oral narratives studied were chosen as examples of highly successful narrations. It is only in reference to a particular linguistic activity that questions of appropriateness arise. By examining thematic cohesion in spoken and written language, we are able to distinguish between communicative background and speech activity, two notions which have been confused and confounded in much of the sociolinguistic re-

search in the past. We attempt to give our findings a task-specific analysis: we ask how differing discourse devices serve to signal connective links in oral narration and then ask whether or not these devices transfer successfully into written discourse. In the transition from oral to written language, prosodic cues are lost; this study suggests that a child who relies heavily on these cues as cohesive devices in oral discourse may be at a disadvantage in making the transition to literacy.

Furthermore, by using the concepts of conversational inference and thematic cohesion we are able to study discourse strategies in a variety of classroom activities. What we find is that community-based differences in discourse style receive differing interpretations in the classroom. Nearly all linguistic performance (whether oral or written) is evaluated in school with reference to an implicit literate standard. Given this state of affairs, a discourse style which relies heavily on prosodic cues for signalling connective ties is frequently at variance with the teacher's own discourse style and literate expectations. As a result, the teacher often inadvertently interrupts or fails to see the point of what the child is saying. Cumulatively, this kind of disharmonious interaction results in a pattern of differential treatment and negative evaluation which has been documented for "sharing time" episodes and is now being investigated in oral reading lessons. Differential treatment and negative evaluation, in their turn, diminish the student's access to the kind of instruction and practice necessary for the acquisition of literacy.

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Notes :

1. While there is still much that remains to be understood about the uses and regularities of prosodic signals, there is mounting evidence that prosody serves a vast range of complex communicative functions (see Crystal, 1969, for a survey of this literature). The difficulty facing researchers concerned with prosodic cues and their functions is that prosody is at once pervasive yet elusive. It is more context-sensitive and inherently variable than lexical items and syntactic constructions. Hence its functional characteristics are less generalizable, less encodable; in a rough and ready sense, less "grammatical." This state of affairs derives, in its turn, from a series of causes: (1) as a physical phenomenon prosodic systems are poorly understood, as is evidenced both by the acoustic and physiological literature and by the fact that no standard notational system yet exists; (2) as non-segmental signals, prosodic cues are not readily susceptible to native speaker awareness and precise characterization (Silverstein, 1977); and lastly, (3) the reduction of the speech signal to orthographic substitutes, in written transcripts, entails a severe loss of prosodic information.

The method we use in analyzing prosodic cues in these oral narratives derives from the work of John Gumperz and John Trim. Initially, we chunk the speech into tone group units which are segments with a single, continuous prosodic contour. We indicate whether these units are major tone groups (ending with some indication of closure) or minor tone groups (signalling "more to come"). Secondly, we locate points of intonational prominence; the primary peak of the tone group being the nucleus, with peaks of lesser prominence identified as secondary heads. Thirdly, we indicate pitch contours on the tone group nucleus (rising, falling, level, rise-fall, etc.) as well as pitch level on the heads (either high or low). We then systematically examine the use of prosody within and across clauses, looking for relationships between tone group chunking, nucleus contour and clausal (syntactic and semantic) structure. We do not assume grammar-like consistency or unity of meaning. Rather we look for general patterns in the use and functioning of prosodic cues within and across speakers, in relation to particular discourse tasks.

The notations we use in transcribing prosodic and paralinguistic cues were developed by Gumperz and his collaborators based on Trim's work. In this system, tone group boundaries are indicated as major "/" or minor "/". Within the tone group we indicate the pitch contour on the nucleus as follows: " \ " low fall, " \ " high fall, " / " low rise, " / " high rise, " ^ " rise-fall, " v " fall-rise. Secondary heads are " | " high or " | " low. Paralinguistic features such as a) shift to high pitch register " F " or shift to low pitch register " L " (both applying to the entire tone group), b) pausing "... " indicating a break in timing and "... " indicating a measurable pause, c) vowel elongation "--" following the

syllable, d) speech rate: "acc." indicating accelerating tempo and "dec." indicating slowing down, e) loudness over an entire tone is indicated by "p" (soft) or "f" (loud). Doubling of any one of the above symbols indicates extra emphasis.

2. The difference between verbal structures as opposed to nominal structures has been discussed by Michael Halliday (1966) in terms of contrasts along two basic dimensions: a conceptual dimension of clausal transitivity and associated causativity; and the communicative dimension of theme. Nominalizations have greater flexibility than verbals along both dimensions. This flexibility helps explain the importance of nominalizations in scientific and technical writings and in discursive prose in general. Halliday comments on the development of **taxonomic** noun structures in a given language, arguing that the development of such lexical-syntactic capacities must be seen in the light of a given society's technological history, the communicative demands which arise therefrom, and the overall communicative advantage (flexibility) which nominalizations enjoy (1966:7-9, *passim*).

3. 'Then' with a high fall is functionally distinct from two other uses of 'then' by this narrator. (1) the use of 'then' with a low fall contour which frequently signals a shift in agent-perspective (it is used this way by other first grade narrators as well), and (2) the use of 'then' with a low rise which is used to mark episode-like breaks in Merle's overall narrative.

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TO TABOO EVERYTHING AT ALL TIMES

G. Diffloth
University of Chicago

Linguistic taboo has often been approached from a socio-linguistic angle, and that is appropriate. But it is also necessary to examine linguistic taboo from a strictly linguistic angle, whether descriptive or historical, or both. I mean from an angle where we can see the place of taboo in the general economy of the language, the effect it has on its various elements, and the general principles at work. We may also be able to propose linguistic explanations in addition to accurate descriptions, and envisage general historical scenarios as well as specific reconstructions of taboo phenomena.

This area of research attracted my attention because of my previous interest in studying iconicity in Asian Expressives (Diffloth 1972, 1976, 1979). The similarity between taboo and Expressives might not be immediately evident, but in both we are dealing with something that can be called linguistic improvisation, in both we can witness the creation and use of linguistic forms which are new to the language and its speakers, and which may or may not be repeated or imitated later on; in both we are confronted with phenomena which are not due to rule-governed behaviour, but to rule-creating behaviour;¹ in both we see a different facet of language: instead of the usual code of rules and congealed structures, we find an on-going process of structuration, of structure in the making. For the moment, linguistic improvisation remains a somewhat uncharted area of language study, one where many theoretical questions appear in a new light, or disappear into the realm of Irrelevance. Take, for example, the notion of grammaticality: the role, if any, which such a notion might play in linguistic improvisation is very far from clear.²

In these few pages, I will not dwell upon the disturbing theoretical issues which linguistic improvisation stirs up, rather, I will document a rich and explicit taboo system found in Semai³ where improvisation is evident.

But first, a few remarks about taboo in English are necessary. Consider the exclamation [ʃʃvut] (falling intonation), which is another way of saying "I am disappointed", "something went wrong". Native speakers will agree that this word stands for another one: [ʃʃɪt] (falling intonation) with the same meaning. This latter exclamation, however, is an instance of a well defined linguistic behavior, "obscurity". Because the straightforward referential meaning of these words belong to a small number of semantic domains which are considered disagreeable, obscenity is frowned upon and carefully avoided by many native speakers in a large spectrum of social contexts, while indulged in on certain other fairly well circumscribed occasions. The first exclamation, however, does not **constitute** an instance of obscenity but a case of what one might call "aborted obscenity": the speaker thereby

conveys the message that s/he intends to use obscenity but decides to refrain from so doing by consideration for the audience and for him-/herself. Notice the phonetic means by which this complicated message is conveyed; the word starts with the same phonetic characteristics as the obscene [ʃʃɪt], an exaggerated⁴ fricative, but the expected sequel [...ɪt] does not materialize, the phonology soon derails, often after a few additional suspenseful milliseconds, and a different word is pronounced, "shoot", which does pertain to another obsession of the culture, but one which is considered far less objectionable.

This particular taboo mechanism might be called "phonological taboo": what is being avoided is not the immodest display of temper, or the speech act of cursing, I mean cussing, not even the indirect reference to excrements which is in fact clear to everyone involved, but simply the phonological sequence ʃ + I + t.

This sort of phonetic superstition is probably widespread around the world, but it is only one of the possible forms of linguistic taboo, and not the most fertile.

In order to find taboo mechanisms of a different, and more vivacious kind, it is instructive to pay attention to non-literate societies where the phenomenon was, after all, first noted and described - the word tabu was apparently brought back from Tonga by Captain Cook - and where it is an active process today.

We find among the Semai of Malaysia a variety of linguistic taboo which might be described as taboo on lexicalisation, as I will try to show below. But first, I must make some general remarks about Semai views on the world.

The Semai are, in their own words, "forest people" /snʔooy srak⁵/. The word /smaay/ is recent and not fully current. It appears to have been coined by the Temiar, their northern neighbors, and to originate in the name of a creek /teew simaay/ located in Cameron Highlands where the two groups came into contact. Reference to topography (the people of River x...) is the normal method which Malaysian forest people use for naming other groups; they do not seem to care much for larger linguistically based groupings, until one reaches the all inclusive term "forest people", which denotes an ecological niche, not an ethnic entity. The equatorial rain forest is their world and absorbing passion, while Malaysian urbanites and farmers tend to view the "jungle" as a rather hostile or haunted kind of place. As a result, much of Semai ideology, as expressed in myths, sayings, and specific rules of conduct (Diffloth, in press) concerns itself with the multitude of life forms of the forest and man's place in it.

Consistently with their dislike for ethnic divisions, the Semai prefer to dwell upon the similarities and connections between living species, including Homo Sapiens, rather than on their differences. One would be tempted to predict that the western concept of humanitarianism which places a quasi-religious value on the life of humans, would probably appear to a Semai as a blatant form of racism, or at least of childish egocentrism.

In the world of myths, the timeless past, there was/is no

clear differentiation of species; all animal life forms, and many plants, looked and behaved very much the way humans do, spoke to each other freely, intermarried, and produced offspring whose identity was nobody's concern, at least in most circumstances. And in the real present, Semais are convinced that individuals of such diverse species as, say, the cockroach, the flying squirrel (*Hylopetes lepidus*) and the pencil-tailed tree mouse (*Chiropodomys gliroides*) metamorphosize into each other during their own lifetime. It is in this context, for example, that cases of people becoming tigers, a notion which is widespread in Southeast Asia, should be understood.

The problem is, and this becomes a central preoccupation for the Semai, that people hunt and kill and eat other animals to keep alive. Semais, the men at least, hunt a great deal and have developed advanced hunting methods; thinking about a hunt, dreaming up ways of outsmarting other animals, observing their behaviour and understanding their motives, occupies them for days; hunters develop a personal bond to the game, one where familiarity breeds animosity and compassion; but the flesh they end up eating is nearly their own, and they do not talk lightly about the whole subject.

In fact Semais do not use language lightly to begin with. Naming, in particular, is a very delicate matter, as it is in Southeast Asia generally. This applies not only to calling people in the proper fashion or to choosing a fitting anaphoric device, but also to specifying animals or plants one wants to talk about.

There is linguistic evidence⁶ that Semais consider any kind of naming as a lesser form of violence, something to be eschewed with the same care one avoids /luk krkbaak/ "laughing at butterflies", one of their favorite understatements for "harassment".

Given the hunter's dilemma and this sensitivity to using names, it is to be expected that animal names will be used by Semais, if at all, with a great deal of diplomatic inventiveness. Evidence for this appears very clearly in the language itself: for every animal species which is possibly eaten, and this includes practically the entire named fauna, insects excepted, there are long, open-ended sets of names. The Semai themselves classify these names into three broad categories: /muh brɔɔr/ "name which-is-good"⁸ /muh cnacæθ/ "name which-disgraces"⁹ and /muh krndɛy/ "name by-which-one-causes-someone-not-to-know".¹⁰

The first category, /muh brɔɔr/ contains only one item per named species, one could therefore call it the real name.¹¹ This is the name which is tabooed; it would be undiplomatic to use it in a large number of circumstances, for example, most emphatically, when one is eating the flesh of the animal, but also when one is preparing it, hunting it, or even thinking about hunting it, in which cases it would certainly bring about /trlaac/ "retaliation" from one of the animal species, /ʔɛkuuʔ/, a mythical heavenly bear, usually in the form of thundersqualls.¹² It would also be indelicate to use the real name in case some other person in the area is doing any of the above activities, and, more generally

when there are uneasy moments in the settlement, such as a pregnancy, a sickness, etc... The list is not yet closed, and is already so inclusive as it stands, and so ill-defined, that, to be on the safe side, Semais refrain from using real names at almost all times (Diffloth, in press).¹³

Members of the other two categories of names are used to replace the real name. Some Semai include these two categories under a single term, /muh krmmuh/ "name with-which-to-name"¹⁴ but the two have different functions, as the terms imply. These "names with-which-to-name" are often used with the word /bah/ prefixed, whose literal meaning is "Father's younger brother" but whose extended meaning is comparable to English "Mr.".

In the disgracing names category, /muh cnacəə?/, we find words which generally make fun of the appearance, the gait, the smell, the behavior of the particular animal, or allude to it in some disrespectful way.¹⁵ Many of these names are Expressives; e.g. /mʌ mntiɪp / "dirty eyes" for the Banded-leaf monkey (*Presbytis melalophos*). Needless to say, it is impossible to list all the /muh cnacəə?/ even for one species: inventiveness is much appreciated here, not only semantically, but even phonologically, since the forms of Expressives constitute an open-ended system, and they are, in a sense, constantly created anew.

In the secret names category, /muh krndəy/, by far the larger, we find words or expressions which are purposefully obscure, so as to cause the animal not to know that he is being named. Here, improvisation is more conceptual and syntactic: a typical food of the animal can serve as a name, e.g. /bah prah/ "Mr. Perah fruit (*Elaternospermum tapos*)" for the Long-tailed giant rat (*Rattus sabanus*); or features of its habitat, e.g. "Mr. cave" for the mountain goat, /bah guul/ "Mr. mortar" for the Lesser gymnure (*Hylomys suillus*) because it is known to sleep in discarded mortars; or behavior traits, e.g. /bah babə?/ "Mr. cling-to mother" for the Flying lemur (*Cynocephalus variegatus*), because of the conspicuous way it transports its young (Medway, 1969), /bah wit/ "Mr. erase-its-tracks" for the Malayan pangolin (*Manis javanica*), because of the effect of its wide, heavy tail; often the allusion is remote, even obscure, not only for me but for many Semais as well, e.g. /naar loo?/ "two penises" for the Black-banded squirrel (*Callosciurus nigrovittatus*), one for his wife, one for his favorite branch, so I was told; sometimes the secret names are not even distinctive for one species, e.g. /bah sabat/ "Mr. imitation-disease"¹⁶ is used for the Sambhur deer (*Cervus unicolor*), the Pig-tailed macaque (*Macaca nemestrina*) and the Long-tailed giant rat (*Rattus sabanus*). Syntactically, secret names are not always Nouns or even simple words, e.g. /bah salut/ "Mr. ouch!" for the Bear-cat (*Arctitis binturong*), where /salut/ is an exclamation indicating burning pain, because the animal is known to sit on the hearths of abandoned houses, or /bah tlɔk ?ec/ "Mr. snap-dung" for the Pig-tailed macaque (*Macaca nemestrina*) because it is known to inspect other animals' droppings, or /bah hi gu ɲɔh/ "Mr. we-usually-light (it)" for the Bear-cat, another allusion to

sitting on hearths; sometimes secret names are made of syntactic constructs which violate the most elementary rules of Semai syntax, e.g. /bah koh tək/ "Mr. chop hand" for the Black giant squirrel (*Ratufa bicolor*) because it does not have thumbs¹⁷: in a normal Semai sentence a transitive verb like /koh/ with an expressed object /tək/ would require a prefix marking agreement with the Agent, even if the Agent itself is omitted, and the specific Noun /tək/ should have the preposed article /ʔi/; one would expect /bah bi-koh ʔi-tək/. All this disregard for syntactic categories and rules indicate that we are dealing with purely semantic associations: taboo names, like metaphors, give us almost direct access to semantic systems.¹⁸

As an example of the taboo naming system, I include here a number of names, and their respective categories, for one species taken at random from my data:

Bear-cat (*Arctitis binturong*)

(This animal is known to settle on the hearths of abandoned houses. It is the object of "mixing-taboo" /pnaliiʔ/ because it resembles a mythical species closely associated to ʔŋkuuʔ).

Real name = bnbaat

Taboo names (names for naming):

Disgracing names:

- / (bah) knrɛp/ = "Mr. bend-down" (it is known to bend under logs)
- /bah mncoʔ/ = "Mr. bait"
- /bah dəp/ = "Mr. settle"
- / (bah) rŋah/ = "Mr. black" (Expressive)
- /bah dŋrəp/ = "Mr. temporary-house"
- /bah butun/ = "Mr. buttocks-stick-out" (Expressive)
- /bah lɔɔt/ = "Mr. come-out"
- /bah lɔɔt kiit/ = "Mr. ass come-out"

Secret names:

- /cooʔ ʔŋkuuʔ/ "dog of the mythical thunder-bear"
- /bah hantuuʔ/ "Mr. ghost" (allusion to abandoned houses)
- / (bah) ʔɔɔs/ "Mr. fire"
- /lʔkaaʔ ʔɔɔs/ "fire tree-meat" (Cf. Dentan 1968)
- / (bah) salut/ "Mr. ouch! it burns!"
- / salut kiit/ "ouch! ass burns!"
- / (bah) hi gu nɔh/ "Mr. we usually light it"
- / (bah) tnhāʔ/ "Mr. genital offense" (sitting on a hearth is equivalent to having intercourse with a very old person and will result in genital distension) (Cf. Dentan 1968.)

It should be clear from what precedes that this list is neither complete nor entirely used by all Semais. New names keep being invented, and there appears to be no specific rule which would allow one to predict much about what the new name will be. There are some

established semantic habits, as outlined above, but these are ill-defined, and in any case, surprising new twists are always welcome and appreciated. The only semantic restriction one could reasonably propose is that the allusions be understood by other humans; but I am not sure even that limitation will hold: often the animal name is indeed incomprehensible, and the audience, often a younger person, will be kept guessing, and the time is not for asking questions. Linguistic improvisation has its drawbacks.

A rapid inspection of the thesaurus I have compiled of such names reveals another interesting fact about the variety of taboo represented here. What is being avoided in the real name is actually not its phonological representation but rather its lexicalisation; the principle is that species X should not be called by the real name for that species: the lexicalisation process must be derailed and some other way of naming must be found; but the real names themselves, as phonological words, are nothing to be upset about. The proof, so to speak, is that they can very well be used as secret names, or as parts of secret names, for naming other animals. For instance, the Malay civet (*Viverra zibellina*) has a secret name: /kalak prahuu/ "the **L**insang of boats", where /kalak/ is in fact the real name for the **L**insang (*Prionodon linsang*), an animal which resembles the Malay Civet. Such cases are not very common however, because one is never sure that the second animal is not overhearing, or somehow involved in whatever delicate situation made one decide to use a secret name for the first. But the possibility of using real names in this fashion shows that it is lexical, not phonological derailment which is sought after.

It is not difficult to find in our own cultures certain taboo-like linguistic systems which operate on the same general principle, though with different motivations and results. Slang, the metaphoric language of subcultures¹⁹ within our own societies, comes from a decision to derail lexicalisations which are typical of the "straight" language; so when someone says "vire tes pincés" he means "enlève tes mains" but rejects the normal lexicalisation of the verb "to remove" and of the noun "hands". Note that the replacing lexical items "vire" and "pincés" are perfectly acceptable words of the straight language, but not with the meanings they are now given. It is easy to see that, in slang, it would be possible, at least in principle, to taboo everything at all times. Even standard conversational English abounds in pragmatically conditioned lexical replacement: speakers hardly ever strive at unequivocal precision ("at school, ...the other day..., her boyfriend..."); rather, the rule of thumb seems to be: remain as vague as you possibly can, the hearer can always, and often does, ask for clarification. And this is to say nothing of roundabout, colorful, humorous styles of speech and individual habits, which are not just imprecise, but deliberately inventive, side-tracking or misleading, in ways which must be improvised if conversation is not to remain exasperatingly explicit.

Footnotes

1. This formulation begs several questions regarding the existence and nature of static structures and rules. Without entering this area as a philosopher would, it is clear that all linguistic utterances are in some ways novel to the speaker and the participants; this novelty may or may not turn into the dead wood we call structure or system of rules. Timeless individual competence is only a useful fiction. I mean one which entirely depends for its survival and credibility upon the uses to which it is put.
2. Recall that the notion of grammaticality is, and remains, the foundation stone of Chomskian linguistics and its various heirs.
3. Semai is one of the aboriginal languages of the Malay Peninsula (West Malaysia), spoken in the states of Perak and Pahang by about 17,000 people; it belongs to the Aslian branch of the Mon-khmer family. "Central Sakai" was the name generally used for it before the second world war.
4. Note other abnormal phonetics in other cases of obscenity: [ffʌk] is sometimes pronounced with a unique kind of labio-dental whereby the lower lip is pulled up into the mouth cavity and the upper incisors close in on what would normally be half-way down between the lip and the chin. Sometimes the articulation is frozen at that point and the rest of the word is not uttered: this silent articulatory gesture is sufficient for communication with the onlooker while respectful of the hearing sense of others.
5. Throughout this paper, unless otherwise stated, Semai forms will be given in what I called the C (central) dialect.
6. For instance, the existence of a verb /diŋ kuur/ "to keep mentioning someone's name"; the literal meaning of this verb is "to knock on someone's head, e.g. with a log". Even one mention of a person's name is thought to be sufficient to make him choke on his food at that very moment, even miles away.
7. About 250 species, not counting fishes and about 200 insect species.
8. /muh/ = "name", /brnɔɔr/ is from the Proto Semai root *bɔɔr "good", with -n- infixion, followed by infixion of the final consonant between the two initial consonants: b-r-nɔɔr; the application of these two rules, in that order, creates a -C_n-infix which has, among other grammatical functions, the effect of turning a verb into a Restricted Relative Participle which is postposed to the head noun /muh/. The same affix is also used for various Nominalisations.
9. /cnacəəʔ/ is from Proto Semai *cwuɬ which does not exist

as a free verb root any more but has left a derivative verb *cacuwu? "to disgrace". With -n- infixation this verb is made into a Restrictive Relative Participle /cna_cəə? / placed after the Antecedent /muh/. The expression /muh cna_cəə? / could also be translated "name with-which-one-disgraces-someone".

10. /krndɛy/ is from the Proto Semai verb *kday "not to know". To this root is added, first, an -n- infix for creating a Restrictive Relative Participle, and second, an -r- infix which creates causatives in original CCVC roots. The interesting detail here is that /muh/ the Antecedent of /krndɛy/ cannot be the Agent of the verb /krdɛy/ "to cause not to know" since Inanimate Nouns like /muh/ cannot be the Agent of causatives; it has to be the Instrument, and thus the awkward translation.

11. This is not too far-fetched because this word /brnɔɔr/ is found in single word questions, with falling intonation as is normal in Semai questions, used much in the same way as "-really?" is, to punctuate English conversations.

12. "Thundersqualls" are usually called /ʔɥkuuʔ/ themselves but I believe this is not the real name of "thundersqualls", just a reference to their origin.

13. What is said here of animals should be extended to a large number of plants, namely those which are eaten. As a result, a very large part of the forest environment, the world with which the Semai identify, comes under naming-taboo.

14. This word /krmmwɥh/ has an -N- infix for forming Restrictive Relative Participles, placed in a verb root /krmwɥh/ "to name". The verb presents a historical puzzle because it appears to contain a kr-prefix which is used for Malevolent Causatives. But the root would be */mwɥh/ "to have a name", too similar to the Noun /muh/ "name" for the resemblance to be accidental; yet Semai is not known to have vowel alternations of this kind. Malevolent Causatives differ from ordinary Causatives in that the causation is done with evil intentions: e.g. /caaʔ/ "to eat", /brcaaʔ/ "to feed (normal causative)", /krcaaʔ/ "to poison", thus the existence of a verb /krmwɥh/ "to name" with a possible kr-prefix would confirm the unpleasant connotations attached by the Semais to the act of naming, as claimed above.

15. The existence of these disgracing names shows that the taboo system is not really inspired by the fear of animals. But I suspect that Semais do not believe these disgracing names to be understood by animals, while I was told that real names would be, that is why they, and they alone, should be avoided.

16. /sabat/, Proto Semai *sabadn (Gf. Malay: sawan, which

describes a variety of ailments) is one of several disease patterns of Semai medicine; /sabat/ is disease by imitation, e.g. touching fresh fish would /sabat/ a pregnant woman: the sensation of something slipping out of the hand may impress her with the fear of miscarriage to the point of causing it. The Sambhur deer is known, by Semais, to be prone to epileptic fits; eating that flesh may, in some cases, cause epileptic fits, whence /sabat/ as a name for the deer. As for the macaque, it is known that children will shake limbs, make faces and speak like monkeys after eating it. I have no explanations for the rat.

17. I have not yet found confirmation of this in the zoological literature.

18. Most current "semantic" studies are actually studies in semantax, that is, semantics as revealed by syntax, not such a great improvement on the older type of semantics as revealed by lexicon.

19. Note that slang is particularly alive in social circles where literacy is not highly praised or where its prestige is questioned. Taboo on lexicalisation seems at home in oral culture; phonological taboo befits a society where reified language, writing, has an overwhelming presence.

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Metaphors in Makah Neologisms

William H. Jacobsen, Jr.
University of Nevada, Reno

Śrīgurave namaḥ.

O. Murray Emeneau's linguistic work has continually evinced a central concern with semantic questions, including the reflection by language of culture and world view, as represented, for example, by his 1949 presidential address to the Linguistic Society of America, "Linguistic and Non-Linguistic Patterns" (Emeneau 1950). Flying in the face of the Bloomfieldian proscription prevalent in those days, this discussed the assumption that "some forms are ordered in classes or subclasses corresponding to systems or subsystems within the environment," illustrating it with examples from chemical terminology, numerals, kinship systems, and status pronouns, but finding the fit to be generally somewhat imperfect. The present paper, while different in topic and less explicitly structured, is offered in a similar spirit.

1. It presents some observations on the processes by which the Makah language has acquired new words and expressions for newly acquired objects and concepts, focusing primarily on the words for items introduced under the impact of Western culture.¹

1.1. Makah is spoken in the area around Cape Flattery, at the northwestern tip of the Olympic Peninsula in Washington State. It is a member of the Wakashan language family, and thus finds its nearest relatives, Nitinat and Nootka, on Vancouver Island, on the opposite side of the Strait of Juan de Fuca.

1.2. It is commonplace in papers on linguistic acculturation to point out that there are three principal methods by which languages satisfy the need to name new things and concepts: either by borrowing the words from another language (including the possibility of loan-translations), or by shifting the meaning of words already present in the language so that they encompass the new concept, or else by coining new descriptive or metaphorical words or phrases according to patterns of derivation already present in the language.² It is a striking fact of the Makah language, and apparently also of other languages of the Northwest Coast area (although relevant reports are rather scanty), that very heavy reliance has been placed on the third approach of coining new words, in preference to the other two.

1.3. The reasons for this are at least partly apparent. Starting in the 18th century, many new artifacts were introduced gradually, as a result of fleeting trading encounters or through the intermediary of other Indian groups, which left the Makah without an authoritative linguistic model to emulate. This situation may be contrasted with, say, that of the languages in the southern two-thirds of California, which are flooded with loanwords from Spanish for acculturational items,³ or with that of some languages of the

Great Basin, which were swamped by the sudden and continuing impact of English. A language from the coastal California area of the Franciscan missions, such as Salinan, has relied almost exclusively on borrowing from Spanish to label such items.⁴

A second primary reason is doubtless to be found in the rich derivational apparatus of the language, which allows flexibility in the manner of forming new words. This capability, which compares very favorably to that encountered in European languages, also leaves relatively free reign for Makah imaginative and conceptual orientations to express themselves by the choice among the varying semantic approaches to neologisms allowed by the language. Many of the patterns seen in neologisms are already present in terms for native flora and fauna or for implements of the well-developed indigenous technologies for woodworking, sea mammal hunting, and other spheres of activity.

2. Certainly other Indian languages have also relied heavily on new coinages as the preferred linguistic solution to these changing cultural conditions. To mention a few specific cases from the far west:

2.1. A similar distribution of strategies is seen in the Karok language of northwestern California, at the southern fringe of the Northwest Coast culture area, as described by William Bright in his article "Linguistic Innovations in Karok" (1952). Here there are a limited number of loanwords from English, mostly for animals and foods, a few native words with newly added semantic usages, and a large number of new formations of varied semantic approaches, using the grammatical processes of derivational suffixation and, especially, compounding.

2.2. The linguistic response of the Kiliwa language of northwestern Mexico to hispanic culture was thoroughly described by Mauricio J. Mixco in his paper at the Third Annual Meeting of the Berkeley Linguistics Society (1977). This language, unlike other Yuman languages, has largely resisted taking in loanwords from Spanish, apparently for reasons of cultural hostility, although a few camouflaged loans were discerned, as well as a few loanwords pertaining to gambling. Numerous extensions or shifts of the meaning of native terms are reported, along with a larger number of words formed by derivational processes, especially that of relativization.

2.3. In the Washo language of the western Great Basin there are some twenty loanwords from Spanish, probably acquired via other Indian languages, along with a moderately large number of borrowings from English. Shifts of meaning of some native terms also occur. Many derivational neologisms are also found, especially for tools and implements, but they lack the semantic and morphological variety found in these other languages, being primarily deverbative formations obtained by prefixation, and expressing the function of the artifact.⁵

3. Unlike Kiliwa and certain other languages of the American Southwest, Makah seems to have had no cultural resistance to loanwords, but has kept the number of them moderate. A brief indication may be given of their nature.

3.1. These are most of the older loanwords for introduced items that are from Chinook Jargon or otherwise from French. They apply to large animals: bu'sbu'sa 'cow, bull', kibta'la, kiwta'la 'horse', libi'tu 'sheep' (Fr. le mouton), k'wišu 'pig' (Fr. cochon), pi'spiš 'cat'; to cloth items: lisa'k 'sack, gunny sack' (Fr. le sac), lišo'la 'shawl' (Fr. le châle), lalupa' 'ribbon' (Fr. le ruban); and to varied other artifacts or trade items: lapu'ta'ya 'bottle' (Fr. la bouteille), la'ba 'liquor, whiskey' (Eng. rum), ta'la 'silver, money, coin' (Eng. dollar), či'kči'ka 'horse-drawn wagon, buggy, riding cart', bu'la 'machine, motor, engine' (Fr. moulin). Sources of these Chinook Jargon words include other Indian languages, as well as French and English. These are not the earliest loanwords in the language, as a number have been observed which come from other nearby Indian languages, primarily Quileute, the southern neighbor of Makah, and the other Nootkan languages, Nitinat and Nootka, but these are left out of consideration here, as presumably not involving such a sudden or drastic cultural reorientation.⁶

3.2. The following are a selection from the loanwords from English, leaning toward the more widely shared and presumably earlier introductions. These apply to plants including: bi'dis 'beans', ha'psa 'hops', ke'bič 'cabbage', te'dups 'turnip, rutabaga', pa'snips 'parsnip', la'yis, lays 'rice', he'pilis, ?e'pilis 'apple', ?o'linčas, ?o'linčis 'orange', pi'čis 'peach, apricot', kilips, kli'ps 'grapes', li'sidis 'raisins', wa'tabe'leda 'watermelon', pe'pa 'pepper', si'dis 'seeds'; to food preparations like: pa'yis 'pie', keyk 'cake', ki'kis 'flapjack, pancake, waffle', sa'lapa 'syrup', ke'čap 'ketchup', baš, maš 'mush', la'da 'lard', ?aysk'wim 'ice cream'; to beverages such as: ti' 'tea', ko'pi 'coffee', bi'ya 'beer', wa'yda, wa'yina 'wine', pa'p 'soda pop', ku'ku 'co-coa'; to items of apparel including: ku'ta 'coat, overcoat', če'kit 'lady's blouse' (Eng. jacket), šu'wis 'shoes', bu'c 'boots', lipas 'slippers', te'kidis 'stockings, socks'; to other personal effects like: he'kčip, he'kčiba 'handkerchief', ta'wila 'towel', wa'ča 'watch, clock'; to metals and coins: ku'la 'gold', ša'ta 'bullet; lead' (Eng. shot), bi'ta 'dime, 10¢' (Eng. bit), k'wa'ta 'quarter, 25¢'; to various other artifacts such as: so'sas 'saucer', buka 'book', ba'blis 'marbles', pakit 'bucket', ko's 'cross', wa'pa 'dock, wharf', bu'ta 'boat', li'lu'ta 'train, railroad'; to broader concepts: ta'wisida 'thousand', ta'wida 'town'; to place names including: bitu'li 'Victoria', pu'ta'wsida 'Port Townsend'; and to categories of persons: pi'šbe'da 'fisherman', ke'ptida 'captain', bo'sa 'boss', da'kta 'doctor', bo'stimme'na 'American' (Eng. Boston man), kinčo'č'atx 'Canadian' (Eng. King George), šu'ča'atx 'soldier', badwa'atx 'sailor' (Eng. man-of-war) (the last three containing the tribal or local group name suffix -'atx).

3.3. Recurrent sound substitutions will be observed in these loanwords, such as the use of l for r, of voiced stops b and d for the nasals m and n, and the dropping of initial s before another consonant. The Makah words cited are shown in morphophonemically underlying forms with respect to the ends of the words, but not in

other respects. When pronounced, final short vowels are lost and final long vowels are shortened; thus *la'ba* 'liquor, whiskey' is pronounced /la'b/, and *ta'la* 'silver, money, coin' is pronounced /ta'la/. Also, labialization of final dorsals is lost. When following the vowel *u*, dorsals (that is, *k*'s, *q*'s, and *x*'s) are always labialized, including when word-final;—this is, however, not indicated in the orthography used.

It will be seen that many of the borrowed words have had a short final *a* added; this is partly on phonological grounds, as words never end in voiced or glottalized consonants in their basic forms; correspondingly, except where vowels are secondarily lost, such consonants cannot be the first members of consonant clusters. As mentioned, such vowels are not pronounced word-finally, but only when a suffix follows. On the other hand, the added *-a* may have morphological status as the marker of the durative aspect; it will be seen to have been added also in some words after voiceless stops and fricatives. The added *-a* occurs in similar fashion in related Nootka, where it is actually pronounced; e.g. *na'ma* /na'ma/ 'whiskey'.⁷

4. We may also illustrate a few typical examples of the second way of labeling new items, that of extending the meaning of words already present in the language for things which served the same or a related function. This is an extremely common device, as doubtless in any language, but the meaning shifts are often rather subtle and easily overlooked. The word for 'match', *si'ii*, *si'iiyak*^w, formerly meant 'fire drill', a meaning not mentioned by any of my informants, but attested from related languages, and also indicated by the literal meaning '(for) stirring on the floor' (*si-*, m. *sičii*, r. *si'asi'ya* 'to stir, strike a match').⁸ 'Sandpaper', *q'wiiq'ba*, was formerly 'dried dogfish skin' used in similar fashion (cf. *q'wiiq'*, m. *q'wiiq'šii* 'to char canoe-bottom to remove splinters'). The word *pi'xi'yak*^w 'telescope, binoculars', lit. 'for looking', and the corresponding verbal expression *pi'x-*, d. *pi'xa*, r. *pi'xpi'xa* 'to look with a telescope' seems to have been extended from *pi'x-*, m. *pi'xšii* 'to inspect a canoe for straightness'. Unlike what occurred in many Indian languages, the word for 'bow' (*bistati*) was not turned to account to mean 'gun', but *busq-*, m. *busqšii* 'to have a bow pulled back and ready' came to mean the comparable state 'to have a gun cocked'. The meaning of 'pump' was added to that of *xučak*^w '(hand-held) bailer' (*xu-*, m. *xučii*, r. *xu'luxu'ya* 'to bail'). Modern 'chewing gum' has replaced the earlier substance 'spruce pitch' as the referent of *łakitbis*, lit. 'chewing material' (*łakit-*, r. *ła'ła'kita* 'to chew gum'). The meaning 'to unlock' has been added to the others of the stem *łaqi-*, m. *łaqišii* 'to untie, untangle, unwind' with the introduction of locks and keys. The expression for 'to write' is obtained by an extension of the meaning of *čat-*, m. *čatšii* 'to draw, mark, color'. And, as in so many Indian languages, the word for 'person', *łicuxadi*, has taken on the meaning of 'Indian' in contexts where it is opposed to the word for 'white man'.

5. A more restricted potential additional process would be the

making up of onomatopoetic words for new sounds made by objects not previously present. It is often difficult to ascertain whether such words are completely new formations or extensions of words for sounds already available in the environment. The stem ca'sk-, m. ca'skšič, r. ca'skca'ska '(bell) to ring' may be a new formation, but pu'tq-, m. pu'tqšič, r. pu'tqpu'tqa '(horn, whistle) to blow, (siren) to sound' seems to be an extension of meaning; cf. Nootka pu'tq-, d. pu'tqa 'to blow a horn, to breathe upon (in doctoring)'. And hu'x-, m. hu'xšič, r. hu'xu'xa '(people) to whistle, give a high-pitched yell "hu"', (train or boat whistle) to sound' may be an extension of meaning from a sound emitted by humans to keep track of each other when berry-picking, later as a warning to other traffic when riding on a hay-wagon, and then to the sound of a train or boat whistle; cf. Nootka huh-, d. huha '(steamer, train, etc.) to howl, whistle'.

6. We come now to the new coinages from native materials on which I wish primarily to focus. For some items a coinage exists side by side with a loanword, as with the following pairs of words: 'squash' q'aq'abaqaaq, lit. 'yellow inside' (ā'abaq-, q'abaqak 'yellow, green'), k'aš; 'watermelon' čača'qā, lit. 'water inside' (ča-, ča'ak 'water'), wa'tabe'leda; 'molasses' ča'bassit, lit. 'sweet liquid' (čabas 'sweet, sugar, candy'), bule'sis; 'shovel' čusu'yak', lit. 'for digging' (čus-, čuššič 'to dig a hole'), še'bila; similar alternative expressions are also presented elsewhere in this paper for 'grapes', 'pepper', 'pie', and 'cross'. Alternative coinages embodying different descriptions or comparisons are also attested, as for 'nickel, 5c', which is either ?a'ata, lit. 'thick ones' (?ata 'thick') or ti'tidičkuk, lit. 'looks like a rock' (tidi'čuk 'rock, stone'). Alternative morphological formations expressing approximately the same meaning also occur.

7. The other papers on the general topic of neologisms and linguistic acculturation that I have examined have all organized their materials primarily in one of two ways: either according to the general cultural sphere involved in the terms or according to the grammatical formations present.⁹ In the present paper, however, I am experimenting with organizing the derivational neologisms on a semantic basis, according to whether the term involves a straightforward description or a metaphorical comparison, and further according to the various points of departure for description or metaphor. Such a categorization will inevitably be more subjective than the other two types, and will also tend to coincide in places with one or the other of them, but it seemed to be suggested by the richly varied patterns encountered in this language. The examples presented are selective, rather than exhaustive, which runs the danger of distorting the patterns present, but in any case this approach may help to reaffirm my long-standing adherence to the "old curiosity shop" school of linguistics.

8. A wide range of aspects of these acculturational items are used as a descriptive basis for new words.

8.1. Quite common is a description of the function of an item.

This manner of labeling is applied to artifacts of various sorts. The following are a selection from the numerous examples obtained. Many belong to the sphere of tools and utensils: *la·la·škatayak^w* 'iron', lit. "for ironing" (*laškat-*, *laškatuk* 'stiff', r. *la·la·škata* 'to iron'), *laqia·yak^w* 'key', lit. "for unlocking" (*laqi-*, m. *laqišia* 'to unlock, untie, untangle, unwind'), *čikyaḥbaḥayak^w* 'frying pan', lit. "for frying moving about up on" (*čiyaḥ-*, m. *čikyaḥšia*, r. *či·či·yaḥa* 'to fry'), *da·ča·wiḥyak^w* 'mirror, looking-glass', lit. "for looking at one's face" (*dač-*, m. *dačšia* 'to look at'), *qu·qu·skidu·ksta·qsuba* 'toothpick', lit. "poking around between" (*qu·s-*, r. *qu·squ·sa* 'to poke with a long object'), *čata·yak^w* 'pencil, pen, writing instrument', lit. "for writing" (*čat-*, m. *čatšia* 'to write'), *ba·qcqi·ba* 'umbrella', lit. "shelter overhead" (*ba·q-* 'shelter'). Other examples belong to the sphere of wearing apparel: *li·išča·yak^w* 'trousers, pants, panties', lit. "for the legs" (*li·iščida* 'foot, leg'), *ḥupsaqstuba* 'underwear, undershirt', *ḥupsaqḥyak^w* 'men's underwear', lit. "(for) keeping warm under one's clothing" (*ḥub-* 'warm, hot'), *we·ičkičida* 'nightgown, pajamas', lit. "sleeping garment" (*we·ič* 'to sleep'), *ta·ta·dakčuba* 'overshoes, rubbers', lit. "adding on at feet" (*ta·da-* 'to add on, pile on, stack up'). Other items exhibit more passive functions in varied semantic domains: *yacačis* 'stirrup', lit. "stepping surface" (*yac-* 'to step'), *čatačis* 'desk', lit. "writing surface", *baq·aqsuba* 'bridle', lit. "tying in the mouth" (*baq^w-* 'to tie'), *čuksac* 'wash tub', lit. "washing vessel" (*ču-*, m. *čukiḥ* 'to wash'), *šaču·yak^w* 'revolver, pistol', lit. "for one hand", *we·ičyak^w* 'mattress', lit. "for sleeping", *ḥapqa·yak^w* 'jam, jelly', lit. "for spreading on" (*ḥapq-*, m. *ḥapqšia* 'to plop down, spread'), *či·aḥyak^w* 'perfume', lit. "for pouring on" (*či-* 'to pour'), *ḥiciḥuba*, *ḥiciḥyak^w* 'rug', lit. "(for) fabric covering floor" (*ḥic-* 'fabric spread'), *hupa·syak^w* 'pot, kettle', lit. "for round object to be up on" (*hup-* 'round object').

Names for edifices typically express their function: *we·iču·was* 'hotel', lit. "sleeping building", *ha·wa·u·was* 'restaurant', lit. "eating building", *baku·was* 'store', lit. "buying building" (*bak^w-*, m. *bakšia* 'to buy'), *baḥu·was* 'jail', lit. "tying-up building" (*baḥ-*, *baḥšia* 'to tie'), *ču·u·was* 'laundry', lit. "washing building"; and similarly names for rooms in buildings: *we·ičuwii* 'bedroom', lit. "sleeping room", *ha·wa·uwii* 'dining room', lit. "eating room" (*ha·u-* 'to eat').

Names for occupations of persons likewise refer to these functions: *bak·i·ti·i·* 'storekeeper', lit. "buyer", *babaḥeyax* 'policeman', lit. "tying up", *siqi·ti·i·* 'cook' (*siq-*, *siqi·da·k^w* 'to cook'), *čati·ti·i·* 'secretary', lit. "writer", *čatik* 'writer, author', lit. "expert writer".

8.2. These derivational formations are continuations of patterns already extant in the language as applied to native artifacts, and sometimes old and new formations from the same stem exist side by side, as may be illustrated by this sampling of formations on the stem *ti-* 'to wipe'. These run from indigenous artifacts: *tičak^w* 'small bundle of sticks used for rubbing during a bath', lit. "wiping

instrument", ti·kciba 'fine cedar sticks used as toilet paper', lit. "for wiping at the crotch", through words that may be older neologisms: tibeyiyak^w 'mop', lit. "for wiping around on the floor", ti·tiqsupyak^w 'dish towel', lit. "for wiping vessels", tiqu·ba 'face towel', lit. "for wiping the face", ti²aksuba 'napkin', lit. "for wiping the mouth", to a presumably relatively recent formation: tiktu·p 'kleenex', lit. "wiping thing".

8.3. Many aspects of the physical makeup of articles are found to have been used as points of departure for descriptions. A number of items are described by their shape, as may be illustrated here for plants: waçitqapiḡ 'almond', lit. "thin fruit" (waçida 'thin'), yuyuçskapiḡ 'pear', lit. "small at the end" (yuç-, yuçak 'narrow'), yuyuçwadi 'peanut; ant', lit. "narrow waisted", didixsabuwas 'grapes', lit. "hanging in a cluster" (dix-, dixapiḡ 'tangled in a bunch'), çiçicitaba 'plum', lit. "cut on the side" (çi-, m. çiçiḡ 'to cut').

8.4. This approach as applied to artifacts may also be illustrated: İuqapiḡ 'whiskey flask', lit. "convex around" (İuq-, m. İuqşıḡ 'convex/concave vertical or inverted; to tip, spill, capsize'), kukuxsw²iq 'macaroni', lit. "holes through" (kux-, kuxak 'hole'), ?a²ata 'nickel, 5¢', lit. "thick ones", caxtqi² 'steamboat, large boat, ship', lit. "round on the bottom" (cax^w-, cax^wapiḡ 'round', caxuk 'to roll, rotate'), paq^wak 'cross (in Shaker church)', lit. "crossed". The expressions for a certain number of dollars are formed by the respective numbers with the classifier suffix for round objects, such as çakwa·qapiḡ 'one dollar', bu·qapiḡ 'two dollars', there being no independent word for 'dollar'. A shape as resulting more explicitly from an operation is exhibited by these terms: kuku·kiduk 'chain', lit. "hooking together" (ku-, m. kuçiḡ 'to hook'), baḡa·piḡ 'barrel', lit. "tied around (referring to the hoops)" (baḡ-, m. baḡşıḡ 'to tie'), šiqi·wadi 'dress', lit. "pleated at the waist" (šiḡ-, r. ši·qşı·qa 'to make pleats'), çi·sapiḡ 'telegraph or telephone wire; telegram, telephone', lit. "strung up in the air" (çis- 'strung out'), İaḡapdaqḡ 'pie', lit. "plopped in", qak^wa·piḡ 'blue trade bead', lit. "cut" (qak^w-, m. qakşıḡ 'to cut with sideways motion, whittle'). And more metaphorically: kaḡa·wa²t '50¢ piece', lit. "broken in half" (kaḡ-, kaḡşıḡ 'to break up'). A changeable shape is: qi·kwiyaḡ 'pocket knife', lit. "comes out". Some items are also described as functioning to cause a change of shape in another entity: yuçu·wadiyak^w 'girdle', lit. "for a narrow waist", puxsi·?i² 'baking powder', lit. "makes it puff up" (pux-, puxak, puxapiḡ 'expanded, puffed up'), İacsi·?i² 'butter', lit. "makes you fat, fattening" (İac-, İaca· 'fat (person)').

8.5. Color is also described, especially in the case of some plants: q^waq^wabaqḡaḡ 'squash', lit. "yellow inside", İiḡiḡa·diḡ 'carrots', lit. "red leg" (İiḡ-, İiḡuk 'red'). Visible marks are in question in: çata·İ 'letter', lit. "writing on fabric-like surface". Light itself is described in İaka·çaxs 'lamp (kerosene or electric)', lit. "light inside" (İakç-, İakçuk 'light'). A different kind of brief display of color or light is found with buçisak 'gunpowder', lit. "flashing" (bu-, bu²ak 'to burn').

8.6. Senses other than sight are also appealed to, such as hearing. The production of sound is a primary function of items such as: ca·ska·yak^w 'bell', lit. "for ringing", du·ku·ču·'radio, phonograph', lit. "singing in a container" (du-, dudu·k 'to sing'), du·kaql 'phonograph, music box', lit. "singing inside", ?ukyaxču 'phonograph', lit. 'news in a container' (?ukyax-, ?ukyaxbis 'news'). For other items, the sound seems to us more of a side effect. An egg, dučak^w, is literally a "singing device", referring to the cackling of the hen who has laid one. Other cases are: pu·yak^w 'gun', lit. "for going 'poo' (that is, 'bang')", λu·λubuqadi 'boat, with a motor, engine' (-qadi 'to sound like', cf. λubu·q-, r. λu·λu·buqa 'to hit sticks together, pound to keep time'), λabaxyak^w 'slingshot', lit. "for snapping" (λabax-, m. λabaxšiλ 'to snap, click (as a trigger, trap)').

8.7. Taste is described in the labeling of various foodstuffs: ča·bassit 'molasses', lit. "sweet liquid", čačaba·yaql 'cake, candy, sweet roll', lit. "sweet inside", qa·iqa·yuql, qa·iqa·yuqlap 'pepper', lit. "burns in the mouth".

8.8. Smell is described in the case of čubap 'blue denim; denim overalls', lit. "smelly material" (ču-, čupał 'smelly, stinking').

8.9. The material involved is the basis for the labeling of several objects, often combined with an indication of shape: hihibiksa·dił 'candle', lit. "wax leg" (hibiks 'marrow, tallow, wax'), pu·qaał 'feather mattress, feather bed', lit. "feathers inside" (pu·quk 'feathers, down'), libi·tuqaał 'quilt', lit. "sheep [wool] inside" (libi·tu· 'sheep'), łakitapı 'gum hat, sou'wester', lit. 'gum around' (łakitbis 'pitch, gum'). 'Chinaware', especially a 'dish' or 'bowl', as well as the material 'glass', is kiλu·k, lit. "breakable" (kiλ-, m. kiłšiλ 'to break, crack, shatter'). Based on this material, a 'glass eye' is kikiλukaqlsił, lit. "glass in the eye". Metals are referred to in: qabačapı 'pan, dishpan', lit. "tin around" (qaba·č 'tin'), ča?ușapı 'brass kettle', lit. "brass around" (ča?uș 'raw; brass'), čač?ușwadi 'musket', lit. "brass around the middle".

8.10. Conversely, certain materials are named from the characteristic artifacts made from them: čatqa·yakbap 'galvanized metal', lit. "spoon material" (čatqa·yak^w 'spoon'), te·kidisbap 'yarn', lit. "stockings material". Indigenous examples of this pattern would be: q'ișsacbap 'clay', lit. "pipe material" (q'ișsac 'pipe'), salaxaıbap 'cattail (plant)', lit. "cattail-mat plant" (salaxaı 'cattail mat').¹⁰

8.11. A material is alternatively named from its source in the case of libi·tuqał 'wool', lit. "sheep fabric".

8.12. Some introduced animals were named by describing a distinctive body part. Thus ?i·?i·wabił 'donkey' is literally "big ears" (a label which seems ubiquitous among Indian tribes).¹¹ A nonce-word for 'goat', made up in a church meeting, was ha?a?aksił, lit. "bearded". This pattern of naming animals by describing a body part is well attested also for indigenous animals, e.g., ?a?al?aqł 'swallow', lit. "two tails", k'ak^w?aqłi· 'porpoise', lit. "broken tail", cucuwaxsił 'wolf', lit. "stinking mouth".¹²

9. In contrast to the preceding rather straightforward approaches to labeling new items are many metaphorical comparisons to previously familiar things. These comparisons are greatly encouraged by the existence of the handy suffix *-kuk* (plus initial CV- reduplication) meaning 'looking like' or 'resembling'. The items seized on for comparison are varied.

9.1. One predominant type involves body parts or products: *hahapswi'i* 'brush', lit. 'hair-teeth' (*hap-*, *hapsa:yup* 'hair'), *la'ks'aba* 'cap', lit. 'tongue at the forehead' (*lak'*- 'to lick', *laka:yak'* 'tongue', lit. 'licker'), *lačkaqsii* 'pitcher', lit. 'sharp lips', *xašaškuk* 'hardtack, pilot bread, crackers', lit. 'looks like bones' (*xaš-*, *xaša:bis* 'bone'), *čičiyupkuk* 'spaghetti, *maçaroni*', lit. 'looks like intestines' (*čikyup* 'intestines'), *dudučakkuk* 'light bulb', lit. 'looks like an egg' (*dučak'* 'egg'). The comparison to the body part is obvious in the case of artificial replacements: *la'la'sakswi'i*, *la'la'sakswi'i:yak'* 'false teeth' (*la'sa-*, *la's'ak* 'stranger, visitor; temporary, false'), *la'la'saqsiil* 'glass eye', lit. 'false in the eye', *la'la'saqsta* 'wooden leg', lit. 'false leg', *la'saqapil* 'wig, toupee', lit. 'false on the head'. Closely related are comparisons to actions of body parts, as with *bačak'* 'clothespin; pliers', lit. 'for biting' (*ba-*, *m. bačil* 'to bite'). Although not a matter of metaphor, it might be mentioned here that 'to row', *dił-*, *r. diłi'di'la*, is literally 'to lean back repeatedly' (cf. *di'lap* 'to lean backwards', *diłil* 'to lie on one's back'), thus describing the rower's bodily attitude rather than the function of propelling the boat; from this is derived *diłi:yak'* 'oar', lit. 'for rowing'. Metaphorical comparisons to body parts and actions are of course common everywhere, and are encountered also in the labeling of items of indigenous Makah culture. Thus, *lak'iltaba* 'point on the prow of canoe' is literally 'tongue at the nose', and *kada:dis* 'projecting ornament on the prow of canoe' is also the word for 'uvula'.¹³ A 'willow species', *qilči'bab*, is literally 'dog plant', presumably involving a comparison to tails (*qilč-*, *qidi'la* 'dog') (cf. Eng. pussy willow).¹⁴

9.2. Other bases for comparison are indigenous fauna and flora. Examples of the former are found in: *hahatqkuk* 'domesticated goose', lit. 'looks like a [wild] goose' (*ha:diq* 'goose'), *babačaskuk* 'wheat, grain', lit. 'looks like fleas' (*bačasi:da* 'flea'). Apparent comparisons to the manner of locomotion of certain creatures are seen in: *xixibi'i's* 'streetcar, car', lit. 'crawling about on the ground' (*xi-*, *xi'uk* 'to crawl'), *laia'pxuk*, *la'pxuwiq* 'airplane', lit. 'flying' (*lapx-*, *la'pxuk*, *m. lapxšil* 'to fly'). Several apparently indigenous comparisons of one animal to another are also attested: *qilqilčkkuk* 'coyote', lit. 'looks like a dog', *čičibičibitqkuk* 'musk-rat', lit. 'looks like a mouse' (*čičibičibi* 'mouse, rat'), *dadačtačkkuk* 'teal duck', lit. 'looks like a mallard duck' (*daxa'tač* 'mallard duck'), *qilqičkkuk* 'tick', lit. 'looks like a louse' (*qič-*, *qiči:da* 'louse').

9.3. Comparisons to indigenous flora include: *hihi'satqkuk* 'currant', lit. 'looks like a red huckleberry' (*hisi'a:da* 'red

huckleberry'), qaqawaš'kuk 'raspberry', lit. "looks like a salmon-berry" (qawaš-, qakwey 'salmonberry'), lu·luxaci·yuba 'wattles of a rooster', lit. "thimbleberries at the throat" (lu·luxac 'thimbleberry').

9.4. Comparisons to native artifacts or structures are also found. A 'thimble' (also 'mushroom'), ciciyapuxskuk, is literally said to "look like a hat" (cikya·puxs 'hat'). A 'captain's hat with a shiny brim', ci·yaksa'a·, is literally "knife at the forehead" (čiyak 'knife' [but not the usual term], lit. "for cutting" [či-, m. čičiλ 'to cut with lengthwise motion'; cf. čiči·ksa'a· 'bangs', lit. "cut at the forehead"]], probably involving a comparison to the indigenous crescent-shaped knife type, called kucitida, k'ičitida. And babałdi 'white man' is literally "house moving about on the water" (ba- 'to dwell', ba'as 'house'), thus involving a comparison of the white men's ships to the Makahs' houses. Among agricultural implements, a comparison of the act of 'raking' to that of 'combing' is implied in ʔipi·bi'·i·syakw 'rake, hay rake, harrow', lit. "for combing about on the ground" (ʔip-, m. ʔipšiλ 'to comb', ʔipi·yakw 'comb'), and, more trivially, a comparison of 'hoeing' to 'chopping' is seen in hisi·bi'·i·syakw, hihisbi'·i·syakw 'hoe, mattock', lit. "for chopping about on the ground" (his-, m. hiššiλ, r. hi·si'sa 'to chop, whip', hisi·yakw 'axe', histup 'whip').

9.5. A rather different sort of metaphor to cooking processes is found in the fact that the metals 'brass' and 'copper' are called respectively by the words for 'raw' and 'cooked', ča'uš and siqi· (siq- 'to cook'). This is just the opposite approach to that which we, who are familiar with metals, use when we say that someone is "bronzed" by the sun.

9.6. More abundant are comparisons to inanimate objects encountered in Makah territory. Examples noted include names for foods, plants, and a certain coin: čiči·saqkuk 'sugar', lit. "looks like sand" (čisabac 'sand'), hihisck'iqkuk 'soda crackers', lit. "looks like chips from chopping" (hisck'·i· 'chips from chopping'), ʔi·ickuk 'Indian bread, buckskin bread, fried bread, biscuits; flour', lit. "looks like white dirt" (ʔici·bis 'white dirt'), pa·pa·xackuk 'yeast bread', lit. "looks like a honeycomb (referring to the texture of the bread rather than to the shape of the whole loaf)" (pa·xac 'nest, beehive'), titidičkuk 'ničkel, 5¢', lit. "looks like a rock" (tidi·čuk 'rock, stone'), titidičaqλ 'cherry', also 'red berry sp.', lit. "stones inside", ča·ca·qλ 'watermelon', lit. "water inside" (ča-, ča'ak 'water').

10. Particularly striking are a number of metaphorical comparisons suggesting the maritime orientation of the culture. The extreme dependence of the Makahs and other Wakashan-speaking peoples on the sea for a food supply and as an avenue of transportation is obvious to a casual observer. Murray Emeneau's teacher Edward Sapir has remarked on the elaboration of vocabulary for naming creatures of the sea in these languages (1912:228; SWES 91) and on the deeply engrained grammatical fact of the occurrence in these languages of suffixes locating action as taking place on the beach, rocks, or sea

(1912:238; SWES 99) as clear linguistic evidence for a seashore environment and cultural interest therein among these Indians. So too in the metaphorical labels for certain introduced plants, foods, and artifacts do we find comparisons to creatures of the sea and to artifacts relating to navigation and fishing, most of which, I am sure, would never occur to one of us. The following are some such items, which of course overlap with preceding categories as being comparisons to animals, including their body parts and products, and to artifacts: ?aʔačpaba·dił 'corn', lit. 'salmon eggs on a long object' (?ačpa·ba 'salmon eggs; kidney'), ?aʔačpabakuk 'cheese', lit. 'looks like salmon eggs', tetʔetqkuk 'cucumber', lit. 'looks like a sea cucumber' (teʔidiw 'sea cucumber'), čača·pačaql̥i 'peas', lit. 'canoes at the rear' (čapac 'canoe')¹⁵ su·yaqap̥i 'bottle enclosed in wickerwork, demijohn', lit. 'fish-net around' (su·yaq 'fish-net; spider-web'), hahačukitkuk 'cannon', lit. 'looks like the large end of a whale's intestines' (hačukit 'large end of a whale's intestines'). In this connection one might adduce also the previously presented metaphorical comparisons to sand and rocks (sec. 9.6). Metaphors of this type are also not limited to acculturational items. Some presumably indigenous examples are: sasadʔaɬkuk 'angleworm', lit. 'looks like fishline' (sadʔaɬ 'fishline made of kelp'), xixicbuqkuk 'goat's-beard (plant)', lit. 'looks like herring eggs' (xi·cbu·ʔu 'herring eggs')¹⁶ či·čibuqqsta, čičibuqspuɬ 'bow-legged', lit. 'halibut-hook legs' (čibu·da 'halibut hook').

In connection with these examples, the following quotation from Sapir's paper "Language and Environment" seems particularly relevant: "There is an obvious difference between words that are merely words, incapable of further analysis, and such words as are so evidently secondary in formation as to yield analysis to even superficial reflection. A lion is merely a lion, but a mountain-lion suggests something more than the animal referred to. Where a transparent descriptive term is in use for a simple concept, it seems fair in most cases to conclude that the knowledge of the environmental element referred to is comparatively recent, or at any rate that the present naming has taken place at a comparatively recent time. The destructive agencies of phonetic change would in the long run wear down originally descriptive terms to mere labels or unanalyzable words pure and simple. ... the transparent or untransparent character of a vocabulary may lead us to infer, if somewhat vaguely, the length of time that a group of people has been familiar with a particular concept. People who speak of lions have evidently been familiar with that animal for many generations. Those who speak of mountain lions would seem to date their knowledge of these from yesterday" (1912:230-231; SWES 92-93). In similar fashion, one would safely infer, for instance, that the Makah have been familiar with sea cucumbers for many generations, but have become acquainted with cucumbers only yesterday, while quite the reverse is true of the white man.

11. Attention may be called to a chronological ordering that can be observed in the terms for items of acculturation. It is of

course to be expected that various straightforward derivatives would be formed by the addition of suffixes to the various types of expressions for new items.

11.1. The following are a few examples involving the addition of suffixes to loanwords in the language. From ta·la· 'money, coin, silver' are formed: ta·la·ksac 'purse, pocketbook, billfold, wallet', lit. 'money vessel', ta·la·te·ʔiɪ 'play-money, counterfeit money', ta·la·ʔu·was 'bank', lit. 'money building', ta·la·ʔu·waso·ɪuk 'banker', ta·la·xtida 'to be made of silver'. From la·ba 'liquor, whiskey' come: la·baqapuɪ 'heavy drinker, alcoholic', lit. 'dreaming of liquor', la·ba·ʔu·was 'bar, saloon, tavern, liquor store', lit. 'liquor building', la·ba·ʔu·waɪuk, la·ba·ʔu·waso·ɪuk 'bartender'. From ku·la 'gold' we have: ku·ku·lakswi·ʔi 'gold tooth', ku·laxtida 'to be made of gold'. From ʔe·pilis 'apple': ʔe·pilisbap 'apple tree'; from ti· 'tea': ti·ksac 'teapot'; and from kibta·la 'horse': kibta·labap 'horse turnip', lit. 'horse plant' (perhaps a loan-translation). Other derivatives are of the productive type wherein the stem is the object of a verbal suffix: la·bʔiks 'to drink liquor, whiskey', wa·ydʔiks 'to drink wine', la·bi·duɣ 'to look for liquor, whiskey', bi·disčak 'to cook beans', ku·takičɪɪ 'to put one's coat on', ta·la·xtidak·i·ɪ 'to make something of silver'. From which further derivatives may be made: pa·yiščakyak^w 'pie pan', lit. 'for cooking pies', ti·čakyak^w 'tea pot', lit. 'for cooking tea'.

11.2. Completely parallel are derivatives from descriptive expressions, the underlying forms for which are analyzed in other sections, as indicated: ʔa·la·škatayak^wacis 'ironing board', lit. 'surface for iron' (8.1), ʔa·ɪq·yuxɪapčuyak^w 'pepper shaker', lit. 'for pepper being in a container' (8.7), ʔaqawaškusaxuɪ 'having a raspberry birthmark on one's chest' (9.3), ba·ba·baɪdiqə 'to talk English' (babaɪdi 'white man') (9.4), baba·baɪdiqəɪsiɪ 'white man's eyes' (9.4), ɪɪɪckukaxsyak^w 'bread box', lit. 'for bread in' (9.6), ta·ta·laqəsubačuyak^w 'glasses case', lit. 'for glasses being in a container' (11.3).

11.3. But many of the metaphorical comparisons, also, are made to other items which were themselves introduced, presumably thus indicating that the items to which comparison is made either came in earlier or were more commonly encountered. Several examples of this type involve edible plants: ke·ke·bičkuk 'lettuce', lit. 'looks like cabbage' (ke·bič 'cabbage'), ʔo·ʔo·linčaskuk 'lemon', lit. 'looks like an orange' (ʔo·linčas 'orange'). A comparison to an introduced animal is found in pi·pi·špiškuk 'bobcat; small fur seal sp.', lit. 'looks like a cat' (pi·špiš 'cat'). A comparison to an introduced plaything is seen in ba·ba·bliskuk 'radish', lit. 'looks like marbles' (ba·blis 'marbles'). The other examples noted involve metals or money: ku·ku·lakuk 'penny', lit. 'looks like gold' (ku·la 'gold'), čačʔuškuk 'bronze', lit. 'looks like brass' (čaʔuš 'raw; brass'), ta·ta·laqəsuba 'glasses', lit. 'money in the eyes' (ta·la· 'money, coin, silver'). Thus this phenomenon gives indirect evidence for a prolonged period of time during which these neologisms were gradually created.

12. The time span in question doubtless correlates with the diffusion of some of these metaphors over a larger area. Thus the expression for 'white man' is shared by other Wakashan languages, including Kwakiutl. The general approach to neologisms, along with various cognate expressions, is shared by related Nootkan languages. But just as there is variability within Makah, so much the more so in the specific metaphors of related languages. Thus in closely related Nitinat, 'carrots', $\lambda i \lambda i \check{c} a k k^w$, literally "look like wild clover roots" ($\lambda i \check{c}$ 'wild clover roots'), rather than having "red legs" (sec. 8.5). 'Macaroni', $k u \cdot k u \cdot k a k k^w$, literally "looks like worms" ($k u \cdot k$ 'worm, hooked stick'), rather than resembling "intestines" (sec. 9.1). A cognate form, $b a b a \check{c} s a k k^w$, means 'rice' rather than 'wheat', which is said to "look like maggots" ($b a \check{c} s i \cdot d$ 'maggots'), rather than "fleas" (sec. 9.2). Conversely, the metaphor may be shared even when the stem form is not cognate. Thus in Nitinat $s u s u \check{p} c a k k^w$ 'sugar' still "looks like sand" ($s u \check{p} i c$ 'sand'), although the word is different (sec. 9.6).¹⁷

This kind of variability reminds us of the accidental or arbitrary nature of some metaphors. But these isolated examples again demonstrate the truism that each language and each culture is a separate prism through which to view the world.

NOTES

¹A preliminary report on some of this material was offered in Jacobsen 1967. My field work on Makah has been supported by the National Science Foundation, the Desert Research Institute of the University of Nevada, and the Research Advisory Board of the University of Nevada, Reno.

²Cf. Bright 1973:716-721 for a survey of the possibilities, with numerous references. An informative survey of the approaches taken by nine Indian groups is found in Voegelin and Hymes 1953.

³Cf. Shipley 1962 for a survey of Spanish loanwords in central California.

⁴My field work on Salinan was supported by the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley.

⁵My work on Washo has been supported by the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley, and by the Desert Research Institute, University of Nevada.

⁶A preliminary report on these loanwords was given in Jacobsen 1976.

⁷Nootka forms cited are from Sapir and Swadesh 1939.

⁸Abbreviations for aspectual formations: m., momentaneous; r., repetitive; d., durative.

⁹Cf. Bright 1973:719-720 for the major recent references.

¹⁰Cf. Gunther 1945:21.

¹¹Cf. Bright 1960:220, sec. 5.3 and 6.2 for some Californian examples.

¹²Cf. Boas 1931:165 for some descriptive terms for animals in Kwakiutl.

- ¹³Cf. Waterman 1920:16, items 5 and 4a; the canoe-part meaning for the latter word is taken from this source.
- ¹⁴Cf. Gunther 1945:27.
- ¹⁵Gunther 1945:39 shows this term as applied to an indigenous plant of the pea family, the giant vetch.
- ¹⁶Identification from Gunther 1945:33.
- ¹⁷These Nitinat examples are taken from Klokeid 1968.

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TALKING, SPEAKING AND CHATTING IN AZTEC¹

Tim Knab

Instituto de Investigaciones Antropológicas
Universidad Nacional Autónoma de México

Speakers of Modern Aztec dialects in the Valley of Puebla from the snowcapped volcanoes, Popocatepetl and Iztaccihuatl, to the city of Cholula and from Huejotzingo to Atlixco can recognize distinctive patterns in everyday language use characteristic of each town within the area, despite the fact that the region represents a single cohesive dialect area². Differences among the three distinct varieties of everyday speech that exist in the area and their social use form the basis for this type of folk linguistic dialect differentiation. Though the diagnostics of this system differ considerably from those employed in areal linguistics or dialectology they are nevertheless concrete and quantifiable. My purpose here is to sketch the differences among the three varieties of speech, the situations in which they are used and their role in the ethnolinguistic system of dialect differentiation. The ethnolinguistic system of dialect differentiation serves to maintain ethnic boundaries within the region and in this way reflects perceived social, economic and political patterns within the area that have been built up through time.

Recognizing patterns in everyday language use is a matter of considerable import to native speakers of Modern Aztec in this area. Political, social and economic relationships among communities in the area maintain and delineate a system of mutual interdependence among people from different towns that is essential to everyday life in the Valley. The interdependence of Valley communities results from distinctive social, economic and political patterns throughout the area, some dating all the way from before the Spanish Conquest to others that are the result of the rapid economic growth of modern Mexico. Recognizable differences in everyday language use thus serve as an index of the relationships of mutual interdependence among communities that are important to the everyday lives of the people in the Valley.

1 Within the region there are three distinct varieties of everyday speech. The variety referred to as *tlahtoliztli*³ 'speech' is the most formal of the three genres and uses the whole range of honorifics in the same manner as described by Jane and Kenneth Hill (1978) for the Tlaxcallan side of the Valley. Such speech is used in virtually all public events where Modern Aztec is appropriate⁴, among individuals having formal social relationships with one another, i.e., *compadres* 'co-parents', godchildren, godparents, etc., with all individuals ascribed a significant degree of social status, i.e., elders, foreigners, clerics, etc., with civil or religious officials, i.e., *mayordomos*, *fiscales*, *topiles*, etc. as well as with the *Presidente Municipal* 'mayor', *Secretario* 'town secretary' and other civil officials from other towns and other areas. The level of honor used in such formal speech is adjusted to the status of the individual addressed and to that of the addressee according to the same rules as described by the Hills. All levels of the honorific, or distance-respect system can be heard in this type of speech at a public event when people are 'watching the way they speak'.

A less formal variety of speech referred to as *tenohnotzaliztli* is used in commercial exchanges, visiting and tale telling among individuals from different communities. This variety of speech functions almost exclusively at level II of the distance-respect system described by the Hills except in four towns on the Northwestern edge of the area where level III is used with individuals of ascending generation. Level II of the distance-respect system, though it is morphologically marked, is the most neutral level of respect (Hill and Hill, 1978:172) and thus the most widely used of the four levels of respect. It is in this variety of speech that the greatest degree of linguistic variation is found. This is a logical consequence of the fact that this variety of speech is used in most types of non-formal inter-community exchanges.

The third variety of speech is called *teilhuializtli* 'talk' and is used among family members and individuals of the same community not having relations of ritual kinship (*compadrazgo*). This variety functions at levels I and II of the distance-respect system and is generally reserved for intimate family situations or talk among old friends. This is the least formal of the three varieties of speech where social relationships are defined on the basis of kinship or long standing established relationships.

The *tlahtoliztli* variety of speech is used where well defined social relationships exist and the *teihuializtli* is used in situations where social relationships are implicitly defined. The *tenohnotliztli* variety of speech is on the other hand used among members of distinct communities where relationships are defined in terms of general patterns within the Valley. It is in this type of situation where relationships are in fact not well defined, either implicitly, as is the case with intimate family situations, or explicitly, as is the case with formal social relationships, that it is most important for native speakers to recognize patterns in everyday language. Thus it is not surprising that non-formal inter-community exchanges should exhibit the greatest degree of linguistic variability.

2 Each of these three varieties of speech show characteristic patterns of variation both among themselves and among the communities of the area. It is on the basis of the *tenohnotliztli* variety of speech that it is possible to distinguish among communities as the other varieties of speech show relatively little inter community variation. Quantitative phonological variation in the *tenohnotliztli* variety is essential to ethnolinguistic dialect differentiation. Morphological differences among the three varieties not related to the use of the distance-respect system are almost nonexistent. Thus far no major syntactic differences have been found among the three varieties except that more formal speech appears to use a greater degree of syntactic complexity. Some communities in the area show some syntactic reorganization (Pu ry, 1976), both due to language contact phenomena and language death, but these differences are found in all varieties of speech when they occur. By far the most important parameter of variation both linguistically and for native speakers is to be found at the phonological level.

		e						e:						i					
		T	E	^	α	ə	a	T	E	^	α	ə	a	T	ι	ε	T	ι	ε
1	SX	.04	.04	0	0	0	0	.10	.08	0	0	0	.02	.10	.10	0	.16	.11	.05
2	YAN	.04	.04	0	0	0	0	.10	.10	0	0	0	0	.08	.07	.01	.15	.11	.04
3	SFC	.04	0	0	0	0	0	.06	.06	0	0	0	0	0	0	0	.04	.04	.02
4	SMT	.02	.02	0	0	0	0	.08	.08	0	0	0	0	0	0	0	0	0	0
5	SBN	.01	.01	0	0	0	0	.08	.08	0	0	0	0	0	0	0	0	0	0
6	SJT	.01	.01	0	0	0	0	.08	.08	0	0	0	0	0	0	0	0	0	0
7	SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	SAC	0	0	0	0	0	0	.03	.03	0	0	0	0	0	0	0	0	0	0
9	SCO	0	0	0	0	0	0	.03	.03	0	0	0	0	0	0	0	0	0	0
10	SMM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	SBC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	ATX	.01	.01	0	0	0	0	.03	.01	0	0	.02	0	0	0	0	0	0	0
13	SLO	0	0	0	0	0	0	.03	.01	0	0	.02	0	0	0	0	0	0	0
14	SLA	.01	.01	0	0	0	0	.04	.02	0	0	.02	0	0	0	0	.01	.01	0
15	NEP	.01	0	0	0	.01	0	.05	.02	0	0	.02	0	0	0	0	0	0	0
16	ST	0	0	0	0	0	0	.02	.01	0	0	.01	0	0	0	0	.01	.01	0
17	STO	.01	0	0	0	0	0	.03	.02	0	0	.01	0	0	0	0	.01	.01	0
18	DA	0	0	0	0	0	0	.04	.01	0	0	.03	0	0	0	0	0	0	0

TABLE I

The formal variety of speech shows relatively little phonological variation in the 18 communities under study in the region. These 18 communities were selected because of the availability of ten or more fluent adult speakers of Modern Aztec⁵. Only in SMT, where only 6 fluent speakers could be found, is the data in Table I based on less than ten samples. Table I shows the rate of total variation, T, per hundred occurrences of i and i: as well as e and e: in all positions and the rate of occurrence of each particular variant contributing to the total, T. Variation due to non-probabilistic rules has been eliminated from this sample and simply not counted in calculation frequencies. Linguistic constraints on variation have likewise been ignored here due to the fact that they play a very minor role in the ethnolinguistic system of dialect differentiation. Although some specific rules do apparently correlate with such factors as indigenist sentiments and economic orientation they do not apparently play an important role in ethnolinguistic dialect differentiation. The relatively low rate of variation in this variety of speech that is shown in Table I is fairly homogenous throughout the area.

		e						e:						i			i:		
		T	ε	^	α	ə	a	T	ε	^	α	ə	a	T	ι	ε	T	ι	ε
1	SX	.69	.33	.07	.08	.04	.17	.85	.52	.07	.04	.06	.11	.64	.36	.28	.81	.54	.27
2	YAN	.58	.29	.05	.06	.07	.11	.69	.55	0	.04	.04	.06	.52	.32	.20	.88	.56	.31
3	SFC	.19	.14	.02	0	.03	0	.55	.51	0	0	.02	.02	.48	.48	0	.52	.38	.14
4	SMT	.33	.31	0	0	.02	0	.56	.55	0	0	.01	0	.06	.06	0	.27	.22	.05
5	SBN	.31	0	0	0	0	0	.56	.55	0	0	.01	0	.43	.43	0	.32	.32	0
6	SJT	.29	.29	0	0	0	0	.55	.55	0	0	0	0	.08	.08	0	.27	.27	0
7	SBT	.03	.03	0	0	0	0	.06	.06	0	0	0	0	.01	.01	0	.05	.05	0
8	SAC	.01	.01	0	0	0	0	.46	.46	0	0	0	0	.03	.03	0	.05	.05	0
9	SCO	.01	.01	0	0	0	0	.43	.43	0	0	0	0	.41	.41	0	.30	.30	0
10	SMM	.02	.02	0	0	0	0	.02	.02	0	0	0	0	.44	.44	0	.32	.31	.02
11	SBC	.02	.02	0	0	0	0	.02	.02	0	0	0	0	.47	.47	0	.33	.31	.01
12	ATX	.18	.11	.03	0	.04	0	.39	.15	.03	0	.21	0	.03	.03	0	.14	.12	.02
13	SLO	.22	.11	.05	0	.07	0	.39	.15	.03	0	.19	0	0	0	0	.11	.11	0
14	SLA	.28	.10	.06	0	.12	0	.42	.14	.06	0	.21	0	.05	.05	0	.12	.12	0
15	NEP	.26	.14	.04	0	.07	0	.52	.17	.10	0	.25	0	.03	.03	0	.11	.11	0
16	ST	.23	.09	.03	0	.11	0	.41	.11	.10	0	.21	0	.06	.06	0	.11	.11	0
17	STO	.30	.11	.09	0	.11	0	.40	.12	.08	0	.20	0	.03	.03	0	.11	.11	0
18	DA	.21	.09	.04	0	.08	0	.52	.17	.10	0	.25	0	.03	.03	0	.11	.11	0

TABLE II

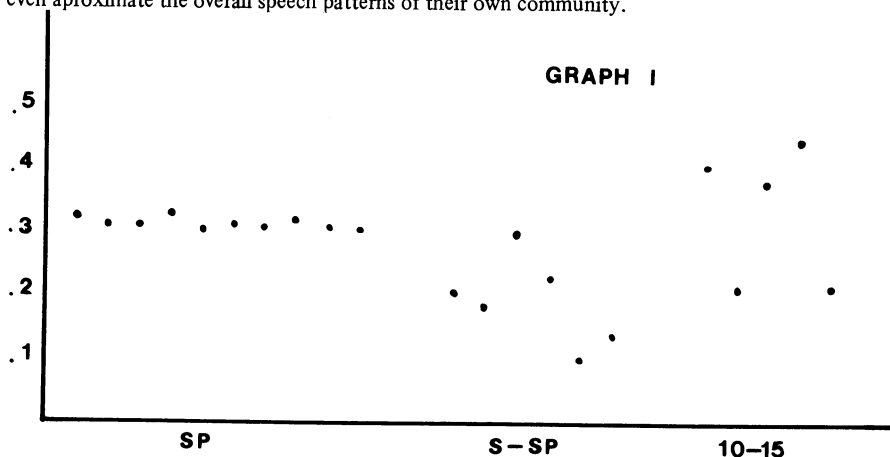
The *tenohnotzaliztli* variety of speech on the other hand shows a far greater level of variation and is essential in the ethnolinguistic system of dialect differentiation. Table II shows the rate of variation and the rate for each variant for each of the 18 communities. Both the quantitative rate of variation, the total T rate of variation of a form such as i or i: for a community, and the qualitative rate of variation, the rate at which a particular variant occurs or group of variants occur are important in ethnolinguistic dialect differentiation.

		e						e:						i			i:		
		T	ε	^	α	ə	a	T	ε	^	α	ə	a	T	ι	ε	T	ι	ε
1	SX	.06	.06	0	0	0	0	.11	.08	0	0	0	.03	.21	.14	.07	.26	.18	.08
2	YAN	.05	0	0	0	0	0	.10	.10	0	0	0	0	.13	.10	.03	.30	.22	.08
3	SFC	0	0	0	0	0	0	.08	.08	0	0	0	0	.06	.06	0	.11	.07	.04
4	SMT	.02	.02	0	0	0	0	.08	.08	0	0	0	0	0	0	0	.03	.03	0
5	SBN	.01	.01	0	0	0	0	.09	.09	0	0	0	0	.04	.04	0	.01	.01	0
6	SJT	.01	.01	0	0	0	0	.08	.08	0	0	0	0	0	0	0	.01	.01	0
7	SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	SAC	0	0	0	0	0	0	.05	.05	0	0	0	0	0	0	0	0	0	0
9	SCO	0	0	0	0	0	0	.03	.03	0	0	0	0	.04	.04	0	0	0	0
10	SMM	0	0	0	0	0	0	0	0	0	0	0	0	.03	.03	0	.03	.03	0
11	SBC	0	0	0	0	0	0	0	0	0	0	0	0	.03	.02	0	.02	.02	0
12	ATX	0	0	0	0	0	0	.04	.01	0	0	.02	0	0	0	0	0	0	0
13	SLO	0	0	0	0	0	0	.03	.01	0	0	.04	0	0	0	0	.01	.01	0
14	SLA	0	0	0	0	0	0	.05	.02	0	0	.03	0	0	0	0	0	0	0
15	NEP	.01	0	0	0	.01	0	.04	.02	0	0	.02	0	0	0	0	0	0	0
16	ST	0	0	0	0	0	0	.02	.01	0	0	.01	0	0	0	0	.01	.01	0
17	STO	.02	.01	0	0	.01	0	.03	.02	0	0	.01	0	0	0	0	.01	.01	0
18	DA	0	0	0	0	0	0	.04	.01	0	0	.03	0	0	0	0	0	0	0

TABLE III

Familiar or intimate talk, *teihuializtli*, shows far less variation than the *tenohnotzaliztli* variety of speech and in this sense is more similar to the formal type of speech. Table III shows the rates of variation for the same 18 towns in the area. The differences between the data in table III and that of table I may well be due to the fact that in the communities of NEP, DA and SJT less than ten samples have been obtained in this speech variety. The restricted context of intrafamiliar use makes samples of this variety very difficult to obtain. Most of the samples of this variety thus far obtained are the result of having family members interview each other when the author was not present. Some of the very low rates of occurrence may also be a result of the mode of analysis of our texts, as the analysis was done without the benefit of sophisticated acoustic equipment.

In all three varieties of speech samples have been taken from everyday conversations of widely differing lengths. The conversations took place between members of each of the 18 communities and three friends of the author who are native speakers of Nahuatl. The data in tables I, II and III is based on the speech of adult fluent speakers of Modern Aztec or Nahuatl as the language is also known. Younger speakers and semi-speakers⁶ show a far greater variation in their speech patterns than do adult fluent speakers. Graph I shows the rate of occurrence of *a* for *e* for ten fluent adult speakers from the town of SX, 6 semi-speakers and five young people between the ages of 10 and 15. The semi-speakers ranged in age from 12–37 and since most of them were unable to even perform a simple translation task, they were played a section of a conversation from a local market and asked to repeat ten sentences. The young people were asked to play a game of buying and selling things in the market with one of the author's native speaker friends. The young people appear to attempt to use the correct *tenohnotzaliztli* variety of speech but either undercorrect or overcorrect whereas the semi-speakers, though the quality of *e* shows considerable variation in some cases, were not able to even approximate the overall speech patterns of their own community.



3 The ethnolinguistic system of dialect differentiation is based on three elemental folk designations that are Spanish loanwords. There also exists a set of native terms used to describe the phenomena involved in ethnolinguistic dialect differentiation but these terms remain semantically opaque. These terms can be used to describe modes of speaking as well as differences in speech patterns and represent value judgments concerning speech. For example *tlahtolmelawak* can refer to the rate of loanword incorporation in everyday speech in a particular community but also means 'to speak true words' and as such represents a value judgement as to the sincerity or truthfulness of a speaker. *Ahuelahtoa* refers to the quantitative rate of vowel variation of a particular community but also means 'to be unable to speak well'. It can in this sense refer to an inappropriate mode of discourse or be a value judgment about an individual's speech. For this reason the ethnolinguistic system of dialect differentiation must be described in terms of the three loanwords that represent the elemental folk designations of the system at present.

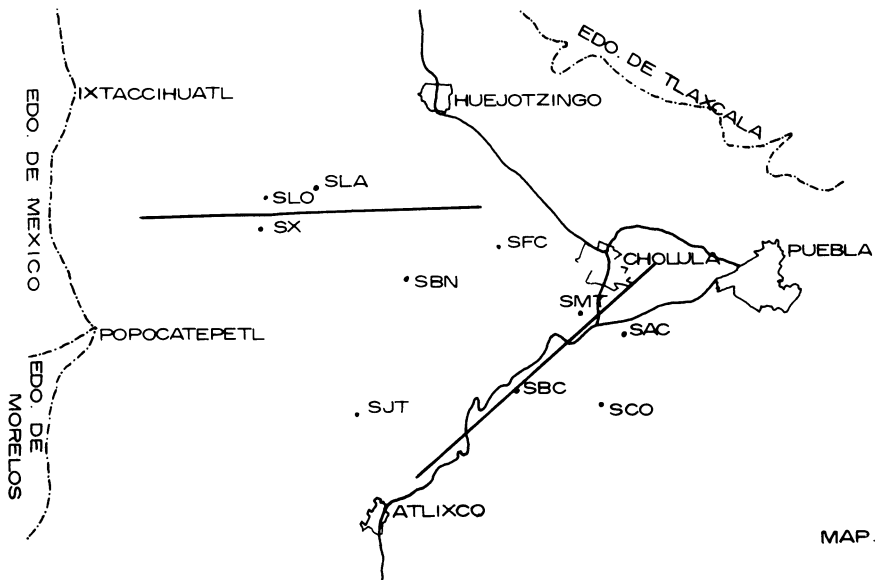
Tono is the most important designation of the system as all, towns in the area are said to differ by *tono*. This is an aggregate term that refers to the ordering and realization of prosodic rules (Knab, 1976), the perceived degree of quantitative and qualitative vowel variation (Knab, 1979) and certain lexical forms. When someone is said to speak with another *tono* it means that his speech bears distinctive patterns of pitch, stress, vowel quality or lexical use from ones own speech.

Distinto is the most transparent of the three terms and is used to describe the speech of ten towns in the area. The term refers to the quantitative degree of relexification characteristic of adult speech in a specific town (Knab, n.d.). When one speaks in a manner that is considered *distinto* it means that one speaks clearly or distinctly without a great deal of interference from hispanisms. This is quite distinct from the term's meaning in Spanish where it means 'different' and as such represents a reanalysis of the term by native speakers of Aztec. This reanalysis is more in accord with the notion in Aztec of the clarity of speech.

Diferente refers to the speech of but four towns in the area. The speech of these towns differs in the use, nonuse or incidence of use of specific morphological systems. To speak in a manner that is considered *diferente* means that an individual uses distinctive morphological devices in his speech or uses them in a perceptibly different manner or with a different frequency than in ones own speech.

Ethnolinguistic dialect differentiation is based on differences perceived by native speakers in the *tenohnotzaliztli* variety of speech. Most native speakers can recognize almost no differences in either the formal or familiar varieties of speech within the area. To check the sensitivity of this ethnolinguistic system of dialect differentiation ten native speakers were asked to classify and identify the speech of 18 towns in this study. The classifications showed almost no variation among individuals from the same town and identifications were nearly always correct as to the town that a particular speech sample came from. The same ten native speakers were also asked to rank and to group the dialects of the 18 towns on the basis of each of the folk linguistic terms. This then served as a basis for mapping the ethnolinguistic patterns perceived by native speakers. Parodies of the speech of each town by a particularly adept native mimic made it possible to pin down the folk linguistic distinctions with concrete and quantifiable linguistic features of everyday language.

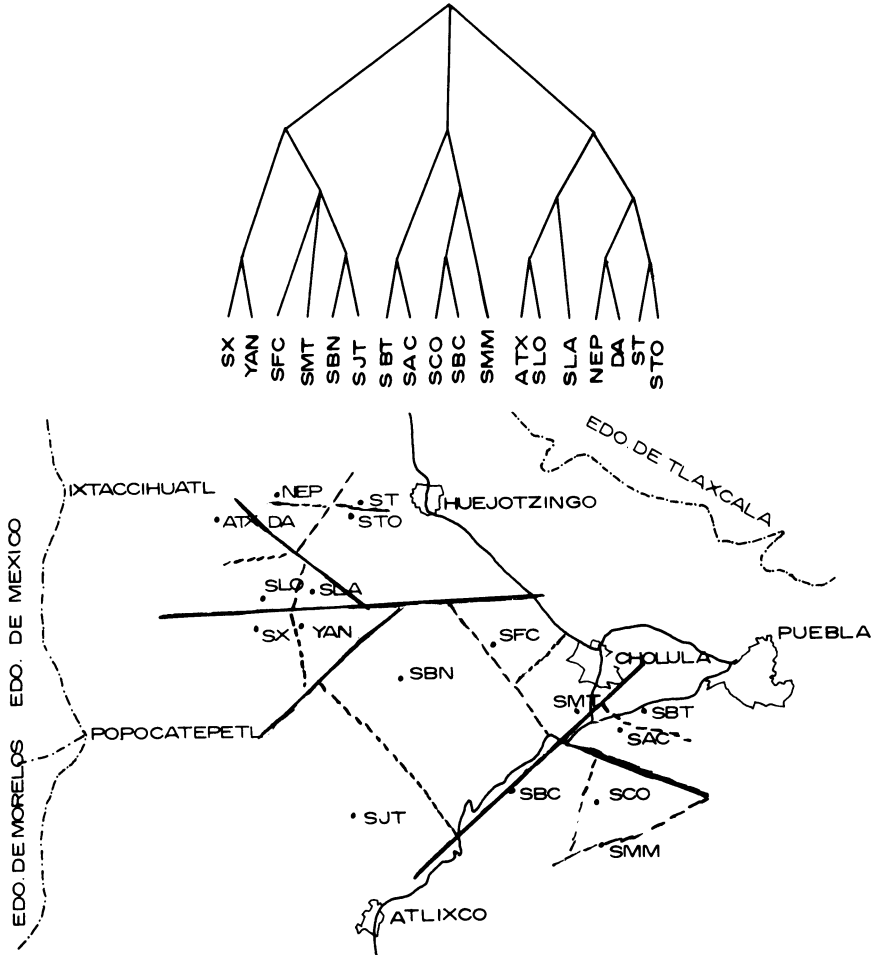
The term *distinto* labels the speech of ten towns in the region; SCO, SAC, SBC, SFC, SJT, SMT, SLO, SLA, SBN and SX. Rankings on the basis of the term *distinto* were found to correspond closely to loanword counts done on speech samples from fluent adult male speakers of Nahuatl. Adult male speakers from a given town show little variation in their use of loanwords in the *tenohnotzaliztli* variety of speech, i.e., in SAC for example there was no individual who varied by more than 7 loanwords per five hundred words in controled topic discourse from any other individual. Female speakers on the other hand have relatively fewer loanwords in their everyday speech but this is the only male/female difference that has thus far been found in the area. Towns that showed variation in the rankings, and no town varied by more than two positions, have very close rates of overall relexification. When native speakers were presented with the rankings based on loanword counts they unanimously found them appropriate to their intuition. Loanword frequencies however proved inadequate to account for groupings as the difference among the three stable groupings were barely perceptible, and in some cases amounted to no more than twenty loanwords per five hundred words of discourse. Differences in the use of particle loans did however prove the key to groupings. Map I shows the distribution of these groups in the area.



MAP. I

The two most straight forward aspects of the term *tono* are; 1) lexical use, such as the preference of the term *niuctli* over *octli* for pulque, a fermented beverage made from the juice of the maguey (*Agave sp.*) or century plant and the preference of the word *cihuatl* over *sohuatl* for 'woman', 2) the ordering and realization of prosodic rules which assign a rising-falling pitch to long accented vowels in some of the dialects in the area (Knab, 1976). These features account for the broad general groupings arrived at by native speakers and indicated by the heavy lines on Map II. Chart I shows more adequately the groupings and subgroupings arrived at by native speakers. Each of the nodes on Chart I can be labeled for a specific linguistic feature that allows native speakers to differentiate the group and in this case the three major groupings can be labeled for the above features.

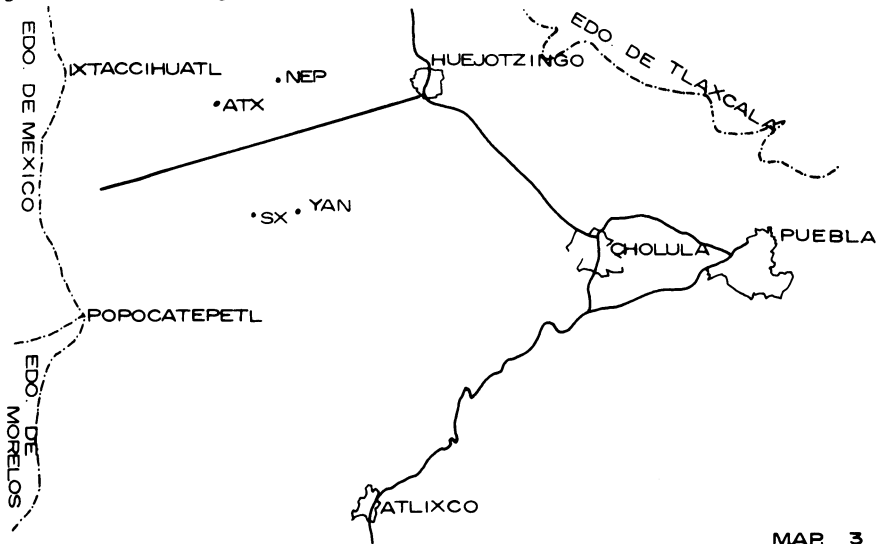
CHART I



The more subtle types of differentiation which account for the subgroupings in Chart I and on Map II rely on the overall quantitative rates of vowel variation and are weighted in terms of specific qualitative variants. In Table II the relative proportion as well as the type of variation also distinguishes the three major groups yet for the subgroups it is the specific type of quantitative or qualitative variation that allows native speakers to differentiate each one of the dialects within the area.

Within the first group both SX and YAN are distinguished by the fact that e and e: can vary to a. In the second group SAC and SBT are distinguished from other members of the group by their very low rate of i and i: variation. In the third group SLO and ATX are distinguished by the low rate of occurrence of as a variant of e as are the NEP and DA dialects. The two subgroups in this group are distinguished on the basis of distinct rates of the variation of a to e (not shown in Table II). Differentiation within the subgroups of the other two major groupings is likewise based on the quantitative rates of variation or the qualitative types of variation not shown in Table II. Nevertheless in this way each of the nodes on Chart I can be labeled for a specific type of variation, and it is exactly the type of variation that native mimics emphasized in their parodies of the speech patterns of each one of the communities that corresponds to the types of variation used to label the nodes on Chart I. The ethnolinguistic system is thus founded on concrete and quantifiable features of everyday speech patterns within the Valley that are weighted in terms of patterns perceived by native speakers in everyday language use. The weighting of the features employed in dialect differentiation does not appear to be arbitrary as in general the more marked qualitative variant of specific vowels are the features selected by native speakers as diagnostics whereas even relatively great changes in the quantitative rate of variation of unmarked vowels appear to be of lesser importance in differentiation.

The term *diferente* refers to the speech of but four communities in the area- ATX, NEP, SX and YAN. These are the only communities in the area that use the Aztec possessional system. The only division within this group that shows any degree of stability among the ten native speakers differentiated SX and YAN from ATX and NEP, this is apparently based on the optionality if the o-prefix in the formation of the preterite. Map III shows the distribution of these communities and the single stable division among them.



MAP 3

4 Perceived patterns in everyday language use in the Valley of Puebla are based on patterns of social, political and economic relationships that play a crucial role in everyday life in the Valley. In this sense patterns perceived in everyday language use define for native speakers the types of general relationships that are important in situations that are neither implicitly nor explicitly defined in everyday exchanges. The importance of such a system in the everyday lives of people in the Valley who have been for the most part up to the beginning of this century agriculturalists (Bonfil, 1973), with a complex set of social, religious and economic interrelationships, cannot be underestimated. Simply the regularity of the ethnolinguistic system of dialect differentiation among ten native

speakers and the fact that native speakers can differentiate dialects in such a subtle manner serves to illustrate the importance for people of being able to distinguish each town's linguistic identity. This in turn reinforces ethnic boundaries by defining social, political and economic interrelationships among communities in terms of each town's own particular linguistic identity. The social, political and economic relationships that are reflected through the ethnolinguistic system of dialect differentiation, though they are the result of interdependent diachronic processes, are perhaps best viewed individually.

The developmental process resulting in the modern political divisions within the Valley shows a striking similarity to the groupings and subgroupings of the ethnolinguistic system of dialect differentiation. At the time of the Spanish Conquest there were three polities within the Valley of Puebla; the Cholanteca and the Huejotzintleca were allied with the Aztec empire and the fiercely independent Tlaxcalteca, north of the area under study, formed a separate and independent state within the Valley. With the Spanish Conquest the Tlaxcalteca who had allied themselves with the Spanish settled the eastern communities of the region under study (Nolasco, 1967). The resulting divisions of the area correspond to the divisions based in the three major ethnolinguistic groupings. The area around Calpan including the communities of SLA, SLO and ATX was claimed by both Cholula and Huejotzingo (Nolasco, 1967:70). In the eighteenth century both SJT and SBN pertained to Atlixco for a short period of time (AGN, I;VII:138). Within the Cholantecan group SX and YAN have traditionally pertained to the same subunit of the system, the municipality of San Nicolás de los Ranchos, with SFC and SMT being separate subunits of the Cholanteca system. Within the Eastern or Tlaxcaltecan group SCO, SBC and SMM, though pertaining politically to the Cholantecan polity in the sixteenth and seventeenth centuries, as did all the Tlaxcaltecan towns, broke off forming an independent polity late in the seventeenth century (Nolasco, 1967:71), whereas both SAC and SBT apparently pertained to the same political subunit (AGN, T;IX:44). Thus within the Cholantecan group (SX, YAN, SFC, SMT, SBN and SJT) the first subgroup corresponds to dependent and independent municipalities. The second to the historical alignment of SBN and SJT with Atlixco and the third to the further differentiation of existing subgroups. Within the Eastern or Tlaxcaltecan group the first subgrouping corresponds to the separation of SCO, SBC and SMM from the Cholantecan polity. The subsequent divisions correspond to political or territorial subunits within the area. Within the Huejotzincan group the first subgroupings correspond to traditional territories and disputed territories of the Huejotzintecan polity. The second subgroup corresponds to dependent and independent subunits of the system which is followed by further subdivision. In this way all of the ethnolinguistic groups can be seen to reflect the development of present day political divisions within the area, but since none of these systems of interrelationships is in fact completely independent of other factors in the area, the ethnolinguistic groups also reflect in a similar manner such things as economic patterns in the area as they are reflected in market patterns.

There are basically three traditional market centers within this region; Cholula, Atlixco and Huejotzingo, in addition to the city of Puebla itself which participates directly in the national economy⁷ and is more a Spanish speaking economic center than other more traditional market towns. Though the three traditional market centers could be seen as a part of the larger Puebla system, since they participate more and more directly in the national economy as a result of increasing penetration and rapid economic development, it is perhaps better to view them as a separate system that feeds into both the Puebla system and the national economy. People from communities in the Tlaxcaltecan group regularly trade in the Cholula, Puebla and Atlixco markets but express a preference for the Puebla or Atlixco markets and in fact attend the Atlixco market with almost twice the frequency that they attend other markets. The Atlixco market, it should be noted, attracts many Tlaxcaltecs from as far away as the state of Tlaxcala itself. People from communities in the first subgroup (SBC, SCO and SMM) attend the Atlixco market with far more regularity, many of them attend on a weekly basis, than do those of SBT or SAC who, due to the availability of easy transportation to Puebla and Cholula, go to the Atlixco market somewhat less regularly. Here it should be noted that the structure of transportation routes in the area is an important factor in determining which markets are attended. The transportation system in the area is as much a result of political and economic factors as it is a result of geographic ones. For example most towns in the Cholantecan area are connected by roads and bus routes leading directly to Cholula whereas people from Huejotzincan communities must transfer one or more times in order to attend other markets in the area. The same is true for people in most of the communities in the Tlaxcaltecan area. Puebla is in fact

throughout the area the central hub of the transportation network, thus making Puebla the most important overall market center in the area. Within the Cholantecan area Cholula is by far the preferred market town. Only people from the communities of SJT and SBN attend the Atlxco market with any degree of regularity and it should be noted that both communities pertain to the same subsystem centered in SBN. SX and YAN in this group also participate in the same subsystem of the Cholula market system centered in San Nicolás de los Ranchos and that because of their distance from Cholula people from SX and YAN attend the Cholula market somewhat less regularly than do people from other towns in the area. People from the communities in the Huejotzincan group regularly trade in the Huejotzingo market but also attend the markets in Puebla and San Martín Texmelucan with some regularity. People from the Huejotzincan towns also attend the Cholula market but without any degree of regularity. People from these communities attend the Huejotzingo market more regularly than any other but prefer the Puebla market. In the first subgroup (SLA, SLO and ATX) people attend the Huejotzingo market with less regularity, due to transportation than do people from NEP, DA, STO or ST. People from SLA, SLO and ATX all participate in the same subsystem of the Huejotzingo market centered in Calpan and people from SLO and ATX attend other markets in general with less frequency than that of Calpan. People from ST and STO attend the Huejotzingo market on an almost religious weekly basis, whereas those of DA and NEP attend less regularly. The market system thus reflects the ethnolinguistic groupings and subgroupings in terms of market attendance and market preference, and in terms of the market systems with their subsystems within the area.

Social interrelationships in the area have in general been given far less attention than they deserve. Bonfil's (1973) excellent work on the center of Cholula itself and Olivera's (1972) work on religious systems give an important insight into the interrelationships within the area, but unfortunately no more. Such things as ethnic identification and group solidarity are far more difficult to quantify than market patterns or political systems. There is thus unfortunately no sound basis aside from the ethnohistorical polities in the area on which to base social groupings in the area. Mercedes Olivera's work in SBT (1967) and her as yet unpublished work in SFC may eventually provide a sound basis for social groupings based on social or religious organization within the area if they do in fact show general patterns. Despite the lack of a basis for general social groupings in the area there are some types of social patterns in the area that do reflect the most specific subgroupings. These are based on marriage ties and ties of *compadrazgo* among communities. Patterns of attendance at religious festivals for a town's patron saint or other religious festivals, dances or pilgrimages may also prove useful in defining larger social groupings but need more study. Ties of both marriage and ritual kinship are for example far stronger between SX and YAN than with any other towns. People from SBN also look to people from SJT for *compadres* before any other town. People interviewed from SBN had more out of town *compadres* from SAC than from any other place but Puebla which may be due to migration patterns. There also appears to be some degree of intermarriage among these two towns. Such patterns in the Huejotzincan group are however less straightforward than in the other areas as people from ATX for example prefer out of town *compadres* from SLA. There is also a small amount of intermarriage reported among people from NEP and ST. Such patterns do not fit the patterns of the ethnolinguistic subgroupings but do though need further study. Though social relationships among communities in the area are far more nebulous than either political or economic patterns, it does nevertheless appear that such factors as ethnic identification and community solidarity can account for the major groupings of the ethnolinguistic system of dialect differentiation and that patterns of social and religious organization as well as attendance at intercommunity functions such as festivals for patron saints, may in the end provide an adequate basis for defining the subgroupings. Nevertheless ties of *compadrazgo* and intermarriage among people from distinct communities do provide an adequate basis for the most specific subgroupings. Though social interrelationships among communities are less well defined than political or economic systems, since all three factors together with others in reality make up the fabric of everyday life for people living in the communities of the area, their role in the everyday interrelationships among people in the Valley is undeniable.

5 Recognizing patterns in everyday language use in the Valley of Puebla and using the proper variety of speech in the appropriate situation is essential not only for linguistic competence but for any type of adequate meaningful social exchange. In patterns of everyday language use in social situations where the relationships of the participants are either implicitly or explicitly defined, it is not necessary to indicate linguistically ones social identity. Yet where social relationships are defined in terms of general intercommunity relationships of mutual interdependence in the Valley a variety of

speech is required that linguistically indicates the identity of each participant in the exchange as coming from a specific community. This not only reiterates ethnic boundaries in the area by allowing participants in an exchange to identify each other in terms of intercommunity patterns of mutual interdependence that are important in the everyday lives of people living in the Valley, but helps maintain the equilibrium, established over the centuries, in everyday relations among communities in the area. Such a system that weaves together the threads of language and society in the fabric of everyday life is obviously the result of long term relations of interdependence among people living in sedentary agricultural communities for centuries in the Valley. And despite the fact that it is rapidly disappearing along with Modern Aztec (Knab and Hasson de Knab, 1979, n.d.), the system of ethnolinguistic dialect differentiation still shows great regularity among native speakers of Modern Aztec living in the Valley. Unfortunately though, given the rapid rate of language loss in the area and socioeconomic change, especially within the last ten years, the system has lost its functional utility among the vast majority of the inhabitants of the area and remains as but a relic, that is rapidly giving way to 'progress'.

The regularity observed in the ethnolinguistic system of dialect differentiation correctly implies that the system is based on concrete and quantifiable linguistic features, though they are not the features that would be chosen by the areal linguist or dialectologist. The system is in fact based on features perceived in everyday language use by speakers of Modern Aztec and weighted in terms of social, political and economic interrelationships among the communities of the area that are important in their everyday lives. Native speaker dialect differentiation in this case is far more subtle than areal linguistic studies or dialectologies, and despite the fact that the area does, on the basis of both formal and intimate varieties of speech, represent a single cohesive dialect area, native speakers do not perceive it as such. Native speakers in fact perceive the diversity in everyday speech that defines patterns of relations among communities in the area that are essential for everyday life of the people in the Valley. Everyday language use in the Valley of Puebla at least, defines the relationships among people that are essential in their everyday lives.

NOTES

- 1) This work was originally begun under a small grant from the American Philosophical Society's Phillips Fund in 1974 and continued under a N.E.H. youthgrant in 1976. Since 1978 this work has been carried out under the auspices of the Instituto de Investigaciones Antropológicas of the U.N.A.M. with the constant encouragement and support of Dr. Jaime Litvak King the director of the Instituto de Investigaciones Antropológicas.
- 2) Yolanda Lastra de Suarez (1974, 1975) and Fernando Horcacitas (1976, 1977, 1978) are in the process of conducting a full survey of Modern Aztec, or Nahuatl, dialects in Mexico and it is to both of them that this study owes much from its inception as a complement to their work.
- 3) The orthography used here is an adaptation of the orthography used for Classic Aztec since the sixteenth century.
- 4) The use of Modern Aztec in Public events in the Valley of Puebla is today extremely limited, as in general the language functions almost exclusively as a household language in the area. As little as twenty years ago Modern Aztec was the language of most public speeches in a number of communities but due to the process of language loss in the area fewer and fewer people can understand or use the language, thus its use is more and more limited every year.
- 5) This material has been selected from 368 interviews thus far conducted in the area but due to the process of language loss or the unavailability of a sufficient number of speech samples in all three varieties of speech from a single individual, much of this corpus was of limited use.
- 6) Semi-speakers are individuals with a limited productive capacity in a language who usually have a somewhat greater receptive capacity in the language.
- 7) My understanding of the market systems in this area is for the most part due to many enlightening conversations with Edward Gardner whose knowledge of markets and marketing in this area far exceeds my own. Mr. Gardener is of course in no way responsible for my interpretation of market systems in the area or any of my errors concerning markets and marketing.

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GETTING THE WHOLE PICTURE:
THE ROLE OF MENTAL IMAGES IN SEMANTICS AND PRAGMATICS

George Lakoff
University of California, Berkeley

The idea that mental images might have something essential to do with meaning has been taboo within mainstream semantics at least since Frege. And because Frege, who deserves to be called the founder of modern logic and modern formal semantics, has been the object of such generally deserved admiration, I think it's only fair to pin part of the blame on him. Here's what Frege has to say about mental images in his classic paper "On Sense and Reference:":

The reference and sense of a sign are to be distinguished from the associated idea. If the reference of a sign is an object perceivable by the senses, my idea of it is an internal image, arising from memories of sense impressions which I have had and acts, both internal and external, which I have performed. Such an idea is often saturated with feeling; the clarity of its separate parts varies and oscillates. The same sense is not always connected, even in the same man, with the same idea. The idea is subjective: one man's idea is not that of another. There result, as a matter of course, a variety of differences in the ideas associated with the same sense. A painter, a horseman, and a zoologist will probably connect different ideas with the name 'Buccephalus [the horse of Alexander the Great].' This constitutes an essential distinction between the idea and the sign's sense, which may be the common property of many and therefore is not a part or a mode of the individual mind. For one can hardly deny that mankind has a common store of thoughts which is transmitted from one generation to another.

--Frege (1966), p. 59.

Here Frege is taking mental images as subjective. He assumes that there are no conventional images within a culture, and no regularities of images from one person to another. This fits in very well with the ax he had to grind, with his objectivist philosophical views, and with his proposal for formal logic, which required that he define sense (or meaning) in purely objectivist terms.

What I'm going to argue is that there are conventional mental images, as opposed to merely individual ones, and that conventional mental images are associated with linguistic expressions as part of the language, and that these images are essential in linguistic semantics and pragmatics.

Before I go on, let me point out some of the ways in which Frege was right about mental images. His observations on the whole are perceptive and sophisticated. First, not all linguistic expressions have conventional images. Second, images do vary from person to person. Thirdly, individuals often have more than one conventional

image per given expression or meaning. Fourthly, images are not clear in the way that photographs can be clear. The clarity of the separate parts of an image, as Frege observed, does vary and oscillate. And images are, as Frege puts it, saturated with feeling. Moreover, they're also saturated with all sorts of other things, imagined motor activity, sound impressions, and so on. But granting all of this, it doesn't follow that there are no conventional images, nor does it follow that images play no role in meaning. It only follows that images play no role in objectively defined meaning, which is the only kind Frege took seriously. As Mark Johnson and I (1980) have argued, objectively defined meaning is irrelevant for natural language semantics, or for any application in the human sciences. In the discussion that follows, I'm going to take for granted the results that Johnson and I reported on, in particular the fact that our conceptual system is mostly structured by conceptual metaphors, and that these conceptual metaphors are reflected in the expressions of our everyday language. The first class of cases I want to discuss in which the images show up are a subclass of idioms--not all idioms, but a particular class which I'll call imageable idioms. I want to make two claims about them: first, that they have conventional images associated with them, and second, that the associated images do play an essential role in the way that the idioms are understood--in other words, the meanings of the idioms are not arbitrary. An example of an idiom with a conventional image is "keep someone at arm's length." Different people have somewhat different details in the image, but you can get at what is common by asking questions like the following and recording typical answers:

- Q: How is the arm oriented with respect to the body? Up? down? forward? backward? sideways?
- A: Forward, perhaps slightly to the side. Typically it's the right arm, and slightly to the right side.
- Q: How high?
- A: About chest height.
- Q: Is the hand open or closed?
- A: Open.
- Q: How is the hand oriented? Is it up, down straight up, bent to the inside, bent to the outside?
- A: Up, something like 45 to 90 degrees.
- Q: Is there another person there?
- A: Yes.
- Q: Is the other person facing you or turned away?
- A: Facing the subject, or whoever's got his arm out.
- Q: Are the muscles tense or lax?
- A: Tense.

There are also lots of things that are not specified in the image, that are either not important or vary indiscriminately from person to person, e.g., Is it a male arm or a female arm? Does it have clothes on? All sorts of things that are irrelevant or vague, and

that vary and oscillate. Thus, parts of the image are relatively stable, and parts are not. Knowledge of the world tends to be associated with images; in this case, the knowledge has to do with the fact that when your arm is in the position given in the image, you can be protecting yourself--you can keep someone away from you so he can't hurt you.

Another example of a conventional image associated with what I'll call an imageable idiom is "spill the beans":

Q: Where are the beans before they're spilled?

A: A pot, a cup--some container, typically, a basic-level object which is a container of some sort.

Q: Where are the beans after they're spilled? Are they in a nice neat pile, in another container?

A: No, they're scattered all over.

If you ask people what kinds of beans they are: Are they pinto beans white beans, black beans? The answers vary from person to person. Some people can't tell, some people have one bean or another depending on their experience.

Not only are there imageable idioms; productive constructions also have images. Take "hit the ball." Suppose you ask people: What kind of ball? How big is it? In this culture--not in all cultures, but in this culture--it's usually about the size of a baseball. If you ask: What do you hit it with--a pizza platter? a broom? People will usually say you hit it with a bat or a stick or something like that. People from other cultures give other answers--e.g., a soccer ball. Or take "He poured water into the glass from a pitcher." Is the person standing on a ladder twelve feet above the glass? No. Is the image the same as "He poured beer into a glass from a beer bottle." No, it's a somewhat different image. The glass is typically taller. There's foam on the beer.

What such examples show is that conventional images do exist. They vary, but they do have certain things in common, or they at least have family resemblances. But suppose you acknowledge that conventional images exist. So what? What does it have to do with linguistics?

Let's start with the productive constructions, like "hit the ball." Suppose you ask what you can report, truthfully, without misleading anybody, just by saying "John hit the ball." Suppose you look out a window over the schoolyard, and you see John hitting a beach ball with a large pizza platter. Assuming that no one else has seen the beach ball and the pizza platter, it is misleading to report this merely as "John hit the ball." The person you're talking to would get the wrong image. Or suppose Harry is standing on top of a ladder with a pitcher between his feet pouring the water from ten feet above into a glass, and you just reported it as "Harry's pouring water into a glass from a pitcher," with no special prior context. It would be misleading. In other words, what's reportable is what's not in the conventional image.

We can draw two immediate theoretical consequences:

1. Any adequate pragmatic theory must take conventional images into account.

2. Knowledge of how to use a language includes knowledge of which images are conventionally associated with which productive expressions.

3. As far as pragmatic aspects of meaning are concerned, the meaning of the whole is not a function of the meanings of the parts for mundane, syntactically productive expressions like "hit the ball."

Let us now return to idioms. It is usually assumed that the meanings of idioms are arbitrary, in other words, that any idiom could have any meaning. According to the usual theory, there is no reason why "keep someone at arm's length" means what it does and why "spill the beans" means what it does. According to the arbitrary meaning theory, each could have the other's meaning: "spill the beans" could mean what "keep someone at arm's length" now does, and vice versa. Or either could mean "go skiing" or "negotiate a peace treaty," or anything else. What I'd like to show is that, at least for imageable idioms, this is not true. Instead, I would like to make the following claim:

The meaning of an imageable idiom depends on

- (a) the image conventionally associated with the idiom
 - (b) the world knowledge that goes with the image
- and (c) the interpretation of the image and world knowledge via conventional metaphors (in the sense of Lakoff and Johnson, 1980).

For example, take "keep someone at arm's length." The image has the arm extended forward, hand up. The world knowledge is that this is a protective position, a means of keeping the other person far enough away so he can't hurt you. The relevant conventional metaphors are INTIMACY IS PHYSICAL CLOSENESS, and EMOTIONAL PAIN IS PHYSICAL PAIN. Applying these metaphors to the image and the world knowledge, we get the meaning of the idiom--maintaining emotional distance, typically to keep oneself from being emotionally hurt.

Or take "spill the beans." Jan-Ola Östman has observed that the relevant metaphors are THE MIND IS A CONTAINER, IDEAS ARE FOOD, and the CONDUIT metaphor. Take the conventional image and what we know about spilling, beans, and the storage of food. Apply these metaphors, and we get: There is information in someone's mind that he is supposed to keep there. Typically by accident (though not necessarily), he lets the information out and it goes all over the place. That is, he's supposed to keep a secret and he doesn't.

The point of these examples is that the meanings of the idioms is not arbitrary. There is a reason why they mean what they mean. In order to account for the nonarbitrary aspects of the meaning of these images, we need to make use of conventional images, conventional metaphors, and knowledge of the world.

The theoretical consequences of these observations is rather considerable. First, they provide still more evidence for the existence of conventional conceptual metaphors, as proposed by Lakoff and Johnson, 1980. Second, they show that images play a role not

only in pragmatics, but in semantics (assuming one wants to keep them separate). Since no current formal theory of either semantics or pragmatics admits images, such examples show the inadequacies of all image-less theories.

Now back to Frege. There was a good reason why Frege wanted to keep images--and anything else psychological--out of semantics. Frege saw meaning and truth as objective--free of all human vagaries. His views are inadequate to account for the semantics and pragmatics of human language. So are the views of his intellectual descendants--most contemporary formal theories of semantics and pragmatics.

SOME RANDOM COMMENTS

Extensions of Conventional Images

Conventional images can often be extended, as in "They just buried the hatchet but it won't be long before they dig it up again." If the meanings of all idioms were arbitrary, such cases should be impossible. But since the meaning of imageable idioms is based on conventional images, new extensions of the idioms can be based on extensions of the images.

Metaphorical Images

A metaphorical image is a case where one image is structured by another image. Sports announcers often have a facility for creating such cases. Consider an example like "The fullback exploded up the middle for five yards." Here an explosion image is structuring a football image. The explosion occurs either where the fullback starts accelerating or where he hits the line. He is carried forward by the force of the explosion; his motion is fast. The opposing linemen are scattered.

Compare this with "The fullback ploughed up the middle for five yards." The motion here is slow not fast. The fullback's legs are pushing hard into the dirt, like the legs of a ploughhorse. The opposing linemen wind up like the furrows, piled in two rows behind him.

The same ability that allows us to metaphorically structure one concept in terms of another allows us to metaphorically structure one image in terms of another.

Why Idioms Tend Toward Basic Level Objects and Actions

In order for an idiom to be imageable, it has to have imageable components--arms, buckets, hatchets, beans, rocks, elbows, etc. As Eleanor Rosch has observed, basic-level objects are the most general kind of objects that are imageable. Thus, it is not surprising to find basic-level objects and actions turning up most often in idioms.

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Speaking for Two: Respect Speech in the Guarijio of Northwest Mexico

Wick R. Miller, University of Utah

The use of language in its cultural context, and its inter-relation with linguistic structure, is just one of Professor Emeneau's many interests. One may point, for example, to his excellent description and analysis of the speech style found in the poetry embodied in Toda song (1958). It is, therefore, quite appropriate that my contribution also deal with a kind of style, namely respect speech. Like the poetry of song, respect speech is an elevated style level, and is universal. It is used to show respect or deference. It is a style which has recently received rather full attention from Brown and Levinson (1978).

I am concerned in this instance with a kind of respect speech¹ that has become formalized and institutionalized among the Guarijio Indians. I address these topics: first, how it is marked linguistically; second, who uses it; third, under what circumstances it is used; fourth, the relation between the linguistic markers and the social meaning; and lastly I provide a brief comparison with other forms of respect speech.

First a note on who these people are. The Guarijos live in the canyons and western slopes of the mountains in western Chihuahua, and extend into the foothill country of neighboring Sonora. They are a small group, numbering perhaps 2,000. They speak a Uto-Aztecan language most closely related to Tarahumara, their neighbors to the east and south who live in higher and more canyonated country. To the north, and also in mountain country are the Pima, and to the west, on the coastal plains, are the Mayo. Both the Pima and Mayo speak related Uto-Aztecan tongues, though not as closely related as Tarahumara.

My Guarijio data was collected between September 1976 and May 1977, and during a six week's stay during the summer of 1978. Field work was supported by the National University of Mexico, and the University of Utah. Some of the examples of respect speech turned up in tape recorded conversations, others in tape recorded stories, and additional examples were elicited in formal field sessions.

The Guarijos refer to their respect speech as "talking for two", which focuses on both the social setting and on the linguistic markers; or as "compadre speech" which focuses attention on the personnel involved. The linguistic markers involve the variation of three things: (1) the personal pronouns, (2) number, and (3) voice. The first and second person singular pronouns are replaced by the appropriate case forms of the first person plural pronouns (Table 1). Secondly we find the replacement of singular forms by the appropriate plural. This is clearly related to the first feature, the replacement of "I" and "you" by "we", especially since a plural verb form is appropriate with

	Subjective	Oblique
1st sg.	=ne, neé	no=, noó
1st pl.	=reme, remé	tamo=, tamó
2nd sg./pl.	=mu, muú	amo=, amó

Table 1: pronouns

	Active	Passive
Past	-Ø	-tú/ru
Evidential past	-re	-reru
Imperfect	-(a)ri	-wari
Present	-ni, -na	-ni
Habitual	-ni, -na	-wa
Future	-ma (sing.)	-pó(1a)/bo(1a)
	-pó/bo (pl.)	

N.B. The present active has two morphologically conditioned allomorphs. The active -ni and the passive -ni are usually added to different stem forms, and usually trigger different phonological processes, so that the two voices are usually distinguished.

Table 2: tense suffixes

a plural subject "we". This feature is not as important as it might seem, since the plural suffix found in most Uto-Aztec languages has been lost in Guarijio. But some common verbs have suppletive or reduplicated plurals, a few adjectives have reduplicated plurals, and most kinship terms along with a few human nouns have reduplicated plurals. The last linguistic marking manipulates the voice of the tense suffixes (Table 2), and resolves the ambiguity that results from the replacement of the first and second persons by a single form; at least it resolves it for the subject forms. If the underlying subject is the second person, then the verb takes the corresponding passive tense suffix; if it is the first person, then the tense remains in the active voice. For example:

- (1) Martiñano: Muké-ru remé ku'ífrabi?
 (carry-past:pass we short:while)
 "Did you carry it on your shoulder a while?" ("muú"
 replaced by "remé")

Enaro: Ka'í=reme muké-Ø=reme.
 (no=we carry-past:act=we)
 "No, I didn't carry it." ("=ne" replaced by "=reme")

The verb is in the past passive, and the second person pronoun ("muú") is replaced by the first person plural form ("remé"). In the response, the pronoun "we" has been retained, but the verb is in the active, showing that "reme" is to be interpreted as "I". In ordinary speech this exchange would be:

(2) Martiñano: Muké muú ku'írabí?

Enaro: Ka'í=ne muké-Ø=ne.

The third example shows the same pattern as the first:

(3) Martiñano: To'a-tú remí-ri isukí?
 (have-past:pass we-also tesgüino)
 "Did you have any tesgüino?" ("ni-rí" replaced by
 "remí-ri")

Enaro: Héé, to'á-Ø=reme woká paiká sigorí.
 (yes, have-past:act=we two three jug)
 "Yes, we had two or three jugs." ("=ne" replaced
 by "=reme")

namely the question in the passive, the answer in the active, indicating that "reme" is to be interpreted as "you" in the question, but "I" in the answer. An example of a verb that has a reduplicated plural form:

(4) Ka'í=na remé-ga co'-colóa-wa?
 (not=particle we-emphatic redp-hungry-hab:pass)
 "Are you hungry?" ("neé" replaced by "remé"; colóá-ni
 replaced by co'colóa-wa)

And with both subject and object in a relative clause:

(5) Uró remé tamó ki'á-Ø-a muguré, kompári.
 (burro we us give-past:act-gerund died, compadre)
 "The burrow that I gave you died, compadre." ("neé"
 replaced by "remé", "amó" replaced by "tamó")

(6) Uró remé tamó ki'a-tú-a muguré, kompari.
 (burrow we us gave-past:pass-gerund died, compadre)
 "The burrow that you gave me died, compadre." ("muú"
 replaced by "remé", "noó" replaced by "tamó")

As you might guess from the glosses, they were elicited. They are not the kind of sentences that are apt to occur in free conversation in respect speech, but they do nevertheless illustrate the linguistic potential of the system. In actual fact, complicated sentences in free speech sometimes lack some of the markers, as in:

si'yá = SpFa (Spouse's Father)
 wasí = SpMo
 mo'né = DaHu
 mo'óri = SoWi

Extensions (old system): used for

- (1) Spouse's parent's siblings (e.g. HuFaBr, HuMoBr = si'yá, etc.)
- (2) Siblings's child's spouse (e.g. BrSoWi, SiSoWi = mo'óri, etc.)
- (3) Spouse's older siblings (e.g. HuOlSi = wasí, etc.)
- (4) Younger sibling's spouse (e.g. YoBrWi = mo'óri, etc.)

The four terms used in the extensions have been replaced in the newer system by two terms, kompári (Spanish compadre), and komári (Spanish comadre). E.g.

kompári = WiMoBr, HuFaBr, WiFaBr, HuOlBr, YoSiHu, etc.

komári = HuFaSi, WiFaSi, BrSoWi, YoBrWi, etc.

Table 3: affinal terms

- (7) I'wá tamo=ki'a-má=ne sunú.
 (here us=give-fut:act=I maize)
 "I will give you maize." ("amo=" replaced by "tamo=",
 but "=ne" is not replaced by "=reme")

in which the object "you" has been changed to "us", but the subject "I" is retained.

Who is addressed in respect speech? It is principally used with certain affinal relatives, and always reciprocally, so that those that receive respect speech answer in respect speech. It is used with one's father-in-law, and mother-in-law; and reciprocally with one's son-in-law and daughter-in-law (Table 3). These affinal terms are extended to other relatives, and not surprising respect speech is used with them as well. These affinal extensions are now being replaced by loans from Spanish "compadre" and "comadre". The Guarijios have borrowed the Mexican institution of the compadrazgo, and plugged it into an existing system. So today one uses respect speech not only to those affinals that are addressed by "compadre" and "comadre", but also those who are "compadre" or "comadre" as defined by the Mexican institution. In addition to these usages, I have recorded respect speech in a story about one of the Saints, San Ysidro, the farmer's patron Saint, who gave mankind maize and other cultivated crops (example seven, above). Why it is used in this instance, I don't know, because I'm not aware that the saints stand in an affinal relation to mankind. It should be noted that respect speech is not used by God, nor by his children when speaking to God, since God is our father, not our father-in-law.

A person will not use respect speech until he is an adult, and normally not until he is married. Even though he has heard it all during childhood, speakers report that they have difficulty keeping everything straight when they first use it with their in-laws. And in fact my main informant often got mixed up, when, in formal eliciting sessions, I asked him to change rather complicated sentences from everyday speech into respect speech.

The use of respect speech is appropriate only between certain individuals, but it is not appropriate in all situations. Unfortunately, I lack full data to specify exactly when it is used and not used, but basically it seems to be appropriate when the speaker wishes to include or invite his in-law or compadre to join him, to become psychologically a part of him. Look back at the first example. The local resident linguist had just come with Enaro, from Enaro's house across the canyon, carrying a heavy pack. Both Enaro and Martinano had the resident linguist under their wing, and felt a joint concern for his well being. Or example three. The topic refers to a tesgüinada, or drinking of tesgüino, a corn beer, which is the local social lubricant. The tesgüinada is an important social institution, and one normally wishes to be included and to be invited to join in. Now contrast these two examples with eight:

- (8) Enaro: Ka'í=na nayú-ni=reme?
(not=particle sick-pres:pass=we)
"You aren't sick, are you?"

Martinano: Ka'í=ni-gâ.
(not=I-emphatic)
"Not me."

The question, "You aren't sick, are you?" is put in the respect form, but the response is not. I was told that the respect form would not be appropriate in the response, because no "invitation" was involved. Thus, an invitation to join with ego seems to be important, and hence the term "to speak for two" when referring to respect speech.

Next is a consideration of the relation between the linguistic markers and the social meaning. The use of "we" is clear; it is a device to include the hearer within the speaker's orbit, so that he is "speaking for two". It is clear that semantically the pronoun represents a dual inclusive "we", even though these are not grammatical categories in the Guarijio language. The use of the plural is motivated by exactly the same thing, and in fact for the verb, it would have to be plural to agree with the plural subject "we".

The passive is a well developed and commonly used grammatical category in Guarijio and other Uto-Aztec languages in Northwest Mexico. To understand its use in Guarijio respect speech we must first consider the use of impersonal. The

meaning of impersonal and passive often intergrade, and in many languages the two are expressed by the same grammatical machinery. Because of the intergrading of meaning, impersonal usage is clear only when the passive is used with intransitives. I have never recorded the passive with intransitive verbs, except in respect speech; and my attempts to use the passive impersonally with intransitives were interpreted by my informant as "speaking for two".

I believe it is noteworthy that in the closely related Tarahumara, which lacks this type of respect speech, the passive is used impersonally (Brambila 1953). Thus I would argue that the passive in Guarijio was probably once used impersonally, but that this semantic function has been usurped by respect speech.

Now, why the impersonal for respect speech? It puts psychological distance between the speaker and the hearer. By having a subjectless, or more accurately an agentless sentence, the speaker cannot be held responsible for the action. Notice the effect of the three linguistic markers, and how they interact. The use of "we" and of the plural closes the psychological distance, and brings the hearer into the speaker's psychological orbit. The difference between "I" and "you" is made by turning around and placing more distance between speaker and hearer for the "you" form.

Now a comparison with systems in other speech communities. As used by the Guarijio, I would call respect speech a formalized speech style. By formalized styles I have in mind such things as men's and women's speech in Koasati (Haas 1944), or abnormal speech in Nootka (Sapir 1915), or baby talk in Cocopa (Crawford 1970). An abrupt change is made, normally by using one or a combination of three techniques: (1) by applying a set of phonological rules, (2) by applying one or a set of grammatical rules, and (3) by using a specialized vocabulary that is reserved for that purpose. Perhaps a fourth technique can be recognized for formalized marking, one which in any case is widely used in non-formal systems. It is the indirect marking by rules for speaking: e.g. kinds of topics that can be discussed, the discourse structure, the way requests are made, the topics that cannot be discussed, by the lexical items that cannot be used, and the like.

Nonformalized style changes, as in American English respect speech, tend to be continuous rather than abrupt. However, in some formalized systems there are several degrees within the formalized style, so that the changes can appear to be continuous. I have in mind the various honorific levels in Japanese and Korean (Martin 1964), the degrees of brother-in-law speech among the Guugu Yimidhirr (Haviland 1979), or the various levels in Javanese (Geertz 1960).

My discussion of these two types, formalized and nonformalized styles, is probably not entirely satisfactory. But no matter; in reality the distinction between the two is probably

not clear cut, and ambiguous cases probably exist. Nevertheless I think it is a useful distinction, and that the two types can usually be distinguished.

The fourth technique, the indirect one, is the primary means of marking the respect speech used with in-laws among the Northern Athapaskans (Rushforth ms), along with a grammatical change (the change from singular to plural of the second person pronouns). As described by Rushforth, it appears to meet my expectations for a formalized system. Nevertheless, the indirect means does not seem to be used very commonly as the main technique for marking a formalized respect system. However, I think it will become evident that the source for the formalized grammatical markings cannot be understood without considering the indirect markings.

The first technique, the use of phonological rules, is widely used to mark a number of styles, such as baby talk, and men's and women's speech. But I'm not aware that it is the primary technique for any formalized respect speech. This leaves us with two marking techniques, the use of grammatical rules and a specialized vocabulary, both of which are widely used, alone or together, in formalized respect speech: Javanese (Geertz 1960), Madurese (Stevens 1965), Samoan (Milner 1961), Ponapean (Garvin and Riesenberg 1952), Japanese and Korean (Martin 1964), most European societies (Lambert and Tucker 1976; Friedrich 1966), Burundi (Albert 1972:83), Nahuatl (Pittman 1948; Hill and Hill 1978), and most Australian societies (Capell 1962).

It is the grammatical markings that interest us for a comparison with Guarijio respect speech. The respect system manipulates three things, pronouns, number, and voice, aspects of grammar that are involved in formalized systems commonly throughout the world. The only grammatical marking in common use in formalized respect systems not utilized in Guarijio is the use of the diminutive. And it is perhaps no accident that the diminutive is not grammatically or morphologically marked in this language. Let's look at each of these three aspects of grammar in turn, looking at both formalized and nonformalized systems.

First the pronouns. There are two very common techniques. One is to replace the second person "you" with a third person form; Spanish and Italian are examples. The other, perhaps more common technique, is to make the singular into a plural; French and earlier varieties of English are examples. These changes have been widely reported and much studied throughout Europe (Lambert and Tucker 1976; Friedrich 1966; and many others), but they are not uncommon elsewhere (Albert 1972:83; Capell 1962:517; Garvin and Riesenberg 1952; Rushforth ms; see Brown and Levinson 1978:203 for further references). Changing to third person or changing to plural serves to create greater psychological distance between the speaker and his listener. I know of no formalized respect system that changes a second person to first person plural, as in Guarijio. However, this is not surprising

when we realize that the object of most systems is to place distance between speaker and hearer, whereas in Guarijio the object is to include the hearer within the speaker's psychological orbit. The semantic categories involved are dual inclusive, "you" sg., and "I", though neither the dual nor inclusive-exclusive are grammatical categories in Guarijio. The expression "speaking for two" clearly shows dual intent.

In discussing nonformalized systems, Brown and Levinson have noted that "by using an inclusive 'we' form, when [the speaker] really means 'you' or 'me', he can call upon the cooperative assumptions..." (1978:132). They note sentences of the following type:

"Let's have a cookie, then." (i.e. me)

"Let's get on with dinner, eh?" (i.e. you)

We can also include the "parental we" here:

"We don't throw spinach at Grandma."

Brown and Levinson note that in Tamil, Tzeltal, Quechua and Malagasy (1978:132, 207), it is the inclusive "we" that is used; I can find no examples from a language that distinguishes, as a grammatical category, the dual from the plural, but it is, of course, the dual that I expect to be found.

Notice that this usage is not to be confused with the royal "we", or the editorial or expository "we" that is now passing from use, but which used to be used in scholarly papers. The royal and editorial "we" is exclusive and plural, and when we use it, it is to place distance between ourselves and our readers (see Brown and Levinson 1978:208).

The second feature is the replacement of the singular with the plural. The use of the plural in respect speech is so common that it hardly needs documentation (see Brown and Levinson 1978 for references). However, I think it is clear that while the Guarijio forms (verbs, adjectives, nouns) are plural, semantically they are dual. The plural makes the reference more diffuse; the dual ties together the speaker and hearer, and excludes all others.

Changes of voice are not as common as those of pronouns or number, but parallels can be found. The reflexive and passive-impersonal are used in the Aztec reverential (Hill and Hill 1978; Pittman 1948), and the passive is used in the Japanese honorific system (Prideaux 1970:17), as well as in the Korean honorific system (Haruo Aoki, personal communications). Impersonals and passives are also widely used in nonformalized systems, as noted by Brown and Levinson (1978:199-202, 278-281). The object in all these cases is to disclaim responsibility, by leaving the

agent unspecified. Guarijio, however, seems to be unique in using the passive to disambiguate the first and second persons.

The emergence of grammatically marked respect systems can be understood through the study of language usage. If we find that a grammatically marked respect system can be a factor in language change, then we have a clear case of language usage playing a role in historical grammar. Changes in the pronominal systems, along with the appropriate verb agreement, in European languages, are cases in point. Another example would be Guarijio, if I am correctly interpreting the evidence from the closely related Tarahumara. It appears likely that the passive was used in Guarijio, as it is still today in Tarahumara, for both the passive and impersonal. But today it is only passive, since the impersonal function was made impossible by the use of the passive with intransitives for respect speech.

Lastly a note on the relation between respect systems and the nature of the society. Brown and Gilman (1960) have made famous a model with two dimensions, one horizontal, the other vertical. The forms used on the horizontal dimension are used reciprocally, with the formal terms showing distance, the familiar ones intimacy. Forms on the vertical dimension, however, are used non-reciprocally, with the superior using familiar terms, but the inferior using formal ones. The title of the paper, "Pronouns of power and solidarity", captures the essence of the two dimensions very nicely. The Brown and Gilman model was found to be applicable, sometimes with some modifications, to a large number of societies, particularly complex societies in Europe and Asia (see Howell 1968, and Brown and Levinson 1978). The model, however, will not work for the Guarijio. Here we find respect speech is always used reciprocally, between certain kinds of in-laws. Reports from simpler societies are not as full as for complex societies, making it difficult to generalize. But it does appear that a similar situation is found in much of Australia (Capell 1962, Dixon 1971, Haviland 1979), in northern California (Miller, submitted; Robert Oswalt, personal communications), and in Northern Athabascan (Rushford ms). In these cases, respect speech is used reciprocally, either between affines (especially affines of the opposite sex) or between siblings of the opposite sex. It may well turn out that the difference is between stratified and nonstratified societies.

Note

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Spoken/Written Language and the Oral/Literate Continuum

Deborah Tannen
Georgetown University

An understanding of the relationship between spoken and written language is crucial for both theoretical and applied linguistics. In the real world, everyone wants to know why nearly all children learn to talk, but (as English teachers and their critics frequently wail) many "can't write." For example, someone who has had an accident rarely has more than momentary difficulty telling friends what happened. Yet consider the result when people have to write down what happened -- as in the following explanations reported on insurance company accident report forms:²

"I had been driving my car for forty years when I fell asleep at the wheel and had an accident."

"The guy was all over the road. I had to swerve a number of times before I hit him."

"In my attempt to kill a fly, I drove into a telephone pole."

The effect of discomfort with writing can thus be comic, but in more cases it is tragic -- as in the failure of children of certain ethnic and class backgrounds in educational and later in employment settings. Inability to write effectively hampers achievement at all levels of public performance. More and more service encounters begin with the injunction, "Fill this out," and for many, that is the start of failure to obtain rights and services. An understanding of the differences between speaking and writing is needed to begin to attack such problems.

In theoretical linguistics, research in recent and past years has focused on one or the other form of language without specifying or being concerned with the relationship between the two. Both European and American structuralists were concerned only with spoken language, considering written forms as an impoverished attempt to record spoken utterances. In contrast, American transformationalists effectively rejected spoken language as a locus of study, dismissing it as "mere performance." Sociolinguists analyzing variation were interested only in casual spoken language. Recent interest in discourse analysis has extended the domain of linguistic analysis "beyond the sentence." In order to determine which sorts of texts are appropriate for study, and to understand the relationship between findings of research based on various kinds of data, we need a perspective on the relationship between those kinds of data. Such an understanding may begin, most logically and crucially, with the relationship between spoken and written language.

A₃ number of linguists have turned their attention to this issue. The work of Chafe (1979, in prep) and Ochs (1979) will furnish a starting point for the present analysis.

Spoken vs. Written Language

Ochs (1979) hypothesizes a functional distinction between planned and unplanned discourse, suggesting that what has been regarded as "written" language is in fact written and planned, while what has been thought of as "spoken" language is spoken and unplanned. Language can be written and unplanned, as in personal letters or diaries, and it can be spoken and planned, as in formal lectures. Ochs goes on to concentrate on the differences between planned written and unplanned spoken language. She demonstrates the following characteristics of unplanned spoken language:

1. Dependence on morphosyntactic structures learned early in life, previously thought to be "replaced" by adult language.
 2. Reliance on "immediate context" to express relationships between propositions.
 3. Preference for deictic modifiers ("this man")
 4. Avoidance of relative clauses
 5. Preponderance of "repair mechanisms" (following Sacks, Schegloff, and Jefferson terminology)
 6. A kind of parallelism resulting in sequences of similar syntactic constructions, lexical items, and phonemes (Sacks' and Schegloff's "sound touchoffs" and "lexical touchoffs").
- In contrast, planned written discourse makes use of complex syntactic structures, formal cohesive devices, and topic sentences. In general, it is more "compact."

In comparing spoken and written language, Chafe (1979) considers the forms that Ochs has identified as planned written and unplanned spoken. He suggests that written language is characterized by a high degree of "integration," made possible by the slowness of writing and the speed of reading, while spoken language has a "fragmented" quality, resulting in part from the spurt-like nature of speech which probably reflects the "jerky" nature of thought (Chafe 1980). On the other hand, spoken language exhibits a high degree of "involvement" in contrast to the "detached" quality of written language.

The involvement factor in spoken discourse results from a number of phenomena, including the following.

1. Devices by which the speaker monitors the communication channel (rising intonation, pauses, verbal requests for back-channel responses)
2. "Concreteness" and "imageability"
3. A more "personal" quality
4. Emphasis on people and their relationships
5. Emphasis on actions and agents rather than states and objects
6. Inclusion of specific details and direct quotation

Like Ochs, Chafe notes that spoken discourse presents propositions without overtly marking their relationship to each other, or with the minimal cohesive conjunction "and," while written discourse makes use of subordinating conjunctions, subject deletion, and other complex syntactic constructions to achieve cohesion. He too notes the preponderance of hesitation phenomena (Ochs' "repairs").

Comparing Spoken and Written Stories

In order to verify and build upon this research on the relationship between spoken and written language, a large number of stories were recorded as told by various speakers who were then asked to write the stories down.⁴ In nearly all cases, the written narratives were shorter by more than half than their spoken counterparts, and they exhibited the expected written features. However, one narrative was twice as long in written form, and it exhibited many features expected in spoken discourse. The ensuing analysis will examine this pair of stories and hypothesize an explanation for their aberrance.

The written version of this pair of narratives is composed of 693 words in 51 sentences and 85 clauses/phrases. In contrast, the spoken story contained 383 words in 64 "idea units" (Chafe 1980), or spurts of speech. Furthermore, the written clearly did not seem less "personal" or "imageable." If anything, it seems more so. Finally, it contains many features associated with spoken language such as direct quotation and use of details. The key seemed to lie in the fact that the writer had produced not expository prose but a story in the literary sense -- a piece of creative writing, an act of fiction. That written fiction employs features of spoken language is not a new idea; but which features does it use, and to what end?

Both Ochs and Chafe were aware of the special status of fiction. Chafe suggests that a literary text is "an imitation of natural speech," and Ochs asserts that a "novelist trying to recreate a casual situational context will use many of the features ... of unplanned discourse in his story." Robin Lakoff (Lakoff in prep; Lakoff and Tannen 1979) has noted however that fictional dialogue does not in fact correspond to what appears in a transcript of spoken language. The present analysis supports her hypothesis. Somehow, the written text represents something that seems more spoken than it is by blending some features of spoken language with others of written. Examination of the spoken and written versions of "Fernandez" (see Appendix for complete texts) suggests that written fiction combines the involvement factors of spoken language with the integration of written. After presentation of the data demonstrating this phenomenon, I will suggest an explanation for it in the theory of oral vs. literate tradition.

Consider the following matched segments of the stories (S = spoken; W = written. Numbers refer to units as numbered in texts in Appendix).

(S45) So just then some young guy passes through the hall, with his two buttons undone, and his hair all stickin' out.

(W49) Just then a younger guy walked past wearing the latest in spiffy attire: short-sleeved shirt, no tie, two buttons undone, hair sticking out of his chest.

In some ways the written and spoken versions correspond to Ochs' and Chafe's descriptions of written/planned vs. spoken/unplanned

discourse. The written version uses the past tense whereas the spoken uses the present; the deictic "some" in the spoken ("some young guy") becomes the indefinite article in written ("a younger guy"). However, in other ways the written version is characterized by features identified as typical of spoken language: most strikingly imageability -- the details that create in the listener a sense of the immediacy and richness of experience. Thus the clothes of the "passing coworker" are described in more detail in the written ("short-sleeved shirt, no tie"). Throughout the written narrative, inclusion of more details contributes to the increased length.

Another important factor which contributes to the greater length of the written version is external evaluation. Labov (1972) notes that a storyteller is always concerned with making clear the point of a story, answering in advance the "withering question," "So what?" Evaluation in this sense can be internal; in that case the teller makes clear the significance of what s/he tells by word choice, paralinguistic features, expressive phonology, direct quotation, and so on. In external evaluation, the teller steps outside the story to call attention to the point, as for example in such frequently heard comments as, "Here's the best part," or "What was so funny about it was..." In the written version of "Fernandez," the writer frequently states outright what was not stated in the spoken version. For example, she makes overt the point about the passing coworker's clothes ("the latest in spiffy attire").

Another phenomenon that can be seen in these segments is the mixing of formal and informal registers in the written version. On the one hand, "spiffy attire" is formal, but "guy" and "sticking out" are preserved from the informal spoken register.

Ochs points out that spoken language makes use of parallelism and repetition. The phrase "spiffy attire" is repeated from an earlier phrase (W40). However, I believe the interval between the two instances is somewhat larger than might be expected in spoken language. In any case, repetition is observed in both the spoken and written versions, but syntactic parallelism is more overriding in the spoken. In the written, the force of the parallelism is muted while imageability it increased. For example, note the segments in which Fernandez is told to change his style of dressing (S48-63, W55-90). There are parallel constructions in both versions, but in the written they are farther apart and progressively less parallel:

- | | |
|--|--|
| (S48) I said hey, you gotta un ..
you gotta take off your jacket. | (W58) I said "You've got to
take off your jacket." |
| (S51) I say gotta take off your
tie. | (W62) I said, "You've got to
take off your tie." |
| (S55) I say you gotta undo your
first two buttons. | (W70) I said, "You have to un-
button your two top buttons and
let your chest hair stick out." |

(S64) I say Ray, you gotta take off your tee shirt so your hair will stick out.

(W81) I said, "Ray, you've got your two buttons undone and your hair's sticking out, but you've got a tee shirt on. You can't walk around with your under-shirt showing."

While the spoken and written versions begin similarly, the parallelism continues in the spoken ("you gotta take off...") while it is gradually dropped in the written. The transition to present tense in the spoken is not seen in the written. While both versions give the speaker's words in direct quotation, the informal "hey" is omitted from the written, and some of the "dialogue" in the written seems to be serving the purpose of external evaluation: restating information that has already been given (W81) and making explicit the moral about the undershirt which is left unstated in the spoken. Thus the written story makes use of a device that is, on the surface, spokenlike (direct quotation), but is writtenlike in content and function (external evaluation). In the spoken discourse, Fernandez' part is played only by his actions. In the written, he is introduced as a character through participation in the dialogue.

In addition, Fernandez' actions are described in more detail and with more precision in the written story:

(S60) he's got his jacket on this arm and his tie over here,

(W63) He took off his tie and laid it neatly over the jacket on his arm.

Furthermore, the written segment integrates information about the jacket into the sentence about the tie. The choice of verb ("laid it") and adverb ("neatly") contributes to the portrait of Fernandez as "Mr Politeness," as he is introduced in the written story. Finally, the description is of an action rather than a state, just the opposite of what Chafe observed in written language.

In fact, action is added in the written that has no counterpart in the spoken narrative. This is seen most clearly in the inclusion of a final scene in which Fernandez reappears with no tee shirt and his top buttons undone. It is also seen, more subtly, throughout the written story. For example,

(S62) and he undoes his top button

(W76) Right in front of my very eyes, Ray reached up to his neck with his free fingers and undid his two top buttons. Then he fluffed the few stray gray hairs sticking out from his collar bone.

This passage shows as well the use in the written version of sound touchoffs, a phenomenon that Ochs, following Sacks and Schegloff, observed in spoken language. These are indicated in the above passage by underlining. Everyone will recognize this

as what is called "alliteration" by literary critics. Again, fiction embellishes upon a process that is spontaneous in natural spoken language.

Similar patterns emerge in the following example. The subject is the languages that Fernandez speaks.

- | | |
|-------------------------------|--------------------------------|
| (S5) ... And he knows Spanish | (W11) He knows at least four |
| and he knows French | languages fluently -- Spanish, |
| and he knows English | French, English and something |
| and he knows German. | else. |

The impact of Fernandez' ability to speak many languages is conveyed in the spoken text by the force of parallel constructions. In the written, the list is collapsed, or integrated, and the fact of his language ability is lexicalized in "fluently," a word which describes rather than recreating.

This does not mean, however, that the written version is always more compact. The next segment, in which the speaker/writer goes on to illustrate her foreign language interchanges with Fernandez, is more developed in the written discourse:

- | | |
|---|---|
| (S32) I say, "Aaaaa, Monsieur, comment ça va:, because I can't think of how to say it in Spanish. | (W13) Whatever language I speak to him in, he answers in that language. I'll say, "Bonjour Monsieur Fernandez, comment s'a va?" and he'll answer "Il va bon," or whatever the French say. He always says the right thing in the right language. |
| Or he walks in and I say, "Gracias, ... Señor Fernandez, ... and he says "Buenas Dias. ... Señora Whittaker." | But me, I forget what language I'm supposed to answer in, and I usually answer in some other language. Like if he asks, "Comment s'a va?" I answer "Va est gut, gracias." |

In the spoken text, she simply demonstrates a typical conversation; in writing, she both presents the dialogue and tells what the point is (external evaluation). She introduces, furthermore, the notion that she mixes languages. In the spoken version, the comic effect was accomplished paralinguistically: she raised her voice to a very high pitch, drew out vowel sounds, and paused significantly in reproducing the dialogue. But these paralinguistic effects are not available to the writer; hence she introduced humor by mixing languages in the written story.

The written version also exaggerates the writer's own linguistic incompetence to set off Fernandez' linguistic ability. While the written story thus introduces more specific examples of their dialogue, i.e. becomes more spokenlike, it also contains more explanation, or external evaluation, which is characteristic of written language. Notice, nonetheless, that while the increased external evaluation is writtenlike, it is rendered in a register that is decidedly spokenlike ("But me, ...").

Fiction as Integrated Involved Writing

Thus literary fiction, as represented by the written version of "Fernandez," combines features of written and spoken language. Specifically, it combines the integration of written with the involvement of spoken language. This is possible because integration and involvement are different orders of categories: the former is a quality of the surface form, and the latter a higher (or deeper) motivating function. In posing the question of why these aspects of spoken and written language are found in fiction, I suggest an explanation resides in an understanding of strategies associated with oral and literate tradition. The remainder of this paper will sketch a necessarily brief summary of research in this area and its relationship to spoken and written language.

Oral vs. Literate Tradition

The sixties witnessed pioneering research on the effects of writing on cognitive and social processes (Goody and Watt 1963, Havelock 1963, Ong 1967). The seventies brought continued work by the same scholars (Goody 1977, Havelock 1973, Ong 1977) as well as others (Cole and Scribner 1974, Cook-Gumperz and Gumperz 1980, Kay 1977, Olson 1977).

In literate society, knowledge is seen as facts and insights preserved in written records. In oral culture, formulaic expressions (sayings, clichés, proverbs, etc.) are the repository of wisdom. Formulaic expressions function as wholes, as a convenient way to signal knowledge that is already shared. It is not assumed that the words in the expressions contain meaning, in a way that can be analyzed out. In other words, oral tradition sees meaning as social meaning. Thus, in oral tradition, it doesn't matter whether one says "I could care less" or "I couldn't care less." The expression is, in either case, a handy way to make reference to a familiar idea (Tannen & Oztek 1977). As Olson (1977) puts it, "the meaning is in the context." In literate tradition, "the meaning is in the text."

Ong explains furthermore that "knowing" in oral tradition is achieved through identification with characters in the telling. In literate tradition, knowing is achieved through analysis. Havelock asserts that understanding in oral tradition is subjective, while understanding in literate tradition is objective. This explains the fact -- puzzling and disturbing to modern scholars -- that Plato would have banned poets from participation in educational processes in the Republic. Because of their ability to move audiences emotionally, poets were a dangerous threat to the transition to literacy, by which people were to learn to suspend their emotions and approach knowledge through analytic, logical processes.

In the broadest sense, strategies associated with oral tradition place emphasis on shared knowledge and the interpersonal relationship between communicator and audience. In this, it builds upon what Bateson (1972) calls the metacommunicative

function of language: the use of words to convey something about the relationship between interlocutors. Literate tradition builds upon what Bateson calls the communicative function of language: the use of words to convey information or content. This gives rise to the idealization that language can be "autonomous" (Kay 1977) -- that is, that words can carry meaning all by themselves, and that this is their prime function. In practice, language is probably never wholly autonomous, nor wholly metacommunicative. Rather, it is relatively weighted in favor of one or the other idealization -- hence, the oral/literate continuum.

Oral/Literate Tradition and Fiction

It is the goal and process of oral tradition then to focus on the interpersonal, the context, rather than decontextualized content, to engender in the listener a sense of identification with the speaker or the characters described. This accounts for the phenomenon Chafe calls "imageability" -- the use of details, of particularities, that gives the listener a sense of "experiential involvement," and of the speaker's "richness of thought." It accounts as well for the emphasis on people, and on action.

Written fiction has as its goal not the convincing of the reader through logical argument but instilling in the reader a sense of identification with its point of view. Thus it builds upon the immediacy function of spoken language -- "imageability" and "involvement." To this end, it borrows and embellishes upon some aspects of spoken language -- use of detail, direct quotation, description of action, as well as prosodic and rhythmic features such as parallel constructions and sound touchoffs. However, it eliminates other aspects of spoken language -- some because they are inefficient (hesitations, some repetitions), and some because they are impossible to create in writing (expressive phonology). Finally, written fiction can take advantage of the written form to present subtle relationships between propositions through complex constructions and choice of words with refined meanings.

Conclusion

In summary, I suggest that oral and literate tradition reflect two overriding communicative goals. Literate tradition entails an approach to discourse which emphasizes logical, analytic processes and focuses on the content of a message, conventionally de-emphasizing or ignoring the interpersonal dynamics between communicator and audience. Conventionally, the audience is to respond by means of analytic processes, not subjectively. The goal is for the relationship between propositions to be explicit, with the least connective tissue supplied by the hearer. Much of this connective tissue is supplied through integration -- that is, through complex syntactic constructions. In contrast, oral tradition emphasizes the interpersonal function and demands a maximum contribution from the audience in terms of supplying sociocultural knowledge and background information. It expects audience understanding to be mediated by emotional or subjective responses.

The fact that these goals operate as hypothesized is attested to by the existence of written fiction, which takes advantage of the written mode to achieve integrated prose, but which opts for many of the strategies associated with spoken language to create prose that also has a high involvement factor, to capitalize on the oral tradition function of emphasizing the interpersonal, making use of subjectivity for knowing through identification.

The explanatory power of the oral/literate continuum is not limited to written vs. spoken language. It can contribute to an understanding of many aspects of conversation; this analysis has been undertaken elsewhere (Tannen 1980, in prep[a]).

Notes

1. I am grateful to John and Jenny Cook-Gumperz for alerting me to the significance of oral/literate tradition, and to Wallace Chafe for continuing interchange about spoken and written language; to my Discourse Analysis class at Georgetown University, fall 1979, for stimulating discussion on this topic; and in particular to Della Whittaker and Susan Dodge for creating and collecting (respectively) the stories here analyzed, and for their insightful comments. The present paper is a preliminary version of a longer study of spoken and written language which is in preparation.
2. Thanks to Patrick Malizio for these examples, taken from a list attributed to the Toronto Sun, July 23, 1977.
3. Others include contributors to the volume Spoken and Written Language (Tannen, ed., in prep[b]).
4. The stories were collected by members of my Discourse Analysis class, Fall 1979, and I thank them.

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Appendix

Fernandez story, spoken: (Transcription conventions follow text)

1 Oh, I have to tell you about this guy at work, Fernández. 2 He is so funny. 3 He is from South América, 4 from ... Chile. 5 ... And he knows Spanish, 6 and he knows French, 7 and he knows English, 8 and he knows German, 9 And he is a gentleman. 10 ... He must be about 59 years old. 11 And they're not doing right by him. 12 Only ... I think ... because 13 with his assortment of foreign languages that he knows 14 it takes him longer 15 to say ... what it is on his mind. 16 And also ... he thinks carefully. 17 ... And also I think with his assortment of foreign languages 18 when people speak fast 19 it takes him a while 20 ... to understand what they're saying. [Even though he is in America and everybody's speaking English.] (Laughing) 21 Yeah, so I, 22 the other guys, 23 ... they're just not nice to him. 24 He comes upstairs, ... 25 to Tech Reports, 26 ... and he wants help with this, 27 or help with that, 28 he wants to understand 29 well can this be done, 30 and can that be done, 31 and I just have a good time with him. 32 I say, 'Aaaaaa, 'Monsieur, ... comment ça va', 33 because I can't think of how to say it in Spanish. 34 Or he walks in, 35 and I say, 'Gracias ... Señor Fernández. ... [laugh] 36 and he says, 'Buéas Días, ... Señora

Whittaker. 37 So the:n, ... I see: ... that he has on such a nice suit one day, 38 and I say ... hey: Ray:, 39 you're really dressed to kill, 40 doncha know you're working for the US Government? 41 You gotta dress like a government worker, 42 and he says, how is that? 43 So just then some young guy passes through the hall, 44 with his two buttons undone, 45 and his hair all stickin' out, 46 I said, hey, you gotta un ... 47 you gotta take off your jacket. 48 So he takes off his jacket. 49 I say gotta take off your tie. 50 He takes, 51 right there in the hall, 52 he takes off his tie. 53 I say, you gotta undo your first two buttons. 54 Meanwhile, two or three other guys are comin' through 55 with their two top buttons undone 56 and their hair stickin' out. (Laugh) 57 So he un ... 58 he's got his jacket on this arm 59 and his tie over here, 60 and he undoes his top button 61 and he's got a T-shirt on under it. ... 62 I say, Ray, you gotta take off your T-shirt 63 so your hair will stick out. 64 He says ... that ... is the end of the line.

Transcription conventions:

- . indicates clause final intonation ("more to come").
- . indicates sentence final falling intonation.
- : indicates lengthening of preceding vowel sound.
- ... indicates measurable pause (approximately .5 second).
- each additional . indicates additional .5 second pause.
- ┌ indicates high pitch.
- ˋ indicates primary stress.
- ˘ indicates secondary stress.

[words in brackets spoken by interlocutor]

(parentheses indicate nonverbal utterance by speaker)

Numbers have been inserted for reference to lines of text.

Fernandez story, written:

1 At my agency, 2 there's a man who is Mr. Politeness. 3 He doesn't say "Hi," 4 he says "Good morning" 5 and "Good afternoon." 6 Instead of calling me "Della," 7 he calls me "Mrs. Whittaker." 8 And he dresses as if he worked in a business corporation downtown 9 instead of for the Government at a field office. 10 He is from Chile, South America. 11 He knows at least four languages fluently -- 12 Spanish, French, English, and something else. 13 Whatever language I speak to him in, 14 he answers in that language. 15 I'll say, "Bonjour, Monsieur Fernandez, comment s'a va?" 16 And he'll answer "Il va bon," 17 or whatever the French say. 18 He always says the right thing 19 in the right language. 20 But me, 21 I forget what language I'm supposed to answer in, 22 and I usually answer in some other language. 23 Like if he asks, "Comment s'a va?" 24 I answer, "Va est gut, gracias." 25 I like to tease him, 26 and he likes me to tease him. 27 I don't think that anyone else at my agency teases him. 28 He's over 60, 29 and most of the other physicists and engineers are punks of 35, 30 so they're impatient with him. 31 Also, they don't like to stand around 32 and wait until he translates their English 33 into whatever language he's thinking in, 34 and they have trouble

understanding his accent 35 when he speaks English. 36 So I think they give him short shrift. 37 But I stand around 38 waiting for him to talk back, 39 and I do like to tease him in the hall. 40 One day I was praising him for his spiffy attire, 41 a really neat pin striped suit 42 with a white long-sleeved shirt 43 and dark tie. 44 He did look handsome. 45 I told him so, too, 46 and he smiled and thanked me. 47 He said that he liked to look business-like, 48 that appearance is part of getting along in the world. 49 Just then a younger guy walked past 50 wearing the latest in spiffy attire -- 51 short-sleeved shirt, 52 no tie, 53 two buttons undone, 54 hair sticking out of his chest. 55 I said, "Hey, Ray, businesslike is one thing, 56 but you've got to dress in the latest style." 57 "What's that?" he said. 58 I said, "You've got to take off your jacket." 59 He took it off, 60 right there in the hall. 61 "Now what?" he said. 62 I said, "You've got to take off your tie." 63 He took off his tie 64 and laid it neatly over the jacket on his arm. 65 "Now what should I do?" he said. 66 I couldn't believe my ears! 67 But I'd gone this far 68 and he'd gone with me, 69 so I figured I'd take it all the way. 70 I said, "You have to unbutton your two top buttons 71 and let your chest hair stick out." 72 Ray looked around 73 and saw that same young guy come back from down the hall. 74 He saw the guy's shirt undone at the top two buttons, 75 and he must have seen his hair sticking out from his chest. 76 Right in front of my very eyes 77 Ray reached up to his neck with his free fingers 78 and undid his two top buttons. 79 Then he fluffed the few stray gray hairs sticking out from his collar bone. 80 "How do you like that?" he said. 81 I said, "Ray, you've got your two buttons undone 82 and your hair's sticking out, 83 but you've got a tee shirt on. 84 You can't walk around with your undershirt showing." 85 "Oh," he said, 86 looked at his shirt, 87 and put his jacket back on 88 and his tie back around his neck. 89 "I'll think about that," he said, 90 and we parted laughing. 91 About a week later, 92 Ray came to my office 93 to discuss the title of a report 94 that he had been working on. 95 I had been bending over another report 96 when he came in, 97 and I recognized him only by his voice 98 as he said hello 99 and handed me his suggested title. 100 Still looking onto my desk, 101 I talked with him about wording. 102 When we were both satisfied about the title, 103 I handed it to him. 104 This time I looked at him. 105 He was smiling. 106 And so was I. 107 He had on a short-sleeved shirt 108 unbuttoned at the neck, 109 and he didn't have on any tee shirt.

INSCRUTABILITY REVISITED

Linda Wai Ling Young

University of California, Berkeley

I. INTRODUCTION

Considerable thought has been expended on the understanding and the improvement of contact across different cultures, both within nations as well as between nations. The theoretical apparatus has been drawn from various disciplines. For example, recent literature by anthropologists of the ethnic processes in state societies explain the persistence of ethnicity as an aspect of socio-economic considerations and power relations. Previous work by social psychologists on the problems in cross-cultural interaction attributes the differences to one of values and attitudes.

I should like to address this paper to the philosophers and historians who, for more than three centuries, have grappled with characterizing Chinese ethos, values and perceptual framework. Many of these works seek to define the differences in logical processes between the Asian mind and the Western mind. Moreover, they attempt to delineate the differences in social processes between Asian cultures and Western cultures. Their emphases have been to either rely on historically or religious based explanations, or they search for the nexus between language and culture. Unfortunately, their excursion into the role of language in delineating modes of thinking has been mired in the study of vocabulary and isolated grammatical paradigms. Conversely, their comments on the overarching framework of social values were not linked to linguistic evidence.

This paper hopes to show that some of the Westerner's claims concerning the peculiarities of the Chinese mind and the Chinese preference towards harmonious social relationships can be traced to culturally-specific notions of acceptable discourse strategy. The unit of analysis will be Chinese speakers of English--specifically, Chinese businessmen conducting a budget meeting in English.* This study will be guided by the assumption that these speakers will have transferred some of the mechanisms of their native speech into English.

II. BACKGROUND INFORMATION

When a Westerner listens to a foreigner whose English sounds odd, he often attributes it to grammatical inadequacies or to phonological characteristics, such as accent. When he encounters someone with an unusual discourse style, he may misjudge that person's intention or ability, leading to severe social consequences. On the other hand, there are Chinese users of English who are convinced that an improvement in the communication process with English-speakers resides in a modification of accent and an increase in vocabulary. What both groups fail to realize is that there are substantial differences in basic sentence type as well

as in certain discourse strategies.

Chinese, as well as many other mainland Southeast Asian languages, has utterances that show a topic-comment grammatical relationship, as in the sentence (from Li and Thompson 1976:479):

(1) Huang se de tu-di dafen zui heshi
yellow color rel. soil manure most suitable

clause
marker

"The yellow soil (topic), manure is most suitable."

Y.R. Chao has suggested that fifty percent of the utterances in Chinese are topic-comment types. He has also claimed that the topic-comment utterance is "the favorite sentence type only in deliberate connected discourse" (Chao 1968:83).

The topic-comment grammatical relationship is in sharp contrast with the preferred subject-predicate format of many European languages, English as well. However, the topic-comment structure itself is not unknown in English. It functions least like:

(2) As for the President's men, they're all a bunch of liars.

where a contrastive relationship is presumed. It is more in tune with the following:

(3) You know the blue surfboard, a giant squid ate it.

The Chinese version of the topic-comment utterance would eliminate the "you know" and "the" portion. The sentence would read, then:

(4) blue surfboard, a giant squid ate it.

Li and Thompson (1976) argue that the topic-comment structure is a basic sentence type and point out some of the differences between subject-prominent and topic-prominent languages: the topic is definite, selectionally independent of the verb, sets the framework for the predication and occurs in sentence-initial position. Other writings on topic-comment in Chinese have acknowledged that the topic bears a loose relationship with its comment. Chafe (1976) suggests that the topic sets the spatial, temporal or personal framework for the following assertion. Chao (1968) has stated that the topic carries the old information whereas the new or significant information is found in the comment.

To put it all succinctly then, the Chinese topic-comment utterance eliminates the necessity of the lexicalized "you know" and "the" parts of a sentence like (3), since it is understood from the context, and their appearance would consequently be redundant.

In conjunction with this discussion on topic-comment sentence organization, Chinese also has subordinate clauses that set the

evaluative framework for the main clause. The appearance of these subordinate clauses is in the order prescribed for the topic of the topic-comment utterance. In other words, they must precede the main clause (Chao 1968). Both the subordinate and the main clauses have pairs of specific lexical markers that occur in clause-initial position. The markers can be optionally dropped by either clause.

These subordinate clauses can be divided into three types:

the causal

(because).....(therefore)
(since) (so)

the conditional

if.....then.....

the concessive

although.....(yet).....
(but)

Guided by the insights of these scholars, I should like to expand their notion of topic and comment. I will extend their analyses of the functions of the topic-comment utterance to reflect beyond the sentence boundary. I will suggest that in such speech acts as explaining, justifying, and persuading, the organization of the discourse mirrors the order presented in the topic-comment utterance. The relationship of the main point to the rest of the discourse is in the order of the semantic relationship of topic to comment.

III. ANALYSIS

A tape had been collected of Chinese businessmen in a role play conducting a budget meeting in English. There were five participants, one of whom chaired the meeting. He began the meeting by asking the participants, who were members of various departments, what should be done with an excess sum of 180,000 pounds in the budget. Several of the participants, for various reasons, requested a portion of the fund.

There is a remarkable coincidence in the presentation of requests. Like the topic of a topic-comment utterance, the reasons for the request appear initially, represent old information and establish the situational framework for the request. In more prosaic terms, the listener is given a build-up before the punch-line is delivered. The following example comes from the tape:

Theta: One thing I would like to ask. BECAUSE MOST OF OUR RAW MATERIALS ARE COMING FROM JAPAN AND () THIS YEAR IS GOING UP AND UP AND UH IT'S NOT REALLY I THINK AN INCREASE IN PRICE BUT UH WE LOSE A LOT IN EXCHANGE RATE AND SECONDLY I UNDERSTAND WE'VE SPENT A LOT OF MONEY IN T.V. AD LAST YEAR, so in that case I would like to suggest here: chop half of the budget in t.v.

ads and spend a little money on Mad magazine.

Note that the justifications or reasons for the request appear before the request. The subordinate marker "because" initiates the listing of reasons while the conjunction "so" signifies the transition from the reasons to the request. Between the two markers are several independent clauses, connected by the conjunction "and", which itemize the reasons. Thus, the example shows a series of conjoined sentences which not only repeat old or assumed information but also provides the hypothetical context with which to evaluate the significant information to follow. The same structure is revealed in the next two examples. Note that the topic-comment structure can be juxtaposed to another topic-comment like structure:

(5)Chairman:...I would like to have your opinion on how we should utilize the extra amount of one hundred eighty thousand pounds to improve....(Beta's answer follows another presentation)

Beta: AS YOU KNOW, I HAVE SPENT FIVE HUNDRED AND SEVENTY THOUSAND POUNDS LAST YEAR TO ON THE MACHINERY AND COMPONENTS AND AH IF AH IF MR. AH LINCOLN WOULD LIKE TO INCREASE THE AH PRODUCTION IN AH THROUGH THE COMING YEAR, I THINK WE HAVE TO MAKE OUR BUDGET TEN PERCENT ON TOP OF THE AMOUNT FIVE HUNDRED AND FIVE HUNDRED AND SEVENTY THOUSAND POUNDS BECAUSE THERE WILL BE A TEN PERCENT ON UH INCREASE IN PRICE ON AVERAGE. AND, uh, in other words, I need another sixty thousand pounds to buy the same material and quality.

AND AS YOU KNOW WHENEVER THERE'S A SHORTAGE OF COMPONENTS ON THE() AMOUNT OF TIME AND AH ALTHOUGH WE HAVE ARRANGED DELIVERY OF NORMAL SUPPLIES FOR FOR FOR AT LEAST SIX MONTHS BUT WE STILL NEED AH AN EXTRA MONEY TO BUY AH THE REPLACEMENT WHICH COST US FIVE HUNDRED MORE. So in other words, I need at least six hundred thousand sorry six hundred thousand pounds for an extra, uh, extra money for the for the new ah budget for for our component.

(6)Chairman:Uh, Mr. Lincoln, do you think the new machinery that you just mentioned that will cost us sixty thousand pounds will cater for the the () the new model, that is, the portable t.v. set that was just mentioned by Mr. Jeffrey?

Alpha: I think this new machine will certainly reduce the production cost. And uh AS WE HAVE AN EXTRA BUDGET OF ABOUT ONE HUNDRED EIGHTY THOUSAND POUNDS STERLING AND WE JUST SPENT ABOUT ONE THIRD OF THE TOTAL AMOUNT BUYING THIS NEW MACHINE AND AS THE SALES OF IT INCREASING, TO COVER THIS INCREASING TREND, WE HAVE TO REDUCE OUR COST OF PRODUCTION AND ALSO TO INCREASING THE PRODUCTION OF HOURS, therefore I think it is very worthwhile at minimal to invest in this new machine by buying a sixty thousand pounds sterling new machine.

I have also one thing to say. BECAUSE THE PERSONNEL MANAGER, HE MENTIONED A FEW DAYS AGO THAT UH THERE ARE SOME DIFFICULTIES IN THE EQUIPPING MORE NEW WORKERS AND ASK THE EXISTING WORKERS TO WORK OVERTIME BY PAYING THEM SOME EXTRA MONEY, AND therefore I think that we have no alternative but to buy a new machine or otherwise incur a lot of cost by using the existing one.

What is striking about the data is the similarity in the majority of the presentations, the smoothness of the interactions and the evident ease of comprehension among the participants. It demonstrates that the topic-comment effect can not be limited to an idiolect and reduces the possibility that these patterns may simply be chance occurrences.

Nonetheless, native English speakers experienced many difficulties with the discourse. The main point was initially lost on them because it laid buried in a mass of information. Adding to their confusion was a lack of understanding of how the important information was highlighted. In fact, their appreciation of the significance of any one feature proved elusive.

Moreover, sentence connectives, which play an essential role in guiding the listener's journey through the discourse, had been invested with meanings which are somewhat different from their usual associations in English. For example, the English-speakers were not fully cognizant of the fact that, in the Chinese discourse, single-word items such as "because", "as", and "so" had replaced whole-clause connectives commonly used in English, such as "in view of the fact that", "to begin with", or "in conclusion."

The English-speakers' attempts to sift through the information were compounded by another problem. The opening lines of the Chinese discourse did not provide a thesis or preview statement which would have oriented the listener to the overall direction of the discourse; the presence of a clear and concise statement of what was to be discussed would have made the discourse more precise, more dramatic and more eloquent. As it was, the clarity and the forcefulness of the main points were absent. Worst of all, the lack of precision and the failure to directly address the point led to suspicions that the Chinese speakers were beating around the bush.

Thus, the implication would seem to be that the presumed shortcomings mentioned above were influenced by the lack of the English-speakers' familiarity with, to use the Gumperz's (1976) term, the contextualization cues of the topic-comment format. It becomes easy to see how a basic unawareness of alternative linguistic structures and discourse conventions can shade into doubts concerning the reasoning abilities of the Chinese mind.

A closer examination of the linguistic data provoked another interpretation that might shed light on the view that Chinese tend to minimize confrontation in social relationships. As mentioned before, the native English-speakers called attention to the indirectness of the discourse style. When asked to appraise the effectiveness of the presentations, they commented that the Chinese arguments lacked sufficient aggressive and persuasive power. In line with these sentiments were remarks concerning the construction of the discourse. The absence of a preview statement and the mere item-by-item listing of justifications, blocked the development of a positive tone in the Chinese arguments. As a matter of fact, the listeners sensed a reluctance on the part of the Chinese to have to make a request, that they had to inevitably slide into it as a result of a convergence of forces. Likewise, it was pointed out that instead of stating their proposition somewhere in the beginning and then proceeding to build their case, the Chinese first established a shared context with which to judge their requests. Only after carefully prefacing the request with an avalanche of relevant details, as if to nullify any opposition, did they present the requests.

In view of the fact that there are correspondences between linguistic behavior and social evaluation (Giles and Powesland 1975), the Chinese examples led some Westerners to the interpretation that the Chinese were employing a deference tactic so as to not press their claim too forcefully upon the other person. The framework provided by Brown and Levinson (1978) would lead one to conclude, then, that the user of such a discourse strategy was minimizing his particular imposition by operating on the basis of "negative politeness".

The aforementioned interpretation is not incompatible with Western writings on Chinese ethos. As a matter of fact, it obliquely lends support to Western impressions that the Chinese prize harmony in social relationships. Whether it is a genuine demonstration of deference or simply the consequence of a particular discourse style needs further investigation.

While such an examination lies beyond the scope of this paper, curiosity led me to make a few inquiries of several native Chinese-speakers. I asked each of them to perform a role play similar to the budget meeting of the tape. The result was that they all began by providing the rationale behind their requests. The overall consensus was that one must always state his request or his main point last, after first articulating the reasons for it.

They provided some illuminating comments when pressed further

as to the reasons for this and as to the kinds of consequences that can develop when the opening line of the discourse indicated their position. One person flatly stated that he would not listen beyond the first sentence as he already would have heard what was wanted. Two other individuals claimed that it would be rude. It would sound as though the person was demanding something. Moreover, it made the person seem immodest, pushy, and inconsiderate for wanting things. Another person elaborated on the preceding point: in giving the impression that you were demanding something, you would lose face for acting aggressively. He added that the use of such a discourse strategy might suggest that you are not considering the other members of the group. Thus you'd be hurting people by claiming something for yourself. And, finally, he said that if you started out with a statement that strongly hinted at a request for something, despite your eventual elaboration of the rationale behind it, and, furthermore, if the chairman didn't grant it, you'd lose the respect of the others. One other person stated that it would be a foolhardy approach to hint about or mention your desires at the outset, because you're not aware of what the chairman is prepared to give you and what the others are planning to ask. In such a situation, it's considered a smart strategy if you carefully delineate the justifications that will naturally lead to your request.

Generalizing from their responses, then, there is an attempt to refrain from making prestige-damaging statements when there might be an open recognition by others that the request may not be granted. Also, there is an effort to resist any appearance of presumptuousness and overeagerness. In addition, in clarifying the circumstances behind the individual's request, such a discourse strategy avoided disagreements as to the justness of the request and the rigidity of the individual's stance. More fundamentally, their comments and the data suggest that there are significantly divergent assumptions about the appropriate linguistic behavior for a given communicative task. The different ways of structuring information receive different valuation in English-speaking and Chinese-speaking cultures. Viewed callously, the Chinese discourse appears imprecise, unwieldy and downright inept. Cast more charitably, it is seen to emphasize cooperation, prudence, and clearheaded caution.

IV. FINAL REMARKS

Although people have been able to coexist in inter-cultural contact, there remains an undercurrent of tension. This tension is not just a product of resource competition and power relations; it can stem from the failures in the communicative process. The fact that there are different socio-cultural assumptions underlying message construction on the discourse level is not easily recognized. Speakers from different cultural or subcultural backgrounds, in attempting to formulate a sensible interpretation when faced by an unfamiliar or unexpected discourse style, fall back on their knowledge of the evaluative frameworks

conventionalized by their own culture. Unfortunately, in cross-cultural interactions, what is generally explained as problems in grammaticality at the sentence level oftentimes becomes interpreted as behavioral differences of motivation, attitude and personality on the level of discourse. It is no exaggeration to say that continuous misperception, misinterpretation and misunderstanding in face-to-face linguistic encounters can harden into stereotypes that are reinforced cumulatively over time.

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Where Dead Language Lives:
The Case of the Balinese Shadow Theater

Mary S. Zurbuchen
University of Michigan

This paper considers certain aspects of verbal art on the Indonesian island of Bali.¹ In particular I will be looking at the shadow theater, an extremely ancient dramatic form using flat, carved cowhide puppets whose shadows are silhouetted on a lamplit screen. The earliest written reference to wayang performance in Bali is dated AD 896,² though the origins of shadow theater in rituals of ancestor worship may go back much further. Today wayang enjoys undiminished popularity, with a performance repertoire based primarily on two (originally Indian) epics, the Mahābhārata and the Rāmāyaṇa.

The linguistic puzzle presented by this theater is a configuration of the two different languages used by the puppet master, the dalang, who speaks the entire play (and also manipulates the puppets and directs the musical accompaniment). One, Balinese, is the modern language of the island; the other, called Old Javanese or Kawi, is a millenium-old literary language with a large borrowed Sanskrit lexicon.³ Presumably, Kawi represents a variant of a language spoken in Java in the early centuries of our era. Like the Latin of medieval Europe which was increasingly supplanted by vernaculars after the 6th century, Kawi has been preserved in written form as the modern languages of Java and Bali developed alongside it. And like Latin, Kawi has often been assumed to be a "learned" or "dead" language, that is, one that has little role in modern spoken expression.

It is, however, impossible to imagine the Balinese asserting Kawi to be a dead language. For them, Kawi is the vehicle of a complex cultural heritage which includes elements of the Hindu and Buddhist civilizations of India and Java along with indigenous patterns. While it certainly carries associations with things remote and archaic, Kawi is nevertheless a vital source of contemporary meaning, and one that shows no signs of disappearing from among the speech varieties widely and regularly heard on the island.

Each Balinese wayang performance, for example, is a combination of various styles of Kawi as well as Balinese. In trying to understand just how the two languages are combined, and the norms governing the use of each, we learn how Kawi "comes alive" in the experience of Balinese audiences. We are also brought face to face with the rules and constraints making up the discourse structure of the play itself.

Looking first at Kawi, we see that each of the major uses of this language in wayang establishes a distinct rhetorical context within the drama. These types of Kawi in wayang can be summarized as follows:

- (1) Speech magic
- (2) Dialogue
- (3) Narration
- (4) Embellishment

Beginning with the first of these categories, we find the dalang using Kawi to invoke and manipulate divine and demonic forces to obtain both protection for himself and inspirational enhancement for the performance. To do this he utters, for the most part silently, a series of fixed chant-like formulas loosely termed mantra. As used by the different ritual practitioners of Bali, mantra are examples of "speech magic": they are an arrangement of words and sounds the force of whose uttering is thought to alter the state of things in the world.

Example 1. Om, idep aku sang Kamajaya wahu prapta,
ngéka kasaktin, ya nama swaha.
(sacred syllable--imagine--I--personal article
--name of deity--just now--arrive--unite--
power--Sanskrit incantation)

"Om, I imagine that the supreme god of love has just arrived, concentrating power, let there be homage."⁴

In this mantra (uttered when the dalang arrives at the site of the performance) some typical "speech magic" features are notable, such as the use of a sacred syllable in the beginning, and closure with a Sanskrit invocation. Whether he is repelling malevolent forces or compelling audience attention, the stated intent of many mantras is clearly within the realm of verbal art:

Example 2. ...Teka welas asih atiné wong kabéh angrungu
sabda swaranku.
(come--affection--love--heart--person--all--
listen--voice-my)

"May love and affection come to the hearts of everyone listening to the sound of my voice."

The verbal and vocal power of the dalang is repeatedly emphasized during the pre-performance mantra sequence. As he sets up his puppets before starting the play, the dalang utters a mantra whose aim is to condense all cosmic force into one essence, the "Pure All-Powerful Mind" (manah mahasakti mahening). From this entity then emerges the "Divine Kawi" (sang hyang kawi), an elevated and deified personification of language that can inspire and direct the course of the play. In this mantra,

Kawi becomes not only the name for a language, but also a state of enhanced aesthetic awareness such that

Example 3. ...Kawi kawiklanan sakawuwus wuwus tingkaha
ngaranya.

(kawi--knowledge--all-speaking--speech--
act--name-its)

"Kawi is the skill of speaking all that can be expressed by words."

In protecting, magically endowing and inspiring the performer, then, the dalang's mantras aim at specifically verbal artistry. They are directed toward unseen forces and use unheard means---the ancient, formally invariable sounds of speech magic.

The second way the dalang uses Kawi is in the composition of dramatic dialogue for each of the puppet characters. Employing a wide range of phonetic technique, the performer must create voices appropriate to each, from roaring demon to stately sage to demure princess. Using no written script for his plays, and under contextual constraints that prohibit verbatim memorization,⁵ the dalang is in effect creating utterances in Old Javanese---a surprising productive use of a supposed "learned" language.⁶

The factors which contribute to the dalang's ability to compose Kawi dialogue involve long exposure to the language of other dalang, as well as the study of written versions of the epics in both Old Javanese prose (parwa) and poetic (kakawin) forms. Although not all dalang engage in literary study to the same degree, certain features of Bali's manuscript tradition have important influences on the Kawi dialogue of wayang.

When the Balinese wish to read and enjoy a work of literary art, they do so by means of a group process called mabasan or pepaosan. Simply stated, group members take turns reading aloud a line or phrase of written text, and then translate or paraphrase it in colloquial Balinese, at which point questions or discussion may occur. The "reading" component of this process is more properly termed "singing," since each metrical type (and most Old Javanese literature is poetic) has a specific vocal musical realization. Even "prose" works are delivered in a distinctive style of tonal contours and rhythmic patterns. Since this oral/aural sharing of literature is by no means an uncommon occurrence, many Balinese instinctively associate certain acoustic patterns with the universe⁷ of discourse of the Kawi epics and related stories.

The dalang's Kawi **dialogue** seems to echo the reading style used for the parwa, the Old Javanese prose retellings of the Sanskrit Mahābhārata. The diction and

syntax of the dialogue are close to the written Kawi, while the phrase-by-phrase intonation of the dialogue, punctuated by sharp raps of a foot-held hammer (compala) parallels the sounding of parwa lines. Many dalang refer to the dialogue vocal technique as palawakya, a term also used among Balinese literati to designate the vocal style used to perform parwa and other non-metric texts.⁸

Example 4. [* = rapping of foot-hammer)

Lakia* pwa ta kita nanak* tan lén kaginucara dé ibunta*
 ri tatkala* angértiakena kunang jagat lamakané sida*
 amangguhakena kertaraharja*.
 (exclamation* emphatic--emphatic--you--child* not--
 different--spoken of--by-- mother-your* at--time*
 strive/work-- connective--world--so that--able*
 achieve/establish--prosperity/well-being*)
 "Ah, you children, it is none other your mother speaks of
 than a time of great striving in the world in order to
 establish peace and happiness."

Another point to be made is that the dalang's Kawi dialogue is extemporized under conditions of oral performance; he works with familiar patterns of substitutable elements in a manner reminiscent of the oral poets of other, less literate, societies. Example 4. shows a type of speech with generalized content, composed of a series of "stock" phrases, such as is typically heard in the opening court scene of a play before any plot-specific details have been introduced. In general, Kawi dialogue is valued for its formal pace and archaic tone; rather than emulating any everyday "natural" speech, it is supposed to sound remote, elevated and ancient, what the Balinese call wayah, 'old'. Yet, in contrast to the mantra-style of Kawi, the dialogue is formulaic rather than wholly a formula---it is composed to fit its context rather than exactly repeated.

The third use of Kawi is in narration, the dalang's descriptive commentary that links the various sections of the play. Typically, major temporal and locational episodes which are also shifts between characters are marked by the appearance on the screen of the kayon, the "world-tree" puppet which also indicates the beginning and end of the drama. When the kayon appears, the dalang narrates, using a distinctive vocal style, a passage which directly or only generally refers to the dramatic moment at hand.

Example 5. Ari wijil ata ri mangkat para natha kabéh.
 (at--come forth--emphatic--at--depart--
 plural marker--king--all)

"Upon the departure of all the nobles..."

Such narrative interludes may be succinct or elaborated, depending on the dalang's inclination, the necessity of drawing out the narration while characters are shown to be traveling, or other contextual factors.

The dalang also uses narration to heighten the mood within a scene, or to emphasize the shift from one speaker to another, as in the following:

Example 6. Ari wawu karenga dé nirang natha Késawa.
(at--just now--be heard--by--he/she--
king--Késawa)

"And just as this was heard by King Kresna..."

As the two examples above suggest, the Kawi narration is often fragmentary and peripheral in terms of its content; it is important because it allows the dalang to continue his vocal activity while he is busy putting down or taking up puppets, or when he needs to collect his thoughts before proceeding with the performance.

In rhetorical terms, the "narrator" of wayang is an anonymous figure commenting from outside the immediate dramatic action, and also quite apart from the point of view of the audience. This Kawi-speaking figure is considered to be the dalang's dramatic persona, under the influence and inspiration of the "Divine Kawi", and symbolized by the particularly strong, guttural voice used in narration, as well as by the kayon figure.

The fourth type of Kawi used in wayang, which might be termed "embellishments," is composed of "quotations" from literary works, from a few lines to several verses in length. These quotations fall into two groupings when defined according to musical criteria: one, the bebaturan, consists of poetry sung either according to its usual metric scheme or using a melody traditional to the dalang, independent of particular instrumental accompaniment;⁹ the other, called tetandakan or seséndon ('songs') comprises verses sung in conjunction with special instrumental melodies. While the bebaturan poetry may usually be found in extant Old Javanese texts, particularly the kakawin, tetandakan often have more obscure sources, including manuscripts possessed only by dalang themselves.

Both tetandakan and bebaturan are considered necessary supplements to the other voices of wayang. Bebaturan occur at the beginning or end of scenes, as the preface to lengthy speeches, at serious moments of philosophical import, as illustrations of arguments, as weapons in verbal debate, or just as a general enhancement of the play's epic atmosphere. Tetandakan

singing, meanwhile, is grounded in mood-setting instrumental interludes, evoking sadness, nostalgia, romance, supernatural presence, and the entrance of favorite comic characters.

Example 7. Kunang prawara Pāṇḍawa anggellar i bajra
 tīkṣṇa alungid, Dhānanjaya lawan Wrekodara
 tumūt Śikāṇḍi harep.
 (connective--foremost--Pandawa--arrayed--
 in--thunderbolt--sharp--sharp--Arjuna--
 with--Bima--following--Sikandi--in front/
 facing)
 "And thus the noble Pandawas were arrayed
 in the Sharp Thunderbolt formation;
 Arjuna and Bima, accompanied by Sikandi,
 were in the fore."¹⁰

There is a general constraint which operates on bebaturan use to the effect that the content of the literary fragment chosen be relevant to the dramatic moment being portrayed. Naturally the extent to which dalang adhere to this aesthetic ideal varies greatly. Some performers have a limited repertoire of bebaturan which are rather loosely applied to a range of dramatic situations; others prefer to regularly dip into the classical texts looking for specific excerpts which are then memorized. Example 7 illustrates a typical bebaturan, sung at the beginning of a verbal confrontation between some of the Pandawa characters and their arch-rivals the Korawa clan. This verse fragment from the kakawin Bhāratayuddha is appropriate both because it mentions the characters actually on the screen, and also because it echoes the antagonism, by means of its battlefield imagery, which always underlies stories based on the Mahābhārata.¹¹

The dalang's quotations are considered essential to the aesthetic completeness of wayang performance. They form the crucial link between the play and its literary and inspirational source, the revered ancient texts themselves. They are the voice of textual authority, of the words of the actual past brought to life with each performance of the epics they signify. The Kawi embellishments contribute to the play an element of permanent material substance, deriving from their source in manuscript form, which contrasts with the more fleeting, unrecoverable speech of the shadow figures.

Thus far we have considered a number of ways in which the dalang uses Kawi, each constituting a different sort of "voice" within the wayang world. The four types of Kawi expression -- mantras, dialogue,

narration and embellishment-- contrast in terms of their form, function, rhetorical structure and vocal sound quality. There remains one final voice to be considered, which is also integral to each performance, and which "speaks" in modern Balinese.

While the Kawi voices can be seen to emanate from frames of reference not shared by the spectators-- the worlds of the gods, demons, epic heroes and ancient writings-- the Balinese voice of wayang speaks entirely within the "life-world"¹² of the audience. The use of Balinese constitutes an entirely separate realm from that of Kawi both linguistically and rhetorically, and is limited to four characters only.¹³ These are court servants, in Balinese parekan, who combine the functions of the Greek chorus and Shakespearean fool in their roles as clownish yet wise attendants.

The crucial discourse-related function of the parekan (from Balinese parek, 'near', i.e. 'those nearer the king') is the translation into Balinese of each speech of the Kawi dialogue as it occurs. They must accurately convey the utterances of royal masters who, aloof and silent, wait for their words to be paraphrased. Like the heroes themselves, the Kawi dialogue is distant from the here and now, and the parekan serve to bridge the gulf between the cultural/linguistic past and present. This function requires one or another of the parekan always to be present on screen,¹⁴ since the Kawi-speaking nobility cannot address each other without intermediaries.¹⁵

An important implication here is that if the Kawi dialogue were not paraphrased by the parekan, much of the play would be unintelligible to its audience. While many Balinese do understand some of the standard Kawi phrases used in the theater, it is nonetheless true that the details of the sometimes intricate lampahan ('plot') and its deeper philosophical or ethical meanings emerge through the Balinese-language component. Perhaps even more significantly, the Kawi-speech-with-Balinese-translation structure of each wayang utterance precisely parallels the mabasan reading-group process where each line of the literary text is paraphrased in contemporary language. Clearly, this dual-language pattern is a characteristic and highly valued strategy for bringing the values of the past to bear on the present, and allowing the present to "recontextualize" the past,¹⁶ in Balinese theater.

When the meanings of the past are transformed into the language of the present, many things happen. The duty of translation is for the parekan also an opportunity for audacious, pungent, moralizing or critical commentary on the world and his noble masters'

exploits. Both during and at the end of episodes, the parekan discuss among themselves the content and implications of each scene as the plot unfolds. They thus carry out the function of recapitulation of meaning on two textual levels -- that of the utterance, the basic unit of discourse, and that of plot structure, the coherence of sequences of utterances.

The fact that the parekan share the universe of discourse of the Balinese audience is formally manifest in their language, which makes full use of Balinese lexical resources for the expression of intimacy versus social distance, of politeness, honorifics and deprecation. This deictically-based system, which obligatorily marks the relations between speech participants (speaker, hearer and other), has variously been termed "language levels," "speech registers," or "high" versus "low" language.¹⁷ In the context of wayang, an utterance in Kawi, unmarked for this sort of pragmatic intent, when translated by the parekan explicitly outlines the dimensions of Balinese social space.

Example 8. [underlined words = honorifics, "high" speech]

Déwi Kunti (in Kawi): Kadiang apa rinasa dénta nanak?
(how--what--be felt--by-you--child)
"How do you feel about it, children?"

Twalén (in Balinese): Kénkén karasa baan cening; kénten ida betari ratu.
(how--felt/understood--by--child; thus--he/she--goddess--queen)
"'How d'ya feel, kids?'---that's what her divine majesty said."

In the above example the first part of the parekan Twalén's utterance is a direct quote, and all the words are in intimate, everyday, "low" Balinese, which is appropriate for a mother (Déwi Kunti) speaking with her children. In his aside in indirect speech, however, the parekan speaks respectfully, using honorifics, which befits his own status as a subject referring to a royal superior.

The deictic, person-related system of Balinese demands a great many selections from lexical sets of semantically equivalent but pragmatically-opposed terms. When Kawi dialogue is paraphrased in Balinese, then, this "speech register" information works to place the characters of the epic world, and the shifting relations between them, squarely within the bounds of Balinese social truth.

In considering the way languages are used in wayang, we can come to understand the (initially strange) fact that large audiences should be attracted to plays whose

dialogue is partially unintelligible. Yet the verbal patterning of Kawi and Balinese itself holds the key to the persistence of Kawi as a mode of expression.

In both dramatic and literary verbal art, the Balinese maintain linguistic multiplicity by interweaving the languages of the past and present. The important elements of this process are sounding (oral performance of the words of the cultural past) and interpretation (spontaneous recapitulation of meaning using the language of the present). Far from being a conservative "learned language" locked away in musty manuscripts, Old Javanese in the wayang tradition of Bali is a living channel of communication. While its forms continue to be preserved in manuscript shape, its meanings are a product of, and indeed only available through, the processes of sounding and interpretation.

While "oral" and "literate" expression are generally opposed as categories of verbal art, our perception of these distinctions must shift when looking at Balinese wayang. This is shown to us by the dalang's masterful fusion of oral composition techniques and literate consciousness. This "noetic"¹⁸ dimension of discourse, that is, the ways in which culturally-valued information is shaped, stored, recalled and communicated through time, here becomes a focal point for the cross-cultural contextualization of verbal art. The paradigm of "spoken" versus "written" language as divergent forms of linguistic behavior is also modified when we consider how a "literary" code such as Kawi, in the different rhetorical frames of wayang, is transformed into many voices. In reaching back through the past for the discourse of the present, and by blurring the boundaries of oral and literary verbal art in the service of "all that can be expressed by words," the dalang continually speaks the vitality of speaking in Kawi.

Notes

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²Goris (1954) remains the major, though incomplete, source for the texts of ancient Balinese inscriptions.

³Kawi includes a large body of charters and inscriptions, prose and poetry, tales and treatises, comprising a substantial attestation of perhaps the oldest forms of an Austronesian language.

⁴From the Dharma Pawayangan, a manual on the mystico-religious aspects of wayang; Hooykaas (1973) and Sugriwa (1963) give similar examples.

⁵Such constraints include the fitting of each performance to its local setting, the principle that one should not repeat a story for the same audience unless by special request, and the notion that the "Divine Kawi" in part selects the play and directs the course of its presentation.

⁶This is in contrast to Javanese wayang, in which the dalang speaks using various styles of modern Javanese, and where the use of Old Javanese is mainly limited to the singing of poetic fragments (suluk) which the dalang may or may not understand.

⁷The musical aspects of literary communication in Bali are extensively treated in Wallis (1979).

⁸The term is perhaps from Sanskrit phalavākya, 'a promise of reward', in which case the Balinese meaning is a reinterpretation of the two parts of the compound (phala 'fruit, result, reward' and vākya 'speech, saying, words'). Another possibility for the Sanskrit etymology might be palavākya, where pala has the meaning of 'a measure of time', thus, 'measured voice'.

⁹Bebaturan comes from batur, a term often translated as 'sacred, pure', and associated with offerings, temples, places of meditation, the chanting of prayers, and so forth.

¹⁰From the kakawin Bhāratayuddha X:11 (see Wirjosuparto 1963:75); the excerpt is one-half of a four-line verse (pada) in the meter Prthwīṭala.

¹¹The allusive and symbolic connections between bebaturan and the play are a source of lively commentary from experienced literati in the audience, who may gauge the dalang's knowledge of Kawi by his use of literary quotations.

¹²That is, in terms of the familiar experiences and concerns of daily life known to everyone; see Ong (1977:106-107) for a discussion of how oral traditions depend on the human life-world for thematic coherence.

¹³In some plays there may be additional characters

who speak in Balinese, but these are also members of the "court attendant" class. Less frequently a dalang may use Balinese for a demon, or for the outspoken hero Bima, but this usage is generally not favored.

¹⁴Again a major contrast with the Javanese wayang, where the clown-servant characters do not always accompany their royal masters; instead, each type of character "speaks" for him/herself alone.

¹⁵Actually, in certain fast-moving scenes (i.e., battles) characters hurl threats and insults in Kawi without benefit of translation by the parekan, and audiences clearly follow the Kawi speech.

¹⁶For a discussion of the text-building functions of the languages of the past and present in Javanese wayang, see Becker (1979).

¹⁷A specific and detailed discussion of this aspect of Balinese would take us too far afield in this paper, but some analysis is forthcoming in my dissertation.

¹⁸Walter Ong (1977) points out the importance of of an understanding of noetics in such diverse settings as medieval European scholasticism and the drum-languages of African cultures.

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Lexical Extension and Grammatical Transformations
 Judith Aissen and Jorge Hankamer
 Yale University Harvard University

0. In earlier work on the syntax of causative constructions (see, for example, the papers in Shibatani (1976)) it was found that it is necessary to distinguish between productive rules of causative formation, which establish regular morphological, syntactic, and semantic relations between verbs and their associated causatives, and "accidental" causative relations between lexical items such as kill and die in English. Given the general framework of theoretical assumptions dominant in the early seventies, it appeared that the appropriate way to capture the distinction was to regard productive causative constructions as derived from syntactically complex source by a transformation, while the relations between irregular pairs, if stated systematically at all, would involve "lexical" rules of a nature and function never very clearly specified or understood.

More recent work on the nature of lexical relations (see especially Jackendoff (1975), Wasow (1977), and Bresnan (1977)) has led to the development of more explicit devices for stating regular relations between lexical items. While those particular authors regard such lexical rules as "redundancy rules", i.e. rules which state generalizations about items independently entered in the lexicon, it is clear that a framework admitting such rules allows for a non-transformational account not only of irregular and non-productive lexical relations, but of those traditionally called "productive" as well.

In this paper we develop an analysis of the Turkish causative construction according to which causative verbs are related lexically to their uncausative counterparts, and no transformational rule is involved in the generation of causative sentences; in particular, causative sentences are not regarded as having complex deep structures as proposed, for example, in Aissen (1974). This analysis, together with certain natural assumptions regarding the organization of the grammar and the interaction of its rule components, will be shown to account for a class of rule interaction phenomena which appeared paradoxical under the transformational analysis of causative constructions.

1. The Transformational Theory

According to the transformational analysis, the causative sentence (1) would have a deep syntactic structure like (2), which contains a clause corresponding to the simple sentence (3) embedded as object complement to the predicate CAUSE; a transformation, called various

ly Verb Raising, Predicate Raising, or Clause Union, reduces the two-clause structure to a simplex and amalgamates the embedded verb with the matrix verb; in Turkish the latter appears as a suffix attached to the former.

- (1) Kadın kasab-a et-i kes-tir-di.
woman butcher-DAT meat-ACC cut-CAUSE-PAST
'The woman had the butcher cut the meat.'
- (2) Kadın [kasap et-i kes-] CAUSE
- (3) Kasap et-i kes-ti.
'The butcher cut the meat.'

The nominal complements of the embedded clause become complements of the derived simplex clause and assume derived grammatical relations according to principles which are by now well known: the subject ("1") of an intransitive clause becomes the direct object ("2") of the associated causative; the subject of a transitive clause becomes an indirect object ("3"), and the direct object of a transitive clause remains a direct object.

Aissen (1975, 1974) observed that a transformational analysis of this kind must incorporate some principle of rule interaction to account for the fact that certain "cyclic" transformations cannot apply on the embedded clause before Clause Union. For example, the application of Passive in the complement in (2) would yield

- (4) Kadın [et kasap tarafından kes-il-] CAUSE
woman meat butcher by cut-PASS CAUSE

and Clause Union should derive (5):

- (5) *Kadın et-i kasap tarafından kes-il-dir-di.
woman meat-ACC butcher by cut-PASS-CAUSE-PAST
'The woman had the meat be cut by the butcher.'

But (5) is ungrammatical.

Facts parallel to these were noted in Sonrai by Shopen and Konaré (1970). They argued that the nonexistence of causatives to passive stems would follow from the assumption that causative stems are listed in the lexicon, while passive stems are derived transformationally. If Passive is a transformation as ordinarily conceived, and operates on a clause in syntactic structure to rearrange grammatical relations and as a side effect leaves a morphological mark on the verb, and if causative sentences at no stage have an embedded syntactic clause for Passive to apply to, then causatives to passive stems can never arise. Thus the inapplicability of Passive in causative constructions, while problematic for a transformational theory of causative formation, would be an automatic consequence of a lexical analysis of causatives, as long as the Passive rule can be argued to be a transformation, and not a lexical rule itself.

There are some problems to be solved before such an account can be made to work for Turkish, however. There are some rules, classically regarded as cyclic transformations, which do appear to apply in causatives as if causative sentences had a complex structure. These are the rules of Reflexivization and Equi; briefly, these rules appear to apply in causative sentences in such a way as to indicate that the superficial 3 in a causative to a transitive and the superficial 2 in a causative to an intransitive are subjects at some level of representation. This phenomenon will be discussed in section 4, where we will suggest a way to reconcile these facts with a lexical analysis of causatives.

2. A Lexical Account of Causative Formation

We propose here that causative formation in Turkish does not involve a syntactic transformation uniting two clauses, but rather a generative rule of word formation which derives the lexical entries for causative verbs. We provide below an explicit statement of this rule.

Since this rule is to take lexical entries (specifically, lexical entries of verbs) as input and give derived lexical entries as output, we must first state our assumptions regarding the form of lexical entries. We assume that the lexical entry for a verb includes (a) a phonological representation (kes in (6)); (b) a semantic representation of some sort, which we will crudely abbreviate as a gloss; (c) the grammatical category symbol: V; and (d) an indication of the argument structure associated with the verb in deep structure, given in terms of grammatical relations (enclosed in angle brackets).

(6) [$\langle (1), 2 \rangle$ V] kes
CUT

(7) [$\langle (1) \rangle$ V] koş
RUN

(8) [$\langle (1), \text{DAT} \rangle$ V] bin
MOUNT

In (6) we have indicated that the verb kes is transitive by including an obligatory 2 among its arguments. Example (7) illustrates an entry for an intransitive verb, and (8) an entry for an oblique transitive verb which requires a dative complement. Entries such as these comprise what we call the kernel lexicon: the set of basic, independent lexical entries of the language.²

We propose that this kernel lexicon is extended by a set of generative lexical rules which provide derived lexical entries; among these lexical extension rules is the causative formation rule, which we formalize as follows:

(9) Causative Formation

$$\begin{array}{ll}
 [\langle (\text{Erg}), \text{Abs}, (\text{Obl}_i) \rangle v] x & (\alpha) \\
 \quad \quad \quad \downarrow \quad \quad \downarrow \quad \quad \downarrow & \quad \quad \quad \downarrow \\
 [\langle (1), (3), 2, (\text{Obl}_i) \rangle v] x+T & (\beta) \\
 & \quad \quad \quad \downarrow \\
 & \quad \quad \quad x'
 \end{array}$$

This rule is to be interpreted as follows: given a lexical entry of the form α , the extended lexicon is to contain an entry of the form β , derived from the α -entry by the indicated modifications. The variables x and X stand for the phonological and semantic representations respectively of the input entry; $x+T$ and X' are the corresponding representations of the causative verb, where T is the causative suffix morpheme ($=/t/$ for polysyllabic stems ending in a vowel or liquid, and $/Dir/$ otherwise). The terms Erg (ergative) and Abs (absolutive) have their usual interpretations: Erg = subject of transitive, Abs = subject of intransitive or direct object of transitive. Note that these are cover terms, as we do not assume that the labels Erg, Abs appear in any lexical entries. Obl_i is one of the oblique relations (Dative, Ablative) that may be required by a verb.

To illustrate the operation of this rule, consider the kernel lexical entry for the verb kes 'cut' (ex(6)). This is a transitive verb, so its 1, if there is one, is an ergative and its 2 is an absolutive. The causative rule derives a new lexical entry as indicated in (10) below, where the input absolutive is related to a 2 and the input ergative to a 3 in the derived entry, and a new optional 1 is introduced. This new entry determines that the causative verb kestir enters into deep structures with an obligatory 2 argument, and optional 1 and 3 arguments.

$$\begin{array}{ll}
 (10) & [\langle (1), 2 \rangle v] \text{ kes} \\
 & \quad \quad \quad \downarrow \quad \quad \downarrow \\
 & [\langle (1), (3), 2 \rangle v] \text{ kestir}
 \end{array}$$

Exx(11)-(14) below illustrate the four cases resulting from taking different options regarding the argument structure for kestir:

- (11) Kadın kasab-a et-i kes-tir-di. (1-3-2)
'The woman had the butcher cut the meat.'
- (12) Et kasab-a kes-tir-il-di. (3-2)
(passive of (11), with subject unspecified)
- (13) Kadın et-i kes-tir-di. (1-2)
'The woman had the meat cut.'
- (14) Et kes-tir-il-di. (2)
(passive of (13), with subject unspecified)

In cases where there is no 1 in deep structure, we assume the Passive transformation obligatorily applies; thus the deep 2 becomes a derived 1 in (12) and (14).

Notice that the only obligatory term in the argument structure of the input entry specification of the causative rule is the absolutive; and correspondingly, the only obligatory term in the argument structure of the derived entry is a 2.

3. The Missing Subject Causatives

Our analysis provides a rather straightforward account of a certain property of causative constructions which we will call the "missing subject" phenomenon. There are causatives like (13)-(14) above, where a NP corresponding to the subject of the kernel verb is omitted, though logically implied; omission of this NP is not always possible, however:

- (15)*Antrenör koş-tur-du
 trainer run-CAUSE-PAST
 'The trainer caused to run.'

- (16)*Memur otobüs-e bin-dir-di.
 official bus-DAT board-CAUSE-PAST
 'The official had board the bus.'

Zimmer (1976) discusses missing subject constructions, and assuming a transformational analysis as outlined in section 1, he proposes that the absence of a NP corresponding to the deep subject of the complement clause is due to the application of Passive in the complement; in this way he would relate the disappearance of the "missing subject" in the causative to the disappearance of the deep subject of a passive (which may optionally appear in a *tarafından*-phrase, but of course need not appear at all).

Zimmer notes three problems with this analysis. First, the passive suffix does not appear on the verb in the missing subject construction; second, it must be stipulated that only personal Passive (Passive promoting 2 to 1) applies in causatives, because there is in Turkish an impersonal Passive deriving passive forms of intransitive and oblique transitive clauses:

- (17) Bu saha-da koş-ul-ur.
 this field-LOC run-PASS-AOR
 'One runs in this field.'
- (18) Burada otobüs-e bin-il-ir.
 here bus-DAT board-PASS-AOR
 'One gets on the bus here.'

But as was shown above (exx (15)-(16)) the corresponding missing subject causatives are ungrammatical. Third, while it is precisely the personal passives that allow a *tarafından*-phrase, appearance of a *t*-phrase in a missing subject causative is ungrammatical:

- (19) Et kasap tarafından kes-il-di.
meat butcher by cut-PASS-PAST
'The meat was cut by the butcher.'
- (20) *Kadın et-i kasap tarafından kes-tir-di.
woman meat-ACC butcher by cut-CAUS-PAST
'The woman had the meat cut by the butcher.'

There seems to be a rather obvious generalization which is obscured by this analysis: namely, that all causative verbs in Turkish are transitive. Exx (13)-(14) are grammatical precisely because the verb has a deep direct object, and the omission of what would have been the indirect object is inconsequential. In (15)-(16), however, the omission of the NP corresponding to the kernel subject deprives the causative verb of its direct object. In the lexical treatment we are proposing, causative verbs are in essence strictly subcategorized for a deep direct object as a consequence of the formulation of the rule in (9).

As noted above, we are assuming that the subject is optional in the deep argument structure of every verb. In those cases where a verb is inserted into a deep structure without a subject, we assume that the absence of a subject triggers Passive; so that personal passives without tarafından-phrases, and all impersonal passives, are assumed to have no initial subjects.

4. Control Rules in Causative Constructions

As noted in section 1, there are rules (Reflexive and Equi) which in some cases operate in causative sentences as if there were a complex structure involved.

Aissen (1974) observed that Reflexivization with 1st or 2nd person controller is clause-bounded in Turkish; furthermore, for most speakers the antecedent of reflexivization must be a subject:

- (21) Ben Hasan-a ayna-da kendi-m-i göster-di-m.
I Hasan-DAT mirror-LOC self-lsg-ACC show-PST-1
'I showed Hasan myself in the mirror.'
- (22) *Hasan ban-a ayna-da kendi-m-i göster-di.
Hasan me-DAT mirror-LOC self-lsg-ACC show-PST
'Hasan showed me myself in the mirror.'

In causative sentences, however, the dative NP corresponding to a subject in the related un-causative can control reflexivization:

- (23) Hasan ban-a kendi-m-i yıka-t-tı.
Hasan me-DAT self-lsg-ACC wash-CAUSE-PAST
'Hasan made me wash myself.'

Aissen (1974) cited this phenomenon as evidence for a syntactically complex analysis of causative sentences; for if sentences like (23) have deep structures in which

the surface dative is a subject of a clause embedded under the predicate CAUSE, then Reflexive can be presumed to have applied in the embedded clause before Clause Union, when the controller was the subject of the clause containing the reflexive. Under an analysis in which the nominal bana is not a subject at any stage, the grammaticality of sentences like (23) would be an unexplained anomaly.

A similar argument can be based on the behavior of a subject-subject Equi rule in causative sentences. The verbs unut 'forget' and başla 'begin' allow Equi-deletion of the subject of a complement clause, and this rule requires a subject controller:

- (24) Hasan [Ø ekmek almağ-ı] unut-tu.
 Hasan bread buy-ACC forget-PAST
 'Hasan forgot to buy bread.'

- (25) Çocuk [Ø yürümeg-e] başla-dı.
 child walk-DAT begin-PAST
 'The child began to walk.'

This Equi is controllable by a non-subject only in causative constructions, where the dative or accusative NP corresponding to a kernel subject can act as controller:

- (26) Ben Hasan-a [Ø ekmek almağ-ı] unut-tur-du-m.
 I Hasan-DAT bread buy-ACC forget-CAUS-PST-1sg
 'I made Hasan forget to buy bread.'

- (27) Ben çocuğ-u [Ø yürümeg-e] başla-t-ti-m.
 I child-ACC walk-DAT begin-CAUS-PST-1sg
 'I made the child start walking.'

Again the facts could be taken to indicate that causative sentences have a syntactically complex deep structure; with Equi taking place before Clause Union, at a point when the controller is a subject of the Equi verb.

The question which goes unanswered under a Clause Union analysis is why these two rules should behave differently from a rule like Passive, which cannot apply in the embedded clause before Clause Union. Looked at the other way, the behavior of Passive indicates that there is no syntactically complex structure underlying causative sentences; while Equi and Reflexive seem to indicate that there is.

Our account of the difference depends on recognizing a typological difference dividing the two types of rules. Passive is a rule affecting grammatical relations; while Reflexive and Equi, though sensitive to grammatical relations, do not affect them. They are rules of marking or interpretation which require the location of a controller satisfying certain grammatical conditions.

Rules of this class (let us call them "control" rules) appear in general to involve "global" conditions on the

controller (cf. Andrews (1971), Napoli (1975), and Timberlake (1979)). We propose here that such rules not only have global access to the strictly "syntactic" derivation, but in principle may be sensitive to "prelexical" structure as well.

For example, the condition on non-third person reflexivization is that the controller must be in the same clause as the reflexive pronoun, and be a subject of the verb of which the reflexive is a dependent. In the causative construction (ex (23)) the controlling nominal, though dative (presumably a 3) at deep structure and thereafter, is associated through the rule of lexical derivation for causative verbs with the grammatical relation 1 in the argument structure of the kernel verb. Thus, though that nominal is not a 1 at any stage in the strictly syntactic derivation, it "is" a 1 prelexically. We assume that this correspondence of the nominal in question to a 1-argument in the prelexical derivation of the causative verb satisfies the subject condition on the controller of non-third person reflexivization.

We propose a similar treatment of subject-subject Equi for the verbs unut and başla: the condition on the controller is that it be a subject of the embedding verb; an NP counts as a subject of that verb if it is the correspondent of the₁ of the kernel verb from which the causative is formed.⁴

On the view proposed here, the difference in the interactions between the two types of "cyclic" rules and the causative rule is due to the difference in how the rules involve grammatical relations. As a consequence of our fundamental assumption regarding the organization of the grammar, a transformational rule cannot feed a lexical rule. Consequently a rule like Passive which produces syntactically derived grammatical relations cannot affect the input to the Causative rule, and there are no causatives formed to passive stems. The organization of the grammar does not, however, guarantee that the Causative rule will bleed relation-sensitive transformational operations, unless it is assumed that such rules are strictly local; and we believe it has been amply demonstrated (cf. the works cited above) that in general they are not. Control rules quite typically involve conditions on the controller which require global access to the syntactic derivation; our proposal is that where there is an extended lexical derivation involving a regular rule such as Causative Formation, control rules can look back through the lexical part of the derivation as well. The prelexical structure cannot be affected by transformations, but it is in effect part of the derivation and can be "seen" by transformations with global sensitivity.⁵

5. The Causative Rule and other Lexical Processes

The causative rule can feed itself, as the following multiple causatives are grammatical:

- (28) Memur turistler-e bavullar-ı aç-tır-t-ı.
 official tourists-DAT cases-ACC open-CAUS-
 CAUS-PAST
 'The official had the tourists open the cases.'
- (29) Kadın-a kasap tarafından et-i kes-tir-t-ti-k
 woman-DAT butcher by meat-ACC cut-CAUS-CAUS-
 PAST-1PL
 'We made the woman have the meat cut by the butcher.'

We must consequently assume that lexical extension rules may apply to derived lexical entries as well as to kernel ones.

Aissen (1974, 1975) discussed the interaction of causative formation with two other processes: (-İş) Reciprocal Formation and (-In) "Reflexive" Formation. (The latter is more properly a "middle", as will be obvious from the examples.)

- (30) İkizler öp-üş-tü.
 twins kiss-RECIP-PAST
 'The twins kissed (each other).'
- (31) Hasan yıka-n-dı.
 Hasan wash-MID-PAST
 'Hasan washed (himself).'

She reported that neither of these processes could apply to feed causative formation, so that causatives to reciprocals (with the appropriate interpretation) and causatives to middles were nonexistent. This turns out to be incorrect with respect to reciprocals, for the following is grammatical:

- (32) Memur ikizler-i öp-üş-tür-dü.
 official twins-ACC kiss-RECIP-CAUS-PAST
 'The official had the twins kiss (each other).'

But the observation appears to be correct for middles:

- (33) *Mehmet Hasan-ı yıka-n-dır-dı.
 Mehmet Hasan-ACC wash-MID-CAUS-PAST
 'Mehmet made Hasan wash.'

In our present framework, this might be taken to indicate that reciprocal formation is a lexical rule (if it is a rule at all) and middle formation a transformation. This does not seem right, however, because both of these processes look like lexical rules under our assumptions. Neither can be fed by any known transformational operation, for example. In particular, neither can be fed by Raising:

- (34) *Ikizler git-ti san-ış-tı.
 twins go-PAST think-RECIP-PAST
 'The twins thought each other to have left.'
- (35) *Hasan kazan-dı san-ın-ıyor.
 Hasan win-PAST think-MID-PRES
 'Hasan thinks (himself) to have won.'

There is thus no problem with reciprocals, since if reciprocal formation is lexical we must expect reciprocal causatives (in the absence of some independent constraint) to be grammatical, and they are; but by the same token, in the absence of some independent constraint, we must expect causatives to middles to be grammatical as well.

We have no motivated explanation for the ungrammaticality of causatives to middles. It may be that there is simply a condition on middles that the initial syntactic subject must be both agent and undergoer of the action; which would be incompatible with causativization

Conclusion

We have presented an explicit lexical account of causative formation in Turkish, and worked out some of its consequences. In particular we have shown that this lexical theory can be reconciled with the behavior of control rules if those rules are regarded as having access to information in the lexical part of a derivation. The rules of lexical extension interact with each other, so that they must be regarded as comprising a separate rule component, with its own principles of internal organization. Our theory further distinguishes productive lexical rules from nonproductive "relations" among the members of the kernel lexicon. The rules which see pre-lexical structure see it only when there is a lexical extension rule leading back to it. Where the relation between two words is not a reflection of a productive rule, as is the case with certain "frozen" and irregular causatives, control rules applying to a sentence containing one are not sensitive to the argument relations of the other. The rules of lexical extension may be regarded as reconstructing the traditional notion of productive word formation.

FOOTNOTES

1. We omit the argument here, but Passive in Turkish can be argued to be a transformation on the basis of the fact that, unlike the causative formation rule, it participates in cyclic-type interaction with other transformational rules. Passive feeds and is fed by a rule of subject-to-object raising, for example (see Kornfilt (1977) and references cited there). We are assuming the

existence of both lexical and transformational rules, and the principal criterion for assigning a particular rule to one class or another is its interaction properties. Wasow (1977) suggests several other criteria, none all of which we accept.

2. We assume also that the thematic relations of the arguments are indicated in lexical entries; but as we make no reference to thematic relations in this paper, we omit them from our representations.

3. This may well be an oversimplification; there is the fact, which remains unaccounted for under these assumptions, that impersonal passives must be interpreted as if the missing subject were +human, while personal passives without t-phrases do not have this restriction. Possibly the personal passives have deep subjects, and unspecified ones (+human or otherwise) vanish in the passive transformation; while impersonal passives have no subjects at any stage.

Another possibility (suggested to us by L. Knecht) is that impersonal passives are lexically derived. So far as we know, this would be compatible with our analysis. The impersonal passive rule in any case could not interact with the causative rule, because (a) Imp-passive creates subjectless intransitives, which cannot undergo the causative rule; and (b) the causative rule creates transitives, which cannot undergo Imp-passive.

4. The new 1 of the causative verb itself (ben in (26) and (27)) cannot control Equi (this would yield a reading that those sentences do not have). The appropriate condition appears to be that the controller must correspond to the kernel 1 of the Equi verb; its relation to the derived verb is irrelevant.

We cannot just say that Equi itself is prelexical, nor that Equi verbs simply subcategorize a VP which is carried over into the argument structure of the associated causative verb, because the Equi target may be a derived subject; i.e. Equi is fed by rules such as Raising and Passive, which we must assume to be transformations. The same holds for Reflexivization.

5. It should be noted that the control rules can see the argument structure only of lexical items that are related to those actually present by a regular rule of lexical extension. Ex (22) shows, for example, that Reflexivization cannot apply according to the argument structure of gör 'see', even though the semantic relation of that verb to the occurring verb göster is similar to that between a verb and its associated causative. These two verbs are not regularly related, and presumably must both be entered in the kernel lexicon.

6. There are various restrictions, which we have not

the space to discuss, on multiple causatives and the nominal arguments which they may take. While double causatives such as those cited are quite common, triple ones are extremely rare and quadruple and higher causatives are unheard of. Further, most speakers reject double causatives with more than one dative phrase corresponding to a pre-causative 1, so that in double causatives to transitives (like (29)) one of the agents must be expressed in a t-phrase or omitted.

It is possible that these restrictions are of a perceptual nature, and reflect the processing difficulties involved in recovering the argument relations underlying multiple causatives. In particular, the constraint on multiple 3's may be due to the difficulty of recovering the kernel grammatical relations through the interpretation process associated with the causative rule, and the t-phrase might present less difficulty because t-phrases are base-generated agent-phrases, and interpreted by an independent rule.

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THE DEVELOPMENT AND PRODUCTIVITY OF PREFIXES

Andrew S. Allen

University of California, Berkeley

The formation of compound verbs by adding a prefix, which was usually derived from the adverbial use of a preposition in Proto-Indo-European, developed in Latin and continued in Romance. Let us examine such prefixes in verbs whose root is followed by the inchoative suffix, so that the pattern of word formation is as illustrated by engrandecer 'to enlarge':

prefix	+	root	+	inchoative affix	+	inflection
en-		-grand-		-ec-		-er

The verb en-grand-ecer is derived from the adjective grande 'big' plus the discontinuous element en-...-ecer, since there is no such verb as *grandecer. Such simultaneous addition of a prefix and a suffix to a root is known as parasynthesis, which plays an increasing role in the formation of inchoative forms in Latin and Romance (cf. Reiheimer-Ripeanu 1974, Malkiel 1941). In the history of parasynthetic inchoatives, there is a smaller variety of prefixes paralleled by a greater use of those that survive. Often, but not always, semantic factors contribute to the productivity of prefixed verbs.

Analyzed according to the roots from which they are derived, Latin inchoatives can be divided into deverbals, deadjectivals, and denominatives as exemplified by the following:

Deverbal:	CALESCERE 'to grow warm, hot'
	< CALERE 'to be warm'
Deadjectival:	DULCESCERE 'to become sweet'
	< DULCIS 'sweet'
Denominative:	FEBRESCERE 'to catch a fever'
	< FEBRIS 'fever'

Even though Latin, like other languages, has more nouns than adjectives or verbs, denominatives have relatively few forms among the inchoatives and the prefixed inchoatives:

	Inchoatives	Prefixed	Prefixed (%)
Deverbals:	140	85	61%
Deadjectivals:	83	23	28%
Denominatives:	67	19	28%

Examination of deadjectival and deverbal inchoatives is greatly helped by comparison with the denominatives in

the preceding table. Thus, the rule of formation of compounds with prefixes has applied most often to deverbal inchoatives and less frequently to deadjectivals and denominatives; such a difference is evident from the numbers and percentages of compounds showing that more deverbal inchoatives have taken on prefixes. Furthermore, the variety of prefixes is greatest among deverbals, as we can see from the following table showing the number of times various prefixes form compounds with deverbal, deadjectival, and denominative inchoatives:

	CON-	IN-	EX-	RE-	DE-	AB-	AD-	OB-	PER-
Deverbal:	12	10	12	9	10	3	6	7	8
Deadjectival:	4	7	5	1	1			3	2
Denominative:	5	3	1	5				1	1

	PRO-	PRAE-	SUB-	DIS-	INTER-	CIRCUM-
Deverbal:	2	2		2	1	1
Deadjectival:						
Denominative:		1	1	1		

A recent Latin grammar summarizes the meanings of the prefixes in a way that can be adapted for our study of compounds (Moreland 1977: 255-7):

CON- 'together (with); completely'	OB- 'toward, against'
IN- 'in, on; against'	PER- 'through; thoroughly'
EX- 'out'	PRO- 'in front of; forth'
RE- 'again'	PRAE- 'before'
DE- 'from; down; utterly'	SUB- 'under'
AB- 'away'	DIS- (DI-) 'apart'
AD- 'to, toward'	INTER- 'between'
	CIRCUM- 'around; on all sides'

The translations of the above prefixes fall into three classes of meaning: (1) locative prepositions like 'in', 'to', and 'under', (2) prepositional adverbs like 'together', 'out', and 'down', and (3) metaphorical derived intensives such as 'completely', 'utterly', and 'thoroughly'. Clearly, a verb root is more likely to undergo such a variety of semantic modifications than a noun root. This argument is supported by the rare denominative inchoatives that take a variety of prefixes, for such denominative inchoatives coexist with corresponding stative verbs derived from the same nouns. Thus, LUCESCERE 'to begin to shine' may be compounded with the prefixes IN-, E-, RE-, DI-, and PRAE-, while CALLESCERE 'to become insensitive' may be prefixed by CON-, IN-, OB-, and PER-; significantly, beside LUX (genitive LUC-IS) 'light' and CALL-UM 'callus',

there also exist the statives LUC-ERE 'to shine' and CALL-ERE 'to be callous'. It could be argued either that the inchoatives were derived directly from the statives with prefixes, or that prefixed statives had enough influence on parallel inchoatives to permit a greater number of possible compounds.

The inchoative form, which is almost always intransitive in Latin, often develops a transitive meaning in Romance, but prefixes do not play a role in the change. Only one of the deverbal inchoatives owes its transitive meaning to a prepositional prefix; this verb is IN-OLESCERE 'to grow in; implant', which contrasts with the simple intransitive OLESCERE 'to grow'. Similarly, among denominal verbs, the prefix IN- imparts transitivity to the meaning of IL-LUCESCERE 'to grow light; to shine upon', which differs from intransitive LUCESCERE 'to begin to shine'. However, such verbs are exceptions. Although many verbs signifying emotion have transitive compound forms--such as PER-HORRESCERE 'to shudder greatly at', EX-PAVESCERE 'to fear greatly', and CON-TREMESCERE 'to tremble at'--these verbs show no contrast in transitivity with their simplex counterparts. Since most other compound inchoatives do not have transitive glosses, composition is not a major cause for the development of transitive inchoative forms in Latin.

Although prefixation did not transitivize verbs, it served important phonological and semantic purposes, for prefixes continually spread to new lexical items, many of which also underwent derivational suffixation. As we have already seen, while prefixes spread to more verbs, the number of prefixes did not increase but grew smaller. Suffixal additions often regularized paradigms, and in the history of prefixation, too, there was a trend towards regularity, since the Romance choice of prefixes is narrower than that of Latin. A comparative list of prefixes includes the results of changes over a considerable historical period, and that fact justifies the analysis of compounds by etymological as well as synchronic criteria. The list of prefixes joined to Latin inchoatives was compiled from the dictionary of Walde and Hofmann (1954, 1965), the Italian is according to Reynolds (1962), Spanish is from the RAE (1970), and French is gleaned from Dauzat (1968); the percentage indicates the proportion of compound inchoatives taking a given prefix:

Latin			Italian		
CON-	21	17%	in-	167	41%
IN-	20	16%	ad-	63	16%
EX-	18	14%	re(d)-	63	16%

(Latin)			(Italian)		
RE-	15	12%	s-	48	11.5%
DE-	11	8.6%	di(s)-	18	4%
OB-	11	8.6%	com-	13	3%
PER-	11	8.6%	de(s)-	10	2.5%
AD-	6	5%	e(s)-	9	2.2%
AB-	3	2%	pre-	6	1.5%
PRAE-	3	2%	tras-	3	.8%
DIS-	3	2%	inter-	2	.5%
PRŌ-	2	1.6%	per-	2	.5%
CIRCUM-	1	.8%	pro-	2	.5%
INTER-	1	.8%			
SUB-	1	.8%			

Spanish			French		
en-	105	55%	a-	50	60%
a-	35	18%	r(e)-	13	16%
de(s)-	19	10%	en-	10	12%
e(s)-	17	9%	é-	7	8.4%
re-	9	4.5%	dé-	1	1.2%
con-	7	3.5%	in-	1	1.2%
			pré-	1	1.2%

The total number of inchoatives and the number compounded with prefixes is indicated below:

	Total inchoatives	Prefixed inchoatives
Latin:	290	127 (44%)
Italian:	729	406 (56%)
Spanish:	226	192 (85%)
French:	208	83 (40%)

The above figures are to be taken critically because they reflect the comprehensiveness of the dictionary used as a source, but both numbers and percentages reveal the increasing use of fewer prefixes in compounds. An important cause of distortion is the number of items because a longer list of inchoatives will contain a greater number and proportion of compounds, which are usually less frequent. For example, Lewis (1969), which is a larger Latin dictionary than Walde (1954, 1965), offers 607 inchoative entries, of which 376, or 62%, begin with a prefix. However, even the smaller number of prefixed forms cited in the table shows that Latin with 127 compounds uses a greater variety of prefixes than Italian with 406 compounds or Spanish with 192. In addition, the curve of frequency is steeper in the modern Romance languages since the most frequent prefix in Latin is attached to only 17% of the inchoatives, while the most common prefix is found with 41% in Italian, 55% in Spanish, and 60% in French. Such

figures indicate a more nearly regular word-formation rule for prefixed inchoatives in the modern languages.

What are the reasons for the historical narrowing of the choice of prefixes? The causes are phonological, lexical, semantic, and morphological. Due to consonantal assimilation in the prefix and because of loss of the final consonants in the prepositions, the Romance languages no longer have separate AD- and AB- prefixes but display a greater number of verbs compounded with a-. Furthermore, reflexes of AD like Spanish and Italian a and French à are very common prepositions meaning 'to', and they also serve various syntactic functions. So frequent are unstressed a and à that they coalesce with the definite article in their respective languages (Sp. It. al, Fr. au). In addition, Italian in, the preposition corresponding to the most common prefix in that tongue, also combines with the definite article (cf. nel). The greater ease of phonological combination shown by these prepositions helps to explain the larger number of compound verbs with reflexes of AD- and IN- in Romance.

A comparison of prefixes with homonymous or nearly homonymous prepositions shows the lexical causes for the rise of certain prefixes and the downfall of others. For example, the Latin prefix CON-, corresponding to the preposition CUM 'with', is frequent in Latin and continues to form words in Italian and Spanish, which also preserve the preposition con 'with'. In contrast, the same prefix has not persisted in French, where the preposition for 'with' is avec. Similarly, reflexes of the prefix IN- are proportionately more numerous in Italian and Spanish, which respectively use in and en for 'in', than in French, where en competes with dans as in the phrases en ville 'in town' and dans la campagne 'in the country'. Furthermore, Latin prepositions that have disappeared have taken the corresponding prefix out of the language with them, except in learned borrowings from Latin. Thus, reflexes of the Latin prepositions CIRCUM 'around', OB 'toward, in front of, on account of', and TRANS 'across' have not persisted in most languages, and neither have the corresponding prefixes. A few prefixes, which display strong semantic content, lack corresponding prepositions. Thus, verbs with reflexes of RE- are iterative, and the reflexes of separative DE- and DIS- and, in Italian, EX- are generally negative. Although the Italian prefix s- has changed from Latin EX- in form, its frequent negative and privative meaning keep it productive; I should add that it can sometimes indicate separation or occasionally lack all meaning (Rohlf 1954: 238-9).

Semantics also contributes to the great productivity of reflexes of IN- and AD-. The corresponding prepositions are the most suitable for expressing entry into a state, since IN means 'in, into' and AD means 'to, toward'. The prefixes themselves may indicate entry into a state, for there are first conjugation doublets of inchoative forms with the same prefix and identical meaning:

It. arrotond-ire, arrotond-are 'to make round'
 incoragg-ire, incorraggi-are 'to encourage'
 Sp. abland-ecer, abland-ar 'to soften'
 enroj-ecer, enroj-ar (obs.) 'to redden'

Furthermore, IN- and AD- are prefixes in Latin verbs used as auxiliaries expressing the inchoative meaning; thus, IN-CIPERE, IN-COHARE, and IN-STITUERE all mean 'to begin', and AD-GREDI signifies 'to start a journey'. Finally, the Romance particle linking the inchoative auxiliary and the infinitive is the reflex of AD, as in French commencer à and Spanish empezar a, which both mean 'to begin to'. These semantic factors, then, are partly responsible for the promotion of Latin AD- and the retention of IN- as the most important prefixes associated with the inchoative suffix.

As the dictionary will show, Portuguese exhibits some derivational rules that jointly stimulate the productivity of certain prefixes and of the inchoative affix. For example, many inchoatives are created by the addition of negative des- to other inchoatives so as to express an affirmative idea by denying its opposite. A Portuguese dictionary, Taylor (1970), contains 34 inchoatives beginning with des-. While some are formations common to related languages, others are quite original. Thus, Ptg. des-guarn-ecer 'to remove garri- sons, disarm' resembles Sp. des-guarn-ecer 'to dismantle, disarm' and Fr. dé-garn-ir 'to dismantle, strip'; similarly, des-obed-ecer 'to disobey' is like Sp. des-obed-ecer and Fr. dés-obé-ir, which both also mean 'to disobey'. However, the following examples are unique (Taylor 1970):

desengrandecer 'to belittle' < engrandecer 'to enlarge'
 desempobrecer 'to enrich' < empobrecer 'to impoverish'
 desenriquecer 'to impoverish' < enriquecer 'to enrich'

In addition to the simple negative prefix, there exists a subgroup of inchoatives with the structure des- + (-en-)...-ecer, where the affix en- is found in 20, or 59%, of the 34 negative compounds. Although en- is the major prefix in compounds, such a percentage is still

higher than expected because only 23% of a list of dated Portuguese inchoatives collected from Messner (1976) begin with en-.

Among inchoative verbs, the prefix en- (< Latin IN-) shows an interesting distribution. A reverse dictionary of Portuguese (de Castelões 1977) indicates that the proportion of -ecer verbs with the prefix en- is 65 out of 174, or 37%, while that of -escer inchoatives is only 4 out of 31, or 13%. As expected, the infinitives with the -ecer spelling follow the Romance pattern of en-compounds more closely than do the -escer verbs, which are typically learned and follow the Latin model. Such an observation receives support from three -escer verbs with the prefix in-, which contrasts with the en- universally preferred by -ecer verbs; of course, both in- and -escer more closely approximate Latin. The -escer verbs are nearer to Latin in other respects, too, since they regularly retain the intervocalic consonants deleted in vernacular verbs like empecer 'to damage' (cf. IMPEDIRE 'to hinder'), adoecer 'to sicken' (cf. IN-DOLESCERE 'to feel pain'), and esvaeecer 'to make disappear' (cf. VANESCERE 'to disappear'). Contrasting semantically as well as formally, learned verbs often express technical meanings, as illustrated by efervescer 'to effervesce, bubble up' and by intumescer and inturgescer 'to swell up'.

An additional semantic factor increases the number of prefixed inchoatives in Portuguese. Color verbs are very likely to begin with en-, as we can see by the following examples:

embranquecer 'to whiten'
empalidecer 'to grow pale'
encanecer 'to turn grey' (of hair)
enegrecer 'to blacken'
enrubescer 'to redden'
envermelhecer 'to redden'
enverdecer 'to make green, grow green'

So strong is the tendency toward en- that amarelecer 'to turn yellow' has developed the variant emarelecer, where root-segments am- were reinterpreted as an assimilated form of the prefix en-. The preference for en-...-ecer in color verbs must have stimulated the production of more en- verbs by supplying a combined morphological and semantic pattern.

Such minor rules of formation as (A) negative des- + (en-)...-ecer, (B) parasynthesis with en-...-ecer, and (C) en- with color verbs played an important role in extending the productivity of the prefix along two axes, since (1) new en- verbs were formed, and (2) the

frequency of the affix rose. Thus, besides increasing the number of prefixed verbs in the language, such rules produced models for the coining of yet more compounds.

In summary, this paper has noted several tendencies in the development of verbal prefixes in Latin and Romance. Derived from an original syntactic construction in Proto-Indo-European, the word-formation rule for prefixal verbs developed independently in Latin. The fate of prefixes in Romance depended on their meaning, the survival of prepositional doublets, and participation in parasynthetic formations, exemplified by prefixes that cooccur with inchoative affixes. Moreover, the general direction of historical development has been to reduce the variety of prefixes even as a large number of new compound verbs were being coined. Finally, as we have seen illustrated by Portuguese inchoatives, meaning may play an important role by stimulating the productivity of a prefix in a particular semantic area of the lexicon. Such, then, are the multiple factors that influence the productivity of prefixes.

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Phonological Convergence Between Languages in Contact:
Mon-Khmer Structural Borrowing in Burmese

David Bradley
University of Melbourne

This paper enumerates and discusses a number of historical changes in the phonology of Burmese, a Tibeto-Burman (TB) language, which have resulted in convergence towards genetically unrelated Mon, a Mon-Khmer (MK) language.

Areal linguistics as exemplified in the work of Emeneau on South Asia and Henderson on Southeast Asia has shown that adjacent languages tend to have similar characteristics. It is also possible to observe such similarities between two specific languages, as Gumperz and Weinreich have done. What I shall attempt is to trace the development of such similarities, in a case where both written records and previous historical linguistic work permit.

History

Burmese is now the TB language with by far the largest number of speakers, perhaps twenty million. Most other TB languages are spoken by groups with anything from a few hundred to a couple of million members; of these, only Tibetan, Newari, Manipuri, and Tripuri have been used as the language of a large traditional state. Thus, Burmese has been the most successful TB language in 'acquiring' speakers.

The phonological history of the Lolo-Burmese subgroup of Proto-TB, which includes Burmese, has been clarified in excellent comparative linguistic work, by Benedict and Shafer at Berkeley in the late 1930's and later; and more recently by Burling, Matisoff, and his students. Burmese itself is extensively attested since 1112 AD in inscriptions.

The history of the people who spoke Proto-Burmese is less clear. It seems they became the politically dominant group in Upper Burma, near Mandalay, about the tenth century AD. For many centuries after that they were in conflict with a series of Mon kingdoms in Lower Burma, which were eventually conquered. What is eminently clear is that Lower Burma, where the capital Rangoon is located, was mainly populated by speakers of Mon only a few centuries ago.

There is a continuing process of 'Burmanization' of the Mons in Burma, which has been going on for nearly a millenium, and is still continuing. At present in the Mon State around Moulmein in southeastern Burma most Mons are bilingual in Burmese and Mon, and many people who speak only Burmese are aware of their Mon genetic background. For example, my esteemed Burmese teacher Hla Pe, professor of Burmese at the University of London, is an ethnic Mon but does not speak Mon.

Well-known historically-documented borrowings from Mon include the Burmese orthography; Burmese was probably first written by Mon monks, who also brought their Theravada variety of Buddhism. Much of the vocabulary of Buddhism was borrowed from Pali via Mon

into Burmese . Other Mon lexical material has also been identified in Burmese - see Hla Pe 1967.

Since so many speakers of Burmese have a Mon background (including large numbers who now have no awareness of it) it is hardly suprising that the structure of Burmese phonology has also been affected. I will give a number of examples in which it appears that Burmese has diverged from closely-related Lolo-Burmese languages in the direction of unrelated Mon.

Suprasegmentals

Prosodies or suprasegmentals are often labelled as 'tone' or 'register' or 'stress' or 'length' when the parameters involved in the opposition include realizations associated with all of these: fundamental frequency (pitch), phonation (voice quality), intensity (loudness), and duration. Burmese has usually been described as a tone language, as have most other TB languages, but in fact if a case must be made for one contrastive parameter, a better case can be made for register in Burmese. In this respect it has become more like Mon, which like most MK languages uses a register contrast. Conversely, languages such as Lahu and Lisu, closely related to Burmese, have proliferated pitch/contour tone contrasts (Bradley 1977), and most TB languages are tonal. The following chart shows the realizations of the 'tones' of Burmese; the first column gives the traditional Burmese term for each category.²

	phonation	pitch	contour	duration	intensity
'creaky'	tight or creaky	fairly high	slight fall	shorter	fairly high
'even'	normal	fairly level or low	slight fall	longer	low
'heavy'	slack or breathy	inter- mediate	sharp fall	longest	very high

(with different vowel nucleus possibilities, and a final stop)

'killed'	normal or tight	very high	slight fall	very short	high
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Fundamental frequency is not a reliable cue to the 'tones' of Burmese; speakers vary between higher and lower pitched 'creaky' in certain environments. Also, the 'heavy', which is usually described as 'high falling tone', is often lower than the 'even' which is often called the 'low tone'. Worse, most 'tones' in fact have similar contours.

Maran has proposed an analysis which attributes the prosodic opposition to abstract final segments which themselves have no realization, but which condition the various differences noted above. This analysis has little diachronic and no synchronic support.

The analysis which seems to correspond to native intuitions as reflected in the traditional names, and which is consistently

reflected in the realization, is the register analysis: a three-way opposition of creaky, normal, and breathy voice quality.³ In most MK languages, there is a two-way register opposition, as in Mon; thus both Mon and Burmese use register contrastively.⁴

In the Arakanese dialect of Burmese there are secondary vowel developments which are typical of a register language, but not of a tonal one; these further arguments for the register analysis are presented below.

Vowel-System Convergence

There are three main ways in which Burmese vowels have changed from the typical TB pattern in the direction of a more MK-like one. The overall result is a larger inventory of monophthongs; several diphthongs which are frequently found in MK languages but rarely in TB languages; and a Burmese vowel nucleus borrowed from Mon, never regularly found in the Proto-TB component of the Burmese lexicon.

The typical TB vowel inventory includes five monophthongs, viz. /i e a o u/; Burmese has monophthongized two further Proto-TB diphthongs, *ay and *aw, to produce a seven vowel system with /ɛ/ and /ɔ/ in oral nonstopped syllables with the register opposition, and has further developed a /ə/ in pretonic syllables as described below in the section on word structure. Thus the Burmese inventory approaches the typical MK symmetrical nine-vowel system, lacking only an /ɨ/.

Several nasal and stop-final nuclei represented in the Burmese orthography by monophthongs and final consonants have become diphthongs in most dialects of Burmese (though the details of which combinations result in which diphthong differ from dialect to dialect; see Bradley 1979c). Though these final consonant oppositions are now completely neutralized, some features are reflected in the resulting diphthong. Specifically, in most dialects,

*im/in/ip/it /ei/ with nasalization or final stop

*um/un/up/ut /ou/ with nasalization or final stop

*oŋ/ok /au/ with nasalization or final stop

Further, combinations reconstructed and written with a medial w have in several cases monophthongized to increase the inventory of nasal and stop-final vowel nuclei; the result is seven nasalized vowel nuclei, and eight stop-final vowel nuclei; again, a more MK-like system.

One of these nuclei is /ai/, nasalized or stop-final. Words with this nucleus never have regularly-corresponding cognates outside Burmish, the subgroup of Lolo-Burmese closest to Burmese. Most lexical items with this nucleus are Mon or other loanwords: some usually attributed to Shan/Thai, others to Pali, and a few unclear. There are a couple of Proto-TB etyma which have shifted into this category, rather than the regular /au/, from *u:ŋ or *u:k.

Interaction of Vowels and Suprasegmentals

MK languages - and register languages generally (Gregerson 1976) - show vowel height differences which relate to the register system. As noted above, so does at least one dialect of Burmese: Arakanese.

In Arakanese all vowels have higher allophones when in a breathy ('heavy tone') syllable. Moreover, what is /e/ in Burmese has split in Arakanese between /i/ mainly in breathy syllables and /e/, which corresponds also to Burmese /ɛ/, in other syllable types. Burmese contact with Arakanese as the 'standard' language has complicated this picture, and there is considerable stylistic variation in Arakanese.

Nevertheless, here is another strong argument for the register analysis. In tone languages (with a few exceptions) there is little correlation between tongue height and pitch height⁵ but more frequently correlations instead between features of adjacent consonants and pitch height/contour. But Gregerson, Glover, and others have demonstrated a regular relationship, based on tongue root position, in register languages in all areas of the world.

Consonants

Again, Burmese has undergone a number of developments in its inventory of consonants which result in a more MK-like system.

Most TB languages, including most other Lolo-Burmese languages,⁶ have an opposition between alveolar fricatives and affricates, e.g. /s/ and /ts/, versus palatal or alveopalatal fricatives and affricates, e.g. /ʃ/ and /tʃ/. Burmese has collapsed *s and *ʃ to |s|, now pronounced /θ/; and has collapsed *ts and *tʃ to |c|, now pronounced /s/. Apart from a few northern MK languages, it is typical of MK not to contrast alveolar as opposed to alveopalatal fricatives or affricates; thus again Burmese has become more Mon-like.

One typologically unusual property of MK languages, including Mon, is that they may have palatal stop or nasal in syllable-final position. This is not usual in TB languages, but in the Burmese orthography, final palatal stop and nasal are written. Whether they had the value of final palatals when the orthography was devised is unclear; on the whole they developed from *i with a *velar or less frequently *alveolar final, so it seems phonetically reasonable that they may have. Now, however, like other *finals, the position contrast has been neutralized and is reflected only in vowel nucleus differences.

Word Structure

Henderson 1951 points out the essentially similar word structure, (C)(C)(C)V(C)^S, of various unrelated Southeast Asian languages: Thai, Khmer, and so on. That is, words may have a first 'minor syllable' or 'pretonic syllable' with schwa vowel and no suprasegmental opposition (tone, register, or otherwise). The consonant and cluster possibilities are often limited in the 'minor syllable', and of course there is no vowel opposition.

Mon, like nearly all MK languages, has this word structure. For

Proto-TB, Wolfenden and others have reconstructed morphological prefixes, but most of these prefixes seem to have been fused into the initial consonants by the Proto-Lolo-Burmese stage (Bradley 1979b). Only a few such as the **ʔə*- kinship term prefix have survived; but in most Lolo-Burmese languages they have become full syllables with a tone. So Lolo-Burmese languages other than Burmese have mainly one-syllable monomorphemic words.

Burmese has instead reduced a large number of full syllables to 'minor syllables', resulting in another parallelism with MK, in the basic word structure.

The most frequent minor-syllable words in Burmese contain a grammatical functor which has a full-syllable cognate elsewhere in TB. Examples include:

- mə* - 'negative' (preceding verbs)
- ʔə* - 'adverbializer/nominalizer' (preceding verbs)
- tə* - 'one' (preceding numeral classifiers)
- nə* - 'two' (preceding numeral classifiers)
- khupə* - 'seven' (preceding numeral classifiers; derived from 'two')

as well as the kinship term prefix *ʔə*-, which occurs mainly with terms for relatives of the same or a younger generation. Thus the very frequent classifier phrase (numeral plus classifier), a part of the noun phrase, will most frequently show this MK-like word structure; as will all negated or derived forms of verbs.

There are also very many Burmese nouns which have had their first syllables reduced. In most cases the original, unreduced first syllable is recoverable from external or internal evidence. In some cases, etymology provides evidence for the full form; in a few cases, inscriptions provide earlier forms that are now spelled with the reduced form. In numerous instances, dialect and standard forms differ: either the dialect reflects the full first syllable and the standard reduces it, or vice versa. There are also examples in which the modern spelling still reflects the former full syllable, but pronunciation always has the reduced form. Many examples show a synchronically transparent or even productive process of reduction. Of course, there are also cases of loanwords, from languages that also have 'minor syllable' forms or to reflect borrowed short vowels. Finally, there is a small residue of unexplained cases, which may either be loans, or may have unclear etymologies.

It is not always clear what the conditioning factor is in the reduction of some two-syllable nouns and the non-reduction of others; perhaps the more closely-bound, unanalyzable noun compounds are more likely to undergo reduction. There are semantic factors involved, for example the frequent reduction of certain body part words (*lɛʔ* 'arm/hand', *chi* 'foot/leg', *nə* 'ear', and so on) which categorize major regions of the body - these also happen to occur frequently in two-syllable compounds, so both semantic and morpho-phonemic processes may be involved.

Less frequently, as in the case of the kinship term prefix, the 'minor syllable' has a very good etymology. For example, 'ant' is

reconstructed as Proto-Lolo-Burmese *p-rwak; the prefix occurs in the Burmese form pə rweʔ. Similarly 'flute' can be reconstructed as *p-lwe¹ (the superscript numeral is a reconstructed tone category); the Burmese cognate is pə lwe. Examples of this type are very few.

Even rarer are examples of verbs which have a 'minor syllable'. gə zà 'to play' is one of the few; in this case the first syllable has probably been reduced from the full verb ká 'to dance'; etymology provides evidence as to the full form.

The following noun examples show the various types of reduction of the first-syllable possibilities enumerated above. They are far from exhaustively listed; these two-syllable nouns are a very frequent phenomenon in the Burmese lexicon. Many other instances of each type could be given.

1. etymology supports full first syllable

θə mɛʔ 'son-in-law' from *ya² 'son/child' plus *C-mak 'son-in-law'
sə bā 'paddy' from *ca¹ 'food' plus MK root for 'rice'

2. inscriptions support full first syllable (as well as etymology)

ʔə ko 'elder brother' inscriptional form |ac kuiw|, from *wa
nə mā 'younger sister' inscriptional form |nham ma|, from *sa

3. dialect and standard forms disagree (in these cases, spelling also usually gives the full form)

shə bɪ 'head hair', Arakanese shə bā, spelling |cham paŋ|₁
(the dialect supports the spelling and reconstruction *cam)

leiʔ pya 'butterfly', Arakanese lə pra
(standard, spelling, and etymology *lip all support the full form)

4. spelling retains the etymologically-expected unreduced form

pə ləu 'heart'; etymon for 'heart' is *s-nik; spelled |nhac
phə naʔ 'sandals'; spelling |phi nap| not supported by etymology

5. semiproductive or productive examples

cà 'tiger'; cə θiʔ 'leopard'
(also various other animal names: 'fish', 'cow', and so on)
nà 'ear'; nə kwɪ 'earring'
(also various other body parts: 'arm/hand', 'foot/leg', etc.)
dà 'knife'; dəʔ u 'knife tip'

A number of other examples of this type occur, such as parts of plants with θə- from θiʔ 'tree', free form θiʔ pɪ. In such cases the spelling also reflects the unreduced form.

6. loanwords

pə ləu 'Palaung' (name of a MK group in Upper Burma)
kə lə 'Indian'
(this word can be recursively reduced, as in kə lə thāi 'chair' (the Indian sitting device, containing the verb thāi 'sit'))

7. unanalyzable (etymology unavailable or unclear)

bəzei 'axe' spelled pu chin
 dəyɛ 'antelope' spelled da ray

There are also a number of words for tools, parts of a boat, and so on which contain the 'minor syllable' tə- or də-, written as if pronounced ta, spelled tam .

In addition to the analyzable adverbs with the prefix ʔə-, there are a number of adverbs with the numeral 'one' tə-, usually in a reduplicated four-syllable word. Moreover, there are several other less easily derivable adverbs, such as the following:

gəné 'today' - the second syllable is 'day'
 gəyú 'carefully'

One possible source for these two is a reduced form of the topic particle ká, which may have become word-initial when the demonstrative ʔə was lost, reducing these two words to the more frequent two-syllable type.

It should not be claimed that all instances can be explained in terms of reduction, as noted above; but on the whole, it seems that Burmese has rearranged its word structure, a relatively basic part of the phonology, from one-syllable towards the Mon (and MK) 'minor syllable' plus main syllable pattern; and that the main mechanism of this restructuring has been reduction of first syllables, including some morphological functors, in two-syllable bimorphemic compounds.

Conclusion

I have tried to show several areas of Burmese phonology which have changed during the recent history of Burmese in the direction of Mon, at a time when Burmese was in contact with Mon. Specifically, it seems that many speakers of Mon were 'becoming' speakers of Burmese.

The most basic area of change seems to be the reanalysis of the main suprasegmental contrast as register rather than tone in Burmese.

Vowel and consonant systems have also become more similar to a Mon-like structure.

The basic pattern of 'minor syllable' plus full syllable has become established in Burmese, though various evidence shows that this has been a recent, gradual, and partially nonsystematic process. Basically, some closely-bound two-syllable noun compounds have had their first syllable reduced.

Finally, it should be noted that the convergence I have documented has not been to an identical phonological system with Mon, but rather to a typologically more MK-like pattern for Burmese.

Footnotes

1. I am glad to acknowledge comments by Matisoff, Diffloth, Haas and Thurgood at the meeting; and also by Benedict and Gregerson.

This is not to blame them for any remaining inadequacies, which are of course my responsibility. I use * before reconstructed forms, and vertical lines to enclose transliterated Burmese.

2. These observations are derived from instrumental work with two speakers from Mandalay, one male and one female. I used F-J fundamental frequency meter, electroglottograph, and intensity meter, recording the results on a mingograf; also narrow-band spectrograms from a Voiceprint sound spectrograph.

3. Mary Haas pointed out that duration is similarly consistent and could also be considered to be the contrastive suprasegmental; intensity similarly differentiates; but three-way stress or length distinctions are rare.

4. Most MK languages, as Gerard Diffloth pointed out, are thought to have developed register from *voiceless versus *voiced initial consonant features preserved in voice quality, but lost in the initial segments. By the time Mon and Burmese came into contact, it seems reasonable that Mon had already developed the voice quality feature, though of course the orthography represents it in the initials.

5. W. S-Y Wang has given some Chinese dialect examples; there is also an example in Lahu, where *uk has /o/ as its reflex in the low stopped tone, but /u/ with high rising tone.

6. Lahu is an exception, but the merger in Lahu, like its nine vowel system, may perhaps be an instance of convergence between Lahu and Shan, which also lacks this contrast, and has a nine vowel system.

7. This MK etymology was provided by Diffloth.

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The Grammatical Status of Aspectual Catenatives in English
 Laurel Brinton
 University of California, Berkeley

Verbal aspect has become a topic of increasing interest in linguistic theory, in philosophy of language, and in language-particular studies. Although in English aspect is not the primary distinction in verb morphology, it is nonetheless an important semantic category with numerous formal manifestations within the verbal system and without. Previous studies of aspect in English have concentrated on the aspectual nature of the perfect and progressive "tenses," lexical verbs, and verb particles. A rather neglected source of aspect study in English is a group of aspectual verbs or "catenatives," e.g., begin, continue, cease, and keep (on), which occur with complement verbal structures and which express most of the major aspectual distinctions.¹ These catenatives present interesting problems for linguistic investigation: determination of the number and variety of aspectual catenatives, of their semantic/aspectual function, of their interaction with other aspectual elements, and of their grammatical status as main verbs or auxiliaries. The purpose of this paper is to examine the last question.

1 Previous studies of aspectual catenatives

1.1 Tabulation of the aspectual catenatives in English

Traditional grammarians were generally content simply to list the aspectual catenatives, the accompanying particles, and the complement structures which they take and to classify them as markers of inchoative, terminative, iterative, or continuative aspect. The following list (1) is a compilation of several scholars' lists (Curme 1931:377-87; 1947:262-4; Charleston 1941:106-16, 130; Poutsma 1926:291-310; Visser 1969:1372-91; 1973:1888-1906):²

1 a) Inchoative aspect

begin	} to V or V-ing	be	} to V
commence		be about	
start (in/out/off)		be going	
set about/out/off/in		set	
get		go	
proceed		go about/off	
fall		grow	
		come (on)	
get	} to V-ing	break out/into	} V-ing
fall		burst out	
go		resume	
set			
take			

b) Iterative aspect

be {used apt	} to V	keep (on)	} V-ing
wont		go on	
used		continue	} to V or V-ing

c) Continuative aspect

keep (on)	stand
go on	lie
remain	sit
persist in	stay

V-ing

continue } to V or V-ing

d) Terminative aspect

finish	lay off
quit	leave off
stop	break off
desist	knock off
forsake	give up/over
cut out	{get} through
{have} done	{be} through
be	discontinue

V-ing

cease } to V or V-ing

1.2 Determination of the status of aspectual catenatives using syntactic evidence

Although grammarians have listed these catenatives and recognized their aspectual nature, they have reached no conclusion about their grammatical status. Different scholars have assigned them either to auxiliary or to full verb status or have given them instead a sort of twilight existence between these two categories. The variety of names for these words reflects this confusion: "catenatives,"³ "verbs of temporal aspect," "auxiliaries of aspect," "quasi-auxiliaries," "aspectual semi-auxiliaries," "aspectualizers," or "so-called verbs of temporal aspect." Those who give these words auxiliary status are often inconsistent or tentative in doing so and generally offer little justification for their classification. On the other hand, those who give these words main verb or intermediate status rely on syntactic evidence which is inconclusive or contradictory and neglect semantic evidence.

The problem of distinguishing catenatives from auxiliaries or main verbs is related to the problem of distinguishing auxiliaries from verbs by syntactic criteria alone. The generally accepted members of the category auxiliary, have, be, and the modals, do not constitute a homogeneous group syntactically. They have different morphological forms and occur in different positions and syntactic constructions. Particularly troublesome for the auxiliary-main verb dichotomy are borderline auxiliaries such as dare, need, used to, ought to, let's, or going to, which behave syntactically like auxiliaries in some respects and like main verbs in other respects.

Catenatives likewise show certain syntactic similarities with and differences from auxiliaries. They fail the major syntactic tests for auxiliaries: they require do in negation, inversion, and emphatic stress. Unlike auxiliaries, catenatives occur in chains of varied order but within a practical limit of length. They may follow the modals, have, or be, and although some catenatives may precede have and be, aspectual catenatives cannot.

Membership in the category of catenative is open, whereas in that of auxiliary it is not. Catenatives may be inflected for the third person and past tense, unlike the modals but like have and be. They may be the first member of an imperative, unlike modals and have but like some instances of be. Like all auxiliaries, however, a catenative forms a single syntactic unit with the following verb, and these unified catenative constructions can be differentiated from other complex verbal constructions such as verbs with infinitives of purpose or result, verbs of emotion with infinitives, or verbs with participles modifying the subject (Palmer 1965:174-7). Moreover, aspectual catenatives have few selectional restrictions, for almost any English sentence can have a counterpart which includes one of these words. This lack of selectional restriction is a "hallmark of grammatical items" (García 1967). One should understand from the above comparison, therefore, that catenatives cannot be assigned conclusively to either auxiliary or main verb status on syntactic criteria alone.⁴

1.3 Main verb analyses of aspectual catenatives

Despite the inconclusiveness of the syntactic evidence, grammarians, whether traditional, structural, or generative, generally analyze catenatives as main verbs. In such an analysis, the central issues are the transitivity or intransitivity of the catenatives and the status of the following verbals, as objects or modifiers. Traditional grammarians argue that if the catenative is normally a transitive verb, then a following infinitive functions as a nominal object or complement and a following -ing form as a gerund or verbal noun. If the catenative is normally an intransitive verb, however, the following -ing form is a present participle or verbal adjective. Problems in this analysis arise, however, with "intransitive" catenatives which may nevertheless occur with infinitives. Palmer (1965:14-17, 150-9) correctly points out the difficulty of distinguishing nominal -ing forms from adjectival ones in the traditional analysis.

Several more recent theories concerning the status of aspectual catenatives are refinements of the "main verb analysis" of the auxiliary proposed initially by Ross (1967); this analysis sees the modals, have, and be as main verbs taking full sentential complements and having complex deep structures which are collapsed by various transformations. Comparing the sentences John intended to come tomorrow and John was coming tomorrow, Huddleston (1969) postulates a system of double tenses and double verbs for modals, aspectual auxiliaries, and catenatives. All are main verbs with sentential subjects. They select their tense separately from the second verb but may place a restriction on the tense of the next lower verb. For example, the aspectual catenatives, begin, start, continue, keep, cease, and stop, require a following present tense. Newmeyer (1975) also argues that "verbs of initiation, duration, and cessation" as well as other catenatives and the modals are always intransitive main verbs with propositional subjects. In a more detailed analysis than these, Perlmutter (1970:107-19) argues

that the aspectual verb begin may take two distinct deep structures: 1) begin may be a transitive verb with a sentential object, as in cases where begin has an animate subject and the like subject constraint holds, or 2) begin may be an intransitive verb with a sentential subject, where begin has an inanimate subject (e.g., Zeke began to work or Oil began to gush from the well).

2 Establishing the status of aspectual catenatives

2.1 Semantic arguments for the status of aspectual catenatives

The above review of syntactically-based studies has manifested, it is hoped, the shortcomings of trying to decide on syntactic grounds alone whether aspectual catenatives are main verbs or auxiliaries. Using primarily semantic evidence, this section of the paper presents several arguments for the grammatical status of aspectual catenatives as auxiliaries. Both the functioning of the catenatives in expressing aspectual notions and the functioning of the following verbals in expressing lexical notions are examined in order to show that the words are, respectively, auxiliaries and main verbs.

The lexical content of aspectual catenatives such as begin, cease, and continue corresponds to the universal aspectual categories, inchoative, perfective, imperfective, and iterative aspect, which in languages other than English are often given formal expression in verbal inflections or auxiliaries. The aspectual catenatives originated in the history of English as lexical main verbs, but their inherent meanings have become formalized and their function grammaticalized.⁵ In a similar development, the modal auxiliaries, perfect have, and progressive be began as main verbs; the progressive is thought to have originated in a construction with main verb beon and either an adjectival or a nominal -ing form, and the perfect in a construction with main verb habban meaning 'hold' (or beon) and an adjectival -en form. As these constructions became verbal periphrases, have and be lost their verbal character. The modals began, of course, as preterite-present verbs. In addition to functioning as aspectual or modal auxiliaries, all of the accepted auxiliaries function sometimes as main verbs in modern English, although the modals do so rarely now. The aspectual catenatives likewise retain main verb uses; in fact, they keep more main verb characteristics and uses than do the other auxiliaries. The aspectual catenatives and the main verbs from which they originate often contrast in their syntax, semantics, and even phonological shape:

<u>Main Verb</u>	<u>Catenative</u>
2) He stopped to eat.	He stopped eating .
He came, to find that I was out.	He came to see that he was
She is going (to the party) to	wrong.
make him happy.	She's going to make him happy.
Despite the bad road, he went on.	She went on speaking.
He used her car.	He used to swim daily.
He gave up, fuming. Fuming, he	He gave up smoking.
gave up.	

The similarity in semantic function of the catenatives of aspect and the accepted aspectual auxiliaries is evidenced by their interchangeability. The catenatives and auxiliaries of mood, tense, and voice may likewise replace one another:

	<u>Auxiliary</u>	<u>Catenative</u>
3) Voice:	He was killed.	He got killed.
Mood:	He should be in his office.	He is supposed to be in his office.
Tense:	John will arrive tomorrow.	John is going to arrive tomorrow.
Aspect:	He was sitting there for hours.	He continued to sit there for hours.

On the bases of development, meaning, and function, therefore, the aspectual catenatives may be said to be only arbitrarily distinguished from the accepted aspectual auxiliaries have and be, just as catenatives of mood, voice, and tense are from the corresponding auxiliaries.

Two other tests also point to the semantic similarity of auxiliaries and catenatives. The first, remarked upon by García (1967), is that with catenatives and true auxiliaries there is passivization across the infinitive and preceding catenative, but such does not occur with other complex verbal structures:

4) John began to kill Tom.	}	Catenative
Tom began to be killed by John.		
Sue continued to write novels.		
Novels continued to be written by Sue.	}	Auxiliary
Bill was driving race cars.		
Race cars were being driven by Bill.		
Jane has to find a job.		
A job has to be found by Jane.	}	Main Verb
Tom wished to kill John.		
John wished to be killed by Tom.		
Jack stopped to eat dinner.	}	
*Dinner stopped to be eaten by Jack.		

The second test, remarked upon by Anderson (1968), is that catenatives, like auxiliaries, are "transparent" to verbal restrictions and can be defined entirely in terms of the surrounding verbs. For example, the verb ask imposes a restriction on the following verb that it express a voluntary action. A true verb such as try can meet this restriction, whereas a catenative such as begin cannot; the verb after begin itself meets the restriction:

5) *ask him to hear [-vol]	ask him to listen [+vol]
ask him to try to hear	ask him to try to listen
*ask him to {begin continue cease} to hear	ask him to {begin continue cease} to listen

2.2 An analysis of aspectual catenatives in logical terms

The most important argument for the status of aspectual catenatives as auxiliaries involves a semantic analysis of them. Aspectual catenatives are analyzable entirely in terms of logical notions with no reference to lexical ones.⁶ This section of the paper will summarize several different semantic analyses and then present a synthesis.

Anderson (1968) concludes from the transparency of words such as begin that they have no independent meaning and need not appear in the lexicon. Sentences with these verbs have the following paraphrases:

- 6) begin NP₁ not VP stop NP₁ VP continue NP₁ VP
 NP_x V_x NP₁ NP_x V_x NP₁ NP_x V_x NP₁
 NP₁ VP NP₁ not VP NP₁ VP

These paraphrases are not reduced by syntactic transformations but are, in fact, part of the semantic component itself. The other semantic interpretations of the aspectual catenatives propose that they are in underlying structure either single predicates (verbs) or configurations of such predicates.⁷ These predicates consist, however, only of logical structures. They occur in complex structures which are reduced by transformations. Dowty (1972) argues that inchoative "aspectual verbs" involve a component COME ABOUT (or BECOME) and a stative with a sentential subject. In von Wright's change of state logic, they express -pTp ('not p and then p'). He also suggests that pT-p ('p and then not p') might be represented by the predicate END and pTp ('p and then p') by REMAIN. Cook (1976) pursues Dowty's suggestion for the predicate REMAIN or "durative aspect," which has surface manifestation in the "aspectual verbs" keep and stay. The durative may occur in conjunction with states or processes or with causative states, processes, or actions. The durative is in the first case a one-place predicate (intransitive) with sentential subject and in the second a two-place predicate (transitive) with sentential object. The possibilities are as follows:

- 7) durative state: The water stayed calm.
 durative process: It kept raining.
 causative durative state: Stay off the grass. Keep off the grass. He kept his car in the garage.
 causative durative process: He kept the water running.
 causative durative action: He kept the men working. Keep smiling.

Several criticisms may be raised to the above analyses. The first objection is to the second line of Anderson's paraphrases which reads NP_x V_x NP₁. The line suggests that an agent acts upon the subject of the catenatives, but in many sentences, this is

simply not the case. The second objection is that Cook's designations "durative state" and "durative process" are redundant, because states and processes are inherently durative. This redundancy shows, therefore, that REMAIN is perhaps not the correct analysis of keep and stay. An alternative analysis in Parisi and Antinucci (1976) corrects this difficulty. They argue that inchoative verbs and their paraphrases with become, begin, start, and get consist of the predicate CHANGE plus a stative. The terminative stop consists of the predicates CHANGE and NEG meaning 'change to not,' and, finally, the duratives keep, stay, and continue have the configuration NEG CHANGE NEG meaning 'not change to not.' One may conclude that aspectual catenatives cannot always be represented with a single predicate but may require a more complex configuration of predicates. A second, more important objection is the conception of aspectual catenatives as predicates or verbs. The findings of these analyses, namely that aspectual catenatives can be understood strictly in terms of logical concepts and seem to express no lexical meaning, argue against such a conception. They seem to show, in fact, that these catenatives express auxiliary meaning. Using the semantic insights of these studies without their syntactic frameworks, I offer the following analysis of aspectual catenatives as auxiliaries

8) <u>Catenatives</u>	<u>Aspect</u>	<u>Semantic Component</u>	<u>Change of State Calculus</u>
begin, start	Inchoative	COME ABOUT	-pTp
finish, stop	Terminative	END	pT-p
keep on } continue }	Continuative Iterative	CONTINUE } REPEAT }	pTp

2.3 The verbals following aspectual catenatives

A final argument for aspectual catenatives as auxiliaries concerns the verbals--infinitives, participles, or gerunds--which follow them. These verbals are not analyzable in logical or grammatical terms only. In fact, they express the primary lexical or verbal meaning of the sentence and compare in form and function with the verbals following have, be, and the modals.⁸ As we have seen above, interpreting them as objects or complements to main verbs is problematical and interpreting them as the second main verb in a complex structure is undesirable.

3 Conclusion

The arguments in this paper have attempted to show that to determine the grammatical status of aspectuals such as begin, finish, or continue, the use of syntactic criteria alone is insufficient. One must consider a variety of criteria. Primarily, one should compare the aspectual catenatives with the aspectual auxiliaries, progressive be and perfect have. Similar to these auxil-

iaries, the catenatives express universal aspectual distinction; they are distinguishable in various ways from their main verb counterparts; they are analyzable with logical rather than lexical notions. Much work needs to be done yet in the tabulation and classification of aspectual catenatives, in the study of their historical development, and in the analysis of their function in the aspectual meaning of the English sentence as a whole, yet one conclusion has perhaps been reached by this paper: terms such as "verbs of temporal aspect" or "aspectual semi-auxiliaries" or even "catenatives of aspect" can be rejected in favor of the simpler and more everyday term "auxiliaries of aspect."

Notes

1. In addition to traditional treatments of these verbs, there are, in fact, several generative studies of the "begin-class of verbs" (e.g., Perlmutter 1970; Newmeyer 1975), but they consider primarily syntactic features. A book which examines the semantic properties of these aspectual verbs in detail, Freed (1979), came to my attention too late for thorough consideration in this paper.

2. This list represents, of course, a compromise among the various scholars, for occasionally the syntactic environments in which they show the catenatives occurring differ. These differences may often be explained by the varying ages of their examples. Several of the constructions listed above seem to me archaic or literary, but I include them for the sake of completeness.

3. A catenative is generally defined as a main verb, but I use catenative as a neutral term meaning a word which combines in linked chains with other verbal elements.

4. Indeed, it seems that auxiliary cannot be defined in syntactic terms alone. Steele (1978) suggests that the universal category AUX is in part defined by a notional set which contains modality, tense, or aspect.

5. Traugott (1980) supplies several examples from the history of English of this process of "delexicalization" or "grammaticalization," i.e., the development of autonomous word into grammatical markers. Of particular interest are the change of locative adverbs/prepositions into "aktionsart" particles and the change of Old English main verbs into auxiliaries (magan-->may, cunnan-->can).

6. Of course, main verb occurrences of these words may require lexical notions in their definitions. For example, quit as a main verb usually means 'dropping out of' or 'no longer participating in' (Freed 1979:119). Freed explains the occurrence of aspectual verbs with derived nominals or primitive nouns in the following ways: in the former case, the nouns are derived from an S or a VP which contains a full verb. In the latter case, either a verbal part has been deleted and is easily retrievable or the nouns themselves express events, continuing activities, or results of events or have clear beginnings or endings.

7. One might compare McCawley's analysis (1971) of all instances of the auxiliary have as an underlying PAST and Parisi and Antinucci's analysis (1976) of modal auxiliaries in terms of the semantic predicates BIND and BELIEVE.

8. Although Freed (1979) views aspectual catenatives as main verbs taking sentential complements, she admits that "since aspectualizers are . . . verbs which specifically operate on forms that name events, such sentences may be thought of as primarily descriptive of the complement events" (p. 17).

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THE PASSIVE IN SLIAMMON

John H. Davis
University of California, Berkeley

1. Overview [1]

Whether or not Sliammon, a Salishan language of the Pacific Northwest spoken 200 miles to the north of the Puget Sound area, has a true passive construction is not immediately clear. We shall see, however, that in Sliammon passive predicates, the patient, while morphologically marked as an object, behaves syntactically like a subject. Thus, Sliammon has in actuality a personal passive construction in which the subject pronoun happens to look like an object morphologically. Therefore Sliammon is not radically different from its sister language Lushootseed, which can easily be shown to have a true passive on morphological grounds.

2. The Passive in Lushootseed [2]

In "Toward a Universal Characterization of Passivization", Perlmutter and Postal (1977:399) state that "a direct object of an active clause is the (superficial) subject of the 'corresponding' passive". This formulation adequately describes the passive in Lushootseed, an American Indian language spoken in the Puget Sound area. In Lushootseed, the superficial or derived subject of a passive predicate (ex. 1) is morphologically marked like the subject of an intransitive predicate (compare ex. 3-4). Furthermore, the passive predicate itself does not carry the morpheme which marks the patient as an object -- as does the corresponding active (ex. 2). [3]

- | | | |
|--|-------------------------|-------------------|
| (1) Čáx ^w a-t-əb
club-trans-intr | čəx ^w
you | 'you are clubbed' |
| (2) Čáx ^w a-t-sid
club-trans-you | čəd
I | 'I club you' |
| (3) x ^w ít'il
fall | čəx ^w
you | 'you fall' |
| (4) ʔíboš
walk | čəx ^w
you | 'you walk' |

Lushootseed forms the passive by combining the transitive marker /-t/ with the intransitive marker /-əb/ (ex. 1).

3. The Problem in Sliammon [4]

Sliammon, a closely related language spoken 200 miles to the north of the Lushootseed area, treats similar predicates somewhat differently. The predicate analogous to the Lushootseed passive appears to lack a subject (5, cf 1): morphologically it appears to have only an incorporated object so that it looks more like the corresponding active predicate (ex. 6, cf 2) than like the intransitives (ex. 7-8).

- | | | | |
|-----|------------------------------------|------------|-------------------|
| (5) | sóp-t-si-əm
club-trans-you-intr | | 'you are clubbed' |
| (6) | sóp-t-si
club-trans-you | č
I | 'I club you' |
| (7) | xʷə́təm
fall | čxʷ
you | 'you fall' |
| (8) | ʔíməš
walk | čxʷ
you | 'you walk' |

(ex 5) shows the same strategy as in Lushootseed: the combination of the transitive suffix /-t/ and the intransitive suffix /-əm/ -- but Sliammon retains the object pronoun.

There are three possible explanations for (ex 5): (a) It is an impersonal passive (cf. Comrie 1977 and Perlmutter 1978). (b) It is not a passive at all. (c) It is a personal passive, and the one pronoun associated with it is its subject, which just happens to look like an object.

Going beyond morphology and looking at syntactic criteria, however, I will argue that the one pronoun in (5) is the syntactic subject, and that therefore this form of the predicate is indeed a personal passive.

4. Case Marking in Third Person [5]

Sliammon has a third person agent suffix /-əs/ (glossed as '(s)he'), but has no third person object pronouns. Furthermore, the NPs which designate third person subject and third person object of an active transitive predicate are morphologically unmarked: word order alone

distinguishes between them, as in (9-10), where switching the NPs around produces a change in meaning.

- | | | | | |
|------|---------------------------------|-----|-----|--------------------|
| (9) | qéqəy-t-əs
beat -trans-(s)he | Joe | Jim | 'Joe beats Jim up' |
| (10) | qéqəy-t-əs | Jim | Joe | 'Jim beats Joe up' |

In contrast, the agent of a passive predicate is marked by the preposition /ʔə/ while the other NP remains unmarked. Such being the case, as in (ex 11-12), the NPs can be switched around with no change in meaning.

- (11) qəqay-t-əm ?ə Joe Jim 'Jim is being beaten up
beat-trans-intr by Joe'
- (12) qəqay-t-əm Jim ?ə Joe (same meaning)

The appearance of the preposition marking the agent of the passive suggests that the agent is not the subject. Throughout the remainder of this paper we will see more evidence that it is not, showing that it conforms to Comrie's notion of SUBJECT REMOVAL (1977:58). I will also present evidence that the patient is the syntactic subject and conforms to the criterion of OBJECT PROMOTION (Comrie 1977:58).

5. Passive Patient as Subject

(ex 13, cf9) illustrates that when an embedded clause is marked with the subordinating proclitic /s/ [6], the agent suffix /-əs/ is replaced with the suffix /-s/. (ex 14) illustrates that the subject of an embedded clause can be raised to become the object of the matrix clause. However (15) shows that the object of the embedded clause cannot be similarly raised: whichever NP is raised is interpreted as subject of the embedded clause.

- (13) pápɤʷa-t č s qóqɔy-t-s Joe Jim 'I watch Joe
watch-trans I that beat-tr-(s)he beat Jim up'
- (14) pápɤʷa-t č Joe s qóqɔy-t-s Jim (same meaning)
- (15) pápɤʷa-t č Jim s qóqɔy-t-s Joe 'I watch Jim
beat Joe up'

In the next set, (16) illustrates that passive predicates with the subordinating particle /s/ take the suffix /-it/ instead of the suffix /-əm/. (17) shows that the patient

'Jim' is promoted to subject status: just like the subject of an active predicate, it can be raised to become the object of the matrix clause. Notice now in (18 a-b) that the agent cannot be raised to become the object of the matrix clause; therefore it has been demoted from subject-hood.

(16) pápk^wa-t č s qəqəy-t-it ?ə Joe Jim 'I watch Jim
watch-trans I that beat-tr-intr being beaten up
by Joe'

(17) pápk^wa-t č Jim s qəqəy-t-it ?ə Joe (same meaning)

(18a) *pápk^wa-t č Joe s qəqəy-t-it Jim

(18b) *pápk^wa-t č ?ə Joe s qəqəy-t-it Jim

6. Ascension Copy

When the subject of an active predicate in an embedded clause is raised to object of the matrix clause, as in (14), a subject marker remains behind in the embedded clause. This is also true of first and second person. We see in (19) that the subject pronoun of the independent clause is /čx^w/. In (20) this is replaced by the pronoun /θ/, glossed as 'that you', and the second person object pronoun is attached to the matrix predicate [7]. Within the framework of Relational Grammar, this phenomenon of copying the embedded subject as a matrix object is called ascension copy.

(19) qəqəy-t čx^w Joe 'you beat Joe up'
beat-trans you

(20) pápk^wa-t-si č θ qəqəy-t Joe 'I watch you beat
watch-trans-you I that Joe up'
you

(17-18) provided evidence that a third person patient of a passive predicate is subject of that predicate. (23-24) give parallel evidence for second person. The patient of the passive clause in (22) is marked morphologically the same as the patient of the active clause in (21), while the agent is not marked the same (cf 11-12).

(21) qəqəy-t-si-əs Joe 'Joe is beating you up'
beat-trans-you-(s)he

(22) qəqəy-t-si-əm ?ə Joe 'you're being beaten up by
Joe'

Parallel to (17-18), (23-24) illustrate that with passive predicates, agents are demoted from subject with a concomitant promotion to subjecthood for patients.

(23) pápk^wa-t-si č s qóqəy-t-si-it ?ə Joe
 watch -trans-you I that beat-tr-you-intr
 'I watch you being beaten up by Joe'

(24a) *pápk^wa-t č Joe s qóqəy-t-si-it

(24b) *pápk^wa-t č ?ə Joe s qóqəy-t-si-it

7. Lack of Object-to-Object Ascension Copy

We have seen (in 14-15) that a third person object of an active predicate cannot be raised to become the object of the matrix clause. Let us look at parallel evidence for second person.

In (25a-b) we see that the subject of an active predicate is raised to become the object of the matrix clause, just like (14) and (15).

(25a) qóqəy-t-si-əs Joe 'Joe is beating you up'
 beat-trans-you-(s)he

(25b) pápk^wa-t č Joe s qóqəy-t-si-s 'I watch Joe
 watch-trans I that beating you up'

There is, however, no way to copy the object of an embedded active predicate: (26a) would be a simple copy keeping the subordinating proclitic /s/; (26b) would be parallel to (20) in that the pronoun /ə/ 'that you' appears; (26c) would illustrate the case where both /s/ and /ə/ were absent. All three examples are ungrammatical.

(26a) *pápk^wa-t-si č s qóqəy-t-si-s Joe

(26b) *pápk^wa-t-si č ə qóqəy-t-si-s Joe

(26c) *pápk^wa-t-si č qóqəy-t-si-s Joe

Just as Sliammon blocks object-to-object raising in the third person active, so does it block object-to-object ascension copy in the second person active. However, we have seen that Sliammon does allow ascension of the patient in both the second and third person passive, thus providing evidence that the pronoun morpheme which looks like an object is really the superficial subject of the passive.

8. Morphology versus Syntax

Sliammon is not alone in having syntax and morphology conflict in the passive. Timberlake (1976:567), in his article "Subject Properties in the North Russian Passive",

wrote

the underlying subject in the N[orth] R[ussian] passive constructions behaves like a subject with respect to all rules except case and agreement.

This analogy holds even though the difference between the NR data and the Sliammon is that the NR agent has been demoted from being morphologically marked as subject **while still behaving** syntactically as subject, while the Sliammon patient has been promoted to behaving syntactically as subject even though it is morphologically marked as object.

Morphological marking appears to be important to Dixon (1979:119) when he writes in his article "Ergativity":

One major use [of the passive] is to bring an O NP (which would otherwise be marked accusative case) into a surface function where it bears the unmarked nominative inflection.

It can be debated to what extent this statement characterizes Sliammon. It is possible, for example, to analyze second person as not deriving from an NP at all [8]. Furthermore, in third person, where there are indisputable NPs, object and subject are not morphologically distinguishable.

On the other hand, Dixon's statement accurately characterizes Sliammon in that the passive does bring an object into the function of a subject without undergoing case marking -- which some consider a low level rule, as does Dixon (1979:119): [9]

case marking is plainly a late rule of the grammar, applying to surface structures after all syntactic operations (including passive/antipassive) have applied.

Why should the subject of a Sliammon passive look, morphologically, like an object? There are two possible reasons. One is that it is semantically the recipient of an action, so it should be marked as the recipient. The second is that passives in Sliammon are transparently derived from actives with the simple addition of a suffix: keeping the original object marked as an object simplifies the rule for deriving a passive.

9. A Possible Continuum of Passivity

Of Cowichan, which is even more closely related to Sliammon than is Lushootseed, Hukari (1976) writes

Cowichan passives represent a mixed category in surface form. They are based on transitive stems and permit inflection for object but not for subject. Two passive constructions exist: the medio-passive ending in /-m/ and the dependent passive ending in /-t/.

This situation is the same as in Sliammon, which has the endings /-əm/ and /-it/ respectively. Illustrative morphological data are: (Hukari, personal communication)

- (27a) lémə-t-əs t^θ Joe t^θ Jim 'Joe looks at Jim'
look-trans-(s)he the the
- (27b) lémə-t-əm ʔəʃ Joe t^θ Jim 'Jim's looked at by Joe'
look-trans-intr by the
- (27c) lémə-t-sámə cən 'I look at you'
look-trans-you I
- (27d) lémə-t-sá·m ʔəʃ Joe 'you're looked at by Joe'
look-trans-you-intr by

In Lushootseed the patient of the passive is overtly marked as subject (5). In Sliammon and Cowichan, on the other hand, the patient of the passive is marked the same as the patient of the active.

I have presented data which show the patient of the passive in Sliammon having subject properties. To date, these data have not been replicated in Cowichan [10]. If they cannot be, then it may be possible to make a case for a continuum:

Cowichan-----Sliammon-----Lushootseed
(less passive) (more passive)

Where the patient of the Cowichan passive shows the fewest subject properties and the patient of the Lushootseed passive shows the most subject properties.

NOTES

[1] I wish to thank Tom Hukari of the University of Victoria, Sarah Bell of the University of British Columbia, and Marilyn Silva and Jack DuBois of the University of California, Berkeley, for their patience in discussing the data contained herein with me; also Tom Hukari and Suzanne Rose for reading an early draft, Marilyn Silva for her considerable editorial expertise, and Danny Alford for typing the manuscript. Needless to say, any mistakes remain my own.

[2] For a published description of the same situation using cognate morphemes in the closely related Squamish language, see Kuipers (1967:68-70).

[3] Data from Thom Hess (1976 and personal communication).

[4] This language was originally called Comox, a name given by Franz Boas. However, "Comox" is a foreign name, given them by the Kwakiutl with whom Boas worked. The language consists of four dialects: /θáθúɬxʷ/ on Vancouver Island and, on the mainland, /ʃʷumáɬkʷu/, /ʃáhus/, and /ʔáʔamən/, which is pronounced in English as "Sliammon".

[5] For a description of the same situation in the closely related Halkomelem language see Hukari (1976) and Leslie (1979).

[6] For additional illustrative data see Davis 1978(b).

[7] For a full exposition of the pronominal system see Davis 1978(a).

[8] For full argumentation of the identical situation in Cowichan, see Hukari (1976).

[9] As a possible counter-example to Dixon, note that in North Russian case marking is the only subject property lost in demotion -- while in Sliammon case marking is the only subject **property** not acquired in promotion.

[10] Cowichan is the Vancouver Island dialect of the Halkomelem language. Donna Gerdts, working on Halkomelem spoken on the mainland of British Columbia, has said (personal communication) that she has found syntactic rules that apply to the patient of the passive but not to the patient of the active; Tom Hukari (personal communication) has said that he has not found the same restriction in the Vancouver Island dialect.

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ON THE NATURE OF ANAPHORIC RESTRICTIONS

Jeanette Speer DeCarrico
 University of Washington
 and
 Portland State University

This paper focuses on the anaphoric options of indefinite noun phrases, as compared with those of definite noun phrases. It will be argued that both semantic and syntactic restrictions must be included in the grammar in order to explain the full range of data for these NPs, and that previous investigations have been inadequate because they have centered on either syntactic or semantic restrictions, while more or less ignoring other aspects (cf. for example, Jackendoff (1971), Lasnik (1976), or Reinhart (1976), among others).

It is well known that indefinite NPs and definite NPs behave differently with respect to their anaphoric options. Very likely, this difference in patterning is the reason that previous writers have tended to treat indefinites and definites separately. However, if these two types of NPs are considered together, that is, if they are compared in parallel contexts, it becomes evident that the distinction of definiteness and indefiniteness does not account for the differences in anaphoric options, and that the nature of anaphoric restrictions must be re-examined accordingly. The examples below illustrate this point.

- (1) a. *He gave up his gun to the sheriff after
 a cowboy shot up the town last night.
 b. *He gave up his gun to the sheriff after
 Bill shot up the town last night.
 c. After he shot up the town last night,
 a cowboy gave up his gun to the sheriff.
 d. After he shot up the town last night,
 Bill gave up his gun to the sheriff.
- (2) a. *That a cowboy was arrested last night
 surprised him.
 b. That Bill was arrested last night
 surprised him.
 c. *That he was arrested last night angered
 a cowboy.
 d. That he was arrested last night angered
 Bill.

- (3) a. *Bill wants to hire a good typist.
 Unfortunately, she prefers to dance
 at the cabaret.
 b. Bill wants to hire Millie. Unfortunately,
she prefers to dance at the cabaret.

Consider first the data in (1). In these examples, unlike those in (2) and (3), the indefinite NPs pattern the same as the definite NPs, in that the anaphoric options are the same. Notice also that in (1) the only difference between the starred examples and the coreferential ones appears to be syntactic in nature. Sentences (1a,b) show that for both definite and indefinite NPs, when the pronoun is in a main clause anaphoric relations are blocked. But when the pronoun is in a subordinate clause, anaphoric relations are allowed, as in (1c,d).

Syntactic data like these are easily accounted for by familiar syntactic restrictions on 'backward' anaphora. For example, these NPs and pronouns all pattern according to the syntactic restriction in Reinhart (1976), repeated below.

(4) General Coreference Restriction

Two NPs cannot be coreferential if one is in the syntactic domain of the other and is not a pronoun.

(The syntactic domain of a node A is said to be in the subtree dominated by the first branching node which dominates A.)¹

In (1a,b), the full NP is in the syntactic domain of the pronoun (i.e. is 'c-commanded' by the pronoun), and coreference is blocked; in (1c,d), on the other hand, the pronoun is in the syntactic domain of the full NP, and coreference is allowed.

However, no syntactic restriction can account for the differences in (2) and (3), in which the indefinites and definites do not pattern in the same way. In the sentences of (2), there is no case in which one NP is in the domain of the other, and yet the indefinites are blocked, although the definites are allowed. Likewise in (3), the discourse level examples, there is no domain relationship between the two NPs. Nonetheless, an anaphoric reading of the indefinite in (3a) is decidedly strange. There is no way, then, that Reinhart's syntactic restriction can explain the different patterning of the indefinite NPs in examples like those

in (2) and (3).²

The reason seems to be that unlike the examples in (1), the differences here are semantic ones, not syntactic ones. In other words, in the indefinite/definite pairs in (2a,b) and (2c,d), the syntax is identical. The same is true in (3a,b). The difference is that the starred examples contain indefinites whereas the coreferential ones contain definites. This difference in patterning must therefore be the result of a difference in the semantic nature of the NPs.

Apparently, then, some kind of semantic restriction is required here. The main problem is that the restriction must be formulated so as to block the indefinites in (2) and (3), but not the one in (1c). It is not simply that indefinites are blocked unless the pronoun is in a subordinate clause. Compare the sentences in (3a) with the one in (5) below.

- (5) Bill wants to hire a good dancer. He wants to put her in the chorus line.

Unlike (3a), example (5) seems entirely natural on an anaphoric reading.

My argument is that the solution lies in making the correct distinction between the types of indefinites involved. In the past, some writers working with restrictions on indefinites, like Wasow (1972) or Reinhart (1976), have simply lumped all of these indefinites together into a single category, labeled "nondefinite." But this classification is too broad. The distinction needed here is between those indefinites which can receive only a specific interpretation, and those which may receive a nonspecific interpretation. Briefly, following Quine (1960), specifics can be defined as those which establish an identifiable referent (i.e. those in "transparent" contexts), and non-specifics as those which do not necessarily establish an identifiable referent (i.e. those in want type "opaque" contexts). This difference is illustrated below.

- (6) a. John wants to catch a fish.
b. A mongoose devoured my pet rat.

In (6a), on the nonspecific reading John wants to catch just any old fish that happens along.³

In (6b), on the other hand, there is an identifiable referent, in the sense that there is a particular mongoose which devoured my pet rat.

With these classifications, we can distinguish the indefinite in (3a), a good typist, as non-specific: it appears in a want type context, and no identifiable referent is established.

Next, we can distinguish the indefinites in (2) as nonspecific also.⁴ Certain writers, like Abbott (1976) and Fodor (1976), have argued that it is not just the much discussed verbs like want, expect, and the like, that induce opaque contexts. Abbott provides an especially convincing argument that with very few exceptions, nearly all complement taking verbs induce opacity. One of her examples is repeated in (7).

- (7) That Mary kissed a boy from Texas was assumed by Jack.

Again, no identifiable referent is established, and the NP a boy from Texas is nonspecific, in the sense outlined above. In a parallel manner, the indefinite NPs in the complement clauses in (2) can also be identified as nonspecific.

With these distinctions in mind, the next step is to formulate a semantic restriction to account for the semantic differences in (2) and (3). The restriction I want to propose is based on the concept of semantic contradiction, which can be informally stated as follows: Semantic Contradiction arises if an NP₁ is nonspecific, and its intended coreferent, NP₂, is specific.⁵ In short, they are semantically incompatible. The constraint itself can be formulated to reflect this generalization, as in (8) below.

- (8) Semantic Contradiction Constraint (SCC)
An intended anaphor/antecedent relation is blocked if semantic contradiction is present.

This constraint accounts for the data in both (2) and (3). The definites are of course interpreted as specific NPs, opaque contexts or not. But the indefinites in (2a,c) are blocked because one NP is nonspecific--the one in the opaque complement clause--and the other is specific. Likewise in (3a), a good typist is nonspecific while she is a specific pronoun. Further, SCC also accounts for

the completely natural anaphoric interpretation in (5). In this case, both NPs are in opaque want contexts, both are nonspecific, and thus the anaphor is not blocked.

That leaves the indefinites in (1). In these sentences there are no opaque contexts, the indefinites are specific, and therefore semantic constraints like SCC are inapplicable. Yet (1a) is blocked anyway. However, notice that it is just these specific indefinites which pattern like definite NPs, obeying the same syntactic restrictions. Recall that, like the definite in (1b), the specific indefinite in (1a) is out by syntactic restrictions on backward anaphora. For example, both would be blocked by Reinhart's syntactic restriction, as discussed earlier.

Based on data like those above, then, my conclusions are that both semantic and syntactic constraints operate to restrict the anaphor/antecedent interpretation. Syntactic constraints operate to restrict both definite and indefinite NPs, as in (1), and semantic constraints operate to further restrict the anaphoric options of indefinite NPs, as in (2), (3), and (5).

FOOTNOTES

1. See Reinhart (1976) for a detailed discussion of the 'c-command' relation.
2. Actually, Reinhart argues for a separate syntactic restriction for indefinites, and this restriction is intended to account for examples like those in (2). However, this restriction makes the wrong predictions for sentences like (1a), (1c), and (3a). In short, her argument does not take into account the differences found between transparent and opaque contexts.
3. The semantics of specific/nonspecific interpretations is of course much more complex than it is made to appear here. For example, because of space limitations I am ignoring the complexities of the much discussed ambiguity between specific/nonspecific interpretations in want type opaque contexts. See DeCarrico (1980b) for a detailed discussion of the forced nonspecific interpretation of anaphoric indefinites in opaque contexts.

4. Jackendoff (1971), working within a semantic framework, is one writer who does make these specific/nonspecific distinctions, and who attempts to formulate a coreference restriction accordingly. However, his restriction can account for semantic data like those in (3) only. It cannot explain semantic data like those in (2), nor can it account for syntactic data like those in (1).

5. For the sake of brevity, and in keeping with the necessarily limited scope of this paper, this definition of semantic contradiction is much abbreviated and inadequately formulated. For a detailed discussion of this concept, covering a much broader range of data, see DeCarrico (1980a).

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Ascensions to Subject in Blackfoot

Donald G. Frantz

University of Lethbridge

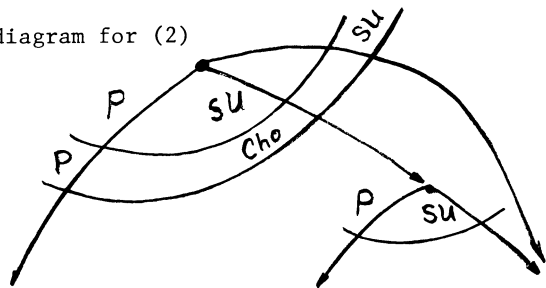
Blackfoot has been shown to be very liberal in the range of ascensions it permits for nominals of embedded clauses (Frantz 1978).¹ This paper examines, within the relational grammar (RG) framework, constraints on ascensions for predicates which take clauses as initial subject. It is found that there are two major types: predicates which allow ascension of the final subject of the downstairs clause, and predicates which allow ascension of non-subjects (primarily direct objects); only the latter type allow ascensions with a domain greater than two clauses. We note in passing that within the TG framework, the latter type ascensions are violations of both the "specified subject condition" and the "subjacency condition" of Chomsky 1977.

Blackfoot verbs agree with their final subject (SU) and direct object (DO) in person and (in most cases) number. In (1) the downstairs (DS) clause (in brackets) is SU of the upstairs (US) clause. The US verb is inflected for third person singular by suffix -wa '3s', and the stem shape is that used with an inanimate gender final SU. The DS verb is also inflected for third person by prefix ot- '3' (the inflectional system is slightly different for embedded clauses), in agreement with SU koko'siksi. Sentences (2) - (4) are paraphrases of (1).

- (1) Iksipisata'pi-wa [ot-sa-wattsiiyi-hsi k-oko'siksi].
surprising (inan)-3s 3-neg-drunk-subord 2-offspring:p
'It's surprising that your kids weren't drunk.'
- (2) Iksipisata'pssi-yi [otsawattsiiyihsi koko'siksi].
surprising (anim)-3p
- (3) Iksipi'sata'pssiyi koko'siksi otsawattsiiyihsi.
- (4) Iksipisata'pssiyi koko'siksi [otsawattsiiyihs-aawa].
-PRO(3p)

In (2) - (4), the US verb stem is that used with an animate gender final SU, and the US verb is inflected for third person plural by -yi '3p'. I claim that koko'siksi 'your kids' is final (but not initial) SU of the US clause in (2) - (4). That is, I claim that (2) - (4) involve 'ascensions'. (The US relation of the ascende is as predicted by Perlmutter and Postal's well supported 'Relational Succession Law'.) Ascensions are defined in RG as the head of a DS arc also heading a non-initial US arc, as shown in stratal diagram (5).

(5) Stratal diagram for (2)



Iksipisata'pssiyi
'surprising'

otsawattsiyyihsi
'not drunk'

koko'siksi.
'your kids'

Evidence for the final relations of this ascension includes:

1. The US verb has the animate gender form.²
2. The US verb agrees with the ascendee koko'siksi.
3. The ascendee may be positioned according to either the final US or final DS relation, as discussed in Frantz 1979; compare (2), in which koko'siksi is clearly a DS constituent, with (4) in which koko'siksi is an US constituent, and a 'replacer' (clitic pronoun -aawa '3p') is the final ds SU. The constituency of koko'siksi in (3) is indeterminate.³

It should be evident at this point that ascensions, like other rules of RG, are quite a different thing from the "movements" of transformational grammar; the former involve non-initial relations which do not necessarily correlate with positional differences when comparing paraphrases. And in fact it is not possible to treat (2), in comparison to (1), as involving a movement, for the linear position of the ascendee is the same in both (1) and (2).

The ascension involved in (2) - (4) is clearly "governed" by the US predicate. Ipisata'p- is representative of a small class of predicates which also includes iska'nistsina- 'seem'. The examples above involve ascension of the (final) DS SU. (6) shows that it doesn't matter whether the DS clause is transitive, and (7) shows that the final DS direct object (DO) cannot be the ascendee with this predicate; (8) shows that an oblique cannot be the ascendee.

- (6) Kits-iksipisata'pssi [kit-sspomo-a-hsi n-oko'siksi].
2-surprising (anim) 2-help-direct-subord my-kids
'You are surprising that you helped my kids.'
- (7) *Iksipisata'pssi-yi noko'siksi [kitsspomoahs-aawa].
surprising-3p -PRO(3p)
('My kids are surprising that you helped them.')
- (8) *Iksipisata'pssi-wa n-itakkawa nits-itap-oo-hsi.
(My friend is surprising that I went to him.)

So it seems that ipisata'p- allows ascension of only DS SU. It remains to show that the ascendee must be a final DS SU. To do this, a clause is needed in which an initial SU is not a final

SU. The most likely candidate in Blackfoot is a class of clauses in which the "logical" SU of a transitive verb is semantically inanimate, for Blackfoot (and apparently most, if not all, Algonkian languages), does not allow semantically inanimate final ergatives. See (9).

- (9) N-imohts-issin-ookoo omiksi isskiksi.
 1-instr-hit-x:1/2 those pots
 'Those pots hit me.'

'Those pots', though of animate gender, is evidently a final SU-chomeur, the presence of which is registered in the verb with imoht- 'instr'. (10) shows that 'those pots' cannot be ascendeo to 'surprising', even though it is apparently DS initial SU, because it is not a final SU.⁴

- (10) *Iksipisata'pssi-yi [nimohtsissinookoohsi omiksi
(issikiksi)].
(*'Those pots are surprising that they hit me.'*)

It remains only to show that 'surprising', unlike a class of predicates to be discussed next, allows ascensions which have a two-clause domain and no more.⁵ This is shown in (11), which if good would involve an ascende^e from a clause within an embedded clause.

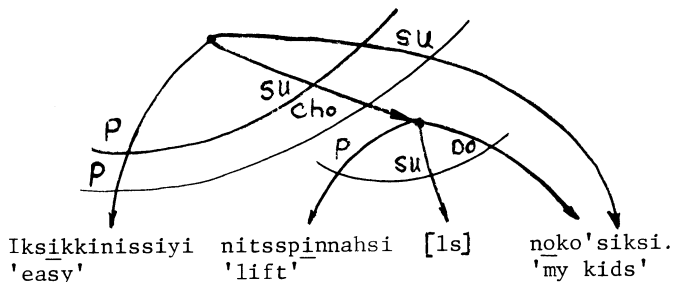
- (11) *Kits-iksipisata'pssi [ots-ikkinis-si [kit-aahk-sspiyi-
hsii]].
2-surprising (anim) 3-easy-subord 2-might-dance-subord
(*'You are surprising that it is easy for you to dance.'*)

Consider now (12) and its paraphrases (13) – (15).⁶

- (12) Iksikkinisi-wa [nit-sspinn-a-hsi noko'siksi].
easy(inan)-3s 1-lift-direct-subord
'It's easy for me to lift my kids.'
- (13) Iksikkinissi-yi [nitsspinnahsi noko'siksi].
easy(anim)-3p
- (14) Iksikkinissiyi noko'siksi nitsspinnahsi.
- (15) Iksikkinissiyi noko'siksi [nitsspinnahs-aawa].

In (12) the predicate iksikkinisiwa is inflected for '3s' in agreement with its clausal SU (in brackets). In (13) – (15), however, the US predicate agrees with the initial DS DO (noko'siksi), its stem shape is that required for an animate gender final SU, and noko'siksi can be a constituent of the US clause. Thus I claim that noko'siksi is final (but not initial) SU of iksikkin-issiyi in (12) – (15); i.e. that these sentences involve ascension of the DS DO, as diagrammed in (16).

(16)



Sentences (17) and (18) show that the ascendeer cannot be the DS SU.

- (17) *Nits-ikkinissi [nitsspinnahsi noko'siksi].
1 - easy(anim)
('I'm easy to lift my kids.')

- (18) *Iksikkinissi-yi noko'siksi ot-aohkitopi-ssi.
easy(anim)-3p 3-ride(horse)-subord
('My kids are easy that they ride.')

Sentences (20) and (21) show that the domain of ascension to 'easy' is not limited to two-clauses.

- (19) Iksikkinissi-wa [koko'siksi ot-aahk-anists-iksimsstaa-hsi]
easy(inan)-3s your:kids 3-might-manner-think-subord
[kit-aahk-sspin-oki-hsi].
2-might-lift-2:1-subord
'It's easy for your kids to think that you might lift me.'
- (20) Nits-ikkinissi [koko'siksi otaahkanistsiksimsstaahsi
1-easy(anim) [kitaahksspinnokihsi]].
'I'm easy for your kids to think that you might lift [me].'
- (21) Nitsikkinissi [koko'siksi ot-aahks-ika'kimmaa-hsi
3-might-try-subord
[otaahkanistsiksimsstaahsi [kitaahksspinnokihsi]]].
'I'm easy for your kids to try to think that you might lift [me].'

Example (19) is the counterpart of (20) without an ascension; (20) differs only in that the predicate 'easy' agrees with the initial DO of 'lift', which is two clauses "down". Similarly, in (21) 'easy' agrees with the initial DO of 'lift', three clauses down. (20) and (21) also rule out analyses in which they each involve two or three ascensions of two-clause domain (i.e., that the ascendees ascend "one clause at a time"). This is so because Blackfoot verbs agree with final SU and final DO, and so the intermediate verb would also agree with the ascendeer in the two-step

analysis. In fact, such a sentence is possible ('think' permits ascension of either S or DO; see Frantz 1978); see (22).

- (22) Nitsikkinissi [koko'siksi nit-aahk-anists-iksimssta-i'ssi
 1-might-manner-think(trans)-
 invers:subord
 [kitaahksspinnokihsi]].
 'I'm easy for your kids to think (of me) that you might lift [me]'.

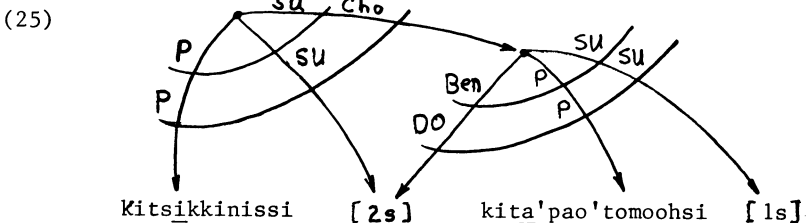
And since there are no rules of Blackfoot which would prevent agreement of a verb with its final DO, the only way to account for the difference between (20) and (22) is to say that (22) involves two ascensions and (20) involves only one ascension.

A three-step analysis is likewise not possible for (21) because of agreement facts, but also because 'try' does not allow ascensions, as seen in (23):

- (23) *Nits-ika'kimmat-a-yi noko'siksi nit-aahk-sspim-a-hsi.
 1-try(trans)-direct-3p 1-might-lift-direct-
 ('I tried my kids that I might lift them.') subord

Thus far I have established that a DO may ascend to 'easy'⁷. Example (24) shows that it need not be an initial DO, for the ascende is initial Benefactee and final DO of 'work (for)'. See (25).

- (24) Kitsikkinissi kit-a'pao't-omo-o-hsi.
 2-easy(anim) 2-work-ben-1:2-subord
 'You are easy for me to work for.'



There is also some tentative evidence that the ascende must be a final DO; this would explain why (26) is bad, for 'these birds' would be a final DO chomeur of 'buy for'.

- (26) *Iksikkinissi-yi [amoksi pi'kssiksi
 easy(anim) these birds
 kit-aahk-ohpomm-o-o-hsi].
 2-might-buy-ben-1:2-subord
 ('These birds are easy for me to buy for you.')

Returning briefly to predicates such as -ipisatap- 'surprising', we are now in a position to show that their ascendees need not be

initial SU's. Given the ascension analysis of sentences with -ikkinis- 'easy', we can embed them under 'surprising' to test whether the ascende to 'easy' can further ascend to 'surprising'. (27) shows that this is possible:

- (27) Kits-iksipisata'pssi [kits-ikkiniss-si [kit-aahk-sspinn-
o-hsi]].
2-surprising(anim) 2-easy-subord 2-might-lift-
1:2-subord
'You are surprising that you are easy for me to lift.'

Conversely, the second ascension of second person in (27) also supports the claim that it is final SU of 'easy'.

Before concluding, I should discuss briefly why I consider a non-ascension analysis of sentences such as (2) - (4) and (13) - (15) inadequate. In the case of 'surprising', we would have to require that if this matrix predicate has a non-clausal SU, that SU must also be the final SU of a dependent clause (bearing what relation?). In addition, we would have to have a semantic rule which assured that pairs such as (1) and (2) involve the same semantic roles. Both of these complications are unnecessary with the ascension analysis, which automatically accounts for the apparent surface constraint and the paraphrase relation. In the case of 'easy', a surface constraint would be more complex, requiring that a non-clausal SU also be a final DO of a clause "further down".

Summary

Predicates such as ipisata'p- 'amazing' permit ascension of the final SU of their clausal SU. This ascension is strictly limited to a two-clause domain. Ikkinis- 'easy' permits ascension of the final DO of its clausal SU; however, this ascension is not limited to a two-clause domain, for the DO of a clause "further down" may ascend to 'easy'.⁸

It is worth noting here, as has already been done for similar data in James Bay Cree (James 1979), that if these ascensions are somehow viewed as movement rules, a sentence such as (20) violates Chomsky's (1977) 'Subjacency Condition'. And whether a movement rule or a constraint on surface structure is used to account for such a sentence, it violates Chomsky's 'Specified Subject Condition.'

Notes

1. While my initial investigation on this topic was conducted in 1974 as part of research reported on in Frantz 1978, a more thorough investigation was inspired by recent work of Debbie James (see James 1979).

I am particularly grateful to Martin Heavy Head and Pat Twigg (both speakers of the Blood dialect of Blackfoot) for their part in this research.

2. Most stative verbs have different "theme-suffixes" (Taylor 1969) depending upon whether they have an animate or inanimate gender (final) subject.
3. Or, as suggested in Frantz 1979, is simultaneously a constituent of two clauses, analogous to the status of "interludes" at syllable boundaries (Hockett 1955).
4. The following sentence shows that there is no constraint against 'pots' being SU of this predicate:
 Iksipisata'pssiyi omiksi issikiksi. 'Those pots are fancy.'
5. In transformational terminology, such rules are referred to as "bounded".
6. Sentences such as (13) - (15) may not be acceptable on the Blackfoot reserve. I have checked them with one speaker from Gleichen, and he finds them unacceptable. However, they are fine for the speakers I have consulted from the Blood reserve.
7. There is some evidence, though it is not clear, that some obliques can ascend to 'easy'.
8. Interestingly, for most speakers iyikoo- 'hard' apparently permits ascension of either SU or DO, but in the case of SU's the ascension is of no greater than a two clause domain. So the domain of ascensions may be a function of the DS GR of the ascendeo rather than governed by predicates as I have indicated above.

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ANTIPASSIVES AND CAUSATIVES IN HALKOMELEM*

Donna B. Gerdts

University of California--San Diego

1. Antipassives.

In Halkomelem, a Salish language spoken in southwestern British Columbia, many sentences with an action of an 'agent' on a 'patient' can be expressed in two ways: a) as an active transitive clause; b) as an antipassive clause:¹

1. a. ni q'wólətəs θə sʰéni? t^θə səplíl
 asp bake-tr-erg det lady det bread
 'The lady baked the bread.'
- b. ni q'wóləm θə sʰéni? ?ə t^θə səplíl
 asp bake-mid det lady obl det bread
 'The lady baked the bread.'
- a. ni pónətəs kʷθə swáyʔqe? kʷθə sqéwθ
 asp plant-tr-erg det man det potatoes
 'The man planted potatoes.'
- b. ni pén'əm? kʷθə swáyʔqe? ?ə kʷθə sqéwθ
 asp plant-mid det man obl det potatoes
 'The man planted potatoes.'
- a. ni cən k'wíét kʷθə qáʔ
 asp l-sbj pour-tr det water
 'I poured the water.'
- b. ni cən k'wíéls ?ə kʷθə qáʔ
 asp l-sbj pour-intr obl det water
 'I poured the water.'

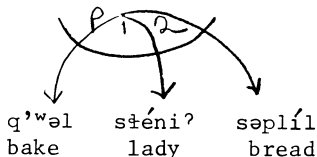
The morphological differences between these two types of sentences is apparent. In the transitive constructions in a), the predicate is suffixed with -t, a transitive marker; the b) sentences lack this suffix. Second, in 1a) and 2a) the final subject is a third person nominal or pronoun. Thus, the predicate is suffixed with -s, the 3rd person ergative marker. This marker is present when a 3rd person is subject of a transitive clause. However, the predicates in the b) sentences lack this suffix, suggesting that these clauses are intransitive. Finally, the predicates in the b) sentences are suffixed with -m, the middle voice marker, or -els, an intransitive suffix.² The verbal morphology suggests then that the a) sentences are transitive while the b) sentences are intransitive.

A second apparent difference between the a) and b) sentences is the case marking of the 'patient'. In the a) sentences the 'patient' is in the straight case; i.e., the nominal is preceded only by a determiner.³ However, in the b) sentences, the 'patient' is in the oblique case; i.e., the nominal is preceded by an oblique marker as well as a determiner. Assuming that the 'patient' is an object of a transitive in the a) sentences, it appears that the

'patient' is not an object in the b) sentences, suggesting again that the b) sentences are intransitive.⁴

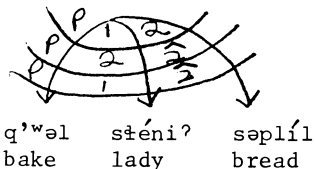
Arguing within the theory of Relational Grammar⁵, I analyze the above sentences as follows: the a) sentences are assumed to be active transitive and can be represented by relational networks as the network for 1a) in 4).

4. Transitive:



The b) sentences have the same initial stratum as the a) sentences, thus accounting for the identity of semantic roles.⁶ In the b) sentences, however, Antipassive places the initial 2 en chomage, as represented by the relational network for 1b) in 5).⁷

5. Antipassive:



Although they share the same initial stratum, the a) and b) sentences differ in a crucial respect: the a) sentences are transitive at the final level [i.e., the final stratum contains both a 1 and a 2]; the b) sentences are intransitive at the final level [i.e., the final stratum contains a 1 but no 2].

In § 1, I give evidence from Quantifiers and Focus Constructions for an analysis involving Antipassive for the b) sentences above. I discuss two restrictions on the rule of Antipassive.

In § 2, I discuss Causatives, showing that while Causative Clause Union is possible in the case of downstairs Antipassive, it is not possible in the case of downstairs transitives. Also, I discuss Causatives in constructions where Antipassive is not possible.

1.1 Quantifiers.

As discussed above, the crucial difference between the a) and b) sentences is final transitivity; while the former are transitive the latter are intransitive at the final level. Thus, the final 1 in the a) sentences differs from the final 1 in the b) sentences; while the former is an ergative [the 1 in a transitive stratum] the latter is an absolutive [the 1 in an intransitive stratum or the 2 in a transitive stratum].

Thus, rules distinguishing ergatives from absolutes, as, for example, the rule of 3rd person ergative marking discussed above, provide evidence that the b) sentences are detransitized

by Antipassive. In this section, I discuss another such rule in Halkomelem--Quantifiers.

Observe the following sentences in which the Quantifier mək'w 'all' is a higher predicate. Note that the clause following the Quantifier is introduced by the complementizer ?u.⁸

6. a. mək'w niw? x̣wələnčén?əm kʷθə sʰəl'íqəʔ
all asp-cmp run-pl det children
'All the children ran.'
- b. mək'w niw? wə?wá?əs kʷθə sq̣wəm q̣wəméy?
all asp-cmp barked det dogs
'All the dogs barked.'
7. a. mək'w niw? q'wələʔəs t̄θə sʰəl'íqəʔ kʷθə səplíʎ
all asp-cmp bake-tr-erg det children det bread
'The children baked all the bread.'
*'All the children baked the bread.'
- b. mək'w niw? qəlá?qaʔtəs kʷθə səwwáy?qe? kʷθə qá?
all asp-cmp drink-pl-tr-erg det men det water
'The men drank all the water.'
*'All the men drank water.'

In the sentences in 6), the clause following the complementizer is intransitive; the Quantifier is interpreted as modifying the 1 of this intransitive clause. Of more interest are the sentences in 7), in which the clause following the complementizer is transitive. In these sentences, the Quantifier is unambiguously interpreted as modifying the 2 of the transitive clause.⁹

Thus the rule for interpretation of Quantifiers must be stated in terms of absolute.

Observe the sentences in 8); here the clause following the complementizer is an Antipassive.

8. a. mək'w niw? q'wələm t̄θə sʰəl'íqəʔ ?ə t̄θə səplíʎ
all asp-cmp bake-mid det children obl det bread
'All the children baked the bread.'
*'The children baked all the bread.'
- b. mək'w niw? pén'əm? kʷθə səwwáy?qe? ?ə kʷθə sq̣éwθ
all asp-cmp plant-mid det men obl det potatoes
'All the men planted potatoes.'
*'The men planted all the potatoes.'

In these sentences the Quantifier is unambiguously interpreted as modifying the 1 of the Antipassive, **suggesting** that it is an absolute. Thus, Quantifiers support the analysis of Antipassives given in 5).

1.2 Focus Constructions.

A second crucial difference between the a) and b) sentences in 1-3) is in the final grammatical relation of the initial 2. As you can clearly see in 4) and 5), the initial 2 in the a) sentences is a final 2 while the initial 2 in the b) sentences is a final 2 chomeur. Thus, rules distinguishing 2s from 2 chomeurs,

such as case marking discussed above, provide evidence for an Antipassive analysis of the b) sentences.

Thus, a second argument for Antipassive is based on deletion rules, which operate in at least three sentence types in Halkomelem--Relative Clauses, Clefts, and Focus Constructions. I discuss only the latter here; the rules are parallel in all three constructions.

As you can see in 1-3) above, the basic word order in Halkomelem is: 10

9. Predicate Final Subject Final Object Non-terms.

If a nominal is especially emphasized, flagged, or contrasted, it is placed before the predicate; the predicate is marked for the grammatical relation of the nominal being focussed.¹¹

Observe the sentences in 10), which are Focus Constructions based on final 1s.

10. a. s̥éni? θə ni q'w'éləm ?ə t^θə səplíl
 lady det asp bake-mid obl det bread
 'A lady is the one who baked the bread.'
 b. s̥éni? θə ni q'w'élət t^θə səplíl
 lady det asp bake-tr det bread
 'A lady is the one who baked the bread.'

In these cases, the predicate is unaffected. Notice in 10b) that when a final 3rd person ergative is being focussed, the ergative marker is deleted. To clearly see the disambiguating function of this deletion, contrast 10b) with 11):

11. səplíl t^θə ni q'w'élətəs θə s̥éni?
 bread det asp bake-tr-erg det lady
 'Bread is what the lady baked.'

In 11) the final 2 of a transitive is focussed. The predicate is unaffected and the ergative marker is suffixed to the predicate. It is clear that the 2 and not the 1 is focussed in 11).

In 12), the 'patient' of an Antipassive is focussed.

12. səplíl t^θə ni sq'w'éləms θə s̥éni?
 bread det asp nom-bake-mid-3pos det lady
 'Bread is what the lady baked.'

The predicate must be prefixed with the nominalizer s-.

Therefore, the 'patients' of the b) sentences in 1-3 do not behave like final 2s of the a) sentences; the former require that the nominalizer s- be prefixed to the predicate, while the latter cannot have this prefix. This can be accounted for in an analysis positing Antipassive for the b) sentences.

It is important to note that Focus Constructions based on the 'patients' in Antipassives are like those based on 2 chomeurs of sentences involving 3-2 [13]) or Ben-2 [14]) Advancement. 12

13. a. ni ʔáməstəs kʷə swíwʔləs ʔə kʷə šəptən
asp give-tr-erg det boy obl det knife
'He gave the boy the knife.'
b. šəptən kʷə ni sʔáməsts kʷə swíwʔləs
knife det asp nom-give-tr-erg det boy
'A knife is what he gave the boy.'
14. a. ni ləkʷəictəs t^θə swíwʔləs ʔə kʷə sc'ést
asp break-ben-tr-erg det boy obl det stick
'He broke the stick for the boy.'
b. sc'ést kʷə ni sləkʷəictəs t^θə swíwʔləs
stick det asp nom-break-ben-tr-erg det boy
'A stick is what he broke for the boy.'

Notice in the unfocussed examples (13-14 a)) that the 2 chomeur is in the oblique case. In the Focus Constructions in 13-14b), the predicate is prefixed with the nominalizer s-.

Furthermore, other nominals in the oblique case (15a)) which are initial and final Obliques (e.g. Instrument, Locative) can also be focussed, in which case the predicate is prefixed with the nominalizer š-, as in 15 b). 13

15. a. ni θ'íq'wəts t^θə John ʔə kʷə šəptən
asp stab-tr-erg det boy obl det knife
'He stabbed John with the knife.'
b. šəptən kʷə ni šθ'íq'wəts t^θə John
knife det asp nom-stab-tr-3pos det
'A knife is what he stabbed John with.'

Thus the data from Focus Constructions argue for an analysis involving Antipassive for the b) sentences in 1-3). The 'patients' in these sentences do not behave like 2s of transitive sentences. Neither do they behave like Obliques. Rather they behave like the 2 chomeurs of constructions involving 3-2 or Ben-2 Advancement. This supports the Antipassive analysis given in 5) where the initial 2 is a final 2 chomeur.

1.3 Restrictions on Antipassives.

In the above sections, I have argued for a rule of Antipassive for sentences like those in 1-3b). Here, I discuss two restrictions on the rule of Antipassive in Halkomelem.

First, we have seen in 1-3b) that 3rd person nominals can be placed in chomage by a rule of Antipassive. In Halkomelem there is a general constraint against placing 1st and 2nd persons [Speech Act Participants] in chomage. 14 Thus, Antipassive counterparts for the following sentences do not exist:

16. a. ni cən pənəθámə
asp lsbj plant-2-obj
'I buried you.'
- b. *ni cən pən'əm? ?əλ' nəwə
2-pron
17. a. ni pənəθám?šəs
asp plant-1-obj-erg
'He buried me.'
- b. *ni pən'əm? ?əλ' ?é.nəə?
1-pron

Second, only initial 2s are placed en chomage in Antipassives. Non-initial 2s, advanced to 2 by the rules of 3-2 or Ben-2 Advancement, are never placed en chomage. Thus, there are no Antipassive counterparts for the following:

18. a. ni cən ?amést kʷθə swéy?qe? ?ə kʷθə səplíl
asp 1-sbj give-tr det man obl det bread
'I gave the man the bread.'
- b. **ni cən ?aməsəm/?aməséls kʷθə swéy?qe? ?ə kʷθə səplíl
19. a. ni cən q'wéləict ?ə kʷθə səplíl
asp 1-sbj bake-ben-tr obl det bread
'I baked him the bread.'
- b. **ni cən q'wéləicəm ?ə kʷθə səplíl

I should point out that the two restrictions here are language specific constraints on the rule of Antipassive in Halkomelem. These restrictions do not follow from any universal predictions concerning Antipassive.

2. Causatives.

In the sections above, I have given arguments for an analysis involving Antipassive for the sentences in 1-3b), and I have given two restrictions on Antipassive in Halkomelem. In this section, I discuss an area of Halkomelem syntax where Antipassives play an important role--Causatives.

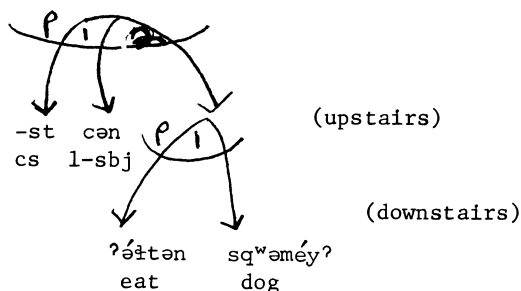
I assume here that Causatives like those in 21) below are examples of Causative Clause Union [CCU]. That is, Causatives consist of two clauses at initial level; -st 'cause' is the predicate of the upstairs clause, the 'causor' is the upstairs 1, and the corresponding non-causative sentence (20) is upstairs 2.

20. a. ni ?əitən tθə sqʷəméy?
asp eat det dog
'The dog ate.'
- b. ni ném? kʷθə swíw?ləs
asp go det boy
'The boy went.'

- c. ?i ?əm?í t̥ə swiʷləs
 asp come det boy
 'The boy came.'
21. a. ni cən ?əʔtənəstəxʷ kʷθə sqʷəméy?
 asp 1-sbj eat-cs-3obj det dog
 'I feed the dog.'
- b. ni cən nəʔéməstəxʷ kʷθə swiʷləs
 asp 1-sbj go-cs-3obj det boy
 'I took the boy.'
- c. ?i cən ?əmʔístəxʷ kʷθə swiʷləs
 asp 1-sbj come-cs-3obj det boy
 'I brought the boy.'

Thus the relational network representing the initial level for Causatives like 21a) would be:

22.

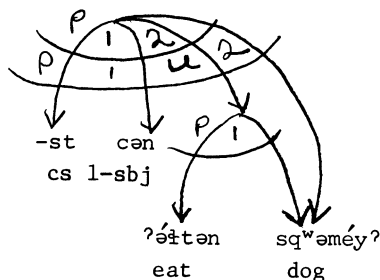


In CCU, the upstairs and downstairs clauses are merged; the downstairs nominals are assigned grammatical relations in the upstairs clause. The universal prediction concerning grammatical relations in CCU made by Relational Grammar is: 15

23. a) Downstairs Absolutive is Upstairs 2.
 b) Downstairs Ergative is Upstairs 3.

If the Causatives in 21) met this prediction, they could be represented in relational networks like the following one for 21a).

24.



The 1 of the downstairs intransitive clause is an absolutive; thus that nominal is an upstairs 2 in CCU. I briefly give two arguments that the downstairs absolutive is upstairs 2 in Causatives like those in 21).

2.0.1 Pronominal Case. In Halkomelem, there are three cases of pronouns: subject clitics (used for final 1s), object suffixes (used for final 2s) and independent pronouns (used for emphatics and Obliques). In CCU, if a downstairs pronominal absolutive is upstairs 2, we would expect a pronominal object suffix. As can be seen in 25), this prediction is borne out.

25. a. ni ʔəttənəstámʔšəs
asp eat-cs- 1-obj-erg
'He fed me.'
- b. ni nəʔəməstámʔšəs
asp go-cs-1-obj-erg
'He took me.'
- c. ʔi ʔəmʔistámʔšəs
asp come-cs-1obj-erg
'He brought me.'

2.0.2 Passive. In Halkomelem, there is a rule of Passive, which advances a 2 to 1 placing the initial 1 en chomage. In 26), I have given examples of Passives of simple transitive sentences.

26. a. ni q'wələtəm kʷəə səplíl ʔə t̬ə siéniʔ
asp bake-tr-mid det bread obl det lady
'The bread was baked by the lady.'
- b. ni q'wáqʷətəm t̬ə spéʔəθ ʔə t̬ə swáyʔqeʔ
asp club-tr-mid det bear obl det man
'The bear was clubbed by the man.'

The predicate is suffixed with -m, the middle voice marker. The initial 2, which is the final 1, occurs in the position immediately following the predicate. The initial 1, which is final 1 chomeur, occurs at the end of the sentence preceded by the oblique marker.

In CCU, if the downstairs absolutive is upstairs 2, we would predict that this 2 could advance to 1 via Passive. In 27), we see that this is the case.

27. a. ni ʔəttənəstəm kʷəə sqʷəméyʔ ʔə kʷəə swíwʔləs
asp eat-cs-mid det dog obl det boy
'The dog was fed by the boy.'
- b. ni nəʔəməstəm kʷəə səplíl ʔə kʷəə swíwʔləs
asp go-cs-mid det bread obl det boy
'The bread was brought by the boy.'

- c. ?i ?əm?ístəm kʷθə qá?
 asp come-cs-mid det water
 'The water was brought.'

Thus, Pronominal Case and Passive provide evidence that Causatives like those in 21) are single clauses at final level.

2.1 Downstairs Initial Transitives.

Finding evidence for the initial bi-clausal structure of Halkomelem Causatives is more difficult; for this, I turn to cases of Causatives with downstairs initial transitive clauses.

According to the prediction concerning CCU, if the downstairs clause of a Causative is transitive, e.g. 28), the downstairs absolutive (t^θə səplíl 'the bread') is upstairs 2 and the downstairs ergative (θə sʰéni? 'the lady') is upstairs 3.

28. ni q'wəléstəs θə sʰéni? t^θə səplíl
 asp bake-tr-erg det lady det bread
 'The lady baked the bread.'

In 29), I have tried various possibilities in Halkomelem of forming a Causative on a downstairs transitive. In 29a), I have tried CCU and 3-2 Advancement; I have argued elsewhere that 3-2 Advancement is obligatory in Halkomelem. But just in case, I have tried CCU without 3-2 Advancement in 29b). Neither of these constructions are grammatical, regardless of case marking and word order.

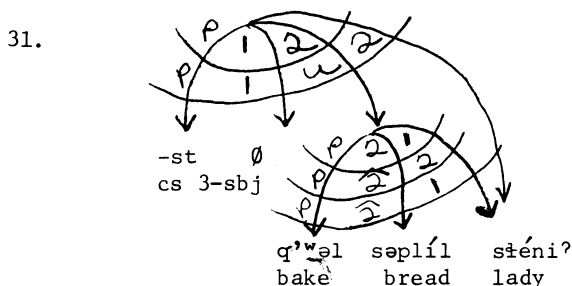
29. a. * ni q'wəléstəstəxwəs θə sʰéni? (?ə) t^θə səplíl
 asp bake-tr-cs-3obj-erg det lady obl det bread
 'He had the lady bake the bread.'
- b. * ni q'wəléstəstəxwəs t^θə səplíl (?ə) θə sʰéni?
 asp bake-tr-cs-3bj-erg det bread obl det lady
 'He had the bread baked by the lady.'

However, if the downstairs initial transitive is an Anti-passive construction, CCU is possible, as can be seen in the examples in 30).

30. a. ni q'wəléstəstəxwəs θə sʰéni? ?ə t^θə səplíl
 asp bake-mid-cs-3obj-erg det lady obl det bread
 'He made/had the lady bake the bread.'
- b. ni k'wəléstəstəxwəs ?ə kʷθə qá?
 aso pour-intr-cs-3obj-erg obl det water
 'He made him pour the water.'

- c. ni c'ək'w^xélstəx^wəs ?ə k^wθə scé.ítən
 asp fry-intr-cs-3obj-erg obl det salmon
 'He had him fry the salmon.'

The relational network for 30a) is as follows:



In these constructions, the downstairs final absolutive is upstairs 2. Again, evidence for the upstairs 2-hood of the downstairs absolutive can be given from the Passive counterparts of the sentences in 30:

32. a. ni q'wələmstəm θə sténi? ?ə t^θə səplíl
 asp bake-mid-cs-mid det woman obl det bread
 'The woman was made to bake the bread.'
- b. ni k'w^xélstəm ?ə k^wθə qá?
 asp pour-intr-cs-mid obl det water
 'He was made to pour the water.'
- c. ni c'ək'w^xélstəm ?ə k^wθə scé.ítən
 asp fry-intr-cs-mid obl det salmon
 'He was made to fry the salmon.'

To account for the impossibility of CCU in the case of downstairs final transitives and to account for the possibility of CCU in the case of downstairs Antipassive, I propose the following restriction on CCU in Halkomelem:

33. CCU is possible only if the downstairs clause is finally intransitive. 16

On the basis of the Causatives in 30), I can now form arguments that at initial level Causatives in Halkomelem are bi-clausal. In formulating an analysis of Antipassives, I crucially maintained the assumption that the semantic role of nominal is encoded at the initial level of syntax. [cf f.n. 6] I claimed that Antipassives and transitives share the same initial stratum; in both cases there is an 'agent' and a 'patient'. Under this assumption, Antipassive is a syntactic rule.

If this assumption is to be maintained in the case of Causatives, then I am forced to posit θə sténi? 'the lady' in 30a) as a 1 and t^θə səplí1 'the bread' as a 2 at some initial level with the predicate q^wəl 'bake' since these nominals have the semantic roles of 'agent' and 'patient' respectively. This assumption can be maintained only in a bi-clausal analysis of Causatives.

Furthermore, in the Causatives in 30), Antipassive, as marked by -m or -els, detransitivizes the downstairs clause. Thus the 1 is absolutive at the final level downstairs and behaves as such in CCU. [cf. 31] If the claim that Antipassive is a syntactic rule is maintained, CCU (which is possible in the case of downstairs Antipassive) must also be a syntactic rule.

2.2 Periphrastic Causatives.

I argued in the previous section that only downstairs final intransitive clauses could participate in CCU. In the case of downstairs initial transitives, detransitivization is accomplished via Antipassive. This raises the question as to how Causatives are formed in cases where Antipassive is not possible. [cf §1.3]

Besides Causatives formed with the suffix -st, as exemplified above, there is a construction with causative force based on the predicate csét 'tell someone to do something' followed by a complement clause. This construction I call a Periphrastic Causative. We get examples like the following:

34. a. ni cən csét ?u šák^wəm[?]əs
asp 1-sbj tell-tr cmp bathe-3sbsbj
'I told him to bathe.'
- b. ni cən cseθámə ?u íéyxtəx^w k^wθə scé.ítən
asp 1-sbj tell-2obj cmp eat-tr-2sbsbj det salmon
'I told you to eat the salmon.'
- c. ni cən csét ?u q^wáq^wəθám[?]šəs
asp 1-sbj tell-tr cmp hit-lobj-3sbsbj
'I told him to hit me.'
- d. cseθámə cən ce? ?u k^wíəíəθám[?]s[?]əx^w ?ə k^wθə tí
tell-2obj lsbj asp cmp pour-ben-lobj-2sbsbj obl det tea
'I will tell you to pour the tea for me.'
- e. csetálə cən ce? ?u q^wəlélíct[?]ələp ?ə k^wθə səplí1
tell-2pl-objlsbjasp cmp bake-ben-tr-2plsbsbj obl det bread
'I will tell you pl. to bake the bread for him.'

Note that in the case of 34c-e), only Periphrastic Causatives are possible, because it is impossible due to the restrictions noted in §1.3 to have Antipassive in the complement clause.

3. Conclusion.

I have argued here for a rule of Antipassive in Halkomelem. I gave evidence from verbal morphology, case marking, Quantifiers, and Focus Constructions that Antipassives (1-3b) are finally intransitive, the initial 2 being placed en chomage. I discussed

two restrictions on the rule of Antipassive in Halkomelem. First, Antipassive could not place 1st or 2nd persons en chomage. Second, Antipassive could only place initial 2s en chomage. Thus, sentences with 3-2 or Ben-2 Advancement have no Antipassive counterparts.

Second, I gave examples of Causatives formed with the suffix -st. I proposed that such Causatives are initially bi-clausal. In such Causatives, in accordance with universal predictions concerning Causative Clause Union, the downstairs absolutive is the upstairs 2, as is evidenced by pronominal morphology and Passive. I gave examples of Causatives with downstairs initial intransitive clauses and with downstairs initial transitive clauses which are detransitivized via Antipassive. Pointing out that downstairs final transitive clauses could not participate in CCU, I suggested a restriction on CCU in Halkomelem: CCU is possible only if the downstairs clause is finally intransitive.

Finally, I discussed Periphrastic Causatives, formed with the predicate csét, 'tell someone to do something.' I pointed out that in cases where it was impossible to form Causatives with CCU, it was possible to form Periphrastic Causatives.

Footnotes.

*This data on Halkomelem is from Arnold Guerin, Musqueam Reserve, Vancouver, B.C. Mr. Guerin, who is a teacher and researcher of the Halkomelem language, speaks a dialect from Kuper Island, B.C. I sincerely thank him for his patience and understanding as well as his critical comments concerning the present analysis.

Any errors in data or analysis are my own responsibility.

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A preliminary version of this paper was presented at the 14th International Conference on Salishan Languages, Bellingham, Washington, August, 1979. Portions of this paper are in an earlier unpublished ms. 'Oblique Objects in Halkomelem Salish.' Dr. Thomas E. Hukari of the University of Victoria has also come to the same conclusions concerning Antipassive. In Hukari (1979), he points out the similarities of 2 chomeurs in Antipassives and 3-2 Advancement constructions using data from relativization.

Several scholars [Davis, Kuipers, Mattina, Thompson] working on other Salish languages have discussed Antipassive, calling this construction by various names including pseudo-transitive and pseudo-intransitive.

Frantz has pointed out similar data concerning Antipassives

and Causatives in Blackfoot.

Abbreviations used in glossing the Halkomelem sentences are:

asp	aspect	obl	oblique marker
ben	benefactive marker	pos	pronominal possessive affixes
det	determiner	sb	subordinate clause pronominal forms
erg	ergative	sbj	pronominal subject clitics
mid	middle voice marker	tr	transitive
obj	pronominal object suffixes	cmp	complementizer
intr	intransitive	pl	plural
pron	independent pronouns	cs	causative
1	1st person	nom	nominalizer
2	2nd person		
3	3rd person		

1. I am using 'agent' and 'patient' as an expedient means for introducing the data. I make no claims as to the usefulness or definability of such notions.

2. The choice of suffixes is lexically governed.

3. The determiners used in the data herein are:

t ^θ	plain visible definite
k ^w θ ^ə	plain invisible definite
θ ^ə	feminine visible definite
t ^ə	feminine invisible definite
k ^{'w}	indefinite

4. In Gerds 1979a, I give a more precise analysis of case marking: Final nuclear terms are in the straight case; non-terms are in the oblique case.

5. For precise definitions of the terms and for explanation of the networks used in Relational Grammar, cf Perlmutter and Postal (1977). Briefly, 1 is subject, 2 is direct object, and 3 is indirect object. 1 is a 1 chomeur; 2 is a 2 chomeur. Ben is Benefactive (an Oblique relation). In an advancement a nominal assumes a grammatical relation that is higher on the relational hierarchy: 1 2 3 Oblique

6. On semantic roles in RG, Perlmutter and Postal (1977, p. 402) say: 'Our ultimate claim is that the justification for [the assignment of grammatical relations at initial level] is universally determined by principles referring to the semantic role of the nominal. Thus . . . agent nominals are initially 1s . . . patients 2, etc.'

7. I use here the formulation of Antipassive as proposed in Postal 1977.

8. I cannot argue at this time if such constructions arise through movement, deletion, or neither. What is essential to the argument, however, is the nominal in the complement clause which the Quantifier modifies.

9. Notice that the Quantifier refers to the 2 of a transitive even though the 1 is more proximate.

10. For evidence that Word Order is stated on final level, observe the Passive constructions in 26-7) and the 3-2 and Ben-2 Advancement constructions in 13-14).

11. I will not argue for a deletion analysis of Focus Constructions here, but note that these constructions are in the form of a predicate nominative construction, i.e. NP Det NP. In this case the second NP is a clause, marked for aspect.

12. I have argued for these rules in Gerdt's 1979a.

13. The difference between the two nominalizers s- and š- is not due to a phonological rule. Observe i) and ii) below:

- | | |
|---------------|-------------------------------|
| i. a. yáys | 'to work' |
| b. syáys | 'work, job' |
| c. šyáyʔəs | 'tool' |
| ii. a. xíʔxeʔ | 'to be ashamed' |
| b. sxíʔxeʔs | 'his shame' |
| c. šxi.ʔxeʔs | 'that which he is ashamed of' |

14. The constraint against 1st and 2nd person chomeurs is a general one. Thus, Passive counterparts of sentences with 1st and 2nd person initial 1s do not exist.

- | | | | | | | |
|-----|------|-------------------------------|------|--------|---------|---------|
| i. | * ni | q'w'életəm | kʷəə | səplíl | ʔəʔ | ʔé.nʔəə |
| | asp | bake-tr-mid | det | bread | obl det | 1-pron |
| | | 'The bread was baked by me.' | | | | |
| ii. | * ni | q'w'életəm | kʷəə | səplíl | ʔəʔ | néwə |
| | | | | | | 2-pron |
| | | 'The bread was baked by you.' | | | | |

15. Universal predictions concerning CCU are from Perlmutter, Class Lectures, UCSD.

16. It is notable that CCU is not possible in the case of downstairs Passive. Thus, the restriction on CCU would have to be refined:

- i. CCU is possible only when downstairs initial 1 is downstairs final absolutive.

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A Definite Use of Early Greek tis

Gary B. Holland

University of California, Berkeley

Early Greek tis is characterized in the standard handbooks and lexica as an interrogative/indefinite pronoun (so Schwyzler-Debrunner 1950:216ff., Meillet-Vendryes 1927:535, Liddell-Scott-Jones s.v. tis).¹ In most environments these two uses are clearly differentiated; interrogative tís is accented and may occur in clause-initial position, whereas unaccented tis is indefinite and necessarily postpositive:

- 1) tís t'ár sphōe theōn éridi ksunéēke mákhesthai?
 who ptc. them gods strife sent to fight
 'Who of the gods sent them together to fight in strife?'
 (Il.1.8)
- 2) hōde dé tis eípesken
 thus ptc. someone would say
 'Thus someone would speak.' (Il.7.201)

Indefinite tis is also used as an adjective, with both nouns and demonstratives:

- 3) all' áge dé tina mántin ereíomen
 but come on ptc. some seer let us ask
 'But come on let us ask some seer.' (Il.1.62)
- 4) hoŭtós tis, Diómēdes, apò stratoŭ érkhetai anér
 this some Diomedes from army comes man
 'This (is) some man, Diomedes, coming from the army.'
 (Il.10.341)

A further use of postpositive tis is with relative pronouns. Here it is generally regarded as making the relative indefinite or generalizing (Chantraine 1948:479, Schwyzler-Debrunner 1950: 643), so that hós 'who' contrasts with hóstis 'whoever':²

- 5) Iphidámas Antēnorídēs ēús te mégas te,
 Iphidamas son of Antenor good and big and
hós trápḥē en Thréikēi eribólaki, mēteri mēlōn
 who was nourished in Thrace fertile mother of flocks
 'Iphidamas son of Antenor, good and large,
 who was nourished in fertile Thrace, mother of flocks.'
 (Il.11.221-222)
- 6) ou gàr éēn hós tís sphin epì stíkhas hēgēsaito
 not for was anyone who them into ranks would lead
 'For there was not anyone who would lead them into (their)
 ranks.' (Il.2.687)

In other Indo-European languages, reflexes of the stem **k^hi-* (the direct antecedent of Greek *ti-s*)³ are used in indefinite, in interrogative and in relative functions. For example, in Hittite, *kuiš* appears in all these uses:

- 7) *U-NU-TE^{MES}-ia-kán* ku-e an-da-an na-at ša-ra-a da-a-i
utensils -and-ptc. which inside con.-them prev. takes
'and which utensils (are) inside, them he takes up.'
(Pāpanikri I 8, cited by Hahn 1946)
- 8) *ku-iš* am-me-el a-ap-pa-an LUGAL-uš ki-i-ša-r[i]
who(ever) me after king becomes
. . .
na-an ne-pí-ša-aš *D^IŠKUR-aš* ḫa-az-zi-e-e[t-tu]
con.-him heaven Storm God let strike
'Who(ever) becomes king after me . . . let the Storm God of
heaven strike him.' (Anitta Rev. 49f.)

(An interrogative use is illustrated in Ex. (26).) In early Latin, *quis* appears in these values:

- 9) *Naucratem quem convenire volui*, in navi non erat
Naucrates whom meet I wanted on ship not was
'What Naucrates I wanted to meet was not on board.'
(Plaut. Amph. 1009, cited and translated by Sturtevant 1930)
- 10) *roget quis*
may ask someone
'Someone may ask.' (Ter. Eun. 511)
- 11) *quid faceret?*
'What would he do?' (Plaut. Rud. 379)

Although virtually all IE languages use reflexes of **k^hi-* in indefinite and in interrogative functions and maintain the distinction in word order between these two uses, they differ in the stem they employ as a relative. Hittite and Latin (with the Italic dialects) use reflexes of **k^hi-*, while Greek, Indic and Iranian use reflexes of **i_o-*. Scholars have been divided on which element to reconstruct to Indo-European as the archetypal relative. The classical view was that **i_o-* was the relative in Indo-European, and that the relative uses of **k^hi-* were to be derived from interrogative uses (so Delbrück 1900:389-391, 405-406, Meillet 1965:166-168). According to these authors, this development was an independent and parallel occurrence in the languages in which it took place. The mechanism for this development will have been the ambiguity of certain types of indirect questions.

Meillet maintains (1965:167) that this type of reanalysis is the only type that is actually observable in the attested development of certain IE languages. In Classical Greek, sentences of the type illustrated by

- 12) . . . histórei, tí soi phílon
 ask what to you dear
 ' . . . ask what(ever) (is) dear to you.'
 (Soph. El. 316, cited in Schwyzer-Debrunner 1950:644)

are generally regarded as the point of departure for the later Hellenistic use of accented tís as a relative pronoun:

- 13) hóti tí théleis práksō
 since what you want I will do
 'since I will do what you want.'
 (Papyrus cited in Schwyzer-Debrunner 1950:644)

E. H. Sturtevant (1930) on the other hand attempted to show that the stem *k_wi- had relative value in Indo-European (and in Indo-Hittite as well, but that need not concern us here). He argued that the position defended by Meillet (and by Meillet-Vendryes) did not take proper account of the Hittite data, and that the correspondences between Hittite and Latin (with Oscan and Umbrian) were so exact that they could not be attributed to independent but parallel development.⁴ In Sturtevant's view, both *i_o- and *k_wi- had relative value in Indo-European, with *i_o- used when the relative had a definite antecedent, and *k_wi- used when the antecedent was indefinite (1930:148). Sturtevant further thought that Homeric evidence for the use of tís as a relative was to be found in

- 14) alloũ d' oú teu oĩda teũ àn klutà teúkhea
 other ptc. neg. some I know whose ptc. famous arms
 dúō
 I might put on
 'Other man know I none whose noble armor I might put on.'
 (Il.18.192; Lang, Leaf and Myers' translation quoted by Sturtevant 1930:148)

Sturtevant's theory by no means excludes a secondary origin for the relative use of *k_wi-; it merely shifts the locus for such a development back into Indo-European. E. Adelaide Hahn (1946) attempted to substantiate exactly this point on the basis of Hittite evidence. She maintained that "[i]n Hittite a subordinate relative clause can scarcely be distinguished from a coordinate indefinite clause," so that a sentence like Ex. (7) could mean either "some utensils are there, and he picks them up" or "which utensils are there, these he picks up" (1946:71).

A marginal use of Greek tís that has not been considered in this context sheds some light on this problem:

- 15) ēn dé tís en Tróessi Dárēs
 was ptc. tís among Trojans Dares
 'There was tís Dares among the Trojans.' (Il.5.9, cf. also 10.314, 17.575)

- 16) *éske tis entháde mántis anér, ēús te mégas te,*
 was *tis* here seer man good and large and
Télemos Eurumídēs, hós . . .
Telemos Eurumos' son who
'There was here tis seer, good and large, Telemos son of
Eurumos, who. . . .' (Od.9.508)
- 17) *Elpénōr de tis éske neótatos*
 Elpenor ptc. *tis* was very young
'There was tis very young Elpenor.' (Od.10.552)
- 18) *éske tis Kapheūs (cod. skapheūs) wanáσσōn*
 was *tis* Kapheus ruling
'There was tis Kapheus ruling.' (Alcman 74 Page)
- 19) *ēn de tis en tēi stratiāi Xenophōn Athēnaĩos*
 was ptc. *tis* in the army Xenophon the Athenian
'There was in the army tis Xenophon the Athenian.'
 (Xen. An. III 1,4)

This construction is well-attested in Homer and in later Greek literature. In these examples we clearly have the unaccented postpositive *tis*, and virtually all scholars claim that it is indefinite as well, although most admit that the indefiniteness is a matter of degree. For example, Kühner-Gerth (1955 [=1904]: 662) state, "Oft bezieht sich *tis* auf vorher genannte oder bekannte Personen," and Schwyzer-Debrunner (1950:214) say that *tis* is often "von nur relativer Unbestimmtheit," while Humbert (1954:26) teaches that "il [*tis*] suppose souvent un objet connu, au moins partiellement: ainsi il fait allusion à une 'certaine' personne qu'on ne veut pas nommer." In the function illustrated by Exx. (15-19), *tis* is usually translated as 'a certain.' Such a translation has, however, no explanatory value; it is merely a convention.

Explanations for the use of *tis* with proper names may be classified into two groups. The first is represented by Meillet-Vendryes who maintain that in sentences of this type "l'indéfini *tis* et les substantifs avec lesquels il a l'air de s'accorder sont en réalité indépendants; il y a seulement apposition" (1927:535-536). Presumably Meillet would translate "there was someone, (by name) NN." Sentences of a closely related structure do exist in Greek:

- 20) *ēn dé tis en mnēstērsin anēr athemístia eidós,*
 was ptc. *tis* among suitors man unjustness knowing
Ktésippos d' ónom' éske
Ktesippos ptc. name was
'There was among the suitors tis man knowing unjust things,
and he was Ktesippos by name.' (Od.20.287-288)

But even the sentences which include *anér* 'man' show that *tis* in these constructions is an adjective, and not a pronoun. *tis* is also used with river and city names (with the rivers and cities

specified by potamós and pólis). Meillet's explanation is another instance of his "appositional" approach to IE syntax, and is to be rejected. E. Adelaide Hahn's monograph on naming constructions (1969) unfortunately does not contain a discussion of the type represented by Exx. (15-19).

The second group of explanations views this use of tis as the result of a gradual extension of its uses with limited groups as in Akhaíōn tis 'someone of the Achaeans' or theōn tis 'someone of the gods' (so Humbert 1954:26f.). Here the basic notion of indefiniteness is maintained, since the actual agent is unnamed although the range of possibilities is quite limited. For these scholars, examples of the type represented by

- 21) kaí tis theòs hēgemóneue
'and tis god was leading.' (Od.9.142)

are the bridge from the theōn tis type to that of Exx. (15-19), since the speaker might have a specific god in mind, but be reluctant to name him or her for one reason or another. Implicit in this explanation too is the assumption that tis is basically a pronoun and that its use with a proper name is semantically anomalous.

Sentences of the ēn dé tis NN type are always presentational in Greek; they serve to introduce a character (or a place) into the narrative where they occur, and the character introduced is invariably the subject of a following story. A comparison of

- 22) éske d' en Tróessi Podēs, huiòs Eētiōnos
was ptc. among Trojans Podes son Eetion
'There was among the Trojans Podes, Eetion's son.'
(Il.17.575; two codices have ēn dé tis en T. . .)

with Exx. (15-19) shows that tis is optional in these presentational sentences. Many of the sentences are marked overtly as presentational by the initial verb. This feature seems to occur in folk tales, in popular stories and fables in almost all IE languages with the exception of Hittite. Typical examples are

- 23) āsīd rājā Nalo nāma
was king Nala name
'There was a king, Nala by name.'
(Nala Episode of Mahābhārata)

in Sanskrit, and

- 24) bùvo karāliaus duktė
was king's daughter
'There was a king's daughter.'
(Žaltys ir mergaitė, ed. Senn 1957)

from a Lithuanian fairy tale (see Kieckers 1911:55ff. on the

question of initial placement of existential verbs in IE). Comparable Hittite examples exist, but they do not have initial position of the verb:

- 25) URU-aš ŠUM-an-še-it Šu-du-ul . . . e-eš-zi nu-kán
 city name - its Sudul is con.-ptc.
 še-ir LÚ-aš ^mAp-pu ŠUM-an-še-it
 adv. man Appu name - his
 'There is a city Šudul by name, and up (there) (is)
 a man Appu by name.' (Appu I 7f.)

A Hittite example which may have the same structure as Exx. (15-19) is

- 26) ¹Ma-ri-ia-aš ku-iš e-eš-ta na-aš ku-e-da-ni
 Marijas kuis was con.-he what
 ud-d[a-ni-i še-ir (BA.UG₆)]
 matter postpos. died
 'Marijaš kuiš was. And for what reason did he die?'
 (Huyq. III 53, ed. Friedrich 1930)

The editor of the text that contains Ex. (26) treated it as a question, 'Was Marijaš war?', although he admitted the difficulty of the passage (Friedrich 1930:157). But if the first clause were a question, the kuiš should precede the noun, and not follow it. Furthermore, since Marijaš is mentioned here for the first time in this text, and is the subject of a short moralistic tale, it seems to be preferable to take it as presentational, especially in view of the Greek examples, and translate it as 'There was a certain Marijaš.'

Relative sentences in Indo-European had much the same structure as that of Exx. (7), (9) and

- 27) hós ke theoís epipeíthētai, mála t' ékluon autoũ
 who ptc. gods obeys very much ptc. they hear him
 'Who obeys the gods, they listen to him very much.' (Il.1.218)
 28) kourēn hēn ára moi géras éxelon huĩes Akhaĩon
 girl which ptc. for me prize chose sons of Achaeans
 dourì d' emōi kteátissa
 spear ptc. my I acquired
 'Which girl the sons of the Achaeans chose for me (as) prize,
 (her) I acquired with my spear.' (Il.16.56-57)

These relative sentences are bipartite: they consist of a grammatically independent preposed clause containing a relative adjective and an instance of the relativized noun; this 'relative' clause is in turn followed by a resumptive 'main' clause. The linkage between the relative and the main clauses is accomplished in two ways: first, by the presence of the relative marker in the

preposed clause, and second, by ordinary anaphoric processes (a discussion of some of these points and a working bibliography are in Holland and Ickler 1978). The anaphoric procedures utilized are either a repetition of the relativized noun or its substitution by a resumptive pronoun, or a complete omission of any overt anaphoric reference. Sentences of the structure of Ex. (28) are archaisms in Greek; the usual structure of a relative sentence may be illustrated by

- 29) Idomeneùs d' ára Phaíston enérato Méionos huìon
 Idomeneus ptc. ptc. Phaistos slew of Meion son
 Bórou, hòs ek Tárnēs eribólakos eilēlouthei
 Boros' who from Tarne fertile had come
 'Idomeneus slew Phaistos son of Boros from Meion who had
 come from fertile Tarne.' (Il.5.43-44)

This type of construction is characterized by relative pronouns rather than relative adjectives, and by postposed relative clauses modifying head nouns. The relative pronoun itself is the anaphoric element.

Virtually all relative sentences in Hittite are of the type of Ex. (7), and Carol Justus (1976) has argued that the primary function of kuiš is to introduce new nouns into the discourse and to establish its nouns as topics; these topic markers will have been reanalyzed as relatives as the language changed from topic-prominent to subject-prominent structure. In a similar vein, Holland and Ickler (1978) have maintained that in the inherited IE relative constructions (Exx. (7), (9), (27), (28)) the relative adjectives (both those from *io- and those from *k_ui-) serve to mark their nouns as topics in at least one other clause.

From a formal and from a functional point of view, the presentational sentences containing tis in Greek are identical to the first half of a relative sentence of the inherited type: in these sentences tis is clearly an adjective, and the noun it marks is always thematic; as stated above, a noun so marked is invariably the subject of a following (short) story.⁵

Notes

1. There has been a certain amount of discussion about which of the two meanings is primary. Meillet-Vendryes (1927:549) believe on semantic grounds that the indefinite is older, while H. Frei (1940:8ff.) cites non-IE parallels for a shift from interrogative to indefinite to support his thesis. P. Kretschmer (1927:62) comes closest to a solution of this question in that he maintains (following P. H. Wegener) that an interrogative "ein betontes Indefinitum sei. D.h. ein betontes und an den Anfang des Satzes gestelltes irgendwer soll den Angeredeten reizen, über diese Person, wenn er es

kann, Aufschluss zu geben. Dieser Anreiz zur Antwort ist aber eben das, was wir Frage nennen." What indefinites and interrogatives have in common is that they both presuppose further information about the modificand.

2. hóstis spreads at the expense of hós in later Greek (Schwyzer-Debrunner 1950:643); in fact, in Homer too there are often no clear boundaries between the use of the two forms. One place where hóstis has specific reference is

Éspete nŭn moi, Moŭsai, Olŭmpia dómat' ékhousai
 tell now me Muses Olympian dwellings having
hós tis dē prōtos Agamémnonos antíon ēlthen
 who tis ptc. first Agamemnon against came
 ē autōn Trōōn ēē kleitōn epikourōn
 either themselves Trojans or famed allies
 'Tell me now, Muses (who) have Olympian dwellings,
 who tis first came against Agamemnon
 either of the Trojans themselves or of the famed allies.'
 (Il.11.218-220; Ex. (5) contains the two succeeding lines.)

Another such usage occurs at Il.14.508-511.

3. I use this reconstruction as a kind of shorthand, subsuming the forms with different vowel grades.
4. The correspondences include preposed relative clauses in Latin and Osco-Umbrian, the use of relatives with demonstratives, and the existence of the compound relative Hitt. kuiš kuiš, Lat. quisquis 'whoever', Osc. pitpit 'quicquid' in Festus' gloss. Sturtevant's view on the repartition of *io- and *k^ui- cannot, I think, be seriously defended.
5. The marginal survival of forms derived from IE *k^ui- as topic markers in a language which otherwise uses a reflex of IE *io- as relative has parallels in Avestan and in Old Indic. Avestan -ciṭ (from IE *k^uid) is used in two basic values (Bartholomae 1904: s.v., Reichelt 1909:289): first, as an "emphasizing" particle, second, as a generalizing or indefinite particle when added to relatives or to interrogatives. Old Indic cid is used under much the same conditions (Delbrück 1888:478). In both cases, further modification is the usual concomitant of the use of these particles. I propose to treat this matter in detail in another place.

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On a Certain Construction of English's
Richard D. Janda
U.C.L.A.

0. Introduction.

The analysis of genitive-constructions has been a particularly controversial topic, in the syntactic literature of the past two decades, and, within this larger sphere of controversy, the issue of the proper description of "postposed" genitives like a friend of John's has been especially hotly debated. As far as is now known, English is unique in having constructions of precisely this type, and it is probably partly for this reason that the construction-type has received a proportionately great deal of attention from syntacticians. Within the generative literature, for example, no fewer than six different analyses have been proposed for it, with widely varying details. Of late, though, something of a consensus seems to be growing that constructions like a friend of John's should be analyzed as underlying (or interpretive) partitives, equivalent to a friend (from out of the set) of John's friends, or one of John's friends. The present paper, however, adduces evidence showing that the partitive analysis is decidedly incorrect, and, to replace it, proposes an account which analyzes the construction in question as an underlying (or interpretive) appositive--a new, seventh account whose essential outlines, it turns out, were anticipated by Jespersen in some brief remarks that he made on this subject fully seventy-five years ago.

1. The Problem.

First, though, a few remarks should be addressed to the question of why what can be called the postposed or "double" genitive is at all problematic. Now, in, say, a friend of John's, a possessor noun-phrase marked with -s is not followed by any possessed noun-phrase, but this is not in itself unusual, since--although it is undoubtedly far more common for NP-s to be followed by an overt NP, as in John's hat--still, elliptical possessive-constructions, with unexpressed possessee, are not rare, as in Bill's hat is older than John's (where we understand 'John's hat'), or Whose book are you reading? --John's (where we understand 'John's book'). Thus, if one heard I introduced Bill's brother to a friend of John's, one could understand 'I introduced Bill's brother to a friend of John's brother'. What is unusual about the friend of John's construction, however, is the fact that we normally do not understand any additional or identical possessee to have been ellipted after John's (or its equivalent); rather, in this particular example, our first inclination is to interpret John('s) as the possessor of the earlier NP friend, in a way parallel to, but still semantically somewhat distinct from, either a friend of John, or else John's friend. The problem posed by postposed-genitive constructions then, is to explain why both -s and of occur in them, on the one hand--or, alternatively, on the other hand, why the possessor-NP (here John('s)) occurs after the possessed NP, and why the (seemingly-pleonastic) of should be present. Proposed analyses of the postposed/double-genitive, friend of John's construction must, thus, all ultimately be judged on whether they explain these particular puzzling phenomena that is, to repeat, on whether they motivate the presence of both of and

-'s, and whether they predict the ordering of the -'s-marked possessor-NP after the possessed.

2. Previous (Non-Partitive) Analyses.

The first generative account of postposed genitives was that of Smith (1964), who, in fact, derived prenominal genitives from these. That is, John's friend, for example, was derived--by preposing of John's, and of-deletion--from a friend of John's, which latter construction was itself derived from the relative-clause construction (in underlying structure) a friend [John has a friend]_S by: first, a transformational conversion of this structure to a friend [the friend is John's], and, then, further transformations of relativization, relative-clause (or "Whiz"-) deletion, and of-insertion (called "Deletion II", as the second part of deletion); cf. the (over)simplified derivation in (1) below:

- (1) a friend [John has a friend]_S --(GENITIVE)-->
 a friend [the friend is John's] --(RELATIVE; DELETION)-->
 a friend John's --(DELETION II)-->
 a friend John's (---(GENITIVE ORDER-CHANGE)---)
 (John's friend)

This analysis has long since been rejected; it is possible to detail numerous reasons to do so, but, here, we have time and space to mention only the excessive power that it requires transformations to have, and the simultaneously ad hoc and obligatory nature of several of the steps involved in its derivations.

The next analysis forwarded for postposed genitives was that of Chomsky (1967/1970), also independently arrived-at by Stockwell, Schachter, and Partee (1968/1973), and repeated by Chomsky in a personal communication reported in a footnote in Emonds (1976). This postposing analysis derives, e.g., a friend of John's from *a John's friend, by NP-postposing and of-insertion; cf. (2) below:

- (2) a John's friend ((Δ)^P Δ)_{NP} --(NP-POSTPOSING)-->
 a friend (Δ) John's --(OF-INSERTION)-->
 a friend of John's

This account can--albeit with some difficulty--be made compatible with the principles and assumptions of current "trace-theory" versions of Chomsky's (Revised) Extended Standard Theory (EST--cf. Chomsky (1972, 1977)), but it has the defect of being based on a deep structure that cannot be allowed to surface. That is, either the NP-postposing transformation must be made obligatory in just this case, or else one needs a surface-filter (cf. Chomsky and Lasnik (1977)) to rule-out *a John's friend--and both of these moves are disallowed (or at least disfavored) by the basic principles of trace-theoretical EST. A variant of this analysis proposed by Siegel (1974), although it avoids these accretions by deriving a friend of John's from John's friend, necessitates a special kind of spellout-rule that inserts a in the wake of the postposing of John's, and so has its own undesirable ad hoc paraphernalia; cf. the sample Siegel-type derivation given below, in (3):

- (3)
$$\begin{array}{llll} [[[-\text{Def}]] [[\text{John}]^{NP_1} [\text{Gen}]^{Case}]^{NP_2}]^{DET} \text{ friend }^{NP} = \\ [[[-\text{Def}]] [\text{John's}]] \text{ friend } \quad \Delta \quad \text{--(NP-MOVEMENT)--} \rightarrow \\ [[[-\text{Def}]] \quad t \quad] \text{ friend } \quad \text{John's} \quad \text{--(OF-INSERTION)--} \rightarrow \\ [[[-\text{Def}]] \quad t \quad] \text{ friend of John's} \quad \text{--(SPELLOUT)--} \rightarrow \\ \quad \quad \quad a \quad \quad \quad \text{friend of John's} \end{array}$$

And, finally, all variants of this type of analysis share the common fault that they force one to view the presence of both -s and of in surface-structure--as well as the ordering of, say, John's after friend--as essentially accidental.

3. The Current, Partitive Analysis and Its Defects.

In light of these problems attendant upon the postposing analysis, the currently-favored account of the friend of John's construction seems to be the partitive analysis, first proposed by Jackendoff (1968/1969), repeated by Jackendoff (1977), and (also) reformulated by Dresher and Hornstein (1976/1979). This analysis, to repeat, derives a friend of John's from the equivalent of a friend of John's friends (i.e., with of more in its etymological sense of 'off, from (among)'), and thus motivates both the of and the -s, as well as the "postposed" position of John's, in this example. Jackendoff's earlier analysis derived a friend of John's from a friend of John's ones (where ones = 'friends') by a general transformation of ones-Deletion cf. the following (4):

- (4)
$$\begin{array}{ll} \text{a friend of John's ones} & \text{--(ONES-DELETION)--} \rightarrow \\ \text{a friend of John's} & \end{array}$$

Jackendoff's later (1977) analysis, however, involves no deletion; rather, the underlying structure for a friend of John's is a friend of John's PRO, where PRO is essentially a free variable with arbitrary reference later interpreted as coreferential with friend and--more importantly--as plural, although this latter fact does not appear to have been noticed by Jackendoff, who fails to formulate the special rule that would presumably be needed for this. Jackendoff (1977) also considers the possibility of inserting of into the construction transformationally (rather than having it be present underlyingly), but reaches no firm conclusion, on this matter, and ultimately decides to leave the question open.

Dresher and Hornstein definitely opt for transformational insertion of of, but the main point of difference between their analysis and Jackendoff's (later one)--and between their and all other analyses--is that they propose a leftward movement of friend. That is, for them, the underlying structure of a friend of John's is something like a Δ John's friend (where Δ , "delta", is--as above--an empty node); friend is moved forward to the empty node by NP-preposing (more precisely, "Move NP"), but, in accordance with the trace-theory of movement-rules in current EST, leaves behind a trace (for a precise characterization of what this means, see Chomsky (1977)). Of, to repeat, is inserted by a later, minor but very general, transformation, and the rules of semantic interpretation that later operate analyze the construction as a partitive one--which they are able to do because when surface-structure is converted into Logical Form (again, cf. Cho

sky (1977)), the trace can be interpreted as coreferential with friend; cf. (5) below for the relevant parts of the derivation:

(5)	[a ^{NP} _△] ^{NP}	[John's friend] ^{NP}	--(NP-MOUMENT)-->
	[a friend]	[John's t]	--(OF-INSERTION)-->
	[a friend]	of [John's t]	

However, like Jackendoff (1977), Dresher and Hornstein (1976/1979) fail to note that a partitive interpretation for the example in question (and, mutatis mutandis, for any example of the construction at issue) would require the trace after John's, here, to be interpreted as plural--for (the equivalent of) a friend of John's friends is needed, it will be recalled; a friend of John's friend makes no sense as a partitive. Nevertheless, it is not clear how plurality of the trace is to be achieved. If the interpretation of traces of singular NP's as plurals is not allowed, then, in order to work, Dresher and Hornstein's analysis will additionally require the NP-Movement (the fronting) of the plural friends--and a concomitant conversion of the fronted NP to a singular, a rather strange and ad hoc specification.

Aside from this problem with the plurality of the second instance of the possessed NP, though, the Jackendoff- and Dresher/Hornstein-type analysis relies only on independently-motivated rules: of syntactic transformation ("Move NP", of-Insertion, etc.--depending on the particular analysis) and semantic interpretation (for partitives, like, e.g., one of John's friends). But it crucially depends on constructions of the type a friend of John's always having a partitive sense.

Unfortunately for the partitive analysis, it is clear that postposed/double-genitive constructions often do not have such a sense. In that big mouth of yours, for example, we hardly interpret that phrase as meaning that one of your big mouths. Stockwell, Schachter, and Partee (1973) argue in this direction, as does Chomsky (quoted in Emonds (1976)), and, as early as 1905, Jespersen pointed out that the postposed-genitive construction "is ... used extensively where no partitive sense is logically possible, as in ... 'that poor old mother of his', etc. When we now say 'he has a house of his own', no one would think of this as meaning 'he has one of his own houses'." As this last example shows, this non-partitive sense of the friend of John's construction is not limited to phrases with demonstratives--in fact, in such a sentence as No daughter of mine (will ever marry a Rosicrucian), it is not only not presupposed that "I" have more than one daughter, but also not even presupposed that "I" have any daughters at all.

4. A New Analysis.

Given that the partitive analysis of postposed genitives falls down completely on such examples as those just mentioned, and given the failings of the other analyses previously offered for them, what is one left with? The null hypothesis is, of course, still available--in this case, that a friend of John's and the like are simply examples of a base-generated construction of the form (DET) NP of NP's, generable either in one step, as a special kind of NP (as in (6) below), or in more than one step, with -s as an optional element at the end of NP's (which can obviously show up at the end of PP's with of) (cf. (7) below):

- (6) NP \rightarrow $\left\{ \begin{array}{l} \dots (\text{DET}) \dots (\text{ADJ})^* \text{N} \dots \\ \text{NP } \underline{\text{of}} \text{ NP's} \\ \vdots \end{array} \right\}$
- (7) NP \rightarrow $\dots (\text{DET}) \dots (\text{ADJ})^* \text{N} (\text{PP}) \dots \text{'s}$
 PP \rightarrow $\dots \text{P NP} \dots$
 E.g.: [a friend [of John's]^{PP}]_{NP}

However, both of these null-hypothesis solutions entail giving up the attempt to motivate--and, hence, explain--the presence of both -s and of in the construction under discussion, and the ordering of the -s-marked NP after what it seems to be acting as the possessor of. On this analysis, then (which appears to be that of traditional grammar/s, and is a likely one for a purely surface-oriented approach like Form-Content Analysis--for details of this theory, cf. Kirsner (1977) and references therein), the prime explananda of the postposed genitive must be claimed to be accidental; there is then nothing to explain (only something to describe). Yet there really does seem to be something to be explained, in the friend of John's construction.

Fortunately, there is another possible analysis for the construction, one that has not before been advocated in the generative-syntactic literature, that provides such explanation. This analysis is based on the fact that, rather than being partitive, the semantics of the postposed-genitive construction seem to link up the postposed genitive with the prenominal modifiers, very much in the manner of Chomsky's and Stockwell, Schachter, and Partee's *a John's friend. Thus, a friend of John's is a (singular, indefinite) friend (who is (also)) John's friend. But, just as appositive relative clauses can be seen as consisting of a conjunction (or at least a juxtaposition) of two main clauses, so a postposed genitive like a friend of John's can be described as the juxtaposition of a friend and John's friend: i.e., a friend, John's friend--an appositive.

Here, the -s is clearly motivated by a following (underlying or interpreted) NP; now, only of needs to be accounted-for--and, for this, we have recourse to the appositive of that occurs in, for example, the month of May, the concept of neutralization, etc. And, once again, Jespersen (1905/1968) turns out to have been the first to reach this conclusion: "[i]n phrases like 'a friend of my brother's' ..., ... of is rather to be classed with the appositional use in the three of us = 'the three who are we'; the city of Rome = 'the city which is Rome'" (p. 173-174). One may argue, then, that the of in postposed genitives has no possessive semantics associated with it--at least, not in the usual way--but is, instead, the same of that shows-up more or less obligatorily in appositives like the above, as well as optionally in, say, the notion (of) "rule of grammar", his home state (of)/, South Dakota, etc., or in "expressive qualitatives" (cf. Milner (1978) and references therein for an extensive discussion of this construction in French) like, e.g., that idiot of a senator, that crook of a president, (He's) a gem of a centerfielder, etc. (also possible in many other languages; cf. French un imbécile de gendarme 'an imbecile of a policeman', mon crétin de mari 'my cretin of a husband', une horreur de robe 'a horror of a robe').

Now, it must be admitted that the proper analysis of appositive constructions in general is still being debated, in generative syntax, and many key issues are still open questions: what the different structures are for restrictive and non-restrictive types (e.g., my Uncle Maurice; Holmes the detective vs. my uncle, Maurice; Holmes, the detective, respectively); what is the head, and what is modifier (Specifier, or even Determiner); whether of in appositives should be present underlyingly, or transformationally inserted. However, even pending a definitive answer to these questions, and, in fact, regardless of the particular answers arrived-at, it does seem clear that apposition is the relevant notion for analyzing what is going on in postposed genitives, and, thus--to repeat and summarize--the proper analysis of a friend of John's, e.g., must be the appositive a friend, John's friend (in a syntactic framework allowing EQUI-type deletions under identity) or, more likely, a friend, John's PRO (in an interpretive framework)--in underlying form, that is. This analysis involves, of course, the transformational insertion of of. While some recent work in EST no longer advocates of-insertion in cases like that of the destruction of the city (from putative underlying (the) destruction the city, parallel to (someone) destroyed the city), but postulates underlying of, this is less attractive in the case of the "alternations" with and without of in appositives (like, e.g., the rule (of) Passive), mentioned above. The reason for this is that the two kinds of appositives are much more clearly the same construction --in some intuitive sense--and having a rule of of-insertion to differentiate them at surface structure allows one to capture this generalization with a quite general rule (one that apparently may apply to all appositives (and perhaps even all NP-NP juxtapositions) when they do not surface separated by intonational commas).

At any rate, there is no reason to suppose that NP-movement applies, in postposed-genitive constructions; Dresher and Hornstein's (1976/1979) use of it there represents a gratuitous invocation of the "free ride" principle. It is true that "Move NP" can figure in an appositive account of the friend of John's construction, but its use there is no more motivated than in a construction like Bill's hat is older than John's (mentioned above, in the Introduction to this paper), where the derivation of this from Bill's Δ is older than John's hat by movement is, while undeniably possible, still egregiously convoluted and counterintuitive, since one must allow for phrases like Bill's is older than John's, where movement cannot be motivated, in any case. But, while movement can be ruled out, for postposed genitives, it does not seem possible to make a principled choice between having an underlying PRO, and having an underlying NP in its place that is deleted under identity with the first NP in the construction. Thus, the derivation of a friend of John's could be either that in (8) below, or that in (9):

- (8) a friend, John's PRO --(OF-INSERTION)-->
 a friend of John's PRO
- (9) a friend, John's friend --(OF-INSERTION)-->
 a friend of John's friend --(DELETION UNDER IDENTITY)-->
 a friend of John's

(The deletion rule will obviously involve a goodly number of constraints on its operation; among them, one on recoverability. Since there is no time or space to go into these, here, it is perhaps better to favor the derivation with PRO, as the less problematic.)

The appositive analysis of postposed/double genitives like a friend of John's, then, makes use of truly independently-motivated structures that explain the occurrence of both of and -s, in the construction, as well as the postposed position of the -s-marked NP; it also accounts for the precise semantics of the construction, and suffers from none of the defects of previous analyses. On all these grounds, it seems clearly to be preferred.

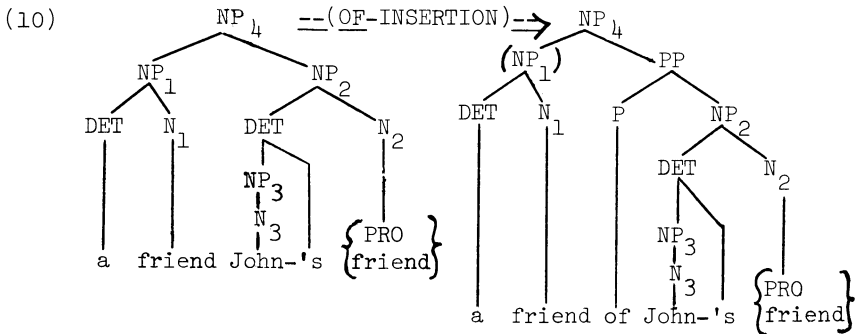
5. Residual Questions and Considerations.

While the appositive analysis of the friend of John's construction is clearly preferable to the partitive and other analyses, it would be dishonest for anyone to claim, or even hint, that it is incapable of receiving further refinement/s, or that it does not raise a number of interesting questions which motivate a search for further answers. First of all, there is the query: if a friend of John's, for example, is an appositive, with a surface structure (like) a friend of John's (PRO), where one interprets friend in the place of PRO (or \emptyset), so that one effectively has a friend, John's friend-- then why does a friend of John's friend (where friend is actually present, in surface structure) not have this interpretation? Why does this latter construction require non-coreference of the first and the second friend, whereas a friend of John's does not? If one has to answer that the friend of John's appositive construction has a special interpretive rule associated with it, then apposition loses much of its generality--and, hence, its appeal--as an explanation for the phenomena that make the construction problematic, for one is then much closer to the null-hypothesis solution: the phrase-type a friend of John's is just a special, idiosyncratic construction, with (at least some) unique properties.

However, there is another possible answer, one that has to do with the rule of Disjoint Reference (cf. Chomsky (1977) and Lightfoot (forthcoming)). According to Lightfoot, Disjoint Reference "specifies that [under certain conditions,] no two NPs may be interpreted as intersecting in reference"; that is, "[i]n a configuration NP_i X NP_j, NP_i is non-anaphoric to NP_j". Disjoint Reference accounts for the ungrammaticality of *I washed me, for example (I and me co-refer by their very nature); for the non-coreferentiality of the two instances of John in (normal utterances of) John saw John, for instance, and for why the set of soldiers is not interpreted as including the officers in, e.g., All the soldiers hate the officers. In regard to appositive (postposed/double) genitives, it seems that Disjoint Reference blocks coreference in a friend of John's friend, where two friend's are physically present, as it were, but not in a friend of John's, where one instance of friend is present only as PRO, or has been deleted. (The comma intonation of a friend, John's friend seems to remove that phrase from the sway of Disjoint Reference, which given the coreference in that crook of a president--might perhaps be better termed Disjoint Sense (and Reference).) This answer to the first query regarding the appositive analysis of postposed genitives

is thus not entirely unproblematic, itself, but it does appear to be a promising avenue for research.

A second and potentially much more interesting query involves the constituent structure of the friend of John's construction; specifically, the position of of within it, as well as in "expressive qualitatives" like that crook of a president, just mentioned again, and in other appositives like the month of May, also mentioned above --hence, this query raises the issue of the syntactic position of of within the hierarchical structure of appositives (where it appears) in general. The question is, essentially: In a friend of John's, is of John's a prepositional phrase, or not? (If of is transformationally inserted--the analysis that has been favored, here--then this obviously refers (only) to surface structure; if of is present underlyingly, then it concerns underlying structure, but this will also be the surface structure, for of, since it is unaffected along the path there, on a no-insertion analysis.) Because transformational insertions (as well as deletions) are not constrained to be structure-preserving (in the sense of Emonds (1970), revised as Emonds (1976)), there is no necessary reason why insertion of of into an "appositive" genitive should entail the simultaneous creation of a PP-node to dominate it and the NP(-position) following it, but this is perhaps the first analytical move that comes to mind, since most prepositions in English surface structure occur inside PP's, especially when they are in NP's. Thus, one should perhaps first consider the characterization of the derived constituent structure produced by of-insertion in an appositive genitive in (10) below:



One way to test the validity of the proposed structure (on the right above) is to see whether the putative derived prepositional phrase acts like other phrases whose PP-hood is clear beyond any doubt; for this, one may perform extraction tests on the phrase in question; of John's, here. With indisputable prepositional phrases in similar constructions, it is clearly possible to extract (by Wh-Fronting/Movement) either the object of the preposition (which "strands" the preposition) or the whole PP (= "pied-piping"); this is illustrated by the sentences in (11), where NP-objects of prepositions containing possessives have been chosen--in several cases--in order to provide a better comparison with appositive genitives:

- (11) I know the names of three books.
 How many books do you know the names of?
 What do you know the names of?
 Of how many books do you know the names?
 Of what do you know the names?
 This is the key to the eighth door.
 Which door is this the key to?
 What is this the key to?
 To which door is this the key?
 To what is this the key?
 John has written books about many people's fathers; I wonder whose (father) this one is about.
 Whose is this one about? (whose = whose father)
 About whose is this one?
 John is a friend of Bill's friend; I wonder whose (friend) Bill is a friend of.
 Whose is Bill a friend of? (whose = whose friend)
 Of whose is Bill a friend?

However, although one can extract from regular of-genitives (regardless of whether they refer to people or not), as in (12) below, one cannot extract from appositive genitives; thus, the examples in (13) form a sort of minimal pair with the last set of examples in (11): if the of in the postposed genitive construction is part of a prepositional phrase, then the two sets of examples should be structurally identical (they are certainly lexically identical)--and yet one can extract in the case in (11), but not in that in (13).

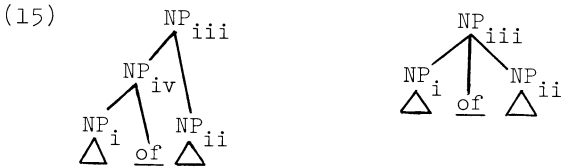
- (12) Hardness is a property of diamonds.
 What is hardness a property of?
 Of what is hardness a property?
 Bill is a friend of John.
 Who(m) is Bill a friend of?
 Of who(m) is Bill a friend?
 (13) Bill is a friend of John's.
 *Whose is Bill a friend of?
 *Of whose is Bill a friend?

If, on the other hand, of John's, in a friend of John's, etc., is not a prepositional phrase, then that explains why extraction is impossible in (13). Furthermore, it seems that the non-PP behavior of of + NP combinations in appositive genitives is paralleled by their similar behavior in other appositive constructions--cf. (14):

- (14) I saw our crook of a president yesterday.
 *Who(m)/What did you see our crook of (a) yesterday?
 *Of who(m)/what did you see our crook yesterday?
 It happened in the month of May.
 *What did it happen in the month of?
 *Of what did it happen in the month?

The conclusion to be drawn from all this appears to be that the of

in of-appositives does not form a constituent with the following NP-- certainly not a PP. As a result, the derived constituent structure of the friend of John's construction, along with that of expressive qualitatives and the month of May construction, must, apparently, be one of the two structures in (15) (here, reduced to their essentials):



Either structure will suffice to present a configuration in which Ross's (1967) A-over-A Constraint (in its original form, or else in some much more recent equivalent formulation in EST) will rule out extraction of an embedded NP, and in which the general prohibition against movement of non-constituents will block the extraction of of + NP_{ii}. There are few considerations which bear on the choice between the alternatives in (15), but parallelisms of the structure on the left with certain quantifier expressions favor it (the [[NP of] [NP]] configuration) over the other.

Akmajian and Lehrer (1976) demonstrate that there are NP's with quantifiers in which the quantifier phrases (QP's) end, in surface structure, with (a transformationally-inserted) of: e.g., a number of books = [[[a number]_{NP} of]_{QP} [books]_{NP}]_{NP}; cf. the agreement facts in a number of books ?was/were found there yesterday. Some NP's can be structured/interpreted either in this way, or with of as part of a PP --with the NP preceding of as the head of the construction: cf., e.g. a herd of elephants was/were approaching at full speed. Given these structures and this variation, Akmajian and Lehrer point out that this all is the result of an ongoing historical process whereby NP's denoting measures or units are gradually reinterpreted as QP's--and that part of this process is the downgrading of of, formerly the introducer of a PP modifying the measure/unit-NP head, into an essentially meaningless element at the end of (a) QP, when the object of the PP is upgraded into the head of the whole NP (thus, in the above examples, books and elephants have come to be the heads, and not number and herd, respectively--at least potentially).

Knowing the existence of these phenomena, and of the similar downgrading--and phonological reduction--that has occurred in sort of > sorta, lot of > lotta, etc., one is inclined to view the appositive/postposed genitive and other of-appositives as having undergone the same reduction of of to an essentially meaningless element. And, thus --although it is difficult to say precisely why--it seems (at least to this author) that the [[NP of][NP]] structure above more closely captures this downgrading of of than the structure [[NP][of][NP]].

To be sure, although I have just spoken of the historical downgrading of of in postposed genitives and other appositives, I have not yet presented any evidence for a source construction where of was more upgraded, less syntactically--and, presumably, semantically--reduced; only evidence that of, in such constructions, is synchronical-

ly rather meaningless. But that hinted-at diachronic study must be the subject of another paper, since this discussion already comes at the end of the present one. For now, suffice it to say that the early attestations of the friend of John's construction--which occur in Chaucer's time, and perhaps earlier--are all ones that are consistent with a partitive interpretation (i.e., do not require an appositive one; cf. the Chaucerian (Middle English equivalent of) an old fellow of yours), so that the appositive interpretation (and, hence, structure) may well have arisen via a reinterpretation of the partitive, since their semantics overlap, in most cases. On the other hand, given that postposed (postnominal) -'s-marked genitives occur, from Old English into ME, the possibility that the appositive genitive arose as some kind of blend of the two cannot be totally discounted (cf. friend mine, a friend of me vs. a friend of mine).

But, in any case, regardless of what the correct account of the past development of the friend of John's construction is, I hope to have shown, here, that the correct account of the present status of such postposed/double genitives is not the partitive or any other previous generative analysis, but a reformulation, in generative terms, of Jespersen's (1905/1968) appositive analysis.*,¹

FOOTNOTES

* This paper stems, ultimately, from a(n extremely long) footnote in a paper of mine (Janda (1978)) on the history of the (Modern) English -'s-genitive, especially its reanalysis--for a time--as the ME his-genitive; the analysis first tried to stand on its own in a presentation to the UCLA Syntax and Semantics Seminar on May 1, 1979, and an earlier version of the present form of this paper was presented at the Ninth Annual California Linguistics Association Conference (CLAC) at California State University, Sacramento, on May 5-6, 1979. For both positive and negative, but always helpful, comments at various early stages, I am grateful to Steve Anderson, Joe Emonds, Júlia Horváth, Paul Kiparsky, Will Leben, Mike Rochemont, Paul Schachter, Bob Stockwell, Steve Weisler, and others; and, at BLS VI, to George Bergman, Donald Frantz, and Henry Thompson.

1. There are a number of points relating to the friend of John's construction which, though they do relate to the phrase-type, do so so peripherally that they are best banished to footnotes.

First of all, it has been pointed out to me that, for some speakers, a friend of mine is grammatical, but a friend of me is not. I do not share this judgment, but, for those who do, it does not seem to mean anything more than that they have a filter proscribing this particular phrase--it does not seem likely that a friend of John and I/me would be bad for them, for instance. This particular phenomenon may perhaps relate to the (un)grammaticality of (Give it) to her and me, e. (vs. ... her/she and I), but, at any rate, it certainly has no immediate bearing on the question of the proper analysis of postposed genitives.

Second, several people have asked whether the analysis of a friend of John's, etc. can and/or should be related to that of constructions like

(He's not) too good of a quarterback, for example, which seems to be a more colloquial variant of (not) too good a quarterback; the reminiscent point of similarity being, obviously, the unexpected occurrence of of. The origin of this latter construction ((not) too good a ..., etc.) was probably very different from that of appositive genitives and other appositives, but it is, in fact, possible to analyze this phrase-type, too, as an appositive--in the following way: [[[too good]_{AP} [PRO]_{NP} of]_{NP} [a quarterback]_{NP}]_{NP} (where PRO can, of course, be replaced by Δ , if one favors an analysis with deletion under identity, discussed briefly--in regard to appositive genitives--above). The newer construction differs from appositive genitives in having the ellipted NP in the first conjunct of the appositive, rather than in the second (which would seem definitely to rule out a movement analysis, here), and in necessarily (or perhaps only definitionally) containing an adjective in that first conjunct--and maybe a very limited set of adjective modifiers, as well--but the fact that it appears to be an appositive with of and a(n underlyingly or interpretively) repeated NP far outweighs those dissimilarities. However, the different origin alluded to above is that the (not) too good of a ... construction may have resulted from a reanalysis of (not) too good a ... as containing a reduced form of of, instead of a, with a subsequent supplying of the missing a. This scenario is, admittedly, quite speculative, but I know of no other.

The (not) too good of a ... construction, then, may well bear on the analysis of appositive genitives and appositives in general, but more in the way of providing independent motivation for rules or structures (e.g., of-insertion?) than in the way of being amalgamable with the latter, or of providing direct evidence regarding them. It certainly deserves further, closer investigation.

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Topic, French Style
Remarks about a Basic Sentence Type of Modern Non-Standard French

Knud Lambrecht
University of California at Berkeley

1. The Phenomenon

1.1. moi je-mange

It is well known that modern French has two series of personal pronouns, one "strong" or "autonomous" (moi, toi, lui etc.) and one "weak" or "clitic" (je, tu, il etc.). It is also well known that pronouns of both series can occur coreferentially in the same sentence, as in

- (1) Moi je-mange et toi tu-bois ¹
 I I eat and you you drink 'I eat and you drink'

The distribution of the two pronoun series has been analyzed in a considerable number of studies and grammars, the best known of which is probably Benveniste's 1965 article 'L'Antonyme et le Pronom en Français Moderne', but the specific cooccurrence phenomenon illustrated in (1) has gone widely unexplained if not unnoticed, although it is strikingly frequent, in particular in the spoken language. When the phenomenon is mentioned at all, the explanation typically given for it is that sentences such as (1) are "redundant" or "emphatic" (cf. e.g. Benveniste 1965, Dubois 1965, Gross 1968, Kiefer 1970, etc.).

The reason why this explanation—which I will argue is wrong or at least misleading—is so often found in the literature may be the following: if it is assumed that the two coreferential elements in (1) are basically the same thing, it seems natural that their cooccurrence should be considered redundant since saying the same thing twice is saying it more often than necessary. It is furthermore typically the case that by saying something more often than strictly necessary we want to stress what we say, therefore it seems equally natural to interpret the consecutive use of two coreferential elements as a sign of emphasis.

The emphasis explanation seems to be confirmed by the fact that only pronouns of the "strong" series can receive contrastive stress, and never clitic pronouns. Thus adding a strong pronoun to a clitic would amount to adding an emphatic element to a non-emphatic one. The difference between strong and weak pronouns with respect to stress is illustrated in (2) (here and in the following examples underlining indicates intonation peaks):

- (2) a. Moi je-mange
 b. *Je-mange

However the fact that only moi can be stressed contrastively does

not entail that simultaneous occurrence of moi and je signals emphasis. I would like to demonstrate with the following four arguments that the interpretation of sentences like (1) as emphatic sentences must be rejected:

A-1: If the strong pronouns have the effect of creating emphasis, then it is still unclear why the weak pronouns should necessarily show up together with them. That the strong pronouns cannot usually occur independently of the clitic pronouns is shown in (3), which contrasts with (1), and in (4a), which contrasts with (4b) 2:

- (3) *Moi mange et toi bois
 (4) a. *Je-vois toi 'I see you'
 b. Toi je-te-vois / Je-te-vois, toi

A-2: If the cooccurrence of autonomous and clitic pronouns creates emphasis, we should expect such constructions to occur in typically emphatic contexts, for example when a pronoun is modified by seulement or ne...que ('only') or when a negation signals a focus of contrast. But these are precisely contexts where the two pronouns usually do not cooccur. Compare the following two sets of sentences:

- (5) a. Elle-aime seulement moi / Elle-n'aime que moi
 b. *Elle m'aime seulement moi / *Elle-ne-m'aime que moi
 'She loves only me'
 (6) a. C'est moi qui mange, pas toi
 it is I who eat not you 'I am eating, not you'
 b. ?Moi je-mange, pas toi 3

A-3: Emphasis is necessarily accompanied by an intonation peak. However when a clitic pronoun cooccurs with an autonomous pronoun, this autonomous pronoun does not usually receive primary stress. For example, in one natural pronunciation of sentence (1), primary stress falls on mange and bois, not on moi and toi. In sentence (6a) however, where the (clefted) strong form occurs alone, the intonation peak must be moi.

A-4: It is possible to repeat a pronoun carrying strong contrastive stress but it is not possible to repeat an autonomous pronoun in the cooccurrence structure, whether this pronoun is stressed or not. Compare example (7a) with (7b):

- (7) a. C'est moi qui ai tout fait et c'est moi qui vais avoir la récompense
 b. Moi j'ai tout fait et (*moi) je-vais avoir la récompense
 'I did everything and I am going to get the reward'

From these four arguments it follows that although the cooccurrence of a clitic pronoun with a coreferential strong pronoun can serve to express a simple contrast, as for example in sentence (1), it cannot be used to express emphasis. It is therefore necessary to look for another explanation of the cooccurrence phenome-

non. In section 3 of this paper I will propose an analysis that accounts for the data in (1) through (7). This analysis will be based on the claim that the two pronoun types are fundamentally different linguistic forms. It is the failure to recognize this difference that has led to such misinterpretations as the Emphasis and Redundancy hypotheses. More serious, an important aspect of French sentence structure cannot be properly understood unless this difference is recognized.

1.2. Pierre il-mange

The pattern illustrated in (1) is parallel to the equally widespread pattern where a full NP cooccurs with a coreferential clitic pronoun, as in

- (8) a. Pierre il-mange
 Pierre he eat 'Pierre is eating'
 b. Mes amis ils-boivent
 my friends they drink 'My friends are drinking'

It has been claimed (Benveniste 1965, Kayne 1975) that pronouns of the autonomous series and full NPs are in free variation. I believe this claim cannot be substantiated in such a strong form. That NPs and strong pronouns are not always syntactically interchangeable follows from the contrast between the ungrammatical forms in (3) and (4a) and the grammatical forms in (9), where nouns have been substituted for the strong pronouns:

- (9) a. Pierre mange et Jean boit
 b. Je-vois Pierre

Free variation does hold however for the sentence structure under analysis in this paper, i.e. for all cases where an NP/strong pronoun cooccurs with a coreferential clitic. I will therefore assume that the structures in (1) and (8) are syntactically equivalent and I will hereafter refer to the phenomenon they exhibit as Cooccurrence.

One relevant piece of evidence for the similarity between (1) and (8) is that the restrictions on strong contrastive stress are the same for strong pronouns and full NPs: compare the acceptable and the unacceptable forms in (5), (6) and (7) above with those in (10), (11) and (12):

- (10) a. Elle-aime seulement Pierre / Elle n'aime que Pierre
 b. *Elle-l'aime seulement Pierre / Elle-ne-l'aime que P.
 (11) a. C'est Pierre qui mange, pas Jean
 b. ?Pierre il-mange, pas Jean
 (12) a. C'est Pierre qui a tout fait et c'est Pierre/lui qui
 va avoir la récompense
 b. Pierre il-a tout fait et (*Pierre/*lui) il-va avoir
 la récompense

1.3. je-mange, moi

In addition to the Cooccurrence pattern on the one hand and the pattern without a cooccurring clitic illustrated in (9) on the other hand, there exists a third, possibly even more common pattern in modern non-standard French, which is illustrated in (13):

- (13) a. Je-mange, moi
b. Il-mange, Pierre

This sentence type, which bears striking similarities to the phenomenon that Givón (1976) and Chafe (1976) have called the Afterthought and the Antitopic respectively, is formally and functionally clearly distinguishable from the two other types⁴. Given the limitations of this paper, I cannot deal here with this important construction of non-standard French. I will take it for granted for the purposes of my argumentation and I will use Afterthought constructions whenever necessary in the examples that follow.

2. Previous Analyses

Given the existence of these three sentence patterns in modern French, we observe that the propositional content of a simple English sentence like Peter eats apples can be expressed in French in three different ways:

- (14) a. Pierre mange des pommes
b. Pierre il-mange des pommes
c. Il-mange des pommes, Pierre

Faced with this diversity, grammarians of different schools have adopted different strategies to deal with it. These strategies can be roughly divided into four types:

- S-1: among the three structures in (14), (a) is considered the correct way of speaking and (b) and/or (c) are rejected or ignored;
S-2: (a) on the one hand and (b) and (c) on the other hand are analyzed as diachronically different manifestations of a functionally identical structure;
S-3: (a), (b) and (c) are analyzed in terms of distributional classes;
S-4: (a) is taken as basic, (b) and (c) as derived.

These four strategies correspond to the normative, the historical, the structuralist and the transformational approach respectively. What is common to all approaches, except for the historical one, is that Cooccurrence is considered a somehow anomalous construction, a marginal phenomenon, whose existence—if acknowledged at all—is dealt with somewhat reluctantly.

My purpose in this paper is to suggest a new approach to Cooccurrence in which this construction is analyzed as a non-redundant, non-emphatic, non-derived phenomenon that occupies a central place

in French sentence structure ⁵. More specifically, I will try to demonstrate that among the two nominal elements in Cooccurrence, the first is best described as a Topic and the second as a Topic-Agreement Marker. I will sketch this new approach in section 3 of my paper. In the remainder of this section, I will briefly describe and criticize the four strategies listed as S-1 through S-4 above. Limitations of space prevent me from giving a more detailed and perhaps fairer account of those previous approaches. I will therefore just summarize the results of an analysis I have presented elsewhere (Lambrecht 1979).

2.1. The Historical Analysis

Wartburg (1943) analyzes the weak subject pronouns in modern French as full-fledged inflection morphemes in an (almost) regular prefixation paradigm. This new paradigm has replaced the IE suffixal inflection system that survives in Italian, Spanish, Portuguese, etc. The strong pronouns are simple subject pronouns in this new paradigm, so that sentence (1) for example represents the new stage of the language, in which the prefixes je- and tu- etc. function exactly like the old, now functionless suffixes in mang-e and boi-s, whereas moi and toi have taken over the functions of the older subjects je and tu. Similarly, (14b) would be the new form that has replaced (14a) because the erstwhile suffixal morpheme in mange has ceased to be perceived as such.

This analysis seems to account in a very simple and elegant way for the cooccurrence phenomenon in (1) and (14b). However it fails to explain why the presence of the new subject pronouns is optional whereas the former subject pronouns had been obligatory since the 15th century. Evidence against the analysis of Cooccurrence in terms of a simple pattern rearrangement from suffixation to prefixation is also presented by the asymmetry in the following sets of contrasting old and new forms:

- | | | | | |
|------|----|-------------------|-----|-----------------------|
| (15) | a. | je mange | --- | moi je-mange |
| | b. | *mange, je | --- | je-mange, moi |
| (16) | a. | l'éléphant mange | --- | l'éléphant il-mange |
| | b. | un éléphant mange | --- | *un éléphant il-mange |

The lack of parallelism between the old forms on the left and the new forms on the right cannot be accounted for in Wartburg's analysis (cf. section 3.5 for an analysis of (16b)). Finally, the most serious shortcoming of the diachronic pattern-rearrangement analysis is that it cannot explain why the new inflection markers continue to carry important subject functions that have not been taken over by the strong forms and why these new subject pronouns actually present none of the syntactic properties typically attributed to subjects (cf. 3.2 below).

2.2. The Structuralist Analysis

This approach is probably represented in its purest form by Benveniste, whose 1965 article I mentioned above (but cf. also Dubois, 1965, and Heger, 1966, for similar approaches). Although Benveniste promises to give an analysis of the two pronoun series and of their relationship, he says virtually nothing about the function of the strong pronouns (which he calls "antonyms") in Cooccurrence, i.e. about the phenomenon that makes the two series so puzzling. Benveniste's essentially distributional method of analysis yields interesting results regarding the possible combination of morphemes of the same distributional class; it does not explain: a) why the strong pronouns, which are said to be in free variation with (proper) nouns, cannot appear in typical NP positions (cf. 1.2 above); b) why the weak forms, although essentially considered nominal substitution forms, do not syntactically behave like nouns either; c) why they cooccur with coreferential strong pronouns or nouns and what the nature of this cooccurrence is; and d) why they are bound to the verb. Furthermore, the criticism applied to the historical approach in 2.1 regarding the non-subject functions of the strong pronouns/NPs also applies to the distributional method.

2.3. The Normative Approach and the Standard/Non-Standard Distinction

This approach is relevant for this paper in an indirect way. In the standard grammars of French, Cooccurrence, although a common feature of modern French, is usually stigmatized as incorrect if it is not altogether ignored⁶. This fact, I believe, constitutes good evidence for the existence of a new linguistic reality that does not fit the patterns of traditional grammar. Being by definition grammars of the (written) standard language, normative grammars have systematically discarded a whole range of syntactic phenomena of the spoken language which, taken together, point towards a new syntactic typology of modern French. Standard French is on its way to becoming a dead language, kept alive only in writing and through the extremely strong influence of classical usage traditions. Since Cooccurrence is essentially—although not uniquely (cf. section 3.1)—a feature of spoken French, I believe that in order to achieve a clearer description of the phenomenon under analysis it is necessary to establish a theoretical distinction between two languages: Standard French and Non-Standard French (hereafter SF and NSF)⁷.

The feature of NSF that is most relevant to this paper is the development of a complete paradigm for the two complementary pronoun series. The chart in (17) presents the pronoun paradigm of NSF. It is not the purpose of this paper to comment on the details of this chart. Suffice it to say that Cooccurrence consists in the combination of one or more items in the Topic columns with coreferential items in the boxes containing the Topic-Agreement Markers. However I will briefly comment on what is probably the most stri-

(17)

The Pronoun Paradigm of NSF

SINGULAR					PLURAL				
TOPICS	AGREEMENT MARKERS				TOPICS	AGREEMENT MARKERS			
	SU	DO	IO	OBL		SU	DO	IO	OBL
moi	je	me	me	en y	nous	on	nous	nous/y	en y
toi	tu	te	te	" "	vous	vous	vous	vous/y	" "
lui/NP	il	le	lui/y	" "	eux/NP	ils	les	leur/y	" "
elle/NP	elle	la	lui/y	" "	elles/NP	elles	les	leur/y	" "
ça/NP	ça	le/ça	y	" "					

king and important innovation of NSF over SF in this paradigm, namely the appearance of the subject clitic on in the first person plural ⁸, which should not be confused with the impersonal pronoun on in the third person singular, which I have left out in (17). In NSF, the pair nous - on is exactly parallel to the pairs moi - je, toi - tu etc. Example (18) contrasts the standard and the non-standard forms in the first person plural:

(18) nous nous-mangeons (SF) - nous on-mange (NSF) 'we eat'

Prefixed to the uninflected verb stem, on has become the regular, unmarked subject clitic in the 1st person plural, virtually always used in the spoken language and hardly ever used in writing. NSF has thus made one crucial further step away from the IE suffixal inflection system and towards the establishment of a complete system of opposition between autonomous and dependent pronouns ⁹.

Although the various uses of on in modern French have given rise to a great number of explanations by philologists and linguists (cf. the summary of the literature in Grafström, 1965), this functional explanation of the shift from nous V-ons to on-V, motivated by the necessary integration of a morphologically anomalous form into a new complementary paradigm, has, to my knowledge, not yet been put forward in the literature.

On behaves in every respect like the other weak forms, in particular it is phonologically and syntactically bound to the verb. In contrast, nous, being its autonomous counterpart, is similar to the other autonomous pronouns, which are phonologically and syntactically independent. Compare:

- (19) a. mes amis ils-iront : /mezami i(1)zirõ/ - /*mezamizil irõ/ - /*mezami ilirõ/
 b. eux ils-iront : /ø i(1)zirõ/ - /*øzil irõ/ - /*ø ilirõ/
 c. nous on-ira : /nu õnira/ - /*nuzõ ira/ - /*nu õ ira/
- (20) a. Pierre/Lui parfois il-boit du vin
 Pierre sometimes drinks wine/He sometimes drinks wine
 b. *Pierre il parfois boit du vin
 c. Pierre il-me-voit

- (21) Qui est venu? { - Moi / *Je 'Who came?' { - 'Me'
 { - Nous / *On { - 'Us'

Example (19) illustrates the difference in phonological status between the two pronoun types: eux, nous, etc., as well as full NPs in general, are phonologically independent words (i.e. there can be no sandhi between the plural morpheme -s and a following vowel), whereas liaison is obligatory between the clitic forms and the verb they are prefixed to. Note also the difference between the NSF form in (19c), where there can be no liaison between nous and on, and the pronunciation of the SF form nous irons, where liaison is obligatory (/nuziro/ vs /*nu iro/). The difference in syntactic behavior is illustrated in (20) and (21): unlike strong pronouns and NPs, clitic pronouns cannot be separated from the verb, except by another clitic (as in (20c)), and they cannot occur in isolation (cf. (21)).

2.4. The Transformational Analysis

Facts such as those illustrated in (19) to (21) have been a problem for transformational analyses of the French pronoun system. Since it is assumed in generative pronoun theories that subject and object pronouns—whether generated as such in the base or transformationally derived via pronominalization—occupy NP position in the underlying structure, and since French clitic pronouns do not behave like NPs in surface structure but in fact are in complementary distribution with nouns, a special device is needed to move clitic pronouns from their assumed underlying NP position into surface position dominated by V. The mechanism needed for this operation has been called clitic-placement (for a detailed account of how such a mechanism operates cf. Kayne 1975, chapter 2). As for the autonomous pronouns, it is assumed that they can be freely generated in NP position (cf. 1.2 above).

Such an analysis can account for the syntactic difference between (22a) and (22c) by postulating an intermediate ungrammatical stage (22b), which obligatorily gets transformed into the grammatical form via clitic-placement:

- (22) a. Tu-manges les pommes 'You eat the apples'
 b. *Tu-manges les
 c. Tu-les-manges 'You eat them'

It cannot account however for the already mentioned fact that the strong pronoun forms, which do seem to behave like nouns, often cannot appear in NP position either unless they cooccur with a clitic (cf. examples (1), (3) and (4) above). This important fact seems to have gone unnoticed in the transformational analyses, as far as I can see. As for the Cooccurrence type illustrated in (8) or in (14b), or in the following example

- (23) Les pommes tu-les-manges 'You eat the apples'

in which the NP in Topic position corresponds to the object NP of (22a), it has been dealt with in terms of a movement transformation of the so-called dislocation (or detachment) type.

I would like to argue that instead of explaining the difference between (22a) and (22c) and similar phenomena by this ad-hoc rule of clitic-placement that moves object pronouns from postverbal into preverbal position and subject pronouns from daughter-of-S position into a position dominated by V, and instead of analyzing sentences like (23) as marked structures that "dislocate" the "normal" word order, it is simpler and intuitively more satisfying to consider (22a) an example of one basic sentence type and to interpret (22c) and (23) as two aspects of another, derivationally independent, basic pattern.

Transformational Grammar has been accused by its opponents of being a step backward from the descriptive science of structuralism towards a new version of prescriptivism. Although I believe that such accusations are unfair or based on a misunderstanding of the goals of TG, it does not seem entirely unjustified to me to assume that the interpretation of sentences like (23) as resulting from some dislocation of a more normal or basic structure is somehow analogous to the normative attitude that rejects the construction altogether. When you hear "dislocation", you think of the displaced bones of healthy sentence structure. The metaphor is revealing. I think that the main motivation for postulating transformations such as clitic placement and dislocation is that Cooccurrence is a troublesome phenomenon within the reductionist model of language in which the rule $S \rightarrow NP VP$ is the first rule of grammar. The weakness of this model, when applied to Cooccurrence, is that it cannot account for the fundamental formal and functional difference between the Topic and the Agreement Marker. Once this difference is recognized, any analysis in which the two coreferential nominal elements are considered two different surface manifestations of an identical underlying entity, namely NP, becomes difficult to defend.

The commitment to the model in which every sentence originates as an expansion of S into NP and VP makes it difficult to account in a natural way for the following phenomenon: among the three ways of expressing the information Peter eats apples illustrated in (14), the "simplest" one, namely (14a), is also the most unlikely to occur in real language use. Striking though that may be, this important fact is difficult to prove since all three forms can occur and since "likelihood of occurrence" is not an easy criterion to argue with. I believe that the following real world example is particularly compelling. Imagine a situation where someone upon seeing a bridge wants to communicate the feeling that she or he finds that bridge beautiful. Among the three most simple expressions of that feeling

- (24) a. Ce pont est beau!
 b. Ce pont il-est beau!
 c. Il-est beau, ce pont! } 'That bridge is beautiful!'

the first is clearly the most unnatural and inappropriate. If there is any sense in distinguishing the three sentences in terms of stylistic markedness, it is (a) that is the marked member of the set.

Limitations of space and knowledge prevent me from presenting a full account of the pragmatic conditions under which each of the three syntactic patterns is appropriate. I will limit my analysis to the Topic type in (24b) and to the different properties of the two nominal elements (hereafter N-1 and N-2) and I will argue in favor of a basic sentence type in which both the subject-predicate and the topic-comment relationship are formally encoded. As for the term Topic, I will use it as an operational concept whose meaning will hopefully become clearer in the course of my argumentation.

3. Criteria for Topic Status of N-1 in NSF

3.1. Topic is Not a Focus of Contrast

Although Cooccurrence is most common in NSF, examples of it can be found in the standard language too (cf. note 6). But it seems that in SF its use is limited to stylistically marked contrastive contexts, as in this example from Saussure's Cours (in this as in the following examples, N-1 and N-2 will be underlined for ease of recognition; underlining should not be interpreted as a signal of emphasis):

- (25) Les prescriptions d'un code, les rites d'une religion...
n'occupent jamais qu'un certain nombre d'individus à la fois...; la langue, au contraire, chacun y participe à tout instant.

'The prescriptions of a code, the rites of a religion... never apply to more than a certain number of individuals at a time...; in the case of language, however, everyone participates at every moment.'

In the language of rhetoric, this example could be qualified as a case of anacoluthon. The shift to the new topic la langue with its clearly contrastive function is accompanied by a kind of syntactic hiatus: what at first seems to be the new subject—parallel to the preceding subjects prescriptions and rites—turns out to be the syntactic object of participe. This effect of surprise gives the construction a stylistically marked status. As in NSF, the clitic (in this case the oblique y) functions as the obligatory syntactic link between the topic and the verb. Although the type of contrastive topic shift construction illustrated in this example is not exactly analogous to similar constructions in English—it would hardly seem appropriate to translate the relevant part of (25) by using a "left dislocation" ('language, however, everyone participates in it at every moment')—I think that Chafe's definition of "Topics, English Style" can appropriately be applied to this French case: "The so-called topic is simply a focus of contrast that has for some reason

been placed in an unusual position at the beginning of the sentence" (Chafe 1976, p.49).

The following example is taken from a formerly very popular comic book series ('Tintin' by Hergé) whose style is predominantly SF with occasional concessions to spoken French. In (26), the occurrence of the definite NP la boîte after previous mention of its referent in indefinite form (une boîte à conserve) cannot be interpreted as contrastive and is thus a more typical example of Topic:

- (26) Le bout de papier provient de l'étiquette d'une boîte à conserve, et la boîte dont il a été arraché, je l'ai eue en main un peu avant de vous rencontrer. (from Le Crabe aux Pinces d'Or)
 'The piece of paper comes from the label of a can, and the can it was torn off of, I had it in my hand just before running into you.'

The topic noun la boîte is "given" information and in some simple sense it represents what the rest of the sentence "is about". Although as in (25), the agreement marker is not in the SU case, much less mental reprocessing than in (25) seems to be necessary here to understand the function of la boîte and to "rethink" as a syntactic object what at first appeared to be a subject. I will argue in the next section that Topic in NSF cannot be understood with relational syntactic concepts like 'subject' or 'object' and that it has to be considered relationally independent of the verb.

A very natural example of Topic in NSF is illustrated in this discourse fragment:

- (27) Speaker A: J'ai essayé d'aller à la plage hier, mais il-faisait trop froid.
 Speaker B: La plage il-faut y-aller quand il-fait chaud.
 'I tried to go to the beach yesterday, but it was too cold.'
 'You should go the beach when it's hot.'

Speaker B's utterance takes up an NP newly introduced by Speaker A (à la plage) and uses it as Topic (la plage), followed by the agreement marker y on the verb. Speaker B's reply is a clear case of a topic-comment structure, in which the (caseless) initial NP signals what the utterance is going to be about.

Summarizing this section, I would like to suggest that although Cooccurrence in NSF can also be used in contrastive contexts—as for example in sentence (1)—examples (25), (26), and (27) present evidence for a process of de-marking from strongly contrastive in SF to neutral in NSF 10.

It is important to notice that the syntactically and stylistically neutral character of Cooccurrence in NSF distinguishes it from superficially similar constructions in English in which, at least in the prevailing view, an NP has been moved into initial position for reasons of emphasis. I have already argued in section 2.4 that the interpretation of Cooccurrence as a case of Left-Disloca-

tion is misleading. Similarly, the NSF construction should not be confused with the rule that has been called Topicalization in English. Unlike in English cases like the often cited Beans I like, the appearance of Topic in NSF is due to a typologically relevant new discourse strategy (the marking of an NP as given in context), not to the breaking up of a more basic structure for purposes of contrast focusing. In English, a "topicalized" NP can be interpreted as leaving a syntactic "gap" in the place out of which it has been moved. French Cooccurrence sentences never contain such a gap since the verb is obligatorily preceded by one or several agreement markers which syntactically "replace" the Topic. Expressed differently, a Topic can always be dropped without causing ungrammaticality. Compare sentences (28) (a), (b), and (c):

- (28) a. Ton frère j'y-ai donné un livre 'I gave a book to
 b. J'y-ai donné un livre your brother'
 c. *Ton frère j'ai donné un livre

In (28c), the missing agreement marker causes ungrammaticality. However, if the "fronted" NP is provided with a case marking, the sentence becomes grammatical:

- (29) A ton frère, j'ai donné un livre

Thus, French also has a rule of Topicalization which is very similar to the English rule. I do not know for sure what the status of (29) is with respect to the SF/NSF distinction. I believe that sentences like (29) are unlikely to occur in NSF. In any case, the clear syntactic and stylistic difference between (28a) and (29)—the latter is a marked construction—proves that Cooccurrence and Topicalization are quite distinct phenomena ¹¹.

3.2. Topic is Syntactically Independent

The most striking formal property of Topics in NSF is that they are not marked for case. The role of a Topic with respect to the case frame of the verb is expressed only vicariously through its agreement marker on the verb. This agreement marker, whose case is morphologically determined (cf. the difference between the Topic columns and the columns containing the agreement pronouns in (17)), establishes the necessary syntactic link between the argument structure of the verb and the pragmatically determined Topic. The discourse fragment in (27) above illustrates this difference: in Speaker A's utterance, his attempt to go to the beach is new information, therefore the noun appears integrated into the predicate structure in the oblique form à la plage required by the verb aller (which does not have an agreement marker). In Speaker B's reply, la plage has lost its preposition together with its status as new information and this preposition now reappears, as it were, as the agreement marker y in front of the verb aller.

It follows that Topic is not determined by the verb, or only

indirectly so. Whereas "the semantic role (Agent, Experiencer, etc.) of the referent of a basic subject is predictable from the form of the main verb" (Keenan, 1976, p.321), the semantic role of a Topic is not predictable in this way. Rather, the Topic in NSF presents some of the typical features of topics as defined by Li and Thompson (1976) for topic-prominent languages: "An important property of the topic is that it...need not be an argument of a predicative constituent;...topic selection is independent of the verb" (Li and Thompson, 1976, p.461ff.). For example, given a two-place predicate like s'intéresser à ('to be interested in') and two NPs, one [+animate], the other not, we can predict that only the agreement marker in SU case can agree with the [+animate] (=Agent) noun and that the marker in the OBL case must correspond to the noun with the feature [-animate], but we cannot predict (except possibly from previous discourse) whether the NP with the animate or the one with the inanimate referent will be the Topic. Thus in the following examples, the Topic is either mon frère or les livres or both:

- (30) a. Mon frère il-s'intéresse pas aux livres
 b. Les livres il-s'y-intéresse pas, mon frère
 c. Mon frère, les livres il-s'y-intéresse pas
 'My brother is not interested in books'

In spite of this freedom of Topic selection, it would be inaccurate to say that in these sentences the Topic has no selectional relation at all with the verb, since Topic-agreement is obligatory. However it is possible in certain cases to omit even this agreement link between the Topic and the verb, so that no overt semantic connection is left between the two constituents. A typical example is

- (31) Ton frère c'est pas pareil
 your brother it is not same
 'It's not the same with your brother'

or even (32), which was uttered in a conversation about problems in foreign language learning:

- (32) Tandis que le suisse-allemand il-faut se lever tôt
 whereas the Swiss-German it is-necessary get up early
 'whereas Swiss-German is really tough (to learn)'

Structures like (31) or (32), in which the semantic relationship between the topic and the comment is recoverable only from the context, bear a striking resemblance to certain constructions in topic-prominent languages (Mandarin, Lahu etc.) in which "the topic has no selectional relationship with the verb" (Li and Thompson, op. cit., p. 468; cf. the examples given there).

It may be worthwhile to mention here a construction which has frequently been dealt with in the linguistic literature, with or without reference to the problem of topic. The construction I have

in mind is the so-called "double subject" construction of topic-prominent languages (cf. e.g. Fillmore, 1968, about "inalienable possession" in Japanese; for a list of such constructions in different languages, cf. Li and Thompson, 1976). An apparently similar construction frequently occurring in NSF is illustrated in (33):

- (33) Mon frère sa voiture elle-est complètement foutue
 my brother his car she is completely wrecked
 'My brother's car is a complete wreck'

It is tempting to consider (33) a particularly clear case of a topic-comment construction: only the subject (or the secondary topic) sa voiture seems to be selectionally and syntactically related to the verb; the Topic mon frère seems to have no agreement relation with the verb whatsoever. However a major difference between (33) and the examples cited by Li and Thompson is that in French—as well as in analogous constructions in non-standard English and German (cf. my brother his car, meinem Bruder sein Auto)—the two NPs are obligatorily linked by a possessive marker (cf. sa in (33)). Because of this obligatory link it seems preferable to analyze the NPs as parts of a special kind of genitive construction that constitutes a syntactic unit, so that mon frère sa voiture would essentially function like the parallel standard form la voiture de mon frère. Nevertheless the occurrence of such non-standard genitive constructions, in which the initial NP somehow "feels" more independent syntactically than in the analogous standard forms, is an interesting case of topic use in spoken language.

A further reason why Topic should be considered independent of the verb is that there is no theoretical limit to the distance between it and the verb. In particular an indefinite number of embedded or main clauses can intervene between the Topic and its agreement marker. For example in (34a) one main clause and in (34b) one main and one embedded clause appear between the Topic and the verb:

- (34) a. Pierre il-faut qu'il parte maintenant
 Pierre it is-necessary that he leave now
 'Pierre has to leave now'
 b. Moi c'est simple, si tu-me-trompes, je-te-tue 12
 me it is simple if you me cheat I you kill
 'If you're unfaithful I'll kill you, I'm not kidding'

The distance between the Topic and the verb could easily be further extended with additional intervening clauses, without making the sentence unacceptable.

Subjects, on the other hand, cannot be as freely separated from their predicates. Compare for example (34b) with the sentences in (35), in which the unacceptability increases with the distance between the subject and the verb:

- (35) a. Si tu-le-trompes, Pierre te-tuera
 'If you are unfaithful to him, Pierre will kill you'

- b. ?Pierre, si tu-le-trompes, te-tuera
- c. *Pierre, c'est simple, si tu-le-trompes, te-tuera

3.3. Topic Selection is Free

In section 3.2 I argued that the selection of Topic is independent of the argument structure of the verb. As a consequence, in sentences with more than one Topic or with one Topic and one or more Afterthought NPs, the relative order of the NPs can vary freely according to the necessities of discourse. However, the order in which the agreement markers appear before the verb is fixed ¹³. Fixed order of affixes is a highly universal phenomenon, and the rigid order of French clitic pronouns is one of the strongest arguments for their status as morphologically rather than syntactically determined elements.

The following examples represent some of the possible Topic-Afterthought variations on the sentence theme 'I will give the book to your brother':

- | | | | | | |
|------|--------------------|---|---------------------|---|-----------------------|
| (36) | Moi | } | je-le-lui-donnerai, | { | le livre, à ton frère |
| | Moi le livre | | | | à ton frère |
| | Moi ton frère | | | | le livre |
| | Ton frère | | | | moi, le livre |
| | Ton frère moi | | | | le livre |
| | Ton frère le livre | | | | moi |
| | Le livre | | | | moi, à ton frère |
| | Le livre moi | | | | à ton frère |

The sharp contrast between the changing order of the NPs and the fixed order of the clitic pronouns follows naturally if the Topic-Agreement analysis is adopted. It is well known that the order of constituents in a sentence is partly determined by their pragmatic status: constituents representing given information tend to occur before constituents whose referents are new. Since Topic by definition represents given information and since the difference between given and new is a matter of context, not of grammar, the topic noun can be selected independently of grammatical constraints ¹⁴. The respective position of clitic pronouns, however, does not depend on such pragmatic factors as givenness in context. Since their main function is to serve as a link between the Topic and the syntactic-semantic structure of the predicate, they are contextually presupposed and therefore not subject to pragmatically determined positional variations.

3.4. Initial Position of Topic and Restrictions on Embedding

There is considerable disagreement among linguists about the nature and function of topics, often due, it seems, to differences in terminology. But no matter how the topic is defined, initial position seems to be recognized as a universal principle, at least in non-verb-initial languages (cf. Bickerton and Givón, 1976, for a

modification of this principle for verb-initial languages). That this principle is confirmed in NSF is clear from the initial or near-initial position the Topic occupies in the examples presented so far in this paper. A particularly striking case is (34), where the Topic stays in initial position although it is separated from its comment by intervening material of indefinite length.

As a corollary of the topic-first principle, a Topic in NSF cannot freely appear in embedded clauses, in particular if the main clause also contains a noun in topic position. Compare the following examples:

- (37) a. Pierre Marie lui-a donné le livre hier
'Pierre Marie gave him the book yesterday'
b. ?Il me semble que Pierre Marie lui-a donné le livre hier
'It seems to me that P. M. gave him the book yesterday'
c. ?*Le jour où Pierre Marie lui-a donné le livre c'était un lundi
'The day P. M. gave him the book was a Monday'
d. *Le livre que Pierre Marie lui-a donné hier c'était la Bible
'The book P. M. gave him yesterday was the Bible'

In (37b) the Topic Pierre appears in an embedded clause, but since no preceding NP interferes, the sentence is (more or less) acceptable. In sentence (c) and (d), however, the head nouns of the relative clauses in which Pierre appears as Topic can be interpreted as Topics on a higher level, which may be the reason why these two sentences are unacceptable. I would like to emphasize that the examples in (37) represent an oversimplification of the possibilities of Topic embedding and that much further research is necessary before any conclusions can be drawn in this domain.

3.5. Givenness of Topic

After the property of initial position, the property most frequently associated with topics is definiteness (cf. Li and Thompson, op.cit., p.461). One consequence of the constituent ordering principle I mentioned in 3.3 (i.e. constituents representing given information tend to occur first) is that in subject-initial languages subjects are typically definite. When indefinite subjects occur, they are often placed in non-initial position and preceded by "dummy" subject markers (English there, German da, es, French il (y a) etc.). It is nevertheless possible in Standard French (as in English and German) not to resort to such empty subjects and to use indefinite subjects at the beginning of a sentence. In addition to the now literary construction in (38a), which is subject to constraints similar to those on the "existential" there construction in English, we also find (38b):

- (38) a. Il est venu un garçon 'A boy came'
b. Un garçon est venu

However in NSF, a Cooccurrence construction corresponding to the indefinite subject construction in (38b) would be ungrammatical, as would be any sentence with a (referentially) indefinite Topic:

- (39) a. *Un/Le garçon il-est venu 'A/The boy came'
 b. *Un/Le garçon je-le-vois 'I see a/the boy'

The fact that sentence (40)

- (40) Un garçon ça-pleure jamais
 'A boy never cries' = 'Boys never cry'

is grammatical does not constitute counter-evidence against this rule. In (40), un garçon is a generic NP and as such, it can be interpreted as definite: it refers to the class of all boys, not to an individual out of that class.

It is an interesting feature of NSF that it has developed a special agreement marker, ça, for NPs with generic reference. The Topic pronoun corresponding to this marker is the homophonous ça (cf. the chart in (17)), and sentences with ça - ça Cooccurrence are very common (e.g. Ça ça-m'embête 'That annoys me'). The fact that NSF has a different agreement marker for generic and for specific reference makes contrasts like the following possible:

- (41) a. Les légumes c'est où? 15
 b. Les légumes ils-sont où?

Both sentences can be translated as 'Where are the vegetables?' but the conditions under which they are uttered are different. (41a) could be asked for example by a shopper in a large store who does not know where the vegetable section is, whereas (41b) could be uttered later by the same person when he gets home and notices that the vegetables he bought are not in his shopping bag.

In addition to the requirement that topics be definite, the Topic in NSF is subject to a further constraint. The referent of a Topic must not only be assumed by the speaker to be known and identifiable by the hearer, but must also represent given information, i.e. it must either have been mentioned in previous discourse (as for example in (26) and (27) above), or, more rarely, it must be given in the situation of the utterance (as in (24), where ce pont is situationally, not linguistically, given). The following definition of givenness characterizes clearly this property of Topic in NSF: "Given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance. So-called new information is what the speaker assumes he is introducing into the addressee's consciousness by what he says" (Chafe, 1976, p.30).

For indefinite NPs in preverbal position as well as for definite NPs that introduce "new information" in Chafe's sense, NSF typically uses the marker il-y-a (standard spelling il y a) followed by the (definite or indefinite) NP and a relative pronoun. For

example, the NSF sentence that corresponds to the SF sentences in (38) is (42):

- (42) Il-y-a un garçon qui est venu

This new-information marker is a morphological unit consisting of the two clitics il and y and different forms of the verb avoir. The two clitics are usually fused in NSF, so that il-y-a, il-y-avait, il-y-aura etc. are pronounced as /ja/, /javɛ/, /jora/ etc. The spelling in the following examples is meant to reflect this pronunciation.

The different encoding of given NPs (=Topics) on the one hand and definite NPs representing new information on the other hand is illustrated in the following two sentences (both translatable by 'Your father just called!'):

- (43) a. Y-a ton père qu'a téléphoné tout à l'heure
b. Ton père il-a téléphoné tout à l'heure

The necessarily definite NP ton père is syntactically encoded as new in (43a) and as given in (43b). The pragmatic difference between these two sentences may become clearer if we provide them with a context. For example, (43a) could be an appropriate answer to the question Qu'est-ce qui s'est passé pendant que j'étais loin? ('What happened while I was away?'). But a question to which (43b) could be appropriately replied presupposes an explicit or implicit previous mention of the NP ton père. Such a question might be e.g. Il-a téléphoné, mon père? ('Did my father call?') or Ils-ont téléphoné, mes parents? ('Did my parents call?').

It is possible to combine both of these pragmatic strategies in one sentence:

- (44) Moi y-a un truc que j'aimerais savoir
me there-is one thing that I would-like know
'There's one thing I'd like to know'

The Topic pronoun moi is isolated in initial position, followed by the new-information marker y-a which introduces un truc. The relative pronoun que is part of the structure y-a - NP - que. Finally the agreement marker je establishes the link between the Topic and the verb.

The last example I would like to present is a short narrative fragment that I think is particularly instructive because it exhibits the different pragmatic strategies of NSF I have dealt with in more or less detail in this paper. The example is from the comic book La Fleur au Fusil by Tardi:

- (45) Y-avait une ferme à deux pas. Tout le monde s'est fait la malle. Y-a qu'les poules qui sont restées sur place. - Faut dire qu'les gallinacées, c'est pas leur fort, l'intellect.

'There was a farm right nearby. Everybody got ready to leave. Only the chickens stayed behind. - You gotta admit, poultry are not known for their intelligence.'

The introduction of the new element une ferme in the first sentence by means of the marker y-avait (here without a following relative clause) is very similar to the English strategy that appears in the translation. The second sentence, which expresses the consequence of the discovery of the farm, is entirely new information and therefore contains no Topic and no agreement marker on the verb. This is the no-agreement sentence type illustrated in (14a). In the third sentence, the NP les poules is definite because the chickens are a given part of the whole setting. However, they cannot be assumed "to be in the consciousness of the addressee at the time of the utterance", therefore they are introduced via the structure y-a - NP - qui. The sentence after the hyphen presents a complex interaction of Topic and of Afterthought agreement (literal translation: '(It) is necessary (to) say that the gallinaceans it is not their forte the intellect'). The chickens, having been mentioned in the preceding sentence, can now function as Topic under the variant form les gallinacées. In the comment following this Topic, the agreement marker c' (=ça), which at first glance seems to agree with the generic Topic, actually goes with the Afterthought NP l'intellect. What functions indirectly as an agreement marker for the Topic is the possessive leur modifying the noun fort which is part of the Afterthought construction c'est pas leur fort whose "subject" is l'intellect.

The impossibility of integrating the Topic NP into the syntactic structure of the verb complex becomes obvious if we consider this simplified English (or rather un-English) version of it:

(46) Chickens, thinking is not their forte

It is clear that chickens cannot be the subject since the selection restrictions of the verb complex are only satisfied by the NP thinking. Nor can it bear any other grammatical relation to the rest of the sentence. The only overt relationship between the first and the second part of the sentence is the relationship of identity between chickens and the referent of the possessive their.

4. Summary and Conclusion

In this paper I have presented evidence for a typology of non-standard modern French in which both the subject-predicate and the topic-comment relationship are syntactically encoded. The topic-comment sentence type, which is very common in NSF, is a construction that contains two coreferential nominal elements whose properties are in complementary distribution: the essentially pragmatic function of the first of these two elements (the Topic) contrasts with the essentially syntactic function of the second one (the Topic-

Agreement Marker). More specifically, the Topic is independent of the verb, it has no case marking and it can be selected freely, whereas the Agreement Marker is attached to the verb, it is internally marked for case and its position is fixed. The clear phonological, morphological and syntactic difference between N-1 and N-2 makes it difficult to explain them as derived from a single underlying NP position.

The functional and typological approach to Cooccurrence has the advantage that it allows us to explain the syntactic difference between N-1 and N-2 as a natural consequence of their different functions as a Topic and as a Topic-Agreement Marker respectively. Thus it provides an explanation for the seemingly anomalous Cooccurrence construction in modern French that follows naturally from a general typological principle.

As a conclusion, I would like to integrate the facts of NSF described in this paper into the typological speculation given by Li and Thompson at the end of their 1976 article. In the evolutionary cycle that leads from A (topic-prominent) to B (neither topic-prominent nor subject-prominent) to C (subject-prominent) to D (both topic-prominent and subject-prominent) and back to A, modern non-standard French seems to occupy a position somewhere between D and A: from a language type in which "topic sentences become less marked, more basic", NSF is changing to a type in which the "topic notion (is) integrated into basic sentence structure; topic and subject (are) distinct."

Notes

1. Contrary to the spelling conventions of standard French, in which the clitic pronouns appear as independent words, I will use hyphens to indicate their verb-dependent character.
2. The third person is exceptional in this respect. The autonomous forms lui, eux, elle(s) can be used with or without a cooccurring clitic, cf.:

- | | | | | | | |
|------|-----|----------|---------|-------------------|-----|-------------|
| (i) | lui | mange | elle(s) | mange(nt) | eux | mangent |
| (ii) | lui | il-mange | elle(s) | elle(s)-mange(nt) | eux | ils-mangent |

The status of (i) and (ii) is controversial. Benveniste (1965) sees in the simultaneous existence of (i) and (ii) evidence for the double status of lui etc. as a pronominal and a nominal form. Kayne (1975), who does not mention (ii), counts the existence of (i) as evidence for free variation between strong pronouns and NPs. A curious contradiction appears between Bally's (1932) and Dubois' (1965) account: Bally, in what I think is the correct analysis, considers the forms in (i) dying out constructions of the written language, whereas Dubois considers them typical of spoken French. It seems possible to me that this contradiction is partly due to a phonological and morphological accident. In non-standard French,

the clitics il and ils are pronounced [i] before a following consonant. Thus the first form in (ii) above is pronounced /lɥi imãʒ/, which in fast speech becomes /lɥimãʒ/, in other words the difference between (i) and (ii) is phonologically neutralized in this case. In the case of elle(s), the difference between (i) and (ii) is often only suprasegmentally realized (the second elle(s) in (ii) cannot be stressed, cf. example (2b) in the text). Confusion can therefore easily arise between the form in (i) (elle(s) mangent) and the form in (ii) when the Topic is not mentioned (elle(s)-mangent). As for the pronoun eux, I believe that the form in (i) only occurs in the written standard language and even then only very rarely.

3. The difference between (6a) and (6b) is not clear-cut. I believe that (6b) is acceptable in a contrastive reading without special stress, but intuitions seem to differ with respect to such sentences.

4. The most striking formal properties of Afterthought NPs are their complete lack of stress and their case marking, which distinguishes them sharply from NPs in Cooccurrence (cf. section 3.2). One of the most well-known French sentences is an Afterthought construction: the famous Ils sont fous, ces Romains ('These Romans are crazy'), muttered by Astérix and Obélix, the two most popular comic-book heroes in France, whenever they knock out a Roman soldier.

5. To my knowledge, Bally (1932) is the first linguist who analyzed the differences between the sentence types illustrated in (14) in terms of universal patterns of sentence formation. Bally also postulates a universal evolution that leads from the "segmented" construction Pierre, il mange to the synthetic form Pierre il-mange. This evolution is very similar to the one postulated by Givón in his theory of the rise of agreement through topic shift constructions (Givón 1976).

6. For example in Grevisse's Le Bon Usage, which is one of the most influential prescriptive grammars of modern French, the pronominal Cooccurrence type illustrated in (1) is not mentioned at all. About the type illustrated in (8), Grevisse (§ 464) only writes: "Les grammairiens condamnent généralement des phrases telles que celles-ci." However he concedes that even respectable authors do use it.

7. For an analysis of some features of NSF that are relevant for the Topic construction, see Lambrecht (1979). For some general but highly stimulating remarks about the problem the SF/NSF distinction presents for the modern writer, see Queneau (1965a and b). Queneau refers to NSF as Néo-Français.

8. The opposition between normative grammars and actual language use is particularly striking in the case of this innovation. Grevisse and Wagner-Pinchon consider the new use of on for nous "vulgarités de langage" and "vulgarisme" to be avoided. For a more detailed analysis of this new pronoun pair nous - on see Lambrecht (1978).

9. The last step would be the elimination of the suffix -ez in the second person plural. This process is complicated by the polite/familiar distinction between the pronouns of address vous and tu and the additional function of the -ez forms as plural imperatives. Linda Coleman (personal communication) has recorded in Louisiana French forms like vous gagne or mixed forms as in (i):

- (i) Et quand vous allez retourner vous peut venir back ici
'And when you return you can come back here'

It seems that the polite/familiar distinction is disappearing in modern French (for example in Québécois French), but I have heard of no evidence for the disappearing of the plural imperative in -ez.

10. The importance of the reanalysis process from marked to neutral syntax for the rise of grammatical agreement has been demonstrated by Givón (1976).

11. Topicalization is more restricted than Cooccurrence. For example, there is no Topicalization construction corresponding to Speaker B's utterance in (27). Compare (27) with (i):

- (i) *A la plage il-faut aller quand il-fait chaud.

12. This sentence is from the comic-book Vive les Femmes by Reiser. Reiser is one of the rare authors who consistently use NSF in their comics.

13. There is a difference in the respective position of DO and IO markers between the 1st and 2nd person on the one hand and the 3rd person on the other hand (compare il-me(IO)-le(DO)-donne with il-le(DO)-lui(IO)-donne). NSF also admits precedence of DO over IO in the second person (e.g. votre femme elle-ne-les(DO)-vous(IO)-montre jamais? - 'doesn't your wife ever show them to you?') and other variations, in particular in the imperative (cf. montre-le-moi or montre-moi-le or even montre-me-le). Such variations contradict the rigorous rules given in Benveniste (1965). But except for this limited fluctuation, the order of agreement markers seems to be fixed in SF as in NSF. In particular, Non-Terms always follow Terms: cf. je-leur-en-donne ('I give them (some) of-it') vs *j'en-leur-donne or je-m'y-intéresse vs *j'y-m'intéresse etc.

14. This statement is somewhat oversimplified. From the fact that Topic-Agreement Markers are obligatory it follows that only NPs in case functions for which the language provides agreement markers can function as Topics. It is clear that the five agreement marker columns in (17) do not cover all possible NP functions. For example for the subject-predicate construction in (i)

- (i) Je-mange à côté de Pierre 'I eat next to Pierre'

there is no corresponding Topic construction (ii):

- (ii) *Pierre je-à-côté-mange

It seems that in the Keenan-Comrie Accessibility Hierarchy NSF can have Topic-Agreement down to OBL and that the split occurs between

more and less prominent oblique functions. However I believe that NSF is evolving in the direction of an increasing freedom of Topic selection (cf Lambrecht 1979 for details about this evolution).

15. Notice that in (41a) the verb agrees in number with the agreement marker ca (c'), not with the Topic les légumes. It might be more accurate to say that there is no number agreement at all in this case since the 3rd person singular can be interpreted as the unmarked form. The verb does not agree in gender either, when the Topic is generic. This lack of gender agreement does not only show up in the agreement marker ca, which is never marked for gender, but also in adjectival predicates. Compare the specific agreement in (i) with the generic agreement in (ii):

- (i) La mer elle-est belle
the(f) sea she is beautiful(f) 'The sea is beautiful'
- (ii) La mer c'est beau
- (iii)*La mer c'est belle

The adjective in (ii) is masculine, which is also the unmarked gender. This lack of agreement between the Topic and the verb can be interpreted as additional evidence for the syntactic independence of Topics (cf. section 3.2).

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Manifestations of Twinship in Toddler Language

Patricia M. Malmstrom

Twin Care Study Center, Berkeley, Calif.

The preponderant focus of research on twins is biomedical, using twins as controls to study physiological or environmental variables. The literature on twin development is scant by contrast, and there is even less literature on twin language, although conventional wisdom considers private language or idioglossia a commonplace between twins, and researchers have been reporting language deficiencies in twins since the 1930's (Day, 1932; Davis, 1937).

In 1966 Koch reported evidence for slightly lower IQ in twins compared with singletons at ages 5 and 6. The most notable discrepancies were on vocabulary and information subtests of the PMA, and so Koch speculated that these discrepancies might be related in part to difficulties with language at an earlier age. Interestingly, she did find that dizygotic same-sex female twins excelled singletons in speech performance on the CAT. Koch made a strong plea for an examination of the language of toddler twins.

Research since then has assumed that early twin language is deficient, but findings have not always verified that assumption, so our picture of twin language is still unclear. Wilson's (1975) finding that twin verbal IQ as measured by the WPPSI was behind that of singletons at age 4 and comparable at age 6 tends to support Koch's suspicion that twin language is less advanced in early years. But in 1977 Wilson found that 44.5% of school-age twins achieved as high or higher verbal IQ scores than older siblings and concluded that it isn't accurate to routinely assume that twins are handicapped in development of verbal ability. Lytton and Conway (1977) reported an apparent difference in amount of parental verbal interaction with toddler twins compared with singletons and concluded that parents' reduced speech level contributes to the twins' generally lower verbal facility, but they also reported higher vocabulary IQ among twins whose mothers attended college.

Marjorie Arnold at Rutgers is currently studying the language of four sets of twins as compared with four matched singletons. Her preliminary findings show that the twins are language-delayed at 18 months, but are apparently equal to the singletons at 36.

The study reported here was undertaken with the hope that an examination of language between toddler twins in their home environment might reveal characteristics of language development uniquely related to the twin status of the subjects. The study examined 31 hours of crib talk between the researcher's own pair of identical female twins, as well as diary records of their speech. Analysis found manifestations of the subjects' twinship in their syntax and their lexicon which appear to be related to the subjects' self-concepts as members of a twin team. This report will describe three of these manifestations with a detailed examination of one, the subjects' use of a double name, Krista-Kelda, for themselves in an 11-month period (27-37 months).

Data collection and analysis

Language data were collected by tape recording during the subjects' third and fourth years (24-45 months), usually a period of rapid language development, when conversation begins to be possible for children (Keenan, 1974), and when language is usually developed sufficiently for communication independent of nonverbal aids such as gestures (Dore, 1975; Greenfield and Smith, 1976; Halliday, 1975), so that interpretation of tape-recorded data can be made with some confidence.

Initially (months 25-31) recordings were made by cassette recorder in many different situations in which the subjects spoke to adults, siblings or each other. There were difficulties with this method: the short range of the instrument required that the subjects be close to it. If they were left alone with the recorder, they often chewed on its microphone or removed the cassette. If an adult remained present to monitor the safety of the instrument, the subjects often ignored each other and talked to the adult or not at all. Therefore, inspired by Keenan's successful tapings of the criptalk of her twin sons (Keenan, 1974), a decision was made to record criptalk between the subjects.

For months 32-45, stereo recordings were made every two weeks when the subjects were alone together in their cribs just before sleep at bedtime or naptime or upon awakening in the morning. At each two-week interval an attempt was made to record one hour of the subjects' talk. It was usually necessary to record two or more times at each interval to make up an hour-long sample, for although the subjects rarely ran out of discourse, they sometimes fell asleep or left the room. This process never exceeded three days, and usually took only 24 hours. Microphones were permanently installed in the subjects' bedroom, with

a reel-to-reel recorder and headset monitor placed in an adjoining room. Taped data were transcribed into print by the researcher as soon as possible after each recording session in order to facilitate the understanding of transitory idiosyncrasies in the subjects' speech, as well as their references.

Beginning in the subjects' 25th month, the researcher and other care-givers made notations of novel utterances or remarks relating to twinship made by the subjects in many different situations.

Since the language of children is in a constant state of development, it is necessary to consider a child's linguistic meaning within the context of the child's own language system. The appearance of new syntax and vocabulary in a child's language does not mean that the child has mastered the adult usage, but rather, that the new elements have become available for use within the child's language system (Cazden, 1972). The appearance of new syntax or vocabulary in the data is assumed to mark its appearance in the subjects' language within the time interval between the sample and the preceding sample. New syntactical or lexical forms are attributed to both subjects upon their first appearance in the data, following the observation of parallel development in the two subjects.

Results

The subjects developed conventional syntax and lexicon which they adapted in ways which seemed to express their twinship appropriately. Three salient examples are reported here: the subjects' use of a double name for themselves as a team; their use of singular verbs in reference to themselves together; and their use of "me" as a twin referent.

Double Name: The subjects (whose names are Kelda--"Kelda" and Krista) made use of a double name, "Kelda-Krista" or "Krista-Kelda", to refer to themselves as a team for a period of eleven months (27-37). During that same period they also used double names for other pairs of people or creatures of their acquaintance (see Figure 1). Figure 1 compares the subjects' use of a double name for themselves, indicated with a solid line, with their use of a double name for other pairs, indicated with a dotted line, during the 13-month period 27-39 months. The subjects made almost equal use of a double name in reference to themselves and other pairs for the first three months shown. At 30 months the uses diverged and the subjects made greater use of a double name for themselves than they did for other pairs for the next five months. Both uses dropped out of the data in the

38th month, the month following the subjects' entrance into nursery school. The difference between the subjects' use of double names for themselves and other pairs is significant by chi square at less than .001 level, and by T-test (two-tailed) at less than .01 level.

The double name "Krista-Kelda" was always used to refer to the subjects together.

Example 1: Double name always used to refer to subjects together:

27 mos. --There's Krista-Kelda in tape recorder. (On listening to tape of subjects.)

28 mos. --Frog, don't drink Krista-Kelda's bottles.

31 mos. --Mommy be at home with Kelda-Krista.

34 mos. --Kelda, Kelda-Krista will call Mommy when Kelda-Krista is done.

Neither subject used the double name to refer to herself individually. Each correctly used her own name or an appropriate singular pronoun to refer to herself alone.

Example 2: Individual names or singular pronouns always used in reference to individual subject:

27 mos. --Krista's doing it.

27 mos. --That's Kelly's night-night (blanket). I love it.

30 mos. --Mom: Can you see yourself in the tray? Kelda: I see me.

32 mos. --I'm saving this for Santa Claus.

36 mos. --When I grow up I want to be a man with green moustaches.

The double name for the subjects was gradually replaced by appropriate plural nouns and pronouns which began to appear in the 27th month and occurred with increasing frequency until the double name dropped out of usage at 38 months.

Example 3: Subjects also referred to themselves with plural nouns and pronouns:

27 mos. --Where's babies going?

29 mos. --Now we have our lunch.

30 mos. --I want to see mine and Kelda's old jammies (pajamas).

34 mos. --Krista: We always go on BART train, Kelly?

Kelda: Unhuh. And we always go on Amtrak.

36 mos. --I'll carry this bowl to the store for us to buy. (Sub-

jects playing store.)

36 mos. -- You and me doesn't got...

The subjects linked their own names with the conjunction "and" for the first time in the 38th month and dropped the use of "Krista-Kelda".

Example 4: Subjects linked their own names with "and" and dropped the use of double name at 38 months:

38 mos. -- Is Krista and Kelda sleeping on the tape in their beds? (Gloss: Are Krista and Kelda asleep in the tape recording?)

Double Name for Other Pairs: The subjects used a double name to refer to pairs of creatures who were familiar to the subjects and to natural pairs in the subjects' experience. Thus they linked Mommy and Daddy and their older sisters, Carolyn and Diana, and the family cats, Marmalade and Pickles.

Example 5: Subjects used a double name to link other pairs, most often family members:

27 mos. -- Carolyn-Diana (big sisters) made toys.

27 mos. -- Mommy-Daddy went dancing.

28 mos. -- Where's Marmalade-Pickles (family cats)?

The subjects used the double name for identical twin friends, Julia and Katy, but never used the double name for fraternal twin friends, Jocelyn and Elizabeth.

Example 6: Double name for identical twin friends and conventional compound for fraternal twins:

33 mos. -- Jocelyn and Elizabeth will come in our house and take away one of my doughnuts and Julia-Katy will come in our house.

Perhaps the subjects made the above distinction because they could identify Jocelyn and Elizabeth individually, but could not tell Julia from Katy. Or perhaps this distinction was related to their longer friendship with Julia and Katy, because almost all of the double names used for other pairs were for family members.

The subjects never used the double name for pairs who had unequal status relative to each other.

Example 7: Double name never used for pairs of unequal status:

32 mos. -- Flora (an older playmate) and me.

36 mos. -- Diana (older sister) and me.

The double name for other pairs was in use during the same months as was "Krista-Kelda" as shown in Figure 1. Its use was never consistent for other pairs and was replaced by or alternated with the proper use of the conjunction "and" to link members of a pair and by appropriate plural pronouns such as "those", "they", "them" and "their". The frequency of the usage of this kind of double name dropped sharply at 30 months when the subjects began attendance at a play group and disappeared at the 38th month along with "Krista-Kelda".

Example 8: Conventional references used for equal-status pairs other than themselves:

27 mos. -- Daddy's and Mommy's room.

27 mos. -- Carolyn and Diana.

27 mos. -- Those are twins.

33 mos. -- Claire and Faithy (sisters) do have... they have some swings.

36 mos. -- They (parents) isn't going to come back.

Discussion of the Double Name: The subjects began to use the double name form which linked their names without the conjunction "and" at the same time that they began to use "and" to link other pairs of names (see examples 1 and 8). The subjects sometimes linked other familiar pairs in the same manner without the conjunction "and". Concurrently, the subjects had the use of appropriate pronouns which could be used in place of double names. They employed plural pronouns for other pairs with greater frequency than they used them in references to themselves beginning in their 30th month. They continued the use of the double name for themselves at a high frequency for five more months. Finally, the subjects dropped all use of double names in their 38th month, the month after they began attending daily nursery school which increased their opportunities for separate friendships and experiences.

Immature syntax cannot account for the subjects' double name. During the eleven months they used it, they had other syntax available. The double name "Krista-Kelda" was, however, an appropriate expression of the subjects' twin status, which during their toddler years circumscribed most of their activities. Its appropriateness was appreciated by members of the subjects' family, including the researcher, who sometimes employed "Krista-Kelda" to refer to the subjects, and in so doing may well have reinforced its use by the subjects. Unfortunately, data including speech with other family members are insufficient for

meaningful analysis of this idea.

Evolving a sense of self-identity is a developmental task for all children (Guardo and Bohan, 1971). For twins this process is complicated by the necessity of differentiating oneself from one's twin (Terry, 1975). In the case of identical twins, the task is complicated even further when the twins can be mistaken for each other by members of their own family, as was the case for these subjects. The subjects had certainly established senses of their individual identities by the time of the study at 25 months. Although there were few observable differences between the subjects, they referred to themselves as individuals (see example 2) and discussed differences between them (see example 9); they argued independent points of view, sometimes refused to play with each other, and occasionally wished for each other's disappearance (Malmstrom, 1978). Still, they were sharing most of their experiences and their sense of interchangeability was a matter of occasional discussion between them (example 9, 28 and 36 mos.). Thus, while the subjects did indeed have individual senses of identity, their twin status gave them each another identity as a team member. It therefore seems appropriate to conclude that the subjects' double name arose out of their twin status and was an expression of their twinship.

Example 9: Subjects consider their twin status:

28 mos. --Krista-Kelda is Krista-Kelda.

32 mos. --Kr: You say "you" and I say "I". Ke: And I say "you" and you say "I".

36 mos. --Kr: (panicky voice) I'm Kelda! Ke: Ka-RIS-ta!

The subjects' use of double names for other pairs seems a likely over-generalization of their twin status to other pairs which were numerous in their immediate and very symmetrical family of two parents, two sisters and two cats. The fact that the frequency of the double name for other pairs dropped sharply when the subjects began attending a play group which didn't include any readily identifiable pairs substantiates this rationale.

Other Reflections of Twin Status: Two other phenomena in the subjects' language which can be accounted for as manifestations of their twin status will be mentioned briefly. The first was the subjects' more frequent use of singular verbs with their double name "Krista-Kelda" and their more frequent use of plural verbs with other references to themselves together (see Figure 2). These facts support the conclusion that the subjects used "Krista-Kelda" to refer to themselves as a team, which, as a singular,

quite properly took a singular verb (see Example 1, 34 mos.; Example 4, 38 mos.; Example 9, 28 mos.).

Another manifestation of the subjects' twinship was their use of "me" to refer to themselves when they were together. "Me" as a twin referent entered the data at the 41st month (Example 10). This was long after "me" entered the data in its conventional use as a singular pronoun (Example 2, 30 mos.). This use of "me" was a less frequent, but quite understandable reference to the subjects as a team--and there are others.

Example 10: Subjects use "me" as a reference to themselves together:

45 mos. --Well, Mom, if you sit between me, then you can reach me better. (As Mom was about to sit beside one twin, avoiding the empty chair between the subjects.)

62 mos. --Which one of me is this? (Showing a picture of one twin.)

67 mos. --Then you could have carried me both at once. (In a double baby carrier.)

Conclusions

The subjects' twin status was reflected in their syntax and lexicon by their use of double names for themselves and others, by their use of singular verbs with their double name, and by their use of "me" to refer to themselves together. The strong bond between experience, cognition and language (Slobin, 1971) which in the case of twins has sometimes produced idioglossia makes it likely that manifestations of twinship such as these are common in the language of young twins. And, in fact, informal contact with parents of twins supports this. There is need for an examination of the language of a number of twin toddlers to establish the frequency of such manifestations. Preliminary results of a pilot survey of families of twin toddlers that the author is currently making show 38% of 150 manifest twin effects of some kind. If they are found to be common in the language of young twins, the duration of these manifestations might be a useful index to the relative strengths of a pair's identities as twins and as separate individuals. And their influence upon language development should also be examined, for such influences might help account for reported discrepancies between the early language of twins and singletons.

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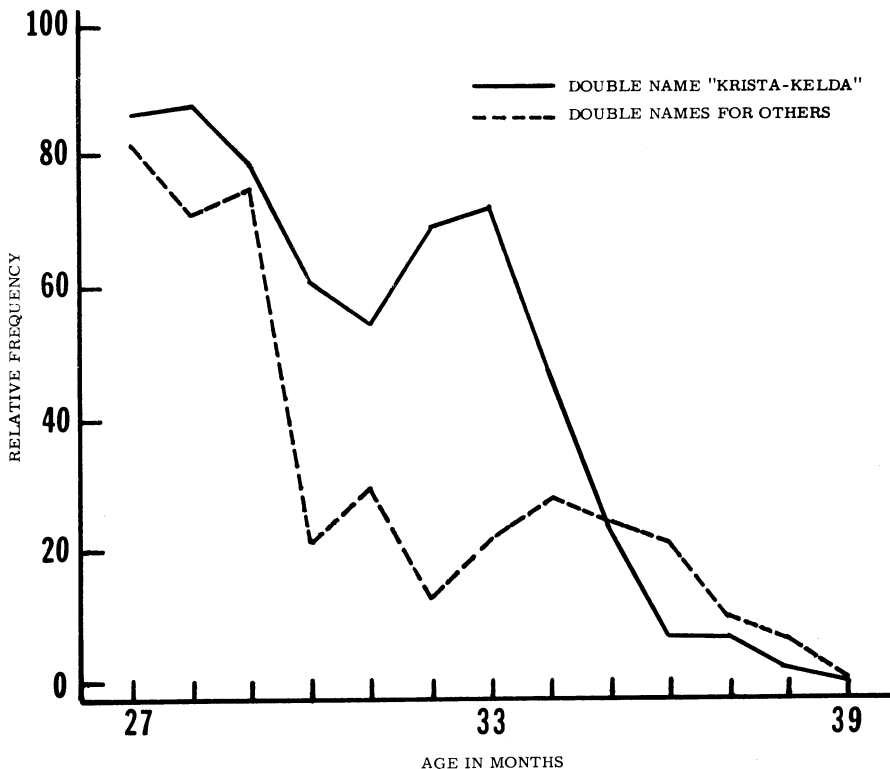


Figure 1. Relative frequency of subjects' use of double name in self-reference, compared to use of double name in references to other pairs.

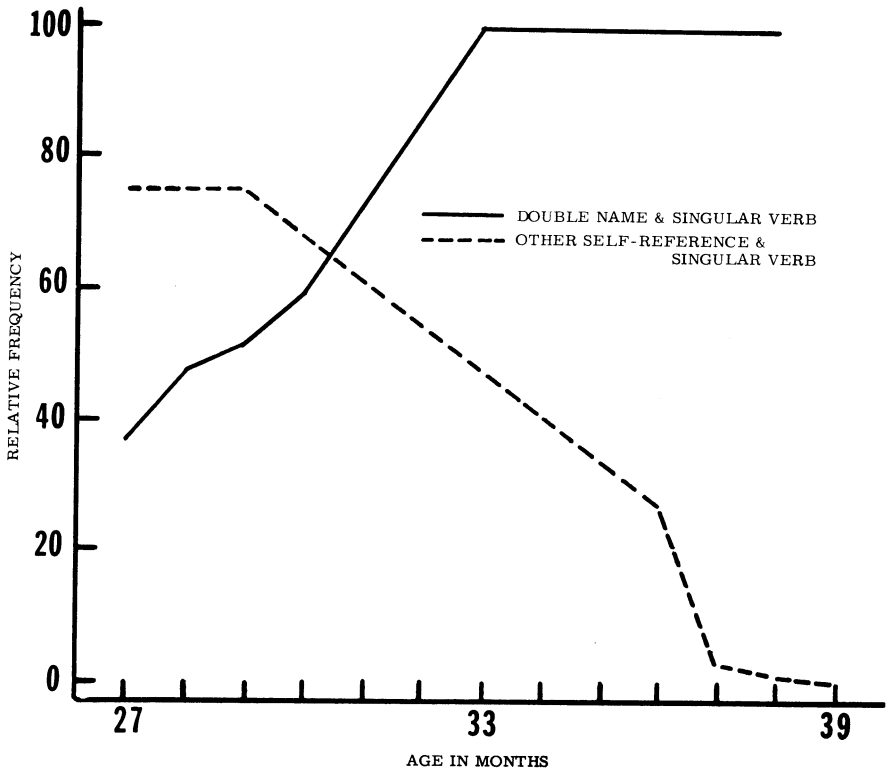


Figure 2. Relative frequency of subjects' use of singular verb with double-name self-reference, compared to use of singular verb in other references to selves as a pair. Missing data interpolated.

Johanna Nichols

University of California, Berkeley

Gilbert Rappaport

University of Texas, Austin

Alan Timberlake

University of California, Los Angeles

1. Introduction. Despite recent progress in functionalism and in relational grammar, no study to date has seriously considered the interaction of functional roles and grammatical relations in the control of syntactic processes such as agreement. Studies in relational grammar in practice discuss control exclusively in terms of grammatical relations, and leave the impression that functional roles are irrelevant to control. Functionalist studies argue that syntactic processes cannot be described adequately without reference to functional roles, but are generally unclear about the status of grammatical relations; these studies seem to suggest that grammatical relations are irrelevant, or that they can be reduced to functional roles.

This paper considers the interaction of grammatical and functional relations in the control of four different syntactic processes in Russian: number agreement in predicates; deletion/interpretation of subjects of adverbial participles; case agreement in predicate nominals; and reflexivization. The argument takes the following form. Control of these processes is determined primarily by grammatical relations, but it is also affected by the functional role of topic; specifically, a topic is a stronger controller than a nontopic. This paper is devoted primarily to establishing that descriptive observation about control strength. From this observation it follows that both grammatical and functional relations are essential to an adequate description of control in Russian and, further, neither can be reduced to the other. We suggest that grammatical and functional relations are represented on distinct *axes*; the fact that subject (as opposed to object) and topic (as opposed to nontopic) both favor control is explicable if each is assumed to be the relation of prominence on a distinct axis of representation.

At the risk of lengthening the preliminaries, we will mention four sets of assumptions. The first concerns rules. We assume that syntactic rules refer in their operation to a complex of distinct conditions, which break down into the following classes: rule conditions, including conditions of control strength and target accessibility; propositional conditions, including conditions of tense, aspect, mood, and reference; stylistic conditions; and occasionally morphological conditions (see Nichols 1980, Timberlake 1980b). Control and target conditions seem to be generalizable across all control rules, while other conditions are much more rule-specific. Since we are investigating only control strength here, we attempt to hold all other conditions constant. In particular, we have not investigated how topicality affects the accessibility of targets.¹

For three of the four processes there is a choice between two logically possible morphological forms, where one form reflects the operation of the rule and the other the failure of the rule to apply. On the assumption that rules apply in proportion to the strength of the controller, one form can be taken to reflect a strong controller and the other a weak controller. We claim that the rules under investigation apply better when the controller is topic than when it is nontopic. (For the fourth process the issue is whether a single,

morphologically invariant form can be controlled at all by a given constituent, so the test for control strength is obvious.)

Second, grammatical relations. Consistent with relational grammar, we assume that grammatical relations are primitive concepts, although there clearly exist implicational relationships between the semantics of predicates and grammatical relations. The rules discussed here are preferentially or exclusively controlled by subjects and, further, subjects at the final level of derivation, so the grammatical relation of final subject is the most important for the discussion. One type of controller that is not a final subject does deserve to be mentioned, however: datives (and sometimes other obliques) with a range of stative 'inverse' predicates; these include modals, experientials, evidentials, quantifiers, and existentials. For the purposes of this paper we remain neutral on the issue of why these datives and other obliques can function as controllers (for three different views, see Chvany 1975, Perlmutter 1978, 1979, Timberlake 1980a).

Third, functional relations. We limit the discussion to the functional relation of topic, defined operationally by word order: a constituent is topic if it is preverbal, nontopic if it is postverbal. It is well known that this difference in word order in Russian is correlated with some difference (or differences) in functional value, but the difference is not easy to define consistently for all cases. It is important to mention that topic in Russian does not necessarily correspond exactly to topic as it is used elsewhere (e.g. in Chafe 1976), and it does not correspond exactly to other functional relations like given, presupposed, empathy focus, theme (e.g. in Babby 1980), and so on, although it may well represent an abstraction over some or all of these.

Our operational definition is an attempt to give precise formal content to a relation whose existence is well established in the literature (see Adamec 1966, Kovtunova 1976). That literature is in large part devoted to giving a substantive characterization to the notion of topic. We assume, in contrast, that a substantive characterization is premature at present. At the same time, however, we assume it is possible to identify topics and register in detail what topicality does in a grammar without being able to say precisely what it is. Our strictly operational criterion has the advantage that it allows us to avoid circularity in the definition of topic.

We assume that in the unmarked functional structure the subject is the topic, and objects are part of the comment. In marked functional structures the subject can be detopicalized, or an object topicalized, or both. Three particular cases of marked functional structure could be mentioned here. (In the examples below, the double vertical line marks the division between topic and comment.) First, the clearest cases of marked functional structure are those that correspond to presentational sentences in English, in which a nonreferential subject is detopicalized; the sentence is then topicless ((1)), unless another constituent is topicalized ((2)):

- (1) || Pošel starik v les.
went old man into forest

'There went an old man into the forest.'

- (2) V les || pošel starik.
into forest went old man

'Into the forest there went an old man.'

Such presentational sentences in fact show the clearest reduction in control strength of subjects. Second, the same analysis can be extended to cases of word order inversion with nonpresentational function, such as (3), in which a referential subject is postposed after the predicate. We assume that the subject, by virtue of being to the right of the predicate, is less topical than in the corresponding unmarked word order of (4), although it may well be more topical than the subject of a presentational sentence.

- (3) || Zakazyval ja druguju knigu.
ordered I another book

'And I ordered another book.'

- (4) Ja || zakazyval druguju knigu.
I ordered another book

'I ordered another book.'

In fact, such subjects are intermediate in control strength between topic subjects and nontopic subjects of presentational sentences.² Third, an object can be topicalized without causing subject-predicate inversion, as in (5):

- (5) Druguju knigu ja || zakazyval.
another book I ordered

'Another book I ordered.'

In such cases the subject remains topical (although it is less topical than the preposed object (Adamec 1966, Kovtunova 1976:53)), and remains a strong controller.

Fourth, judgments of speakers. The judgments given below represent the consensus interpretation of at least six³ native speakers of Russian from the Soviet Union, given according to a hierarchy of decreasing acceptability: ⟨no mark⟩ 'acceptable and preferred', ⟨†⟩ 'acceptable but not preferred', ⟨?⟩ 'marginally acceptable', ⟨*⟩ 'unacceptable'. Actual judgments of individual speakers on sentence tokens vary considerably; our claim concerns the relative acceptability of competing forms in minimal or near-minimal pairs. For example, for the pair (22-23) below, ND preferred the nominative for both sentences, but allows instrumental for the nontopic controller; NZ prefers nominative for topic controller and instrumental for nontopic; and VP prefers instrumental for both, but allows nominative for topic controller. Despite differences in absolute preferences, all three speakers find the nominative relatively more acceptable with a topic controller, and the instrumental relatively more acceptable with a nontopic controller. As in the examples above, a double vertical line ⟨||⟩ marks the division of the clause into topic vs. comment. Controllers are italicized; targets for three of the four processes can be identified by alternative morphological forms, separated by slash ⟨/⟩.

2. Subject-predicate agreement. Since control of agreement in the predicate (along with nominative case) is often considered to be definitional of subjecthood at the final level of derivation, it is not immediately obvious how topicality could affect agreement of the predicate with the subject. The effect shows up in at least two contexts in which the subject noun phrase has a complex internal structure.

The first of these is comitative phrases, phrases with a nominative head noun and a dependent noun expressed by the comitative preposition *s* 'with' plus the instrumental case.

When the head noun itself is singular, two agreement patterns are possible in principle. The verb can be singular (and in the past tense, agree in gender with the nominative head); this pattern of agreement with the head noun alone can be characterized as minimal scope of agreement. Or the verb can be plural (with no gender distinctions); this is maximal agreement over the domain of the whole subject noun phrase, including both the head noun and the dependent comitative phrase.

The choice between minimal and maximal scope of agreement is affected by the topicality of the subject noun phrase. When the subject controller is topic, maximal agreement – that is, plural morphology – is preferred for animate nouns ((6)). When the subject is nontopic, minimal agreement – that is, singular – is equal in preference to maximal agreement ((7)):

- (6) *Avdeev so svoim vedomym* || čut' bylo ne otpravili/? otpravil
 with own copilot almost sent
 (pl.) / (sg.)

na tot svet fon Manštejna.
 to other world

'Avdeev with his copilot almost sent Von Mannstein to his grave.' (Krylov, otpravili)

- (7) *Fon Manštejna* || čut' bylo ne otpravili/otpravil na tot svet
 almost sent to other world
 (pl.) /(sg.)

Avdeev so svoim vedomym.
 with own copilot

'It was Von Mannstein who Avdeev with his copilot almost sent to the grave.'

The second context involves quantifier phrases. Again two agreement patterns are possible: the predicate can be singular (and agree in gender with the quantifier in the past tense), or it can be plural. For example, *bol'sinstvo* 'majority' takes neuter singular or plural, *rjad* 'series' takes masculine singular or plural (Crockett 1976: 385-404). The latter example contradicts the traditional view, which interprets the singular pattern as 'nonagreement' (based on the fact that neuter singular in the predicate could be nonagreement instead of agreement with a neuter subject) and the plural pattern as 'agreement in sense'. Consistent with the analysis of comitative phrases, we view the singular pattern as minimal scope of agreement with the quantifier alone, and the plural pattern as maximal scope of agreement with the whole subject noun phrase. In any event, the choice between singular and plural patterns for quantified subject phrases is affected by topicality. With indefinite quantifiers of the type *mnogo* 'many', *nemalo* 'not a few', *bol'sinstvo* 'majority', and the like, the singular and plural patterns are roughly equal in acceptability for a topic (animate) subject phrase, as in (8). The singular pattern is usually preferred for a nontopic quantified subject, as in (9), in which word order inversion has a presentational function:

- (8) *Množestvo žonglerov* || kidajut/kidaet desjatki tysjač šarov.
 number jugglers throw tens thousands balls
 (pl.) /(sg.)

'A number of jugglers are throwing tens of thousands of balls.'
 (De Sent-Ékzjuperi, kidajut)

- (9) V pljasku || ?vstupili/vstupilo množstvo žonglerov.
 into dance entered number jugglers
 (pl.) /(sg.)

'There entered into dance a number of jugglers.' (De Sent-Ėkzjuperi, vstupilo)

The choice between agreement patterns is of course also affected by numerous other factors, including animacy, referentiality, collectivity, and the lexical identity of the quantifier, but word order is consistently mentioned as one of the major conditions governing agreement with quantified subject phrases (see, for example, Švedova 1970:555, Corbett 1979). Yet it is virtually never asked why word order should have an effect on subject-predicate agreement. We suggest that this effect can be interpreted in terms of control strength, as follows.

With both comitative and quantifier phrases a topic controller favors maximal scope of agreement, a nontopic controller favors (relatively speaking) minimal scope of agreement. This suggests that when the subject noun phrase is topic, the dependent constituent – the comitative noun phrase in comitative expressions, or the quantified noun in quantified phrases – is more prominent and is allowed to participate in the control of agreement. Conversely, when the subject noun phrase is nontopic, the dependent constituent is less prominent and is not allowed to participate in control of agreement, so that agreement is restricted to the head of the subject noun phrase. Interpreted in this way, the facts presented above are consistent with the claim that the operation of agreement (in the sense of its maximal application) is favored by topicality, and hence that a topic is a stronger controller than a nontopic.⁴

3. Adverbial Participles. A range of adverbial concepts can be expressed in Russian by nonfinite clauses in which the predicate appears in a nonagreeing form called the adverbial participle (or gerund). The subject of the adverbial participle does not appear on the surface, and the deletion of the subject (or its interpretation) is usually controlled by a constituent of the matrix clause; this is marked in the examples below by Ø. Our discussion, which is limited to so-called detached adverbial participles, takes as its point of departure the analysis in Rappaport (1979).

The natural controller is a consistent subject (subject at initial and final levels). It is possible to some extent to have other controllers, but this depends crucially on the stylistic register. The literary norm is the most restrictive, and in fact allows only consistent subjects to be controllers; it does not allow either promoted final subjects or demoted initial subjects of passives to be controllers. At the opposite extreme, an unrestrictive register allows control by various nonsubjects as long as they qualify as prominent in terms of some functional role like topic, empathy center, hypertheme (of discourse), and so on. Although this register could provide evidence for the effect of topicality on control, the usage of most educated speakers is much closer to that of the literary norm. We use this intermediate register to examine the effect of topic on control of adverbial participles.

In this intermediate register consistent subjects can serve as controllers under virtually all conditions, even when they are not topics, as in (10-11).

- (10) Ø zametiv našu mašinu, nam || stali maxat' kakie-to ljudi.
 noticing our car us began wave some people

'Having noticed our car, there began to wave to us some people.' (Simonov)

- (11) Ø uvidev menja, iz doma vsled za mnoj || vyxodit jugoslav v forme.
 seeing me from house after me exits Yugoslav in uniform

'Having seen me, out of the house following after me comes a Yugoslav officer in uniform.'
 (Simonov)

The fact that consistent subjects can control adverbial participles when they are not topics argues that subjecthood is a more important condition on control than topicality.

For less well established controllers topicality is a necessary condition for control. One imperfect controller is the final (or derived) subject of a passive. Control by a passive final subject is prohibited in the literary norm, but in fact most educated speakers allow this type of control when the controller is the topic, as in (12). They find it unacceptable, however, when the controller is not the topic, as in (13), even if the target clause is postposed, as in (14):

- (12) † Ø vyrvavšis' iz tjur'my, Šimanovskaja || vnov' arestovyvaetsja
 breaking out from prison anew gets arrested

vo Vladivostoke.
 in

'Having broken out of prison, Šimanovskaja again gets arrested in Vladivostok.'
 (cited by Ickovič 1974:88)

- (13) * Ø vyrvavšis' iz tjur'my, vo Vladivostoke || vnov' arestovyvaetsja
 breaking out from prison in anew gets arrested

Šimanovskaja.

'Having broken out of prison, in Vladivostok again gets arrested Šimanovskaja.'

- (14) * Vo Vladivostoke || vnov' arestovyvaetsja Šimanovskaja, vyrvavšis'
 in anew gets arrested breaking out

iz tjur'my.
 from prison

'In Vladivostok again gets arrested Šimanovskaja, after having broken out of prison.'

Another weak controller is a dative associated with an experiential predicate. When the dative controller is the topic, the sentences are basically acceptable to most speakers, although there is some hesitancy about some sentence tokens ((15)). When the dative controller is not the topic, the sentences are unacceptable for all speakers, regardless of the position of the target clause ((16-17)):

- (15) † Ø buduči junošej v armii, mne || pripominalas' melodija babuškina budil'nika
 being youth in army me get remembered melody grandma's clock

v časy toski.
 in hours mood

'Being a youth in the army, to me would come back the melody of my grandma's alarm clock in times of depression.' (adapted from Ickovič 1974:85)

- (16) * Ø buduči junošej v armii, melodija babuškina budil'nika || pripominalas' mne
 being youth in army melody grandma's clock get remembered me

v časy toski.
 in hours mood

'Being a youth in the army, the melody of my grandma's alarm clock would come back to me in times of depression.'

- (17) * Melodija babuškina budil'nika || pripominalas' mne v časy toski, Ø buduči
 melody grandma's clock get remembered me in hours mood being

junošej v armii.
 youth in army

'The melody of my grandma's alarm clock would come back to me in times of depression, being a youth in the army.'

Although both these types of control by controllers other than consistent subjects are proscribed in the literary register, examples are attested in written Russian (Ickovič 1974). Consistent with the claim advanced here, in virtually all such examples this type of controller (when it is an overt constituent) is the topic of its clause (Yokoyama 1978, Rappaport 1979).

4. Case agreement of predicate nominals. Predicate nominals occur in a wide variety of constructions, three of which are exemplified below. Our discussion of predicate nominals is based on the analysis in Nichols (1980). Depending on its part of speech, a predicate nominal may inflect for case. Generally speaking there are two possibilities: a predicate nominal may be in the same case as its controller (often nominative) or in the instrumental. The selection of agreeing case can be assumed to reflect the operation of a rule of case agreement, while the selection of instrumental reflects the failure of this rule to apply. (Agreement for gender and number in adjectives and participles is independent, since it occurs regardless of case agreement.) The rule of case agreement is governed by a wide number and variety of factors, the most important being the construction type and propositional conditions (tense, aspect, mood). Control strength is evidently also a factor, to judge by the fact that case agreement occurs more consistently with subject controllers than with object controllers. Here we will exhibit three construction types to show that topicality also affects control.

The first is the copular construction. Under the right combination of conditions, both agreeing (nominative) and nonagreeing (instrumental) case are possible for the copular construction in the past tense. If the controller is postverbal, as in (19), then the instrumental is slightly preferred.

- (18) *Ona* ne skandal'naja/†skandal'noj || *byla, prosto* šumnaja/†šumnoj.
 she not scandalous was simply loud
 (nom.) / (instr.) (nom.) / (instr.)

'She was not really scandalous, just loud.' (Rasputin, skandal'naja, šumnaja)

- (19) || Byla *ona* na udivlenie †molčalivaja/molčalivoj.
 was she surprisingly untalkative
 (nom.) /(instr.)

'She was surprisingly untalkative.' (adapted from Rasputin, molčalivoj)

A second contrast with a masculine adjective is given in (20-21), in which the nominative and instrumental are equal for a topic controller, but the instrumental is definitely preferred for a nontopic controller. The postverbal order is infrequent in texts, but in the handful of textual examples we have the instrumental is invariably used.

- (20) On || vseгда byl vesel'j/vesel'ym i dobryj/dobrym.
 he always was happy and kind
 (nom.)/(instr.)

'He was always happy and kind.'

- (21) || Byl on vseгда ?vesel'j/vesel'ym i ?dobryj/dobrym.
 was he always happy and kind
 (nom.)/(instr.) (nom.)/(instr.)

'And he was always happy and kind.' (Proskurin, vesel'ym, dobrym)

The second construction type involves a predicate nominal with a verb of motion. With the past tense of the perfective aspect of *vernut'sja* 'to return', the nominative is generally preferred by speakers and predominates in textual usage. This is clear when the controller is the topic, as in (22), when the nominative is unambiguously preferred by speakers. When the controller is nontopic, as in (23), the instrumental becomes a viable option, equal in preference to the nominative.

- (22) Čerez minutu on || vernulsja krajne nedovol'nyj/?nedovol'nym.
 after minute he returned very unhappy
 (nom.) / (instr.)

'After a minute he returned very unhappy.' (Arsen'ev, nedovol'nyj)

- (23) Slyšno bylo, čto iz Moskvy || vernulsja on ves'ma dovol'nyj/dovol'nym.
 heard was that from Moscow returned he very happy
 (nom.) /(instr.)

'It was said that from Moscow he returned quite satisfied.'

The third context involves an accusative controller of a predicate nominal. This construction generally prefers the nonagreeing (instrumental) case, but sometimes — with feminine adjectives or pronominal controllers — will allow the agreeing case, in this construction the accusative. In (24) below, the accusative controller has been topicalized to preverbal position, and the accusative case is preferred for the predicate nominal. In (25), however, the controller remains in nontopic position, and the instrumental is then preferred:

- (24) Čtoby opredelit' količestvo kamnja, mašinu || vzvešivajut snačala pustuju/†pustoj.
 to determine quantity stone vehicle weigh first empty
 (acc.) / (instr.)

'In order to determine the quantity of stone, the vehicle they weigh first empty.'

- (25) ... metod, pri ktorom || vzvešivajut *mašinu* snačala †pustuju/pustoj, ...
 method in which weigh vehicle first empty
 (acc.) /(instr.)

'... this technique, in which they weigh the vehicle first empty, ...'

As a second contrast for the same construction, consider (26-27). In (26) the accusative pronominal controller is topic and the accusative is preferred for the predicate nominal. In (27) the controller is nontopic and instrumental is preferred.

- (26) Potom *ego* || posadili gologo/†golym na osla, licom k xvostu.
 then him sat naked on ass face to tail
 (acc.) / (instr.)

'Then him they sat naked on an ass, with his face to the tail.' (Solov'ev, gologo)

- (27) || Posadit' *ego* licom k xvostu †gologo/golym na osla, i vozit' *ego*
 sit him face to tail naked on ass and take him
 (acc.) /(instr.)

po gorodu.
 around city

'(We should) sit him with his face to the tail naked on an ass and lead him around the city.' (Solov'ev, gologo)

Thus, in three different types of predicate nominal constructions, topicality of the controller affects choice of case in the predicate nominal: a topic controller favors the selection of agreeing case as compared to a nontopic controller. This is true for both subject and object controllers. On the assumption that agreeing case reflects the operation of a rule of case assignment, it follows that a topic is a stronger controller than a nontopic. Further evidence comes from topicless presentational sentences, in which no participant can control any kind of predicate nominal at all (Nichols 1980: § 1.4.4).

5. Reflexivization. There are two closely related processes of reflexivization in Russian: *Sebja* Reflexivization ('himself', etc., in which the target is the head of its noun phrase) and *Svoj* Reflexivization ('his own', etc., in which the target is a possessive adjective). Parallel to the choice between agreeing and nonagreeing case for predicate nominals, the choice of the reflexive form can be assumed to reflect the operation of the rule of reflexivization, while choice of the ordinary nonreflexive personal pronoun reflects the failure of the rule to apply; the nonreflexive personal form appears under the 'elsewhere' condition, when the necessary conditions of control strength, target accessibility, or reference are not met. The discussion here is based on Timberlake (1979, 1980a, 1980b).

The preferred controller is a consistent (initial and final) subject. For such controllers both *Sebja* and *Svoj* Reflexivization of an accessible target is obligatory for 3d persons under the condition of coreference. There are in fact well-attested cases of control by nonsubjects, but all are restricted in some way. Direct objects apparently can control reflexivization only with certain predicates, and then it is not obligatory (Klenin 1974); datives and other obliques can also control reflexivization, but usually only with certain restricted predicates, such as modals, quantifiers, existentials, and so on (see Perlmutter 1978, Timberlake 1980a).

At first glance reflexivization appears to be insensitive to topicality. In (28, 29), for example, the controller is a detopicalized consistent subject, yet *Sebja* and *Svoj* Reflexivization for 3d persons is obligatory:

- (28) Ej bylo stydno, što ee || dolžen nesti na sebe./*nem Volodja.
her was ashamed that her must carry on self him
(rfl.)/(pers.)

'She was ashamed that Volodja had to carry her on himself.' (Proskurin, sebe)

- (29) Tak so svoimi/*s ix orudijami || šxodili na bereg morjaki.
so with own with their weapons went onto shore sailors
(rfl.) / (pers.)

'Thus with their weapons onto the shore went the sailors.' (Krylov, so svoimi)

Conversely, direct objects with predicates that do not regularly allow object control cannot become controllers just by becoming topics:

- (30) Savičeva || lučše by prideržat' i dlja *sebja/nego samogo.
better hold back even for self him emphatic
(rfl.)/(pers.)

'It would have been better to hold Savičev back for the sake of *himself*.'

- (31) Ego || vyzvali v perednjuju *svoej/ego kvartiry.
him called into front room own his apartment
(rfl.)/(pers.)

'Him they called out into the front room of his apartment.' (Bulgakov, ego)

The effect of topicality, however, becomes apparent when the applicability of reflexivization is reduced for other reasons. For *Sebja* Reflexivization a context of reduced application is given by targets isolated in the structure [_{NP} [_{AdjP} Adj [_{PrepP} Prep—]] N]. In this context, first distinguished by Klenin (1974), the reflexive form is used in a little less than fifty percent of the textual examples with 3d person, but is consistently preferred by speakers. This characterization should actually be taken as applying to cases in which the controller is the topic, since virtually all examples, like (32) below, have the controller as topic. The lone textual example in which the controller is not the topic is (33), where the nonreflexive form was used textually and is strongly preferred by speakers.

- (32) Načal'nik || sidel v kresle, v redkom dlja sebja/†nego spokojnom sostojanii.
director sat in chair in rare for self him calm state
(rfl.)/(pers.)

'The director sat in a chair in a rare for him calm state of mind.' (Krelin, sebja)

- (33) || Tak zapomnil na vsju žizn' načal'nik ètu pervuju dlja ?sebja/nego
so remembered for whole life director this first for self him
(rfl.)/(pers.)

nespravedlivost'.
injustice.

'And so committed to memory for all his life the director this first for him injustice.'
(Krelin, nego)

A context of variable application of *Svoj* Reflexivization involves target prepositional phrases that describe properties or characteristics of the subject, such as *on s _____ spokojnoj ironije* 'he with _____ quiet irony'. For reasons that are not clear these targets do not obligatorily undergo *Svoj* Reflexivization even for 3d person subject controllers. As in the cases above, applicability depends in part on the topicality of the controller. When an animate controller is the topic, the reflexive form is usually preferred, as in (34). But the nonreflexive form is slightly preferred when an animate controller is nontopic, as in (35):

- (34) *On so svoim/†s ego spokojstviem || byl ljubimcem otrjada.*
 he with own with his calmness was favorite troop
 (rfl.) /(pers.)

'He with his calmness was the favorite of the troop.' (Simonov, *so svoim*)

- (35) *Mne || očēn' nraivsja ètot čelovek ?so svoim/s ego umeniem razgovarivat'*
 me very pleasing this man with own with his ability talk
 (rfl.) /(pers.)
s soldatami.
 with soldiers

'To me was very pleasing this man with his ability to talk to soldiers.' (Simonov, *s ego*)

This context occurs frequently enough to allow for an informative statistical count. With topic controllers the reflexive form is used in 73% of the examples (14 of 19), while with nontopic controllers the reflexive form is used in only 42% (8 of 18).

The contexts above are all ones in which the applicability of reflexivization is reduced because the target is in some way inaccessible. Topicality shows the same effect when the strength of the controller is reduced, as it is with oblique controllers. A wide range of oblique constituents can control reflexivization, at least with existential predicates (ones that assert or comment on the existential status of the subject). In the minimal pair (36-37), the controller is a locative with the existential predicate *ostat'sja* 'remain'. The reflexive form is possible when the locative controller is topic ((36)) but impossible when it is nontopic ((37)):

- (36) *U Savičeva || ostalsja neprijatnyj osadok posle †svoego/ego poraženija.*
 chez remained unpleasant taste after own his defeat
 (rfl.) /(pers.)

'With Savičev there remained an unpleasant taste after his defeat.'

- (37) *Neprijatnyj osadok || ostalsja u Savičeva posle *svoego/ego poraženija.*
 unpleasant taste remained chez after own his defeat
 (rfl.) /(pers.)

'An unpleasant taste remained with Savičev after his defeat.'

These three contexts of reduced applicability show that reflexivization is affected by the topicality of the controller in a way that is consistent with other processes: the topic is a stronger controller than the nontopic.

6. Conclusions. The facts presented above lead to two conclusions: first, both grammatical and functional relations are necessary for an adequate description of control; and second, grammatical relations are more important than functional relations in determining strength

of control in Russian.

The fact that it is necessary to invoke both grammatical and functional relations contradicts the meta-assumption implicit in recent relational and functionalist literature; both give the impression that control can be stated exclusively in terms of one or the other type of relation. This at least is the descriptive practice of such studies; in fact, neither tradition explicitly discusses the relationship of grammatical and functional relations in control.

A representative example of one variety of functionalism is Kuno and Kaburaki 1977, which argues that "many of the phenomena that have been given ad hoc or totally inadequate 'syntactic' explanations, as well as many other phenomena not noted before, can be explained naturally by general principles that control the linguistic manifestation of the speaker's empathy" (p. 630). Elsewhere Kuno (1976:118) attempts "to show that wide varieties of linguistic phenomena are in fact controlled primarily by nonsyntactic factors". To the extent that such claims are to be read as an argument for the necessity of including functional relations (such as empathy focus or, by extension, topic) in the description of syntax, it is supported by the facts presented here. One gets the feeling, however, that the functionalist principles are supposed to supersede any other 'syntactic' principles, perhaps including grammatical relations. This claim is made more explicit in Yokoyama 1978, which claims that control of adverbial participles can be stated exclusively in terms of the functional relation of 'theme'. To the extent that this variety of functionalism intends to claim that functional relations are sufficient for the description of control, or even that they are primary in the description of control in Russian, the claim is not supported for Russian by the facts presented above. This specific claim about the control of adverbial participles in Russian is contradicted by (10, 11) above (Rappaport 1979).

A second variety of functionalism seems to make a different claim. Informally stated, this is the claim that subject is just an 'institutionalized topic' and, accordingly, processes that appear to be subject-controlled are just processes that have institutionalized former topic control. The ultimate consequences of this claim are not made explicit; in the cases where this claim is made (e.g. Givón 1976), it seems to be limited to a claim about the historical development of controlled processes. More generally, though, one gets the impression that the claim is intended to be the claim that grammatical relations (and the grammatical relation of subject in particular) are not primitives, but are derivative of some discourse relations, in particular the relation of topic. Whatever the intent of this variety of functionalism, the facts presented above show that grammatical relations must be rigorously distinguished from the functional relation of topic if one is to have an accurate account of control processes in Russian.

The descriptive practice of orthodox relational grammar comes fairly close to adopting the extreme position that control involves only grammatical relations, although there is no explicit discussion of the role of grammatical and functional relations in control. The formalism of relational grammar does allow for functional roles like topic (termed an 'overlay' relation in Perlmutter and Postal 1978), but this relation is never actually invoked in the corpus of relational description. To the extent that relational grammar claims only that grammatical relations are primary in control, its claim is supported by the facts above. To the extent that it intends to claim that control can be stated exclusively in terms of grammatical relations, then it is not supported by the data given here.

Two examples suffice to show this. First, in verb agreement word order has an effect only for noun phrases with internal structure, such as comitative and quantified noun phrases. It has no effect on ordinary subject noun phrases, which continue to control verb

agreement obligatorily even in postverbal (nontopic) position. This means that verb agreement still must be stated primarily in terms of the grammatical relation of (final) subject; in order to account for the effect of word order on verb agreement for subjects with complex structure, it is necessary to add a second condition involving topicality.

Second, in the control of reflexivization it was noted above that word order ordinarily does not affect control of reflexivization when the target is syntactically accessible. Thus, final subjects control reflexivization of accessible targets obligatorily even when they are postverbal ((28, 29)), and final objects cannot control reflexivization even when they are preverbal ((30, 31)). This means that control of reflexivization still must be stated primarily in terms of subjecthood (with reference to different levels); topicality is basically irrelevant to control, except when the target is isolated, when it becomes a minor condition on control.

In both of these cases, then, it is necessary to distinguish systematically between subjecthood and topicality. Further, in some contexts the statement of control must contain distinct statements about both. That is to say, topicality is evidently a different type of relation from subjecthood.⁵

We conclude, then, that an adequate account of control in Russian must be phrased in terms of at least two distinct kinds of relations. It also turns out that the purely lexical category of animacy/personhood plays a role in control roughly equal to that of topicality. To describe these effects, we suggest that control must be stated in terms of a number of recognizably distinct variables, including grammatical relations, the functional relation of topic, and lexical properties (specifically, animacy/personhood). There are many ways to formalize this; one possibility is to provide each sentence with a number of simultaneous but distinct types of representations, which can be called *axes*. Each axis has a set of relations for nominals, and a nominal is simultaneously characterized by relations on each axis, as listed in (38).

(38) Conditions on control	
metacondition:	prominent \geq nonprominent
<hr/>	
grammatical:	subject \geq nonsubject
functional:	topic \geq nontopic
lexical:	animate \geq inanimate

As the relations are hierarchized in (38), relations on the left favor control while those on the right disfavor control. The similarity among these relations can be expressed by positing a metacategory of 'prominence' (see Klenin 1979, Rappaport 1979). In the most general terms, then, prominence favors control while nonprominence disfavors control.

In concluding, we emphasize that this metacategory is not intended to replace the specific relations of control. As argued above, the specific effect of each axial relation has to be stated in detail in the grammar, potentially individually for each control rule, and with different degrees of effect depending on other conditions such as conditions on target accessibility or propositional conditions.

Notes

¹ It appears that target accessibility is generally the obverse of control strength. For example, animates are less accessible as targets than inanimates (Timberlake 1980b). By analogy, one might expect topics to be less accessible targets than nontopics (because topics are stronger controllers), but the facts at this point are not clear.

² We depart here from the traditional analysis of such sentences, according to which the predicate and subject together are the topic, and the remaining object is the comment (Adamec 1966:52-54, 67, Krylova and Xavronina 1976:81, Kovtunova 1976:39).

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⁴ The facts of agreement are also consistent with two other interpretations. First, when the subject phrase is preverbal, the dependent constituent can be adjacent to the predicate, but when it is postverbal, the quantifier intervenes between the dependent constituent and the predicate. The difference in agreement might be attributed to a difference in proximity, or syntactic distance, between controller and target (see Corbett 1979). Second, the predicate both determines topicality relations and is also the target of the rule. This means that a shift in the relative order of subject phrase and predicate implies a difference in order of controller and target. The difference in agreement might be attributed to a difference in the directionality of rule application, left-to-right for subject-predicate order but right-to-left for predicate-subject. These alternative interpretations are consistent with the facts of verb agreement, but they are contradicted by facts presented below for the other three processes. In particular, they are contradicted by examples in which the target is after the controller and predicate in both sentences of a minimal pair. In such cases a nontopic controller is syntactically closer to the target, but is still a weaker controller than a topic. And in such cases the rule applies left-to-right regardless of the relative order of controller and predicate.

⁵ This fact undermines the argument in Perlmutter (1978, 1979). Perlmutter observes that datives with certain predicates (modals, quantifiers, experientials, and so on) can control adverbial participles and reflexivization. This observation is used to argue that these dative controllers are subjects at an earlier level of derivation. The argument rests on the assumption that the subject relation is the only relation that is sufficient for control. Since relations other than strictly grammatical ones are evidently involved in control, there is no reason to maintain this assumption (see Rappaport 1979). Control by datives with inverse predicates may well be due to some entirely different relation (for one possibility, see Timberlake 1980a).

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GRAMMATICAL PARALLELISM IN QUICHE RITUAL LANGUAGE

William M. Norman
University of Pittsburgh

Verse differs from prose in that verse is normally built around regularly recurring formal units, while prose normally lacks this quality. On the phonological level, these regularly recurring units may be manifested as rhyme, alliteration, fixed patterns of tone or syllable quantity, etc. On the grammatical level, the recurrent structures characteristic of verse manifest themselves as parallels of form or meaning among different grammatical constructions. In China and Japan, grammatical parallelism has been extensively used as a major technique of versification, and the analysis and classification of types of grammatical parallelism has inspired a considerable body of native scholarship on the subject. Among western scholars, the study of grammatical parallelism was initiated by Bishop Robert Lowth, who in 1753 pointed out that parallelism on the grammatical level was the dominant stylistic feature of Hebrew poetry. Lowth defined parallelism as follows: "The correspondence of one verse or line with another, I call parallelism. When a proposition is delivered, and a second is subjoined to it, or drawn under it, equivalent, or contrasted with it in sense, or similar to it in the form of grammatical construction, these I call parallel lines; and the words or phrases, answering one to another in the corresponding lines, parallel terms" (Gevirtz 1963:6). In this century, the union of poetics and linguistics forged by the Prague School has given rise to a number of studies of grammatical parallelism within different poetic traditions; notable among these are Roman Jakobson's programmatic studies of the grammar of poetry. As Jakobson observes (1966:399), the study of grammatical parallelism promises to shed light on significant issues in linguistic analysis: "Such traditional types of canonic parallelism offer us an insight into the various forms of relationship among the different aspects of language and answer the pertinent question: what kindred grammatical or phonological categories may function as equivalent within the given pattern? We can infer that such categories share a common denominator in the linguistic code of the respective speech community."

Among the Mayan communities of Mexico and Guatemala, verse forms based on pervasive grammatical parallelism are to be found in ceremonial speeches, oral history, songs, prayers, curing rituals, magical incantations, and dance dramas (for a survey of Tzotzil speech genres, see Gossen 1974; for a detailed treatment of parallel couplets in Ixil, see Townsend 1979). In the Quiché-speaking communities of Santa Catarina Ixtahuacán and Nahualá, Guatemala, a special form of speech, marked by extensive use of grammatically parallel couplets, is utilized in the rituals for petitioning a bride, initiating members of religious confraterni-

ties, and installing officials of the municipal government.¹ An excerpt from one such ritual, a marriage ceremony known as chupb'al q'aag' 'extinguishing the fire', is presented below:²

- 1 Jesus b'entiita alabaad santiis sakrameent,
 Jesus blessed exalted holy sacrament
 aanjl jandalawaard aanjl chajineel,
 angel guardian angel guard
 aanjl k'aak'alineel,
 angel sentinel
 nuDyoos chla7 chkaaj,
 my-God there in-heaven
- 5 waraal chwach uleew,
 here on-earth
 malaay intaat.
 oh my-father
 nunaan,
 my-mother
- Dyoos kuuk'a7n sin aanimaa alaq,
 God he-has-with-him emp. your-souls
 loq'chajin sin aanimaa alaq,
 he-reverently-guards emp. your-souls
- 10 Aree k'u ri kamiik, mal k'u tyoox,
 and-so the today so-thanks
 karaj ne7 (x)sagirik,
 perhaps it-got-light
 karaj ne7 xpakataj jun saantalaj uwach uleew,
 it-dawned a holy world
 xneek'aama chu7loq,
 I-was-brought now-here
 xneeyaaka chu7loq,
 I-was-raised now-here
- 15 chwa ri nutz'aag,
 before the my-wall
 chwa ri nuk'axtuun,
 before the my-fortress
 chwii nub'iineem,
 above my-walking
 chwii nuchakaneem.
 above my-crawling
- Aree k'wa7 xin-loq'-k'u-tewechi7j wiib',
 And-so-now I-reverently-so-blessed myself
 xin-loq'-k'u-k'amowaj wiib'.
 I-reverently-so-thanked myself
- 20 Xink'am k'u loo wee kurusim b'eh,
 I-brought so maybe this crossed road
 wee kurusim jook,
 upam loo gaswaan,
 its-interior maybe our-ravine
 upam loo gatinamiit,
 its-interior maybe our-town

- 25 xaa chwii loo jun raqan alih,
 just above maybe a her-leg girl
 xaa chwii loo jun raqan alah,
 just above maybe a his-leg boy
 xaa chwii loo jun ooch',
 just above maybe a growing-ear-of-corn
 jun pakaay.
 a pacaya

Ceremonial speeches such as this one are delivered by specialists known as k'amal b'eh 'guides' (literally 'bringer of the road'), ajb'eh, or ajtz'onolob, men who have held offices in the traditional cargo system and who have learned the ceremonial orations by apprenticing themselves for several years to a senior k'amal b'eh. The language of ceremonial rhetoric differs from everyday Quiché in a variety of ways. Ceremonial speech has a 'hypothetical' quality to it which results from using particles like loo 'maybe, probably' and karaj ne7 'perhaps' to qualify nearly every assertion. Ritual language preserves several archaic features of Quiché which have otherwise been lost: the use of the particle mi to mark recent past (attested in Quiché documents from the sixteenth and seventeenth centuries) and the incorporation of the adverb log 'reverently' into the verb word (cf. xin-log'-k'u-tewechi7j, line 19 above). But the most striking feature of Quiché ceremonial speech is its couplet structure: lines come in pairs, one word of the second line contrasting with the corresponding word of the first line. Above all else, this pervasive grammatical parallelism sets ritual language apart from ordinary discourse.

The object of this paper is to describe the grammar of parallelism in Quiché ritual language. This problem will be approached by considering two questions: 1) What are the well-formedness conditions for parallel constructions in Quiché? What types of terms may participate in parallel constructions, and in what configurations may these terms occur? 2) What must a k'amal b'eh add to his knowledge of ordinary Quiché in order to produce ritual speech?

In order to answer the first question, it will be helpful to consider some of the parameters along which parallelistic systems of versification may vary from one culture to another. Chinese Regulated Verse offers a particularly instructive example of parallelism in versification since its rules are quite strict and have been highly codified (cf. Chen 1979, Kao and Mei 1971, Liu 1962, T'sou 1968). In Regulated Verse, poems could consist of lines of either five or seven syllables, and corresponding syllable in adjacent lines had to contrast in tone. In a poem of eight lines, the four interior lines had to form two antithetical couplets (Liu 1962:147-148). Both lines of such a couplet had to have the same syntactic structure, with words of the same lexical class occupying corresponding positions in the paired

lines. The second line of a couplet could not repeat any word of the first line. Semantically, words occupying the same position in the two lines of the couplet were expected to constitute an antithetical pair, that is, they were supposed to both belong to the same semantic class without being synonyms, e. g. mountain and river, wind and rain, morning and evening. The following couplets illustrate the grammatical and semantic requirements of Regulated Verse.

- 1) cicada sound gather ancient temple (Liu 1962:148)
bird shadow cross cold pond
N N V Adj N
- 2) star hang (down), wild plain (is) vast (Kao and Mei 1971:96)
moon gush, great river flow
N V N V
- 3) sun set, river-lake white (Kao and Mei 1971:105f.)
tide come, heaven-earth blue
N V N V

In Regulated Verse the choice of lexical items to fill corresponding slots in grammatically parallel lines was not dictated by tradition; rather, it was a test of the skill of the individual poet.

poet. A quite different form of parallelism is to be found in the Hebrew poetry of the Old Testament and in precolumbian Aztec poetry. Though the rules of Hebrew and Aztec versification were rather diffuse and allowed for much greater latitude than Regulated Verse, it is nevertheless clear that both Hebrew and Aztec poets drew upon a repertoire of conventionally paired lexical items. In the case of Hebrew, 'head' and 'pate' formed a stock pairing which is repeated several times in the Old Testament (Gevirtz 1963:7-10), for example, "May they be on the head of Joseph, and on the pate of the devoted one of his brothers" (Genesis 49:26), "His villainy returns upon his head, and upon his pate his violence descends" (Psalms 7:17). The fact that 'head' and 'pate' also form a stock pair in Ugaritic poetry shows that a corpus of paired lexical items was part of the poetic diction shared by poets of ancient Syria and Palestine. Unlike Regulated Verse, Hebrew poetry did not require that paired lexical items occur in the same syntactic environment. Semantically, the members of a fixed lexical pair could be either synonymous (e. g. people/nation, mountain/hill) or antithetical (e. g. rain/dew, weep/mourn). The use of fixed lexical pairs to bind together successive lines was one of several parallelistic devices utilized in Hebrew versification; other devices included semantic or syntactic parallelism between adjacent lines (cf. Yoder 1972 for an overview of Hebrew versification).

Aztec versification employed such conventionally paired items as xochitl, cuicatl 'flower, song', quauhtli, ocelotl 'eagle, jaguar', and chalchiuitl, teocuitlatl 'jade, precious

metal'. The following couplets from poems by Nezahualcoyotl (León-Portilla 1972:66-71) illustrate the manner in which such lexical pairs were employed:

- | | |
|--|---|
| 4) Tel ca <u>chalchiuitl</u> no xamani
no <u>teocuitlatl</u> in tlapani | 'If it is jade it shatters,
if it is gold it crumbles' |
| 5) Ayac <u>chalchiuitl</u> ,
ayac <u>teocuitlatl</u> mocuepaz | 'No one into jade, no one
into gold will transform
himself' |
| 6) ma nel <u>chalchiuitl</u> ,
ma nel <u>teocuitlatl</u> | 'Even if you were jade,
even if you were gold' |

In Aztec poetry, it appears that paired lexical items normally bear the same grammatical relation within their respective clauses, although the paired clauses do not have to be syntactically identical in other respects (cf. example 5 above). In one respect, Aztec and Hebrew poetics represent the antithesis of Regulated Verse: the Chinese poetic tradition dictates strict syntactic parallelism between lines of a couplet, leaving the choice of lexical items relatively free, while Hebrew and Aztec versification prescribe the pairing of lexical items without imposing such strict requirements on syntactic parallelism. Thus parallelistic systems of versification may vary as to whether the basis of parallelism is primarily syntactic (Regulated Verse) or lexical (Aztec and Hebrew).

In addition to the syntactic/lexical dimension, there is a second parameter along which parallelistic systems may vary: the allowable configuration of sets of parallel terms relative to one another. In Regulated Verse, as a consequence of the prohibition against repeating a word of the first line in the second line of a couplet, other parallel terms always intervene between the first and second terms of any juxtaposed pair. If we let A stand for the first member of a pair of parallel terms and A' stand for the second member, then the canonical configuration of parallel terms in Regulated Verse would be (schematically) A B C D // A' B' C' D'. In Aztec poetry, A and A' may be separated by an element B of another pair, as in 4 above, where xamani, paired with tlapani, intervenes between chalchiuitl and teocuitlatl. Aztec permits the configuration A B // A' B', as well as A B // A B' as in 6. Permissible configurations in Hebrew are too numerous to list.

The purpose of this digression has been to enable us to place Quiché parallelism in the proper typological perspective. Aware of some of the ways parallelistic systems may differ, we will wish to ascertain the relative importance of syntactic versus lexical parallels in Quiché ritual language and to determine the permissible configurations of parallel terms. Even a cursory examination of Quiché ceremonial speech is sufficient to reveal three of its most salient characteristics. First, the same pairs of lexical items are repeated a number of times throughout the same text, e. g. b'eh, jook 'path, road', k'am yak 'bring, raise', tz'aag k'axtuun 'wall, fortress', b'iineem chakaneem 'walking,

crawling'. In most cases, the relative order of the paired terms is invariant. For instance, in lines 23-24 above, swaan 'ravine' is paired with tinamit 'town'. When these terms are paired, the order is always swaan tinamit, never *tinamit swaan. Nor does one find *k'axtuun tz'aaq for tz'aaq k'axtuun, or *chakaneem b'iineem for b'iineem chakaneem. Furthermore, the majority of lexical pairs have a metaphorical or idiomatic meaning, some of which are illustrated in Table I.

Table I. Metaphorical interpretations of lexical pairs³

<u>Paired terms</u>	<u>Literal</u>	<u>Metaphorical</u>
juyub' taq'aa	mountain, plain	country
aqan q'ab'	foot, hand	person
b'iineem chakaneem	walking, crawling	daily activities
tz'aaq k'axtuun	wall, fortress	home
b'eh jook	road, path	destiny
eeqa7n pataal	load, burden	family of groom
ooch' pakaay	corn ear, pacaya	single boy and girl
loq'oneel mayijaneel	esteemer, worshipper	in-laws
k'am yak	bring, raise	hire a <u>k'amal</u> <u>b'eh</u>

There are some words which only occur as part of a lexical pair; thus k'axtuun only occurs in the pair tz'aaq k'axtuun, pataal occurs only in combination with eeqa7n, and mayijaneel must be paired with either loq'oneel or ch'uteneel 'consoler'. These characteristics make it clear that Quiché versification resembles Aztec and Hebrew in the use of conventionally paired terms.

Paired lexical items are subject to the further restriction that both members of the pair must belong to the same lexical category: nouns must be paired with nouns, adjectives with adjectives, and so forth. In the case of verbs, transitive verbs must be paired with transitive verbs, intransitives with other intransitives. Not all word types are to be found in lexical pairs. Word types which may participate in lexical pairs are nouns, adjectives, verbs (transitive and intransitive), adverbs, numbers, relational nouns, and positionals.⁴ Word types which cannot participate in lexical pairs include prepositions, directionals, sentence connectives, pronouns, deictics, epistemic particles, and other minor word classes. The division between those lexical categories which can participate in stock pairs and those which cannot corresponds to a distinction between content words and function words: only content words of the same class can be terms of a lexical pair.

As is the case in Chinese, Hebrew, and Aztec versification, parallel terms in Quiché must belong to the same semantic category, that is, they must share a number of semantic components. In Regulated Verse, antithesis is the preferred mode of semantic relationship in parallel terms, while the stock pairs of Hebrew appear to consist largely of (near) synonyms. Quiché lexical pairs exhibit a wide range of semantic relationships, of which

we will present only a sample (cf. Townsend 1979 for a more exhaustive treatment of semantic relations in Ixil couplets). In many instances, the parallel terms of a lexical pair comprise polar opposites, e. g. q'iiij aq'ab' 'day, night', jujub' tag'aaaj 'mountain, plain', agan g'ab' 'foot, hand'. In other cases, members of a pair differ with respect to a single semantic component without being antonyms, e. g. nuumik chagijchi7 'hunger, thirst', choh poloh 'lake, ocean'. Synonyms or near synonyms are also frequent: b'eh jook 'road, path', chajineel k'aak'alineel 'guard, sentinel'. Other terms are semantically related by virtue of contiguity: q'aaq' xk'uub' 'fire, trivet (cooking stones on which pots are placed)', swaan tinamit 'ravine, town' (tinamit earlier referred to fortified towns surrounded by ravines). In the case of numbers, if the first term is X, the second term is X+1, e. g. jumejaaaj kaamejaaaj 'one act of kneeling, two acts of kneeling', a pattern also found in Hebrew poetry (Gevirtz 1963:18ff.). Finally, there is a kind of pseudo-parallelism employed when listing entities which belong to semantic classes with a large number of members, such as trees, plants, animals, or tools. Here the pair is formed by repeating the name of the entity, preposing the adjective q'ana 'golden' to the first occurrence and preposing saga 'silver' to the second, e. g. q'ana siijah, saga siijah, q'aniipuum, sagiipuum 'golden cowbird, silver cowbird, golden Inca dove, silver Inca dove'.

A second salient characteristic of Quiché ceremonial speech is that paired lexical items must appear in the same syntactic environment. Both members of the pair must bear the same syntactic relation in their respective clauses, and there must be word-for-word identity between the other lexical items occupying corresponding syntactic positions in the two clauses. For instance, in the couplet karaj ne7 xqayaa nee ri b'iis, karaj ne7 xqayaa nee ri oq'eej 'perhaps we caused sadness, perhaps we caused crying', the paired terms b'iis and oq'eej are both direct objects, and the other syntactic slots common to the two clauses are filled by identical lexical items. The same pattern may be noted in the sample text above at lines 13-18 and 21-26. Not all the lexical material which appears in association with one term must be repeated with the other term, a fact which may be confirmed by a comparison of lines 25-26 with 27-28. Couplets whose lines differ in their lexical composition at more than one point are ill-formed.

In the discussion above it was observed that parallelistic systems of versification may differ in respect to the allowable configurations of parallel terms. In Quiché there is only one possible pattern for the occurrence of several sets of paired terms: A // A', B // B', C // C', as for example in lines 13-18 (xneek'aama . . . // xneeyaaka . . . , . . . nutz'aag // . . . nuk'axtuun, . . . nub'ilineem // . . . nuchakaneem). To put it somewhat differently, between the first and second members of a pair A A', there may not appear a term belonging to another lexical pair. Thus configurations such as * A B // A' B' or * A B B' // A' are not permissible in Quiché.

A rather remarkable fact about Quiché ritual speech is that grammatical parallelism does not stop at the level of the word but applies to the internal morphological structure of paired terms as well as to the syntactic constructions in which they occur. That is, if A and A' are paired terms, then if there is a morphologically complex pair A+X A'+Y which contains A and A', X and Y must be identical.⁵ As an example we may take the pair k'am yak 'bring, raise' which occurs at lines 13-14 in the morphologically complex form xneek'aama . . . // xneeyaaka . . . The morphological structure of xneek'aama is x-n-ee-k'ahm-a completive aspect-1 sg./absolutive-GO-BRING/passive-imperative (the passive of monosyllabic transitive verbs is formed by infixing a morphophonemic H which is realized on the surface as vowel length, ee is the incorporating form of the verb b'ee 'to go'). x-n-ee-yaHk-a has the identical internal structure. Since in this case the identity of structure applies only to inflectional affixes, it may not seem really all that remarkable: as we have already stated, parallel terms occur in the same syntactic position, and if inflectional morphology is generated by rules which mark a word for features which occur in its syntactic environment, then one could perhaps predict this fact from what is already known. But identity of internal structure applies to derivational morphology as well as to inflectional morphology. For example, the nouns b'eh jook 'road, path' (cf. lines 21-22) form the bases of the derived nouns b'e7-aal jok-aal and of the intransitive verbs b'e7-an jok-an; the pair of nouns chii7 wach 'side, front' form the derived verbs chi7-n wach-in and the derived nouns chi7-b'al wach-ib'al. In the foregoing examples the corresponding derivational affixes happen to have the same phonemic shape, but this need not always be the case. The nouns chaak pataan 'work, service' form the derived transitive stems chak-u patan-i; the nouns kik' kuma7j 'blood, coagulated blood' form the abstract nouns kik'-eel kuma7j-iil. -u and -i are lexically conditioned allomorphs of the same morpheme, as are -eel and -iil. In the case of paired terms where one term has undergone reduplication, the other term must have undergone the same type of reduplication: rem-el tik'-il 'spread out, standing up' (-V₁l reduplication), luk-lut pach-pat 'bow, stoop' (-C₁at, with subsequent vowel assimilation), jet-et may-ay 'approach, go haltingly' (-V₁C₁l).

At this point we can summarize the well-formedness conditions on parallel constructions in Quiché: 1) Parallel terms must be content words, and they must belong to the same lexical class. 2) Parallel terms must share a number of semantic components. 3) Both terms of a pair must appear in the same syntactic frame. 4) No member of one pair can intervene between the first and second members of another pair. 5) Paired terms which are derived from more basic paired terms must have identical derivational affixes.

The final issue to be addressed here is the following: what must a k'amal b'eh learn (in addition to his knowledge of normal

Quiché) to be able to produce ceremonial rhetoric which conforms to the well-formedness conditions above? Clearly the k'amal b'eh must memorize the stock lexical pairs and their metaphorical interpretations, or at least the contexts in which they are appropriate. But how does the k'amal b'eh ensure that paired terms always appear in the same syntactic environment, without being separated by any term of another pair? An answer to this question is suggested by an examination of stylistic options in ritual speech.

A k'amal b'eh may present couplets in either an expanded or a condensed form, with several intermediate stages between the most expanded and the most condensed style. The examples below illustrate various degrees of condensation.

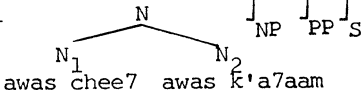
- (7) kayojlin k'u loo pa ri awas chee7
 kayojlin k'u loo pa ri awas k'a7aam
 'It echoes in the forbidden tree, it echoes in the forbidden vine'
- (8) je7l b'aa loo kayojlin ruuch'aab'al
 utzijob'al pa ri awas chee7
 pa ri awas k'a7aam
 'Its voice, its speech echoes wonderfully in the forbidden tree, in the forbidden vine'
- (9) xuq kawajlin loo pa ri awas chee7
 awas k'a7aam
 'It also echoes in the forbidden tree, forbidden vine'

In the most expanded style, represented in 7, everything to the left of awas chee7 as far as the beginning of the sentence is repeated on the left of awas k'a7aam. In the most condensed style, shown in 9, the second term of the pair immediately follows the first, with no intervening elements. (awas 'forbidden' is an obligatory part of the stock pair; chee7 k'a7aam by itself does not occur as a lexical pair.) In 8, awas chee7 occurs in a prepositional phrase preceded by the preposition pa and the definite article ri. Only the lexical items belonging to the prepositional phrase are repeated on the left of awas k'a7aam.

Since stock lexical pairs have an idiomatic semantic interpretation, it would be reasonable to suppose that, like idioms, they constitute complex lexemes: single dictionary entries which consist of more than one grammatical or phonological word. Let us suppose that a k'amal b'eh learns to treat awas chee7 awas k'a7aam as a single lexical item which contains two words. Since awas chee7 and awas k'a7aam are part of the same lexical item, they are inserted into sentences as a unit. Now suppose that the k'amal b'eh learns a repetition strategy such as 10:

- (10) Leftward repetition: Repeat on the left of A' those elements to the left of A. In copying leftward, you may stop at any constituent boundary, or you must stop if you reach the beginning of the sentence or a member of another lexical pair.

A sentence such as 7 would be produced by applying this repetition strategy to a structure such as 11:

- (11) [_S [_{VC} kayojlin k'u loo]_{VC} [_{PP} pa [_{NP} ri
]_{NP}]_{PP}]_S
awas chee7 awas k'a7aam

In 11, VC designates the verb complex, a surface constituent which consists of the verb word plus other words which either depend on the verb or which customarily occur in conjunction with verbs--this will be treated in more detail below. Sentence 7 could be produced by applying the most expanded option of the repetition strategy. The other options permitted by the leftward repetition strategy would lead to 12, 13, and 14.

- (12) kayojlin k'u loo pa ri awas chee7
awas k'a7aam
(13) kayojlin k'u loo pa ri awas chee7
ri awas k'a7aam
(14) kayojlin k'u loo pa ri awas chee7
pa ri awas k'a7aam

If the k'amal b'eh used such a repetition strategy, his speech would automatically conform to several of the well-formedness conditions observed above. The fact that a lexical pair is treated as a single complex lexeme would automatically have the consequence that both members of the pair would appear in the same syntactic environment. The repetition rule would automatically result in verbatim identity between the two lines of a couplet at every point but one. It would also automatically result in couplets where no member of one pair intervened between the first and second members of another pair. Furthermore, the repetition strategy would account for another fact about Quiché ritual speech: in couplets which have paired nouns, the lexical material which appears to the left of A' must be a subset of the material which appears to the left of A.

The repetition strategy in 10 will not account for the fact that in the case of paired verbs, words on the right of A may be repeated on the right of A', as in lines 13-14 above, which for ease of reference we repeat below:

- (15) xneek'aama chu7loq,
xneeyaaka chu7loq

In 15, chu7loq is a contraction of chi 'now' and ulog 'this way'. chi is a particle which occurs postposed to predicates; ulog is a so-called directional adverb which occurs as a modifier of verbs. Both of these words belong to the verb complex, which can also include auxiliary verbs, reflexive pronouns, second-person formal pronouns, deictic particles, and clitics of various sorts. It

appears that it is not possible to repeat just one element of the verb complex without repeating all the elements. Therefore a separate repetition rule is needed to account for the behavior of verbs:

- (16) Verb complex repetition: If A and A' are verbs, then repeat to the right of A all elements of the verb complex which occur to the right of A'.

This rule would account, for example, for the occurrence of the reflexive pronoun wiib' 'myself' to the right of both verbs in lines 19-20. These two rules appear to be sufficient to account for most of the well-formedness conditions of ritual speech.

Viewing Quiché ritual language as the result of a special vocabulary plus two simple repetition rules leads to a consideration of two interesting questions. First, we have been treating ceremonial speech as a kind of linguistic game, like pig Latin or other codes. If ritual speech is indeed like a linguistic game, then it should be possible to produce ritual speech by adding a few rules to ordinary Quiché. Furthermore we would expect these rules to operate at a fairly superficial level. In the case of ritual language in Quiché, there so far does not appear to exist any evidence that the special rules of ritual language do not operate on a surface level of syntactic representation. Secondly, at the outset of our discussion of Quiché, we considered several aspects of typological variation in the use of grammatical parallelism in versification. If one considers only surface patterning, then Quiché versification seems to lie between Regulated Verse and the Aztec and Hebrew systems: like Regulated Verse, Quiché parallelism must conform to strict syntactic requirements, but like Aztec and Hebrew, it utilizes traditionally prescribed lexical pairs. If one considers the rules of production, however, then the similarity between Quiché and Chinese versification vanishes. Syntactic parallelism is a fundamental condition of Regulated Verse, while Quiché ritual language is basically a lexical pair system like Aztec or Hebrew, with a few additional rules.

The primary purpose of this paper has been to describe the use of grammatical parallelism in Quiché ritual. In the process we have raised some issues which go beyond more narrowly descriptive interests: the possibility of a typology of parallelistic versification and the principles upon which such a typology might be based.

FOOTNOTES

¹I would like to express my gratitude to the Quiché linguists at the Proyecto Lingüístico Francisco Marroquín for collecting the ritual language texts and to the k'amal b'eh of Nahualá and Santa Catarina Ixtahuacán. This research was supported by a

National Science Foundation grant to the State University of New York at Albany.

²This paper employs a Spanish-based practical orthography for Quiché. Symbols have their customary values except for the following: x = [ʃ], j = [x], ʔ = [ʔ] (glottal stop), VV = long vowel.

³The metaphorical interpretations were supplied by two k'amal b'eh. Their interpretations did not always agree, and they were not able to interpret all the lexical pairs. Adult speakers of Quiché know the approximate meaning of the most common pairs, but most of the pairs are too esoteric for non-specialists to gloss. Quiché speakers differ in this respect from speakers of Tzotzil, among whom knowledge of the metaphors appears to be more widespread (Robert M. Laughlin, personal communication).

⁴Relational nouns and positionals are both word classes peculiar to Mayan languages.

⁵There is one exception to this claim. An intransitive verb or a monosyllabic transitive verb takes an obligatory clause-final suffix when no word follows it in the same clause. Thus if A and A' are verbs of either of these types, and A is at the end of its clause, then A will have a clause-final suffix while A' will not. An example of this is (x)sagir-ik at line 11 (-ik is the intransitive clause-final suffix).

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IN SEARCH OF Y/N S-AUX: ¹
 A STUDY OF ANSWERS TO YES-NO QUESTIONS IN ENGLISH

Judy E. Winn-Bell Olsen²
 Alemany Community College Center
 San Francisco

This study might be called a kind of quantitative discourse analysis. It is a search for a particular grammatical form in a variety of speech situations to find its actual frequency in environments where it would be predicted, and to see what occurs in its place when it does not appear.

The form is Y/N S-AUX, or the short-answer form, as it is known in the TESL literature: Yes or No, plus SUBJ plus AUX, matching the AUX of the Yes-No Question--

Is she a student? Does he know her? Have they arrived yet?
 Yes, she is. Yes, he does. No, they haven't.

--not a very interesting form grammatically, being, in fact, one of the most regular features of a language noted for its irregularities. Yet, for the applied linguist specializing in ESL curriculum development and teacher-training, a study of the frequency and distribution of any grammatical form is of practical interest, as will be discussed in the latter part of this paper.

The study focuses on these concerns:

- A) In the data analyzed, how often did speakers use YNSAUX forms in response to yes-no questions (YNQs)?
- B) If not YNSAUX, what was used in response to the YNQs?
- C) In what kinds of speech situations was YNSAUX most often found?

Sources of recorded, transcribed data were chosen to represent as wide a variety of speech situations, speaker relationships and speech topics as possible, including interviews from radio and television (short, promotional interviews as well as lengthy, informational ones), casual conversations between familiars or between strangers, an argument between newlyweds, flirtations, a counseling session in which reasons for marital discord were hotly aired, and a tense interchange between political conspirators. Figure I gives more complete information for each source. In categorizing texts for figure I and data analysis, attention was given to speech situation, relationship of the speakers, and whether or not speakers knew they were being recorded.

The answer to Question A, "How often did speakers use YNSAUX?" was as predicted: not very often. Of a total of 329 yes-no interchanges (YNIs) in approximately 5½ hours of conversation, only 26 responses, or slightly more than 8%, were of YNSAUX form. (See figures III & IV, categories 1 and 2). Such a finding may come as a revelation to those who must teach and re-teach this form to ESL beginners.

Question B, "What forms did native speakers most often use?" required two kinds of break-down to sort out the data. Figure III shows 11 structural categories, the total responses for each, and

I. KEY TO TRANSCRIPT CODE

With comments on sources and notes on data

1. FM--Fanshel, David, and Freda Moss. Playback: A Marriage in Jeopardy. (transcripts of 6 marriage counseling sessions) 1971. Columbia U. Press. Session 2, 50 min, 37 Yes-No Question-answer interchanges (YNI), 6 "No" answers (N) Ø Y/N S-AUX-form short answers (YNSAUX).
2. CJ--Carterette, Edward C, and Margaret H. Jones. Informal Speech: Alphabetic and Phonemic Texts with Statistical Analyses and Tables. (recorded conversations of first-, third-, fifth-graders and jr. college students) 1974. UC Press. Young adults, pp. 366-402 (approx 50 min) 39 YNI, 7 N, 1 YNSAUX
3. WP--The Watergate Papers. Meeting of the President, Haldeman, and Dean, Oval Office, 9/15/72. 50 min. 24 YNI, 6 N, Ø YNSAUX
4. SJ--Soskin, William F, and Vera P. John. "The Study of Spontaneous Talk", pp.228-282 in The Stream of Behavior, ed. Roger Barker. 1973. Appleton-Centry-Crofts. (Study of young couple 'wired for sound' and sent to a weekend resort. Approx. 14 min, 14 YNI, 7 N, Ø YNSAUX
5. EB--An interview on the Ed Bush Radio Talk Show, sometime in 1975. Subject: alternative treatments for cancer. Recorded by Wynn Kapit, transcribed by J. Olsen. Approx. 30 min, 25 YNI, 3 N, 2 YNSAUX
6. MD--Several interviews from the Mike Douglas Television Show, 1976. Recorded, transcribed by Ruth Cathcart. Approx 30 min, 36 YNI, 3 N, 1 YNSAUX
7. SS--"Somewhat Spontaneous": interviews, conversations between "friendly professionals"--recorded by ESL teachers for aural comprehension of "natural" English conversation. Speakers are aware that they are being taped. Recorded, transcribed by Joanne Dresner, Judy Olsen, Kyle Perkins. (Perkins from articles in TESOL Quarterly v. 13 #1 and RELC Journal, v.9, #1)approx.60 min,51 YNI, 13N, 4YNSAUX
8. FL--texts of flirtatious conversations, from "Components of Flirtation: Self-disclosure and Bids for Approval", Olsen,1979. Unpub. paper. 13 min, 7 YNI, 1 N, 1 YNSAUX
9. IS--Short interchanges between strangers, 3 minutes or less in length. Transcr. by J. Olsen; texts from "What's Work", John Fanselow, 1979. Teachers College, Columbia U. Approx. 7 min, 42 YNI, 15 N, 12 YNSAUX
- 10.IF--Interchanges between friends, acquaintances or friendly colleagues. longest conversation: 7 min. Approx. 17 min. total, 22 YNI, 3 N, 1 YNSAUX
- 11.KS--KSFO Radio interviews used as promotions for a contest, 1978. 18 interviews, each using basically the same questions. Approx. 9 minutes, 33 YNI, 11 N, 4 YNSAUX

and examples of each from the data, coded for source and degree. Figure II shows the categories of degree of "Yes-ness", "No-ness", and "Hedged-ness", with examples of each category from the data, coded for source and structure. Combining the grammatical categories of Figure III with the categories of degree in Figure II, we have the grid in Figure IV, showing the spread of the total number of responses combined (see the circled number in the lower right corner of each square), as well as a breakdown of responses by source (indicated by capitals, coded in Figure I.)

Figure III shows a preponderance of single-word affirmatives and negatives: "Yes", "no", "yeah", "naw", "uh-huh", "uh-uh", and the like, alone or followed by further statement--137 in all (categories 3 and 4). Checking with Figure IV, we find that these responses cluster in the degree categories of "emphatic yes", "direct yes", and "direct no". Another large number of responses, 84 in all, are full or incomplete statements not preceded by "yes" or "no", 47 with the same proposition as the question, 37 presenting a new proposition (categories 8 and 9). Figure III gives examples of each category; Figure IV shows that they were used primarily for indirect affirmations or hedges, respectively. The third largest group is that of formulaic expressions of confirmation and denial, such as "sure", "I doubt it", "certainly", etc.--48 in all, alone or followed by further statement, clustering in the "direct yes" and "emphatic yes" categories of degree, structural categories 5 and 6.

Figure II--the degrees of "yes" and "no"--shows a much higher proportion of "yes" to "no" answers: 207 to 83. How much this had to do with the nature of the particular interchanges studied, and how much with the general nature of verbal English interaction, would be an interesting topic to explore.

Figures I and IV show us that direct yes-no questions were more often asked in interchanges between strangers (136 interchanges in 76 minutes) than between familiars (143 interchanges in 94 minutes). This may have had more to do with the content of the particular conversations than with the relationships of the speakers, however, as the interchanges between strangers included talk-show interviews and other situations primarily for exchange of information.

The final question, C, "In what kinds of speech situations was YNSAUX generally found?" emerged only after data had been accumulated from many sources. Careful examination of Figure I will show that, of the 5½ hours accumulated speech-time represented in the data, roughly 3¾ hours were of interchanges between familiars (FM, CJ, SJ, FL, IF) and 1¼ hours were of interchanges between strangers or near-strangers (IS, KS, MD, EB). 1 hour was of short conversations between ESL professionals who knew they were being taped for aural comprehension exercises in ESL classes (SS).

Examination of Figure 4, a breakdown of responses by degree, grammatical category, and source, shows that nearly all of the YNSAUX forms (23 or 26) were found in the 2¼ hours of interchanges between strangers, near-strangers (as on the talk shows, in which

II. CODING THE RESPONSES: DEGREES OF "YES" AND "NO"

EMPHATIC from H: We can take depositions on both of these?
 YES (ey) WP: Dean: Absolutely. (C/D)
 40 Pres: Hell yes. (C/D)

from Customer: Are these fresh? (holding cough drops)
 IS: Druggist: What a foolish question! Let me show
 you my stock. Come here. (F/I-N)

DIRECT from F: You miss me?
 YES (dy) FL: M: Yup. (Y/N)
 120

from Caller: Is this Ed Bush?
 EB: Talk Show Host: Yeah. Make it brief, we
 gotta go. (Y/N+)

HEDGED OR from Therapist: Jack, are you having any reaction to
 INDIRECT FM: my probing and inquiring with Sally, here, as
 YES (hy) to whether she has any reaction to your attach-
 47 ment, slight or much as it may be, to Nancy?
 Does it make you uncomfortable?
 Mr. P: (thoughtfully) I guess maybe in a sense
 it does. (F/I-S)

from E: Now they're bringing back cyclamates,
 EB: aren't they?
 G: Well, evidently they aren't causing cancer
 any more. ((F/I-N)

UNCLEAR from Interviewer: Are you embarrassed?
 OR "VERY MD: Surgeon: It doesn't happen after every operation.
 HEDGEY I: You might have further surgery? (F/I-N)
 HEDGES" S: Well, we can't be sure. (F/I-S)
 39

HEDGED OR from A: Jim, you ever been to Puerto Rico?
 INDIRECT KS: J: Not yet. (C/D)
 NO (hn) from A: Yeah. That's a good job? (about a dept. store)
 13 CJ: B: Not really. It's notions. (C/D+)

DIRECT from Jock: Getting seasick, dear? (laugh)
 NO (dn) SJ: Roz: Uh-uh. I don't get seasick in boats like
 54 this. I get sick in sailboats. I think...I
 hope! Boy, if I get seasick, I'll be mad. (Y/N+)

from A: Have you come up with it yet?
 SS: B: Nah. (Y/N)

EMPHATIC from Driver: (moves to left lane) I can go right
 11 IF: through?
 Trainer: No! Break your speed, break your speed!
 There's a car coming. My God! Turn now! (Y/N+)

from Pres: Did that disturb you?
 WP: Dean: No, that didn't disturb me at all. No sir.
 (Y/N+)

III.

CODING THE RESPONSES:
STRUCTURAL CATEGORIES,
WITH EXAMPLES FROM TEXTS

1. Y/N S-AUX: "Classic" short answer form: "Yes, I do"; "No, he isn't"	14
2. Y/N S-AUX+ "Classic" short answer plus further statement	12
3. Y/N: Single word responses: "yes" "no" "yeah" "naw" "yep" "nope" etc.	56
4. Y/N+: "yes", "no", etc., followed by further statement	81
5. C/D: formulaic expressions of confirmation or denial: "sure", "I doubt it", "absolutely", etc.	31
6. C/D+: formulaic expressions followed by further statement	17
7. S-AUX \emptyset : "It is", "I do", etc; + alone or expanded	9
8. F/I-S Full or incomplete statement (without Y/N)--Same proposition as question	47
9. F/I-N: Full or incomplete statement, new proposition	37
10. Q: Question in reply to question	11
11. R \emptyset : Repetition of words in question, but in statement form, with or without expansion	14

from IS:

C: Hello, is Judy Scott there?

A: No, she isn't. (dn)

from KS:A: Mark, have you ever been to
Puerto Rico?

M: No, I haven't. (dn)

from IS:

C: Can I make reservations for tonight's performance?

T: Yes, you can. We hold them until eight o'clock. (dy)

from IF:

W: Could I do a little reading in bed? W: You wouldn't mind?

H: 'M-h'm. (hy)

H: 'M-'m. (hn)

from CJ:

A: Did you have the last test?

B: Yes, and I thought I did so marvelous because I really thought
I was sure I knew most of them and when I was taking it this
is a breeze. And I got a C. (dy)from WP:

P: The grand jury is dismissed now?

D: That is correct. (dy)

from KS:A: ...you can join the KSFO gang of over a hundred for four days
in San Juan. Does that sound good?

L: Really! It sounds real good! (ey)

from KS:

A: Are you ready to go to Puerto Rico?

W: I certainly am. I'm really lookin' forward to it. (ey)

from CS:A: Mr. Poole. He's a real good teacher. He teaches sociology,
doesn't he?

B: Sociology 1 and 2. (dy)

from WP:

P: Have you had the P.O. checked yet?

H: That is John's area. I don't know.

(h)

from MD:

M: Will they improve?

S: Alta will limp. (h)

from IF:

A: Have you gotten your Christmas shopping done yet?

B: Are you kidding? Have you been to the big stores lately? It
took me an hour just to find a parking space! (en)from FL:M: (chuckle) I'm getting a little tired of (doing that demonstra-
tion) but I still do it on command--I--y'know, I also bark on

F: (laugh)

command--

M: When you don't have tenure, you do a lot of things on command.

F: Uh-huh. Do you bite?

M: I bite, when I--but that's not on command. That's for pleasure.

(r+)

F: I see.

F: Uh-huh

IV.

BREAKDOWN OF RESPONSES

BY DEGREE

(**vertical columns--**
see fig. II for examples,

BY STRUCTURE

(**horizontal rows--**
see fig.III for examples)

BY SOURCE

(initials within each
box--see fig. I for
explanation of code)

Circled numbers in
each box refer to
the total number
of examples in that
structure/degree
category, from
all sources

1. Y/N S-AUX: "Classic" short answer form: "Yes, I do", "No, he isn't."	14
2. Y/N S-AUX+. "Classic" short answer plus further statement	12
3. Y/N: Single word responses: "yes" "no" "yeah" "naw" "yep" "nope" etc.	56
4. Y/N+: "yes", "no", etc., followed by further statement	81
5. C/D: Formulaic expressions of confirmation or denial: "sure", "I doubt it", "absolutely", etc.	31
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8. F/I-S: Full or incomplete statement (without Y/N)--Same proposition as question	47
9. F/I-N: Full or incomplete statement, new proposition	37
10. Q: Question in reply to question	11
11. R \emptyset +: Repetition of words in question, but in statement form, with or without expansion	14

emphatic YES 40	direct YES 120	hedged. indirect YES 47	UNCLEAR "very hedged," 39	hedged, indirect NO 18	direct NO 54	emphatic NO 11
	CJ-1 IS-3 IF-1 MD-1 ⑥				SS-2 IS-3 KS-3 ⑧	
	IS-3 EB-1 KS-1 ⑤				SS-2 IS-3 EB-1 ⑥	FL-1 ①
	FM-8 SS-5 WP-1 IS-4 EB-2 MD-9 ③⑧	FL-1 IF-2 ③		IF-1 ①	FM-1 SS-1 CJ-3 IS-1 SJ-1 KS-1 ⑫	SS-2 ②
FM-3 SS-3 WP-2 SJ-1 IF-1 MD-1 KS-2 ⑬	FM-5 SS-3 CJ-6 WP-1 IS-2 EB-1 KS-2 MD-4 ③④	FM-1 SS-2 CJ-2 IS-1 ⑥	EB-1 ①	SS-1 WP-1 KS-2 MD-1 ⑤	FM-3 CJ-1 IS-3 SJ-5 KS-1 MD-6 ⑫	IF-2 ②
FM-1 WP-2 IF-1 KS-2 ⑥	CJ-2 SS-2 WP-2 IS-2 SJ-1 IF-3 EB-1 KS-1 ⑭	FM-1 WP-1 ②	CJ-1 EB-2 IF-1 ④	CJ-1 SS-1 KS-1 ③		WP-2 ②
CJ-1 KS-3 ④	SS-2 KS-1 ④	FM-1 SS-2 IS-1 ③	SJ-1 ①	CJ-1 SS-1 ②	CJ-1 SS-1 IS-1 MD-1 ④	
FM-1 SS-2 KS-2 ⑤	FM-1 SS-1 MD-1 ③	SS-1 ①				
FM-1 CJ-1 WP-1 KS-3 ⑥	FM-1 CJ-3 IS-1 IF-1 MD-1 ⑦	FM-5 SS-6 CJ-2 FL-1 WP-2 IF-1 EB-2 MD-2 ⑫	SS-2 SJ-3 EB-3 ⑦	SS-1 SJ-1 ②	FM-1 ①	FM-1 SS-2 ③
WP-1 IS-1 SJ-1 ③	FM-1 IF-1 KS-1 ③	FM-1 CJ-1 FL-1 IF-1 ⑦	CJ-1 SS-3 WP-3 IS-4 IF-1 MD-6 ⑮	SS-1 WP-1 IS-2 EB-1 ⑤	KS-1 ①	
			CJ-1 WP-1 IS-4 SJ-1 MD-1 ⑧		IS-1 KS-1 ②	IS-1 ①
SS-1 EB-1 IF-1 ③	CJ-1 SS-1 WP-1 EB-3 MD-1 ⑦	SS-1 FL-1 EB-1 MD-1 ④				

people generally unacquainted with each other were nevertheless in a particular "goodwill" relationship), and interchanges between speakers who were conscious of being taped. Even more striking, the highest proportion of YNSAUX was found in one of the smallest samples: IS (short interchanges of complete strangers) had 12 YNSAUX in 42 interchanges in an accumulated total of 7 minutes.

In the entire group of texts of interchanges between strangers, including the aforementioned "goodwill" relationships of talkshows, YNSAUX was relatively infrequent, however, appearing 19 times in 136 interchanges, less than 15% of the time. But this was considerably more than in the interchanges of familiars, where YNSAUX appeared 3 times in 141 interchanges, or slightly more than 2 % of the time.

It appears that the frequency of the short-answer form was an indication of the social distance between the speakers in the various interchanges--the more distant the relationships, the more frequent the YNSAUX³ In the case of the speakers conscious of the tape recorder (4 YNSAUX in 51 YNIs, or about 6.6%), use of YNSAUX might have indicated slight discomfort, a subtle feeling of "something strange". YNSAUX might be posited as a distancing device, then, no doubt usually an unconscious one. If this is so, extended use of YNSAUX between intimates might well indicate a strain in the relationship--a "nervous-making" situation, as with the tape recorder, or interpersonal difficulties.

SUGGESTIONS FOR FURTHER STUDIES

The data analyzed so far suggest several directions in which further studies might go:

- 1) Further collections of short interchanges between complete strangers--difficult speech situations to capture--would be helpful, perhaps with short "man on the street" interviews prompted by a questionnaire of predominately yes-no questions on some current topic of interest. If taping is impractical, a checklist of the structural categories of possible answers (see figs III and IV) could be listed on a check-sheet to be marked by the interviewer.

- 2) More attention to the functions of the yes-no questions in the interchanges might reveal other patterns of answer forms. So far, the focus has been on the relationships of speakers, degree of positivity or negativity in their responses, and the kinds of speech situations in which they are interacting.

- 3) With large enough speech samples, it might be interesting to attempt a study of the styles of individual speakers, based on the frequency of particular grammatical forms within their speech. Close examination of the data for this project shows a consistency in the answer patterns of some speakers--John Dean's patterns are recognizable, as are those of a surgeon being interviewed on the Mike Douglas Show. However, the speech situation and topic may have more to do with the consistency of pattern than does the personal style of the speaker; much more investigation--and data--is needed. While time constraints have not permitted a detailed study of this kind yet, the first three sources in Figure I (Fانشel and Moss's marriage counseling sessions of one couple,

Carterette and Jones' extended conversation of a group of junior college students, and the various interchanges of a small cast of characters in the Watergate Papers) provide much further data, as yet unanalyzed, for such a project.

SUMMARY

A) In speech samples collected from a wide variety of contexts, short-answer forms appeared infrequently as answers to yes-no questions (about 8% of possible occurrences).

B) Forms most likely to be used in emphatic and direct affirmatives and direct negations were words such as "yes", "yeah", "uh-huh", "uh-uh", "naw", "no", alone or followed by further statement which was not a short-answer form (about 32% of total responses)

Forms most likely to be used in hedges and indirect affirmatives were full or partial statements not preceded by any single-word affirmative or negative. Statements as indirect affirmatives usually contained the same proposition as the question. Statements as hedges usually contained a new proposition in answer to the question.

C) Short-answer forms appeared much more frequently in interchanges between strangers (19 times in 136 interchanges in 76 minutes) and in self-conscious speech (4 times in 51 interchanges in 60 minutes) than in interchanges between familiars (3 times in 143 interchanges in 194 minutes). The difference of frequency of YNSAUX in these different contexts may suggest that the short-answer form is an unconscious indication of social distance or discomfort with the situation.

PRACTICAL APPLICATIONS

The findings of this study may be of particular interest to those involved in teaching English as a Second Language, as the discipline moves from focus on patterns of form to patterns of function.

The short-answer form is ubiquitous in ESL materials, appearing with the introduction of each new tense: "Does she...? Yes, she does." "Can he....? Yes, he can." "Will they...? Yes, they will." etc. The YNSAUX form is often presented as the main vehicle for affirmative or negative answers. At the same time, the match of AUXs in question and answer, which serves little or no communicative purpose, is often difficult for the beginning ESL learner, resulting in confusion and frustration. This study has attempted to put the short-answer form into proper perspective, particularly for the novice teacher, who is likely to over-spend class time attempting to perfect some of the more obvious--and therefore, presumably, more "teachable" details of English, such as the AUX-AUX match of the yes-no question and answer.

Hopefully, what will be inferred from this study is that other forms of affirmation and negation should be practiced as well as the short-answer form, and that, for reasons of language frequency as well as position in the natural order of acquisition, and reasonable pedagogical expectations, YNSAUX need not be practiced extensively after presentation, particularly at the earliest stages of ESL. Also, as YNSAUX appears to be a distance marker,

its exclusive use would not prepare the learner of English for the variety of situations that s/he presumably would encounter. While it is unreasonable to expect a beginning learner of English to grasp all the distinctions of appropriateness, it is not unreasonable to expect the teacher to be aware of them when structuring situations to present and practice the language.

Hopefully, too, studies such as this will benefit not only the classroom teacher, but also those applied linguists working in teacher-training and ESL curriculum development, and can suggest a model for further investigations into the frequency and function of particular grammatical forms, as well as the range and frequency of forms in which particular functions are realized.

NOTES AND ACKNOWLEDGEMENTS

¹In this study, yes-no questions are considered to be questions beginning with AUX-SUBJ-VERB, statements with rising intonation, statements judged from context as bids for confirmation or denial, or tag questions.

²The inspiration for this project came from a series of teachers'-room conversations with Ruth Cathcart at Alemany CCC in 1975. The investigation has developed slowly through our individual projects. At this stage, it would be difficult to pinpoint which ideas were originally Ruth's or mine, and which are a synthesis. Others who have provided helpful criticism along the way are Susan Rubin, K. Lynn Savage, Sandy McKay, Nessa Wolfson, James Kohn, Paul Willis, and Jagdish Jain. However, the composition of this paper and current arrangement of data, with whatever faults or weaknesses, are solely mine.

³This is not to suggest that every use of YNSAUX is an indicator of distance--only that frequent use seems to be.

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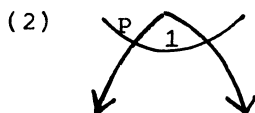
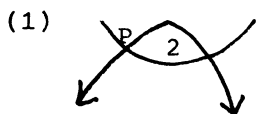
Evidence from Turkish for the Unaccusative Hypothesis*

İnci Özkaragöz

University of California, San Diego

0. Introduction

Perlmutter (1978) proposes the Unaccusative Hypothesis as a linguistic universal. The Unaccusative Hypothesis stated within the Relational Grammar Framework claims that there are two types of initially intransitive clauses: the unaccusative clause which has an initial 2 but no initial 1, shown in (1), and the unergative clause which has an initial 1 but no initial 2, as shown in (2).



According to Perlmutter, there are semantic criteria which distinguish unaccusatives from unergatives such as involuntary action versus willed or volitional acts. Examples of unaccusatives in English are sentences like (3).

- (3) a. Joe slid on the slippery ice.
b. Joe fell out of the window.

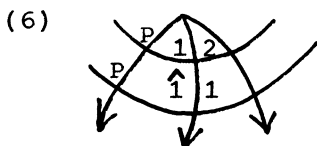
Examples of unergatives are sentences such as the following:

- (4) a. Joe slid into third base.
b. Joe fell right on cue in the second act.

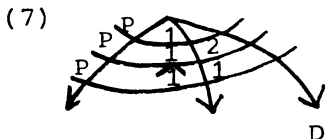
Assuming that impersonal passivization involves advancement of a dummy from 2 to 1, Perlmutter gives an argument for the Unaccusative Hypothesis based on the interaction of impersonal passives and the 1 Advancement Exclusiveness Law (1 AEX Law) using data from Dutch and Turkish. The 1 AEX Law is stated informally in (5).

- (5) No clause can involve more than one advancement to 1.

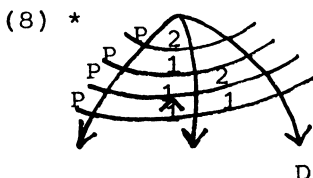
Recall that the Passive structure in (6), as depicted by Perlmutter and Postal (1977), includes a transitive stratum: the stratum in which the advancee to 1 bears the 2 relation also includes a nominal bearing the 1 relation.



Perlmutter and Postal claim that this universal characterization of Passive applies to impersonal passives as well. Thus, in (7), we have an initially unergative clause appearing in a passive construction; a Dummy comes in at the second stratum making it transitive.



The proposed universal characterization of Passive shown in (6) is met. In (8), the Dummy comes in as a 2 in an initially unaccusative clause which necessarily involves an advancement to 1 in order to create a transitive stratum for the impersonal passive construction.



However, the diagram in (8) is ruled out by the 1 AEX Law since it involves two advancements to 1. As a result, Perlmutter makes the claim that impersonal passives provide a syntactic test to distinguish between intransitive clauses that are initially unergative and ones that are initially unaccusative. The claim is that if a clause is initially unergative, impersonal passive advancement is possible; if a clause is initially unaccusative, impersonal passive advancement is not possible. Consider the Turkish impersonal passives in (9) which are ungrammatical and are therefore claimed to be unaccusative. These verbs are also classed as unaccusative by the semantic principles set forth by Perlmutter (1978).

- (9) a. *Burada sol-un-ur.
 Here fade-PASS-AOR
 ('Here it is faded.')
 b. *Burada fişkir-il-ır.
 Here spurt-PASS-AOR
 ('Here it is spurted.')
 c. *Burada kuru-n-ur.
 Here dry-PASS-AOR
 ('Here it is dried.')

The impersonal passives in (10) are grammatical; they are classed as unergative by the proposed universal

semantic principles.

- (10) a. Burada dans ed-il-ir.
Here dance -PASS-AOR
'Here it is danced.'
- b. Burada çalış-il-ir.
Here work-PASS-AOR
'Here it is worked.'
- c. Burada kavga ed-il-ir.
Here fight -PASS-AOR
'Here it is fought.'

Thus, it appears that if we assume certain initially intransitive clauses have initial 2's but no 1's, i.e. unaccusative, and that these initial 2's generally advance to 1, we can account for the ungrammaticality of certain impersonal passives. In turn, it seems that we can use the inability of certain verbs to impersonally passivize as a universal test for unaccusativity.

The remainder of the paper is devoted to two things. First, I present another piece of syntactic evidence from Turkish for the Unaccusative Hypothesis. Second, I reexamine the impersonal passive evidence summarized above, and use it to argue that either the 1 AEX Law or the dummy advancement analysis for impersonal passives may have to be abandoned.

1. The Gerund Suffix -ArAk

Internal to Turkish, there appears to be a further piece of syntactic evidence for the unaccusative versus unergative distinction in initially intransitive clauses: namely, the gerund construction in which an embedded verb exhibits the suffix -ArAk.

-ArAk is a productive suffix that can be used to convey three different meanings. It can be used to denote simultaneous action as in (11), consecutive action as in (12), or it can mean 'as' or 'for' when suffixed to the verb stem ol 'to be' as in (13).

- (11) Ayşe (ağla-y-arak) gel-di.
cry-GL-ArAk come-PST
'Ayşe, while crying, came.'
- (12) (Biz-i gör-erek) onlar da gel-di.
us-ACC see-ArAk they too come-PST
'Seeing us, they came too.'
- (13) (İlk defa ol-arak) karşılaştı-lar.
first time be-ArAk meet-PST-PL
'For the first time, they met.'

I will be concerned here only with the first of these meanings. As can be seen from example (11), the em-

bedded clause containing the -ArAk suffix (appearing in parenthesis for clarity's sake) cannot have a subject on the surface and generally appears directly after the matrix surface subject. Subject controlled Equi is obligatory in the sense that the structure for Equi must be present and Equi must apply. The controller of Equi is the final subject in the matrix clause; the target of Equi is the final subject of the embedded clause. Sentences which have coreferent subjects and do not have Equi are ungrammatical as exemplified in (14).

(14) *Ayşe (Ayşe ağlayarak) geldi.

Sentences which do not have coreferent subjects and thus do not have Equi are ungrammatical as shown in (15).

(15) *Ayşe (Ahmet ağlayarak) geldi.

I will show that the following conditions stated in (16), besides coreference, must hold for a sentence containing the -ArAk suffix to be grammatical.¹

- (16) i. The controller and the target of Equi must bear the same initial grammatical relation.
- ii. The controller and the target of Equi must be final 1's.

Reviewing sentence (11), we see that these two conditions are met. Note that the controller Ayşe and the target Ayşe are both initial 1's and final 1's.

1.1. Arguments that the Conditions Must Hold

For sake of clarity, I have organized the grammatical relations of the sentences I will be discussing in boxes as in (17b) instead of the usual stratal diagrams.

(17) a. Gazete (anlaş-ıl-arak) oku-n-du.
 newspaper understand-PASS-ArAk read-PASS-PST
 'The newspaper, while being understood, was read.'

b.	Controller	Target
Initial	2	2
Final	1	1

(18) a. *Gazete (anlaş-arak) oku-n-du.
 -ArAk -PASS-PST
 ('The newspaper, while (PRO) understanding (it), was read.')

b. *	Controller	Target
Initial	2	2
Final	1	2

- (19) a. *Gazete (anlaşıl-arak) oku-du.
 -PASS-ArAk -PST
 ('The newspaper, while being understood,
 (PRO) read (it).')
- b. *
 Controller Target
Initial 2 2
Final 2 1

In (17), both clauses have passive structures. The controller and target bear the same initial grammatical relation and both are final 1's. However, (18a) and (19a) which are boxed in (18b) and (19b) respectively, do not meet the conditions for the -ArAk construction, and are thus ungrammatical. In (18b), note that while the controller and the target are both initial 2's, only the controller is a final 1, whereas the target is a final 2. In (19), these relations are reversed. While both controller and target are initial 2's, the controller is a final 2 and the target is a final 1.

- (20) a. Çocuk (sakız çiğne-y-erek) anne-si-ni
 child gum chew -GL-ArAk mother-POSS-ACC
 öp-tü.
 kiss-PST
 'The child, while chewing gum, kissed his
 mother.'

- | | Controller | Target |
|---------|------------|--------|
| Initial | 1 | 1 |
| Final | 1 | 1 |

- (21) a.*Çocuk (sakız çiğne-y-erek) öp-ül-dü.
 -GL-ArAk -PASS-PST
 ('The child, while chewing gum, was kissed.')
 b.*Çocuk (sakız çiğne-y-erek) öp-er.

- | | Controller | Target |
|---------|------------|--------|
| Initial | 2 | 1 |
| Final | 1 | 1 |

- (22) a. *Çocuk (sakız çiğne-n-erek) öp-ül-dü.
 -PASS-ArAk -PASS-PST
 ('The child, while gum is being chewed (by
 child), kissed his mother.')

- | | Controller | Target |
|---------|------------|--------|
| Initial | 1 | 1 |
| Final | 1 | ↑ |

Sentence (20) is grammatical because, again, both of the conditions listed in (16) are met: the controller and the target are both initial and final 1's. In (21), the target is an initial and final 1 whereas the controller is an initial 2 and final 1. In (22), while the controller is an initial and final 1, the target is an initial 1 but a final $\bar{1}$. Thus, since the conditions are not met in

(21) and (22), they are ungrammatical as predicted. Now consider (23) which is boxed in (24).

- (23) *Ben Ayşe tarafından (gül-erek)öp-ül-
 I by laugh-ArAk kiss-PASS-
 du-m.
 PST-1sg
 ('I by Ayşe, laughing, was kissed.')
- (24) * Controller Target
 Initial 1 1
 Final 1 1

(23) is ungrammatical because while the controller and target bear the same initial grammatical relation, the controller is a final 1 and the target is a final 1. Thus, 'laughing' cannot refer to an action done by Ayşe, nor can it refer to 'I' if 'laughing' is placed after ben 'I' as in (25).²

- (25) *Ben (gül-erek) Ayşe tarafındanöp-ül-dü-m.
 -ArAk -PASS-PST-1sg
 ('I, laughing, by Ayşe was kissed.')

This is a predicted consequence since the controller and target do not bear the same initial grammatical relation. 'I' in the matrix clause is an initial 2 whereas the target 'I' is an initial 1.

2. Consequences for the Unaccusative Hypothesis

Having established the conditions of grammaticality for sentences containing the -ArAk suffix, let us now see how they interact with the Unaccusative Hypothesis. Consider (26) in which the embedded verb is an unaccusative and the matrix verb is a passive.

- (26) Hasta (kana-y-arak) hastane-ye getir-il-
 patient bleed-GL-ArAk hospital-DAT bring-PASS-
 di.
 PST
 'The patient, while bleeding, was brought to the hospital.'
- Controller Target
 Initial 2 2
 Final 1 1
- (27) Good Year Blimp (üzeri-miz-den geç-erek)
 on top of-1pl-ABL pass-ArAk
 herkes tarafından merak-la seyred-il-di.
 everyone by curiosity-CON watch-PASS-PST
 'The Good Year Blimp, while passing overhead, was watched with curiosity by everyone.'

The conditions for grammaticality are met because assuming unaccusative advancement, both the controller and target are initial 2's and final 1's. (27) meets the conditions in the same way (26) does. Now consider (28) in which the embedded verb is an unergative and the matrix verb is a passive. The sentence is ungrammatical because the controller is an initial 2 and the target is an initial 1.

- (28) *Oğrenci { (ağla-y-arak) } döv-ül-dü.
 student { cry } GL-ArAk beat-PASS-PST
 { shout-ArAk }
 ('The student, while {crying, } was beaten.')
 {shouting}

In (29), the embedded verb is an unergative and the matrix verb is an unaccusative. As predicted, the sentence is ungrammatical because the controller and target bear different grammatical relations initially.

- (29) *kɨz ((top) oyna-y-arak) kay-dɨ.
 girl ball play-GL-ArAk slip-PST
 ('The girl, while playing (ball), slipped.')

Note that when the unaccusative verb is replaced with an unergative the sentence is grammatical in (30).

- (30) Kiz ((top) oyna-y-arak) şarkı söyle-di.
sing -PST
'The girl, while playing (ball), sang.'

More examples in which the controller and the target are combinations of unergative and unaccusative and are therefore ungrammatical appear in (31)-(34).

- (31) *Kız (kayak kay-arak) düş-tu.
girl ski -ArAk fall-PST
('The girl, while skiing, fell.')
- (32) *Adam (yüz-erek) boğ-ul-du.
man swim-ArAk drown-PASS-PST
('The man, while swimming, drowned.')
- (33) *Adam (konuş-arak) öl-dü.
man talk-ArAk die-PST
('The man, while talking, died.')
- (34) *Adam (çalış-arak) hastalan-dı.
work-ArAk get sick-PST
('The man, while working, got sick.')

Examples in which the controller and target are both unaccusative are given in (35)-(38).

- (35) Adam (sayıkla-y-arak) öl-dü.
man talk in delirium die-PST
'The man, while talking in a delirium, died.'
- (36) Ahmet (üzül-müş görün-erek) yorgun bir
sad-PRESUM appear-ArAk tired a
hâl al-dî.
condition take-PST
'Ahmet, while appearing sad, had a fatigued air.'
- (37) Güneş (kız-arak) bat-tî.
sun turn red-ArAk set-PST
'The sun, while turning red, set.'
- (38) Buz (eri-y-erek) küçül-dü.
ice melt-GL-ArAk get small-PST
'The ice, while melting, got small.'

The grammaticality of the -ArAk constructions in all of the data above can be explained by assuming the conditions stated in (16) and the Unaccusative Hypothesis. Recall that in an -ArAk construction the controller and the target of Equi must be final 1's. Thus, the -ArAk construction argues in favor of the Unaccusative Hypothesis.³

3. Impersonal Passives Reexamined

We now return to the impersonal passive evidence that was discussed earlier. Given the 1AEX Law and the advancement analysis of impersonal passives, there appear to be counterexamples to the Unaccusative Hypothesis. Predicates which are classed as unaccusative by the semantic criteria allow impersonal passivization, as shown in the examples in (39).

- (39) a. Burada kay-ıl-ır.
here slip-PASS-AOR
'Here it is slipped.'
- b. Burada düş-ül-ür.
here fall-PASS-AOR
'Here it is fallen.'
- c. Bu göl-de boğul-un-ur.
this lake-LOC drown-PASS-AOR
'In this lake, it is drowned.'
- d. En çok Mart ay-ın-da öl-ün-ür.
most a.lot March month-POSS-LOC die-PASS-AOR
'It is died most in the month of March.'
- e. Hastalan-ıl-ır.
get sick-PASS-AOR
'It is become sick.'
- f. Bu yetimhane-de çabuk büyü-n-ür.
this orphanage-LOC quickly grow-PASS-AOR
'In this orphanage, it is grown quickly.'

- g. Yan-an ev-de yan-ıl-ır.
 burn-PART house-LOC burn-PASS-AOR
 'It is burned in a burning house.'

Assuming that the 1 AEX Law and the advancement analysis of passives were correct, these verbs (and many others) would have to be marked exceptionally as unergative. That is, the strong hypothesis that the proposed semantic criteria predict unaccusative vs. unergative predicates for all languages would have to be abandoned.

However, the predicates in (39) which are classed as unaccusative by semantic criteria, also behave as unaccusative with respect to the -ArAk gerund construction. That is, they can appear with other unaccusatives and passives. Some examples are given in (40).

- (40) a. Sarhoş (yalpala-y-arak) kay-dı.
 drunk sway about-GL-ArAk slip-PST
 'The drunk, while swaying about, slipped.'
 b. Ahmet (kana-y-arak) yer-e düş-tü.
 bleed-GL-ArAk ground-DAT fall-PST
 'Ahmet, while bleeding, fell to the ground.'
 c. Ahmet (su-yun altın-da kal-arak) boğul-du.
 water-GEN under-LOC stay-ArAk drown-PST
 'Ahmet, while staying (involuntarily) under the water, drowned.'
 d. Ahmet (işkence gör-erek) öl-dü.
 torture see-ArAk die-PST
 'Ahmet, while undergoing torture, died.'
 e. Ahmet (soğuk-ta kal-arak) hastalan-dı.
 cold-LOC stay-ArAk get sick-PST
 'Ahmet, while staying in the cold (invol.), got sick'
 f. Ahmet (iyi eğitim gör-erek) büyü-dü. [sick
 good education see-ArAk grow-PST
 'Ahmet, while going through a good education, grew up.'

These predicates, as shown in (29) and (31)-(34), crucially cannot appear with unergatives.

If these predicates are unaccusative, then the question is how the impersonal passive facts can be accounted for. It has been proposed by Laura Knecht (personal communication) that the impersonal passive facts in (9), (10), and (39) can be explained by the following principle in (41).

- (41) Intransitive verbs that have human subjects may appear in an impersonal passive construction.

Knecht's proposal allows the "exceptions" in (39) to be classed as unaccusative in accordance with the semantic criteria and the -ArAk gerund construction. Impersonal passives, it appears, cannot be used to distinguish between unaccusative and unergative verbs.

However, if this analysis is adopted, the validity of the 1 AEX Law (for Turkish) upon which the impersonal passive evidence is based, will have to be reexamined. Alternatively, it may be that the 1 AEX Law does hold for Turkish but the advancement analysis of impersonal passives does not. Thus, it appears that the original evidence using impersonal passives for the Unaccusative Hypothesis turns out to be evidence against one of two other hypotheses proposed as universals.

Footnotes

*For their native intuitions, I thank Tülây Bozkurt, Ahmet Erkan, and especially Aslâhan Tolun who was my principal consultant. I am grateful to Sandy Chung for comments regarding content and style on earlier versions of this paper, and to David Perlmutter for his encouragement throughout the researching and writing of it. Any errors or shortcomings are, of course, mine entirely.

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1a If a framework which incorporates the dummy advancement analysis of impersonal passives is assumed, it will be necessary to modify condition (16ii) in view of examples as the following where the matrix verb is an (impersonally) passivized unergative and the embedded unergative is active.

(Düşün-erek) çalış-ıl-ır.
 think-ArAk work -PASS-AOR
 'It is worked while thinking.'

The controller is a final $\hat{1}$ and the target is a final 1. Note however that both are initial 1's.

A second type of example which violates the condition (16ii) are sentences with incorporated objects where both the matrix and embedded verbs are passivized.

(Su yudumlan-arak) Türk kahvesi iç-il-ir.
 water sip-PASS-ArAk coffee-POSS drink-PASS-AOR
 'Turkish coffee-is drunk while water-is sipped.'

The controller and target are initial 1's but final $\hat{1}$'s. Assuming that object incorporation creates an in-

transitive stratum to which passive applies, we have an impersonal passive like the example above. These two types of sentences are similar in that both involve a dummy advancement analysis of impersonal passives which places an unspecified nominal en chômage, thus violating condition (16ii).

1b Instead of positing two levels of syntactic representation, it might be proposed that the conditions for Equi are based on a semantic characterization using semantic roles.

- (16i) The controller and target of Equi must bear the same semantic role, e.g. they must both be agents or non-agents.

Such a characterization however does not account for examples like the following where the embedded final 1 is an agent and the matrix final 1 is a non-agent.

Hasan Las Vegas-ta (hem ağla-y-arak hem gül-erek)
 -LOC both cry-GL-ArAk laugh-ArAk
 para kaybet-ti.
 money lose-PST
 'In Las Vegas, Hasan, while both crying and laughing,
 lost money.'

Perlmutter's framework classes the matrix nominal as an initial 1 and is thus compatible with the embedded nominal which is also an initial 1.

² The attempted meanings in (23) and (25) can be expressed by using the suffix -ken which does not require that the initial grammatical relations be the same.

³ According to Perlmutter's (1978) semantic criteria, predicates expressing states of mind are classed as unaccusative. In Turkish, with respect to the -ArAk construction, these predicates behave blindly in that they appear in the matrix clause with an embedded unergative or unaccusative, or vice-versa. Further work is needed to determine the nature of this behavior.

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AN ETYMOLOGICAL DOOR TO SYNERGETIC STRUCTURES

Martin Schwartz

University of California, Berkeley

This contribution has two purposes: (I) To set forth the evidence for a hitherto unobserved Indo-European etymon, and (II) to present a new structural mode of analysis of interest for not only the study of linguistic change, but also e.g. mythopoeic and poetic processes. In keeping with this volume's dedication to Prof. Murray B. Emeneau (under whom I had the good fortune to first study Sanskrit) my emphasis here will be Indological.

I. As background, I must first present my non-Indological data. I propose a Proto-Indo-European √dhwer(H) 'to go apart bilaterally and form a gap' from the following evidence:

1. Anc. Greek: √sar 'to go apart bilaterally and form a gap' appears in sēsēra (stative perf.) 'to have the lips withdrawn so as to show the clenched teeth, to have the mouth agape; to gape (e.g. of wounds)'; sēranx 'cave'; sárma 'chasm'; and (with *-on-/-n-) sārōn 'gaping (vulva)'; sarōnís 'hollow oak'; sarāpous 'gap-footed' i.e. 'pigeon-toed'; sárabos 'vulva' (*-g^w(o)- suffixed to *-r/n- stems, marking natural objects; cf. OInd. ásr-g, Lat. sanguis 'blood'; OInd. śr̥ṅga- 'horn'; Gr. ptērux 'wing' etc.; not *-g-!)

This etymology results from my discovery, based on symmetry of phonological correspondences, that the regular Gr. reflex of PIE *dhw- is s-, not th-. [See Note 1.]

2. Lithuanian: dverti 'to go apart, go asunder, to gape, develop holes' etc.

3. Hittite: duwarnai- 'to break' < *to make go asunder'. Here -nai- goes back to *-na- (factitive), as also tarnai- 'to let' and hurnai- 'to moisten'. These words conform to the transfer of -hi conj. thematic stems to -mi stems discussed in Watkins and Jasanoff.

4. Pan-IE: The etymon of door, *dhwor- *dhur- etc. need no longer be described as a "terme inanalysable par lui-même, qu'on ne peut pas rattacher a une racine verbale et dont la signification nous échappe" (Benveniste 1969 I:312), since this word may now be explained from our etymon √dhwer(H). The oldest forms refer to doors or gates with two leaves. Thus in Vedic a door or gate is designated by the dual, dvārā. Similarly in Homer 'door' is usually thúrai; Lat. fores is a great door with two leaves, and Gothic daurons is a two-leaved gate; here pl. forms have replaced the old du. The bivalvous door cut in half the weight on the hinges, allowing larger, more secure structures, and had the psychologically poignant appeal of symmetry, with all its important architectural possibilities. Named from

its special feature of bilateral opening, this door became the door par excellence. Thus the various late forms referring to a univalvous door are from *dhwor-*dhur-, often retaining the plural form (substituted for the still earlier dual; hence 'door' was not a PIE plurale tantum).

Three curious facts will be addressed later: The irregular d- for *dh- in OInd. dvār- dur-; the Old Iranian (singular) form dvara- as against OInd. dvār-ā dual, and the circumstance that thurai in Homer always refers to the concrete apparatus of a bivalvous door (and not merely a passageway), except when it refers, as frequently, to the entrance of a cave.

The oldest kind of door consisted of a single plank covering an opening, eventually mounted on a pivot. This is shown by Skt. vāra- 'gateway, door' (lex.), Prasn (Kafir) wārek 'house', Oscan veru 'portam', Umbrian verofe 'in portam (and prob. here Pol. wierzeja < *vereja- 'leaf of door'), OChSlav. vrata, OPruss. warto 'door, gate' etc., whose etymon is PIE √(H)wer 'to shut up, (en)close, obstructs, shield, protect', whence OInd. vr̥nóti '(en)closes, obstructs', vr̥trá- 'obstruction', Old Iranian wr̥θra- 'resistance, defense' > Ossetic wart 'shield'; Old Irish fern 'shield' etc. From this base one may reconstruct the IE term for 'to close, to shut', OInd. (ápi) vr̥nóti, Lat. operio (*opi-wer-), cf. Lith. užvėrti, as well as 'to open', OInd. āpa vr̥nóti, = Lat. aperio (*apo 'away'), also OInd. vī vr̥nóti (vī 'apart'), Lith. atvėrti. This accords with the priority of √(H)wer in the IE terms for 'door'.

II. I now come to the Indological part of this paper, which illustrates the approach I shall henceforth be advocating. This is a mode of analysis arising from phenomena I call synergetic structures. This approach treats change as a "vector resultant" of patternings of features simultaneously interacting in various parameters of form, meaning, cultural context, psychological factors, etc. These interactions take place through dynamics of associable similarity of features as well as dynamics of differentiation, which often result in simultaneous alignments and polarities in various levels of function. I believe that these synergetic phenomena reflect an aspect of the operations of the mind, which in this regard may be viewed as a multidimensional associative network with a complementary mechanism whereby distinctions are maintained.

Synergetic structures may often be conveniently schematized. I shall here present a few model schemata for synergetic interactions in the realm of language. I note in passing that synergetic schemata take account of (and help account for) a range of linguistic phenomena including what is commonly called analogy (paradigmatic leveling, etc.), contamination and blending, phonesthemes, popular etymology, malapropisms, slips of the tongue, puns, consonances (rhyme, alliteration, etc.) and varieties of word association, including those that remain unconscious and those that are manifested artistically (or humorously).

This is not the place to discuss the application of the approach e.g. to literary criticism and the study of folklore, or its relationship to currently more familiar theories and methods of "structuralism" and trends in psychology: these issues are beyond the scope of this paper. I will limit my illustration of synergetic structures to problems in Old Indic which are related to the material discussed in I.

Vedic $\sqrt{\text{dhvar}}(\mu)$ $\text{dhv\acute{a}rati}$, $\text{dh\acute{u}rvati}$) 'deceive, injure' requires an etymology, especially since the Hitt. form with which it had earlier been grouped is a special development of 'go apart'. The fact that $\sqrt{\text{dhvar}}(\mu)$ is phonologically suited by PIE $\sqrt{\text{dhwer}}(\text{H})$ necessitates that the latter be considered as etymon. The semantic difference 'to go apart and form a gap': 'deceive, injure' needs of course to be reconciled. Rather than rush to an arbitrary, *ad hoc* judgment of how to relate these meanings, it is methodologically necessary to see what the station of $\sqrt{\text{dhvar}}$ was in the Old Indic lexical network.

Phonologically $\sqrt{\text{dhvar}}$ would be similar to two verbs. The first, $\sqrt{\text{dhrav}}$ ($\sqrt{\text{dhru}}$), is attested only in rare forms, all zero grade nominalizations: the abstract $\text{dhr\acute{u}ti}$ - 'seduction, deception' and the root stems dhrut- and -dhru- , but as I showed in 1966, the corresponding verb is well attested in Iranian. Relevant forms include Avestan $\text{dr\acute{a}uuaiia-}$ 'to lead astray, wreak mayhem', ppp. $\text{dr\acute{u}ta-}$; draoman- 'deception, mayhem'; Parth. $\text{dr\acute{a}w-}$ 'to seduce, deceive'; Sogd. $\text{\bar{a}r\delta\acute{e}w-}$ (sic); $\text{\bar{a}-}$ established by N. Sims-Williams) 'to seduce'; Khwarezmian $\text{\bar{a}r\delta\acute{a}w}$ (sic) 'seductive demon leading its victims far away', and ar\delta uc 'remotum, *seductum'. The antiquity of the form and the meaning is guaranteed by its connection with Lat. fraus furnishing the PIE base $\sqrt{\text{dhrew}}$ whose extended form, $\sqrt{\text{dhreugh}}$, yielded OInd. druh- , Av. drug- 'lie, deception,

demonic force, demoness'. The details are given in Schwartz (1966). From the Avestan (and Parthian) passages cited there is clear that $\sqrt{\text{drav}}$ was particularly associated with $\text{ae}\bar{\text{s}}\text{ma}$ - 'Fury, Disorderly Behavior', and thereby with Disintegration ($\text{v}\bar{\text{d}}\text{ātu}$ -) and indeed with drug -; the notion of $\sqrt{\text{drav}}$ is best defined as 'making things go wrong' e.g. the stopping of the ordained motion of the heavenly bodies and leading astray the mind of man.

The other verb which phonologically resembles $\sqrt{\text{dhvar}}$ is $\sqrt{\text{hvar}}$; $\text{h}\bar{\text{v}}\text{arati}$ 'is crooked, goes off course, vacillates', $\text{h}\bar{\text{v}}\text{aras}$ - 'crookedness, perversity', for which I reconstruct $*\text{ghuH-el}$ - 'go off course' (cf. Lith. žuti 'to perish', Latv. zūst 'go lost'): $*\text{ghuHl}$ - (OIr. zūrah - 'perversity, evil'; OInd. hūrchatī 'is crooked'; Lith. atžūlas 'unmerciful, disinclined'), $*\text{ghweHl}$ - (prob. Gr. phēlos 'deceitful'). A close phonological association between $\sqrt{\text{dhvar}}$ and $\sqrt{\text{hvar}}$ would result from the fact that in OInd. dialects dh became h , even within the same paradigm, e.g. $\sqrt{\text{dhā}}$ 'to place', ppp. Vedic dhita - (rare) > hita - (usual).

Not only would $\sqrt{\text{dhvar}}$ if it originally had the sense of PIE $\sqrt{\text{dhwer}}(\text{H})$ 'to go apart' be phonologically similar to both $\sqrt{\text{dhvav}}$ and $\sqrt{\text{hvar}}$, it would also be semantically comparable to both, sharing with them a reference to motion away from a center or focus (point/line).

The mg. 'more apart bilaterally' would also make $\sqrt{\text{dhvar}}(\text{H}) = \sqrt{\text{dhwer}}(\text{H})$ opposed to the idea of joinedness and fitting together. As it happens, in Indo-European the concrete 'fitting (being joined)' furnished in the abstract realm the idea of fittingness i.e. suitability, propriety, excellence, the good. (The proof of this follows in accordance with the following axiom of historical semantics: in a language or language group a semantic association or shift not motivated by specific systematic pressures may be verified by the reoccurrence of that association or shift in a number of phonologically unrelated instances.)

Note these examples: (1) OInd. āgadhita - 'clasped', MDutch gaden 'to fit, to match', OChSlav. ugoditi 'to suit', godu '(proper) time', Eng. good; (2) Arm. darbin , Lat. faber ($*\text{dhA/Ebh-ro}$ -) 'joiner, craftsman', Goth. gadōf 'fitting, proper', gadōb 'is appropriate', OChSl. doba 'suitability, occasion', dobri 'good', dobli 'best, most seemly'; (3) Gr. pēssō 'fasten', Germ. fügen 'to join together', fängen 'to grasp', Goth. fagrs 'fitting, fit', OEng. fæger 'fair, excellent, suitable, beautiful' (4) Gr. ārare 'joined, fitted together', arthrós 'joint', árti 'exactly', Lat. ars 'craft', artus 'joint', Gr. hómēros 'companion', Hitt. n. āra - 'companion' and c. 'that which is fitting, right suitable', Gr. aréskei 'fits, is suitable', areté 'excellence', aréion 'better', áriston 'best'.

In Indo-Iranian the latter group is represented by $\sqrt{\text{ar}} / \text{r}$: OInd. rnóti 'joins together, fits' trans./intrans.), ppp. rtá- 'joined'; ará- 'spoke of a wheel'; Av. arānte 'are joined', aipi-~~ar~~ta- 'fixed, regular', Av. aša-, -arata- 'Rightness, (Cosmic) Truth, righteousness', ara-, ra- 'proper(ly)', in accord', ratu (proper) time, Sogd. rtu- 'moment', OInd. (Ved.) ara-, arām 'proper(ly)', in accord', rtú- '(proper) time', rtá- 'The Right, order(ed), (Cosmic) Truth'; 'the state of things being in, or going to, their proper place'; 'the state of being solidly held together', 'the Law which is firmly established' (= rtá- 'joined').

Already in Proto-Indo-Iranian the $\sqrt{\text{ta}}$ - concept was opposed by $\sqrt{\text{d(h)rugh-}}$ (> OInd., drúh-, Av. drug-) and $\sqrt{\text{dhrav}}$. In Vedic the association of rtá- with 'join' was kept alive by its having merged with the past passive participle.

(It must be noted that the older verbal noun $\sqrt{\text{ta}}$ - is shown by Av. aša-; $\sqrt{\text{ta}}$ - may therefore a thematized root stem. Cf. Av. aš-, Pashto $\sqrt{\text{r-}}$ 'very' < $\sqrt{\text{rt-}}$ 'truly, verē' ? Further to Gr. árti (loc.) 'just, exactly', ártios 'fitting (the facts, etc.)', The latter suggests the mg. 'Truth' of $\sqrt{\text{rtá-}}$, unique among derivatives of bases meaning 'fit together, join' may be from 'closely corresponding'; this could interact synergetically in Indo-Iranian with 'fitting, proper' and produce 'Truth' (as a cosmic potency); for 'truth' as 'epistemologically correct' Indo-Iranian had satya- 'pertaining to the way something is', from sant- 'being'.)

As a value concept rtá- stood against $\sqrt{\text{dhrav}}$ ($\sqrt{\text{dhru}}$) as expressing deception, making things go wrong, etc., and also against $\sqrt{\text{hvar}}$, which also expressed abstractions like crookedness, deviousness, deviation, instability, etc.

It must also be observed that rnóti also means 'more (trans./intrans.) to the right place', synergetically related on one hand to the idea of '(fitting) reward', cf. Gr. ánumai, Av. arənaoiti, aši- etc. (and OInd. artha- 'goal'), perhaps reflecting a PIE form of $\sqrt{\text{Aer}}$ 'to fit', and on the other to the homophonous rnóti 'to move, to rise', etc. from PIE $\sqrt{\text{Ee/or}}$, so that both $\sqrt{\text{dhru}}$ ($\sqrt{\text{dhrav}}$) 'to lead astray' and $\sqrt{\text{hvar}}$ 'to go off course, bend sideways' would be opposed to this sense of $\sqrt{\text{r}}$ in rtá-.

The dynamics of the synergetic interactions affecting $\sqrt{\text{dhrav}}$ may now be schematized. First the words may be arranged so as to reflect their relationships:

$\sqrt{\text{dhrav}} / \text{dhru}$ 'lead astray, make go wrong'
$\sqrt{\text{dhvar}}(\text{H}) / \text{dhr}$
*'go apart etc.'
$\sqrt{\text{hvar}} / \sqrt{\text{hūr}}$ 'be crooked, go off course, vacillate'.

Phonologically $\sqrt{\text{dhvar}}(\text{H}) / \text{dhur}$ is similar to both $\sqrt{\text{dhrav}} / \text{dhru}$ and $\sqrt{\text{hvar}} / \text{hur}$, and is associatively attracted to both; since it is an intermediary or bridge between the latter two bases, its phonological "vector resultant" may be shown as follows:

$$\longrightarrow \begin{array}{l} \sqrt{\text{dhrav}} (/ \text{dhru}) \\ \sqrt{\text{dhvar}} (/ \text{dhur}) \\ \sqrt{\text{hvar}} (/ \text{hur}) \end{array}$$

Semantically $\sqrt{\text{dhvar}}(\text{H})$ stands to both $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$ in a complex manner. 'Go apart etc.' stands against both 'lead astray' etc. and 'go off course', etc., which latter meanings are very similar. But $\sqrt{\text{dhvar}}(\text{H})$ shares with both $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$ the signification of diverse or divergent motion with reference to a point or line, and may therefore be associatively "attracted" to them. But while $\sqrt{\text{dhvar}}(\text{H})$ signifies bilateral divergence, the divergence indicated by both $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$ is unilateral. However $\sqrt{\text{dhvar}}(\text{H})$, like both $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$, is opposed to the $\sqrt{\text{r}}$; in the case of $\sqrt{\text{dhvar}}(\text{H})$ the opposition is to $\sqrt{\text{r}}$ in the meaning of 'join together', whereas $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$ are opposed to $\sqrt{\text{r}}$ as 'to move toward a goal'. Thus the semantic relationship, as concerns motion with reference to a point or line, would be as follows (<A away; T> toward):

	BILATERAL	UNILATERAL		VECTOR RESULTANT
<A	$\sqrt{\text{dhvar}}(\text{H})$	$\sqrt{\text{dhrav}}$ $\sqrt{\text{hvar}}$	\longrightarrow	$\sqrt{\text{dhrav}}$ $\sqrt{\text{dhvar}}$ $\sqrt{\text{hvar}}$
	$\sqrt{\text{r}}$	$\sqrt{\text{r}}$		

The potential for attraction of $\sqrt{\text{dhvar}}(\text{H})$ to $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$ is realized by the analogical proportions $\sqrt{\text{dhvar}}(\text{H}) : \sqrt{\text{dhrav}}, \sqrt{\text{hvar}} :: \sqrt{\text{r}} : \sqrt{\text{r}}$. The semantic "vector resultant" is thus the same as has been observed for the phonology.

Finally we may again consider interactions of the three bases in the semantic sphere, taking into account tensions and results of the last synergy in their vertical opposition (movement away/toward), but confronting this opposition in the plane of concrete signification with the negative/positive polarity in the area of philosophical conceptualization. As was seen, $\sqrt{\text{dhvar}}(\text{H})$, like $\sqrt{\text{dhrav}}$ and $\sqrt{\text{hvar}}$, figured elementarily in the description of physical reality, as also the antithetical $\sqrt{\text{rtá}}$ -

(past passive participle of \sqrt{r} , $rnóti$), but in the plane of ethical value concepts $\sqrt{dhvar}(H)$ had no role, whereas \sqrt{dhrav} (and \sqrt{hvar}) and derivatives (cf. $dhrúti$ -, $hvarás$ -) were antipodal to the notion of the noun $rtá$ -. As indicated, Vedic $dhru$ - was a synonymous counterpart of $druh$ -, which was diametrically opposed to $rtá$ -, just as Av. \sqrt{draz} and its derivatives patterned with $drug$ -, systematically antipodal to $aša$ - in the Zoroastrian dualism. [For \sqrt{hvar} as loosely patterning with \sqrt{dhrav} against the $rtá$ - concept, cf. Av. $zbar$ - ($*zvar$ -) as a technical term for the motion of evil beings. —The history of its synonym $duar$ - ($dvar$ -) I take to result from complex Iranian synergies of \sqrt{zvar} 'go crookedly', \sqrt{dvar} 'go apart', \sqrt{draz} 'to run', and \sqrt{draz} 'to lead astray', which led to the elimination of \sqrt{dvar} 'go apart'.] Nevertheless in the metaphysical plane (inseparable from the ethical for the Indo-Iranians), $\sqrt{dhvar}(H)$ would have been associated with dissolution (cf. Av. $Vidātu$ - as subject of \sqrt{draz}) and thus opposed, together with \sqrt{dhrav} and \sqrt{hvar} , to the $rtá$ concept, which included cohesion and solidity. The schema for the synergy would be:

PHYSICAL: MOTION RE
REFERENCE PT./L.

METAPHYSICAL AND ETHICAL

\sqrt{dhrav}	\sqrt{dhrav} 'mayhem', 'deception', 'wrongness'	-
$\sqrt{dhvar}(H)$	$\sqrt{dhvar}(H)$ 'dissolution'	Ø
\sqrt{hvar}	\sqrt{hvar} 'instability' 'crookedness'	
\sqrt{r} : $rtá$ -	'joined' 'gone to goal'	+
	$rtá$ - 'Order', 'Truth', 'Right(eous)ness', 'Stability'	

The result would be identical to that seen for the other two schemata. It must be remembered that the operations of all three were all simultaneous and interconnected in the minds of the speakers of pre-Vedic; a multi-dimensional model would be required to illustrate the unified synergetic process. Suffice it to say that a multiplicity of factors, in many hierarchies of language and thought, made for a close associative alignment of the three bases, both in form and meaning.

Through this rapprochement, $\sqrt{dhvar}(H)$ took on the meanings of \sqrt{dhrav} (\sqrt{dhru}), because of their similarities and shared systematic opposition to the meanings of $r(tá)$ -, in the various parameters schematized above. Thus prob. the pres. stem $dhúrva$ - was modeled after $dhvára$ -. A clear instance is RV $satya$ - $dhvrt$ - 'seeking to be) deceiving (perverting) truth' alongside $Varuna$ - $dhrút$ - 'seeking to deceive Varuna (the god presiding over $rtá$)'. More interestingly, we find $dhvarás$ - f. and $druh$ - f. coordinated

in opposition to rtá- in RV 4.23.7-8; it is now possible to identify dhvarás- as an alternative expression for drúh- as the feminine hypostasis of Lie (etc.); this is confirmed by the pl. dhvarásas, described as dvayāvīnas 'duplicitous ones' 2.23.5, the equivalent of the pl. is from *dhvaras- n., modeled (as shall be seen below) after hvaras 'crookedness'.

Remodeling of √hvar (itself a cross of *hu(v)ar- < *huHar- and hvār- < hvaHr/l-) after √dhvar(H) / dhru is shown by the alternation of hur (hūrā-, hūrchatī), the sole expected outcome of *huHr/l (Ir. zūr/l, Lith žūl), with hur in hurás '(going) off course', remodeled after dhūr (dhūrtī etc.) alternating with dhur (dhurā 'violently'), where we have conditioned variants, resp. preconsontantal and prevocalic, of */dhurH/. With √dhvar(H) having become semantically identical to √dhraV / dhru, √hvar developed forms like -hrut-, hrūti- after forms like -dhrut-, dhrūti-. Thus ends the supposition of dhru as a metathesis of dhv and hru of hvr; the other alleged evidence in Indic for such a metathesis in śvaśura-: śvaśru and catvāras: catu (!), Av. caθru-, merely reflect a PIE dissimilatory metathesis of two labial sonants (*swekuro-, *kwetw(o)r-).

The confusing diversity and mental "clutter" caused by the multiplicity of similar forms with identical/similar meanings had two results. √dhvar, which had the phonological support of the rhyming √hvar (whose meaning was sufficiently distinct from √dhvar / dhru, as Karl Hoffmann has shown), and whose opposition to the rtá- concept was complete in more dimensions than that of √dhraV, ousted the latter as a living verb; even the nominal survivals are limited to the zero grade, dhru, supported by the semantically and phonologically similar druh, thus also the greater frequency of the verb dhurvati as against dhraVati tendency among sufficient speakers to avoid verbal forms of both bases (this is another solution to the confusion), so that the later language maintains only dhūrta- 'rogue' (and note the Sanskrit use of hvalate as against Vedic hvārti?).

Not only was the semantic shift of √dhvar(H) a virtually inevitable regulatory response to combined tensions within the Old Indic lexical network, but it was this which in turn motivated the change of the word for 'bivalvuous door' from the original form *dhvār- to the attested dvār-. The only attractive earlier explanation of this change was "analogical influence of dvā 'two'". It is moot whether such an association would have sufficed against the phonemic distinction dh- : d-. But it certainly would not have taken place as long as there was a verb dhvārti 'goes apart bilaterally', of which dhvār- is the cognate noun illustrating the verb. But once dhvārti came to mean 'deceives, injures', the designation for the gates or doors of every major dwelling or fortification would

no longer be the appropriate 'that which goes apart on two sides' but would ascribe treachery and harm to those devices of security, hospitality, and transition. It would also entail sacrilege (for doors, dvār-, as goddesses, see e.g. the 5th and 6th stanzas of the Apra/Apri Hymns of the Rg-Veda). The station of *dhvār- in the lexical network provided a way around this impasse: 'two-leaf door' entered the phonosemantic field of dvā '2'; the phonemic difference now became a secure barrier closing off association with the inadmissible.

To demonstrate this connection I would note that the variant pronunciation of '2' as duā brought about duār- a variant of dvār-; this is reflected in the RgVedic scansion duārā 4.51.2, a reflection of whose reality in the spoken language I would also claim in Prakrit du(v)āra-, duāria, Panjabi duār, Nepali duwār, Eur. Romany vudar, and (in Kafiric) Waigeli dōr. etc.

The two-leaf door would be the clearest and most tangible illustration, constantly experienced in everyday life, of the original meaning of PIE √dhwer (H), 'part bilaterally and form a gap'. In OInd. the shift of meaning resulted not only in the new formal approach of 'two-leaf door' to 'two', but in the alignment with 'door' of words for 'gap, chasm, cave' from the old base of 'door'. Note that Greek has from the same PIE base not only sárma 'chasm' and séranx 'cave', but, as remarked earlier, thúrai ('dual) as both 'two-leaf door' and 'cave entrance' (see esp. Odyssey IX 243; 415-418), the result of a synergy of two forms related phonologically as well as semantically (and, in this case, etymologically).

Now Kashmiri has bar m. 'door', bor^u m. 'hole permitting entrance, crack or fissure in wall', f. būrū 'spy-hole, crack in wood or stone or in a door' (Grierson; Turner). These should go back to resp. dvara- (Turner), and (following Morgenstierne's notes on the Kashmiri mātrā vowels), *dvara-ka-, *dvari-kā-.

I account for these forms as follows: In pre-Indic *dhvara- m. 'gap, large aperture' and *dhvari- f. 'aperture, hole', became, through alignment with *dhvār-ā > dvār-ā 'door', dvara- and dvari-. By synergy with dvār(-ā), the thematic form dvara- then took on the convenient meaning '(any kind of) door(way)', cf. also the OIr. and Kafiric words for 'door' < *dwara-. In pre-Kashmiri the words for 'gap' and 'aperture' etc. were then distinguished from dvara- ('door') (> bar; cf. also Kashmiri brānt 'threshold' < *dvarānta-, Turner) by the addition of diminutive suffixes (hence 'door' = 'large opening'; 'fissure, crack' = 'small opening'. (Note also *dvāras- in Vṛkadvaras-, the name of a demon, hence 'he who lives in a den of wolves' since this is from *dhvāras-, the Vedic dhvarás- 'lie' must be a new creation.)

The above is confirmed by a hitherto impenetrable RgVedic passage which occurs in one of the Savya hymns to Indra. Before analyzing the passage, it is necessary to summarize the Vedic myth to which it and a great many other hymns refer.

In the beginning there was an undifferentiated state which the Veda describes as stagnant waters. Within this primordial matrix there developed a speck of solid substance which became a mountain (párvata-), or rock, in which was concentrated a force of resistance to a more differentiated cosmos. Flowing waters and a sun (establishing motion and regularity) existed latently within the enclosing, obstructing rock. This force, called Vrtrá- 'Obstruction, Resistance', was mythologized in a more active conception as a serpent lying inertly upon the mountain, or encircling it, or engulfing it. Against this doubly-represented force of blockage there arises the god Indra, who pierces Vrtra, smashes open the mountain, lets the pent up waters flow, and releases the sun. The base of the mountain, dharúṇa-, he extends horizontally to be the earth, and on the locus of the opened source he raises the heavens with a prop, the axis mundi down which the sun returns at night.

As against Vrtra, who is the (En)closer (as plays on the root vr constantly remind us), Indra functions as the Opener. In a hymn of the Savya cycle, we read 'You, Indra, have unclosed the enclosure of waters...in the mountain (párvate)'. In other hymns we read 'the cave (bílām) of the waters which was shut up, having smitten Vrtra, that did he open'. Moreover, Indra thereby opens the doors (dvār-) of the waters: 'You let the waters through the doors on all sides, Indra; you broke the mountain's fastness'; again, 'he opened the doors of the stream shut up in the rock'. Finally, in the Yajur-Vedic mantra, 'he has smitten Vrtra; he has opened the doors'.

We may now come to our passage with dvará- and dvarí-, RV 1.52.2-3:

sá párvato na dharúṇesv ácyutah...
Indro yad vrtrám avadhín nadvítam...
sá hí dvaró dvaríṣu vavrá údhani
 'He (is/was) like a mountain
 unshakeable on its foundations...

(i.e. Indra, since he smote Vrtra, the (en)closer of streams...

for he (Indra) is

<u>dvaró</u>	<u>dvaríṣu</u>	<u>vavrá</u>	<u>údhani</u>
(nom.)	(loc.)	(nom.)	(loc.)

The second of the two grammatically parallel phrases consists of well-attested words, and means 'a cave at the udder'; since there should be a relationship in the signification of the two nominatives, vavrā- 'cave' would confirm the meaning 'gap, opening, chasm, cave' which was posited above on etymological grounds. In the cattle-centered imagery of the Veda, the udder, údhār/n-, was a term for the mountain or rock breached by Indra, whence flowed forth the streams; I shall show elsewhere that the Savya poet had in mind an image of four streams set flowing toward the four directions by Indra. The four teats of the udder completes the parallelism in our verse, where údhāni loc. sg. corresponds to dvarīṣu loc. pl. The interpretation of 'udder' in our verse as the outlet(s) of liquid made by Indras piercing the mountain is confirmed in an earlier hymn, RV 5.32.2: āramha údhāh párvatasya vajrin 'You have let the mountain's udder flow, o Club-wielder!' In verse 8 of the same hymn RV 5.32, Vrtra is called the great insatiable abyss (engulfment, chasm, cave), asinvām vavrām māhi, where vavrā- is an etymological variant of vr̥ṇōti, whose participle vavrivams- and similar forms, cf. nadyō vavri- and nadivṛt- 'stream encloser' occur in the Savya hymns. In 5.32 vavra- refers to Vrtra as a greedy gulf sucking up the liquid. (I leave for elsewhere a discussion of the relationships of water and soma in these hymns.)

It may be asked, why in 1.52.3 is Indra called (dvarā-)/ vavrā-, when the latter should refer to Vrtra? This is explained by a complex of factors:

- 1) As a masculine noun with stressed thematic syllable, dvarā- would be 'opener' (as well as 'opening'), and hence describe Indra. But since dvarā- is also 'opening, chasm, cave', it is synonymous with vavrā (which is both 'engulfer' and 'gulf'). This suggests an equation Indra = Vrtra.
- 2) Indra is associated with closing in one instance in the older hymn RV 3.43.3. Here is a statement linguistically unusual and stylistically striking: índro vr̥trām avṛṇot i.e. 'Indra enclosed the Encloser (engulfed the Engulfer, closed down the Closer)'. This would have made an impression on later Vedic bards, whose profession it was to remember such things. The passage is no less memorable than the Greek Orthodox Epitaphios Hymn for Good Friday: 'Down in the tomb you established life, O Christ, and by your death, death did you destroy' (cf. also John Donne's 'Death thou shalt die'.)
- 3) By breaking into the mountain Indra literally supplants, i.e. takes the place, of Vrtra. The reversal of roles is introduced in our passage by the artful use of what at first passes for a cliché, Indra described as a mountain (párvata-) unshakeable on its foundations (dharūṣv ácyutah). The condition previous to Indra's feat is described by the same poet in 1.54.10: dharūṇahvaram támo 'ntar vr̥trásya játhareṣu párvatah 'darkness shaking the foundation; the mountain was in Vrtra's maw'. In 1.56.5 the poet praises Indra for setting matters aright, ví yat tiró dharūṇam ácyutam rájo 'tiṣṭhipo

'when you extended the foundation (as something) unshakable across space.'

4) The paradoxical equation of Indra and Vrtra reflects the fact that 'cave' is both an opening (dvará-) and an enclosure (vavrá-), and may thus be seen as releasing or retaining liquid; similarly an udder. Doors too may be regarded as opening (dvar- and cf. Old Dardic (>Kashmiri) *dvará-) and closing (vr-). Furthermore the ordinary word for 'to open' has the same verb (plus preverb) as 'to close', vr-, whence vrtrá-, etc.

The "equation" of Indra with Vrtra is a rhetorical device which shows the professional excellence of the poet as well as his profundity of mystical insight (at the conclusion of the figure he calls attention to his 'art and vision' addressing his god's generosity); it serves to embellish the message of the poem as vehicle of the myth, Indra's cosmogonical act. Here it is Indra's opposition to Vrtra which is really thrown into relief.

The following chart synoptically shows the synergetic factors serving as the unconscious elements whereby the elaborate figure was motivated, and also serves to diagram the figure as an artistic exposition in parvo of the myth:

HYMN TO INDRA		THEME:	Cosmogony:	Differentiation
Motion / flux		vs. Stasis: resistance/blockage		
MODEL (1) (Primordial) water in mountain				
MYTH: Indra (hero-god):		vs. <u>Vrtra</u> (monster/dragon serpent)		
The Opener				
<u>dvará-</u> (m.) 'that which (he who) opens up'		'(En)closer, Obstruction'		
<u>dvará-</u> 'chasm' (= 'opening, gap')		<u>vavrá-</u> (m.) 'that which (he who) shuts up, (en)closes		
<u>dvarí-</u> 'opening of cave, cave-mouth'		<u>vavrá-</u> 'cavern' (engulfment enclosure')		
		(vavri- 'envelopment')		
MODEL (2) Opening doors (<u>dvar-a</u> ; and <u>dvara-?</u>)		vs. closing doors		
PIE <u>√dhwer(H)</u>		<u>√vr-</u> : <u>vrnóti</u> etc.)		
		PIE <u>√(H)wer</u>		

Indra's act, as Kuiper (1960) has indicated, was thought by the Vedic poets to be daily recapitulated by the goddess Dawn's rising from the cavern of darkness (the locus of the breached mountain); thus she too is often said to open doors. This act was in turn thought to be paralleled microcosmically in the individual by the activation of his inner creative illumination.

It may be fitting, in view of the insights into the amazing complexity of the mind revealed by our poet, to close this paper's door with an allusion by another hymnist to the inspired vatic arousal of this deep-lying luminosity (RV 9.10.6):

āpa dvāro matīnām pratnāh rṇuvānti kāravaḥ [See Note 2.]

'The poet-heralds of yore open the doors of thoughts'.

NOTE

As correctives to etymologies with *dhw- > th- I offer:
(a) thairós 'door pivot' and also 'pole upon which the side of a chariot is built' < PIE *dhryo- 'shaft, rod', cf. Norw. darre 'long pin, spigot, peg, threshing stick', dial. also 'door pivot' and 'small post in the corner of a sleigh'; ONor. darr 'javelin', darraðr 'spear, lance, long peg', Hitt. tarma- 'nail, peg', OEng. derian 'to injure', daru 'harm'; Lith. dùrti 'to jab, stab, pierce', dùrkliis 'spear', all of which I assign to a previously unnoted PIE base √dher 'to shaft, to jab'.

(b) theeion 'sulphur' < *dhew(H)es-yo-, cf. Gr. thúos 'burnt offering, aromatic', OInd. dhavisyati 'will puff', dhavitra- 'a fan', etc. PIE √dhew 'to (be like) smoke, steam'.

(c) theós 'god' < *dhEsó-, cf. Arm. di-k' 'gods' *dheEs-, Lat. fanum, fēstus, etc.

(d) thís, gen. thínós 'pile', PIE *dheEVn- > *dhēyVn-, gen. (anal.) *dhīn-ōs, √dheE 'to put, deposit', cf. Gr. themón, thōmos, etc. 'pile, heap'.

(e) thnāskō 'die', thánatos 'death' etc.: PIE *g^whnpA-, √g^when(A) 'to smite', which must await full discussion elsewhere.

(f) tholós 'murk, mire, cuttlefish ink' < PIE *dhwolo-, dhw-el- 'be smoky, obfuscating, turbulent'; the traditional etymology may here be left unchanged, since *t(h)wo is attested in Mycenaean, and, as was shown in Wyatt (1963), wo merges with o betw. the Myc. and Hom. periods.

(g) In confirmation of *dhw > Gr. s-, note sēpia 'cuttlefish (ink)' PIE √dhw-eE-p 'be like smoke, obfuscate, swirl', from whose zero grade OHGerm. tūvar 'foolish' etc.

(g) Perhaps Gr. -s-th- of the 2nd p. mid. pl. (etc.) is to be explained by *-dhw-.

For *dhw- > σ-, cf. *tw- > σ-, *dhv- > σ-, *dw- > σf, (δ)δ, *ghw-, *g^wh- > φ-, θ-.

NOTE 2

vi rñóti orig. 'moves apart' (vi āra 'fell apart'; Av. viārayeiti 'dispersed'; Pashto wir 'expanded, spread' < *vi-rta- !) replaced dhvarati *'parts bilaterally'; inevitably > 'is disjoined'; sum of mgs. *'opens'; rhymes: vi rñóti & vi vñóti, āpa vñóti : āpa rñóti. NB vi rñóti freq. w. obj. in v-r (vara-, vraja-, dvar-, vrtrā-; thus quasi-haplogy functional variant of vi vñóti).

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PENUTIAN AMONG THE RUINS:
A PERSONAL ASSESSMENT

William Shipley
University of California, Santa Cruz

It has been 67 years now since the name 'Penutian' first appeared in print--in a 1913 article by Roland B. Dixon and A.L. Kroeber. Their genetic proposals for the California Indian languages were expanded in the now-classic monograph which appeared seven years later, in 1919: Linguistic Families of California. They coined the word 'Penutian' by combining the words for 'two' in Maidun--pen-- and Costanoan--uti. The Maidun part was undoubtedly taken from Nisenan [pe·n]. The uti must have been from Rumsen, with which Kroeber had done some work; the form in that language is [ʔutis]. Their Penutian included five language groups: Three Pen families, Wintun, Maidun and Yokutsan and two Uti families, Miwokan and Costanoan (or what is now often called Ohlonean).

How did they arrive at this classification? It is critical to take note that they did not do so by means of the application of the comparative method. The criteria were, in part, typological. A list of diagnostic features was compiled: noun cases, no prefixes, "Indo-Germanic" type verbs with mode, tense, number, person, etc. and "vowel gradation" by which they may have meant vowel harmony, though in later years a close inspection of more reliable data has shown many, though random, apparent alternations between e and o and between i and u.

The other criterion was lexical similarity. The judgments there were based on an inspection of resemblant forms. I was fortunate enough to be around the day that Kroeber brought his original worksheets for Penutian (and Hoka) in to the Linguistics Department to leave them with Mary Haas (I'm sure she still has them). The sheets are very large, with the languages across the top and the glosses down the side. The technique was to count resemblant forms--the sets of languages with unusually high numbers were grouped together.

Although we have amassed a vastly greater and more accurate amount of lexical data since it is very important to point out that the fundamental characteristics of the sets one finds are much as they were for Dixon and Kroeber. There are many resemblant forms--I believe Pitkin and I accumulated over three hundred for our 1958 article (Pitkin and Shipley) and there are lots more--but they are irritatingly unsatisfactory. Most of the consonant resemblances are identities, furthermore there is little parallelism from one set to another. The vowels also are either identities or seemingly random. The Penutian area looks as if it had been subjected to a massive and prolonged process of lexical diffusion, layered in like sedimentary rock. That postulation has its difficulties, however, since many of

the glosses are for body-parts and other simple, non-cultural things, the terms for which seem unlikely to be subject to replacement. It has been very puzzling, and has engendered a steady stream of cautionary statements from people familiar with the situation.

I should like to explicate here three traditional (though still unfounded) assumptions about Penutian which have gained wide acceptance.

1. The resemblances among the so-called Penutian sub-families are primarily genetic. This view has been continuously taken as axiomatic, in the face of the stubborn failure of the relevant data to provide any basis for establishing convincing sound correspondences or credible reconstructions. The only exception to this is the established genetic tie between Miwokan and Costanoan.

2. The California Penutian languages form a subset within a larger Penutian genetic framework. The rationale for this view would seem to be simply a result of Dixon and Kroeber's having proposed California Penutian first.

I certainly fell for this one myself, proposing a Penutian kernel, consisting of the California Penutian languages to which every new Penutian candidate was to be matched, like swatches in a drygoods shop. Dell Hymes was the one who saw through this first. He proposed, in 1964, that those of us engaged in work on California Penutian genetic problems should drop our reluctance to envisage a Penutian on the scale of Sapir's hypothesis and should recognize such a scale as both valid and the only way to resolve the apparent impasse of comparison within California alone.

Hymes' point of view did provide a sounder working principle. Unfortunately, bringing in the various Oregon languages which have been tagged as 'Penutian' has not, up to now, really shed any new light on the fundamental genetic problem: What is related to what?

Whistler's remarks on this point project what now seems to be a much more hopeful line of endeavour. He said, in 1977: "I now consider the hypothesis of a California Penutian kernel dead. It is inconsistent with the linguistic borrowing data, with expectations based on other historical linguistic principles, and more crucially, with the cultural sequences implied in the archaeological record. Penutian entry to California must have occurred in several stages and likely from different directions."

3. There is an adequately defined entity called 'Penutian' which includes an unknown number of languages. It is therefore valid and important to scout around and find these languages, by magic if necessary, and to identify them in print. The activities resulting from this hypothesis are certainly the most bizarre and mischievous of all the Penutian games which have been played.

In a very important sense it is invalid to cite Sapir's Penutian superstock formulation in this light. Sapir's own claims were modest and equivocal; only his imposing reputation was responsible for turning his interesting hunches into doctrine. But it was a house built on sand.

In 1940, in separate papers, J. Alden Mason and Frederick Johnson proposed a Macro-Penutian phylum, adding Aztec-Tanoan, Mayan, Totonacan, Xincan and Lencan to Sapir's Penutian. This vast collocation was primarily due to Benjamin Lee Whorf--at least, according to Mason and to George Trager, who made the following incredible pronouncement in 1945: "Whorf established, to the satisfaction of those who saw his material, that the grouping of Penutian, Sahaptian, Azteco-Tanoan, Zuni, Kiowa, probably Mayan and Totonac, and possibly Tunican, as stocks constituting a phylum which he called Macro-Penutian, was at least as good as the Algonkian Mosan or Na-Dené groupings of Sapir." This pronouncement of Trager's is sheer moonbeams and attar of roses. The Algonkian-Mosan grouping has long since, I believe, dropped through the trapdoor of time. According to Michael Krauss, (1973, pp. 953-963) the Na-dene hypothesis is, to say the least, provisional. In a way, then, Trager was saying that nothing is at least as good as nothing.

In 1956, Morris Swadesh went, as it were, the whole way and argued for an expansion of Whorf's Macro-Penutian group into a huge phylum which he called 'Penutioid'. He excluded Aztec-Tanoan, Kiowa and Tunican; thus Penutioid was not simply an expansion of Macro-Penutian but actually a different theory--the boldest and most far-flung proposal with which the name 'Penutian' has ever been associated. There were twenty subgroups, stretching from Tsimshian on the Northwest Coast to Quechua-Aymará in Peru and Bolivia.

Now, don't get me wrong. I knew Swadesh somewhat and I liked and admired him. He had imagination, courage and talent. Many of his ideas on language classification were, as the kids would say, 'far out' and most of them will undoubtedly never be substantiated. But imaginative and speculative flights do a lot to break up the logjams in people's heads. Maybe he wasn't serious, for all I know. The unfortunate part has to do with what comes after--with the way other people solemnly and humorlessly embalm such fantasies. Let me quote the total entry for Penutian from the 1976 edition of the Encyclopaedia Britannica (Volume 10, p. 671):

"Penutian. The Penutian phylum is the only group of languages in North America for which relationships with languages in South America have been traced convincingly. The Penutian languages are thus distributed from the Northwest Coast and Plateau areas through California (with a possible extension into

the Southwest) and Meso-America into Bolivia, Chile, and Argentina. Many of the more than 24 Penutian languages north of Mexico are either no longer spoken or are spoken by fewer than ten people. In Meso-America, however, many native languages have a considerable number of speakers; e.g. Mixe, in the Zoque family, has over 30,000 speakers, and the Mayan family includes some languages with several hundred thousand speakers, as Maya, Quiché, Kekchí, Cakchiquel, and Mam."

If the rest of the articles in the Encyclopaedia Britannica are as pin-point accurate as this one, then all that leather and gold leaf isn't wasted!

As a counterpoise to these assumptions, I should like to propose the following two working principles:

1. The term 'Penutian' has no genetic definition at all. The very use of the term prejudges the case and sets us off to working from a kind of axiomatic entity which we have not defined. For instance, suppose our researches led us to the valid conclusion that Wintun and Utian are related and that Maidun and Yokutsan are related but that the evidence will not support a genetic connection between the two pairs. Then, which pair is Penutian? Or, to put it another way: suppose we take some known genetic entity--Klamath or Maidun or Mayan or whatever--and designate it as Penutian (we could do this right now, as a matter of fact). We are really prejudicing our case by multiplying entities, or at least naming the Devil twice. If we ever find real genetic connections somewhere among these languages, then the term Penutian might be all right to use again, although it is pretty shopworn. I think we should stop misleading everybody and drop the term out of our working vocabulary even though it might produce an identity crisis in some of us. It is not that I feel there are no genetic connections to be found--I just don't want to name something until I have something to name.

2. We must develop new techniques which will take into account all the cultural, historical and archaeological factors we can muster. This point, of course, simply echoes Whistler. I think he's absolutely right. Using the insights which he has provided has brought the whole enterprise back to life--for me, at least. I feel I can put my years-long accumulation of knowledge about the minutiae of these languages to some new, exciting and rewarding uses.

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THE STATUS OF LEXICAL ASSOCIATIONS
AND THE OBLIGATORY CONTOUR PRINCIPLE
IN THE ANALYSIS OF TONE LANGUAGES¹

John V. Singler
U.C.L.A.

Both Goldsmith (1976) and Leben (1978) have shown the suprasegmental treatment of tone as introduced in Leben (1973) to be too highly constrained. Their evidence is straightforward: Goldsmith presents data from Etung, and Leben, from Mende and Hausa which suprasegmental phonology would predict not to occur. Goldsmith and Leben differ, however, as to how they would alter the theory so as to accommodate the language data in question. Goldsmith's solution is to abandon what he calls the Obligatory Contour Principle (OCP), a facet of Leben's theory, which stipulates that [a]t the melodic level of the grammar, any two adjacent tonemes must be distinct. Thus HHL is not a possible melodic pattern; it automatically simplifies to HL.

(Goldsmith, p. 36)

In Goldsmith's "autosegmental" theory, the OCP has no status; with regard to it, Goldsmith comments that ". . . the Obligatory Contour Principle is a condition not on possible underlying forms, but on simply-learnable grammars; not all grammars, however, need be simple." (p. 135)² On the other hand, in Leben's "revised suprasegmental" theory, the OCP is retained, but lexical associations are introduced as a way to account for those forms which violate the OCP.³ Thus, in Leben's framework, the contrast in Mende disyllabic nouns having the underlying tone melody HL between those having the surface tonal pattern H L, e.g. [kényà] 'uncle', and those having the surface tonal pattern H HL, e.g. [ngóngô] 'tooth', is established by marking each of the H HL words with an association line in the lexicon, e.g.

(1) /ngóngô/
 / H L /

Then, the process by which the language associates the segmental and the suprasegmental will yield [ngóngô] in contrast to [kényà]. Although Leben does not say this, it is in fact the case that his use of lexical associations preserves the OCP. Thus, Goldsmith's 1976 statement still holds that "the principal empirical differences between Leben's analysis and mine result from the inclusion or rejection of the 'Obligatory Contour Principle' . . ." (p. 36).

A consequence of this difference is the difference to which each theory is constrained. Autosegmental theory allows far fewer surface tone patterns than does a revised suprasegmental theory with its use of lexical associations. For example, while revised suprasegmental theory could account for the forms in (2), autosegmental theory could not.

(2)	Suprasegmental	Autosegmental
[cVCV]	/CVCV/ /H L H/	?
[cVCVCV]	/CVCVCV/ /H L H L /	?

There are no possible surface melodies which would be permitted by autosegmental theory but not by revised suprasegmental.

The crucial difference between the two theories--the difference in status of the OCP--thus constitutes a difference as to the extent to which each theory is constrained. Additionally, the introduction of lexical associations weakens a claim fundamental to suprasegmental (as well as autosegmental) theory, namely, the claim of the autonomy of strata.

In the discussion which follows, data are presented from Etung, Klap, Hausa, and Mende, data for which the original suprasegmental theory was too highly constrained. Autosegmental and revised suprasegmental analyses are provided in each case. The autosegmental analysis of Etung is from Goldsmith, and the revised suprasegmental analyses of Hausa and Mende are from Leben (1978); the remainder of the analyses are based on the principles set out in Goldsmith, for the autosegmental, and Leben (1978), for the revised suprasegmental.

The ability of the revised suprasegmental theory to account for the data at hand is not in question; the ability of the autosegmental theory is. If autosegmental theory does prove capable of accounting for the evidence at hand, then autosegmental theory will, ceteris paribus, be more highly valued than revised suprasegmental theory by virtue of the fact that, while both theories provide adequate accounts of the data in question, autosegmental theory is the more highly constrained.

As a preliminary to the discussion, mapping principles will be introduced. The differences between theories with regard to these are not crucial, and the principles in (4), while formulated by Leben, are used in presenting analyses from both theories in order to facilitate comparison.

(3) The Well-Formedness Condition

- a. Every tone is associated with some syllable.
- b. Every syllable is associated with some tone.
- c. Association lines may not cross.

(4) Mapping Principles

- a. Associate the external boundaries of the tonal representation with those of the segmental representation.
- b. For any tones that are not associated with any syllables, associate the first tone with the first syllable, the second with the second, and so on.
- c. Any syllable that has no tone is associated with the tone of the preceding syllable, if there is one. Otherwise, tone assignment takes place according to the Well-Formedness Condition.

The rules in (4) are demonstrated in (5). (5a) shows the case where the number of tones equals the numbers of syllables, (5b) where tones outnumber syllables, and (5c) where syllables outnumber tones.

- (5) Mende
- a. /ngila/ $\xrightarrow{4b}$ ngila [ngílà] 'dog'
 / H L / H L
- b. /nyaha/ $\xrightarrow{4b}$ nyaha $\xrightarrow{4c}$ nyaha [nyàhâ] 'woman'
 /L H L/ L H L L H L
- c. /foni/ $\xrightarrow{4b}$ foni $\xrightarrow{4c}$ foni [fòni] 'savannah'
 / L / L L

The first language to be considered is Etung, an Ekoid Bantu language spoken in Nigeria. Etung is Goldsmith's example of a language which violates the OCP. He cites distinctions within pairs of forms, each member of which would have to have--in original suprasegmental theory--an underlying melody of L H, e.g. [̀nsí] 'fish' and [̀nsí] 'mud', and pairs of forms, each member of which would have to have the underlying melody of H L, e.g. [égòm] 'jaundice' and [éròp] 'spear'. Goldsmith's solution is to posit, for one member of each of the pairs, a form at variance with the OCP:

- (6a) /nsi/ 'mud' (7a) /erop/ 'spear'
 /LLH/ /HHL/

On the other hand, if lexical-associations are employed (à la Leben), then the OCP can be preserved:

- (6b) /nsi/ 'mud' (7b) /erop/ 'spear'
 /L H/ /H L/

A different type of violation of the OCP exists in Kɔ̀a, a Kru language spoken in Liberia.⁴ Here the contrast is between di- and tri-syllabic forms having, for example, the tone melody M H, as illustrated by [nā́nē] 'to speak' and [pṑpṑlṓ] 'wind, breeze'. If both are assigned MH without further adjustment, the mapping principles yield [nā́nē] and [*pṑpṑlṓ]. The solution, as in the case of Etung, is the introduction of a lexical-association in the revised suprasegmental analysis or, alternately, a departure from the OCP in the autosegmental analysis:

- (8) Suprasegmental Autosegmental
 /pṑpṑlṓ/ /pṑpṑlṓ/
 / M H / / M M H /

If the mapping principles spelled out in (4) were applied starting from the right rather than the left, then the adjustment to the forms in (8) would be unnecessary; however, this would yield an incorrect surface form in the case of (9a); moreover, it is not borne out by the general tendencies of the language with regard to tone. (Singler (1979) discusses the directionality of tonal processes in Klap in greater detail.)

- (9a) Right-to-Left Application of the Mapping Principles
 /tape/ $\xrightarrow{4b}$ $\begin{array}{c} \text{tape} \\ | \\ \text{MLH} \end{array}$ $\xrightarrow{4c}$ $\begin{array}{c} \text{tape} \\ / \backslash \\ \text{ML} \text{ H} \end{array}$ [*tāpé] 'cup'
- (9b) Left-to-Right Application of the Mapping Principles
 /tape/ $\xrightarrow{4b}$ $\begin{array}{c} \text{tape} \\ / \backslash \\ \text{ML} \text{ H} \end{array}$ $\xrightarrow{4c}$ $\begin{array}{c} \text{tape} \\ | \\ \text{MLH} \end{array}$ [tāpé] 'cup'

For Hausa, a Chadic language discussed in Leben (1978), the revised suprasegmental analysis employs lexical associations for forms at variance with the OCP; examples are given in (10a-l2a).

- (10a) /alhamis/ [àlhāmís] 'Thursday'
 / L H L /
 /alhamiis + ii/ [àlhāmfiš-ii] 'Thursday'
 / L H L /
- (11a) /kadangaree/ [kàdǎngárée] 'lizard'
 / L H L /
- (12a) /majalisaa/ [mǎjǎlísàa] 'council'
 / L H L /

(With regard to variants such as those found in (10a), Leben notes: "Nouns ending lexically in a consonant often have a variant form with the ending -ii attached." (1978:207))

In addition to lexical associations, the Well-Formedness Condition, and related principles of association, Leben's analysis also requires a special mapping principle for some, but not all, four-syllable words with the melody LHL; this principle would apply before the other mapping principles, i.e. before those set forth in (4). Although Leben does not attempt to formalize it, the mapping principle would have to be something like the following:

For words having the melody LHL and a lexical association between the H and the second syllable, associate the low tones to the first and last syllables.

This mapping principle would apply to (11a) but not to (12a) (since the lexical association in (12a) is between the H and the third syllable). If the principle were not applied, the surface form of

(11a) would be [*kàdángàrèe]. In the autosegmental analysis, no such ad hoc mapping principle is required. Rather, the application of the mapping principles in (4) to the underlying forms posited in (10b-12b) yields the correct surface forms in each instance.⁵

(10b)	/alhamis/	[àlhâmís]	'Thursday'
	/L L H L/		
	/alhamiis + ii/	[àlhâmísisii]	'Thursday'
	/L L H L /		
(11b)	/kadangaree/	[kàdángàrèe]	'lizard'
	/ L H H L /		
(12b)	/majalisaa/	[màjâlísàa]	'council'
	/ L L H L /		

Mende, a Mande language spoken in Sierra Leone and Liberia, is yet another language which contains forms at variance with the OCP. [ngóngô], given below as (13a), was shown in (1) to have the same tone melody, HL, as [kényà] but a different surface representation of it; similarly, [làsîmô], in (13b), is at variance with the more common pattern for trisyllabic LH forms. The solution is the same as before: lexical associations in the revised suprasegmental analysis, departures from the OCP in the autosegmental.⁶

(13)		Suprasegmental	Autosegmental	
a.	[ngóngô]	/ngongɔ/	/ngongɔ/	'tooth'
		/ H L /	/ H H L /	
b.	[làsîmô]	/lasimɔ/	/lasimɔ/	'amulet'
		/ L H /	/ L L H /	

Before further discussion of Mende, a word is in order with regard to the autosegmental analyses presented thus far. In each case, the exceptions presented to the OCP have been assigned an underlying form very close to the surface form. That is, forms have either conformed to the OCP or have been posited as having an underlying sequence which closely parallels the surface sequence.

To return to Mende: the forms [běsí] and [hĩndò], as presented in (14), taken from Leben (1978), cannot be accounted for by autosegmental theory.

(14)		Suprasegmental	Autosegmental	
a.	[běsí]	/bɛsi/	?	'pig'
		/ L H /		
b.	[hĩndò]	/hindo/	?	'male'
		/L H L/		

However, as Leben (1973) remarks with reference to forms like (14a): "It is not clear whether these vowels are phonetically short." (p. 85) Dwyer (1978) maintains that the initial vowels in both (14a) and (14b) are phonetically long. If the initial vowels are long, then the forms conform to the OCP and require special treatment in neither analysis, as demonstrated in (14c-d):

(14)		Suprasegmental	Autosegmental	
c.	[bɛ́ɛ́sɪ]	/beesi/	/beesi/	'pig'
		/ L H /	/ L H /	
d.	[hɪ́ɪndɔ]	/hiindo/	/hiindo/	'male'
		/ L H L /	/ L H L /	

At present, the status of the crucial first vowels remains unresolved. However, given the uncertainty as to their length, these forms cannot yet be said to constitute evidence in favor of lexical associations and the revised suprasegmental analysis over the autosegmental analysis.⁷

The largest part of Leben's discussion of Mende is devoted to the morphotonemics of Mende nouns. Examples of the surface tonal patterns of nouns in constructions involving more than one morpheme are given below in Table 1.⁸

Table 1

The Surface Realizations of Mende Nouns

	Uninflected form		Indef. Pl.	Def. Sg. (1)	(2)	
/H/	kɔ́	'war'	kɔ́-ngàa	kɔ́-í	kɔ́-hú	kɔ́-híndà
/H/	pélé	'house'	pélé-ngàa	pélé-í	pélé-hú	pélé-híndà
/L/	bèlè	'trousers'	bèlè-ngàa	bèlè-í	bèlè-hù	bèlè-híndà
/HL/	mbù	'owl'	mbù-ngàa	mbù-í	mbù-hù	mbù-híndà
/HL/	ngílà	'dog'	ngílà-ngàa	ngílè-í	ngílà-hù	ngílà-híndà
/LH/	mbá	'rice'	mbá-ngàa	mbè-í	mbà-hú	mbà-híndà
/LHL/	nyàhà	'woman'	nyàhà-ngàa	nyàhè-í	nyàhà-hù	nyàhà-híndà

(1) = With the toneless "postposition" hu 'in'

(2) = In a compound with híndà 'business'

("The change of a to ɛ before -i is regular." (Leben 1978:194))

The rules by which the forms in Table 1 are derived in an autosegmental analysis are presented in (15) and (16). Implicit in an autosegmental analysis is the principle that pre-mapping rules in the tonal stratum do not make reference to segmental information. (The segmental stratum is present in the description of Rule (15b) only as a way to indicate that there is a morpheme between the boundaries.) After mapping has occurred, then rules involving tone are similar to other rules of segmental phonology. Accordingly, Rule (16) utilizes segmental information to restrict its applicability to the appropriate forms: it applies only to contour tones. (In the statement of the rule, this fact is symbolized by the arc over the input.)

(15) Pre-Mapping Rules

a. Nominal-Compound Tone-Adjustment

$$T_N \quad \# \quad T_0 \quad \{N, Adj\}$$

$$1 \quad 2 \quad 3 \quad \Longrightarrow$$

$$1 \quad 2-1-L \quad \emptyset$$

Example:

$$\begin{array}{l} /ngila\#hinda/ \quad \xrightarrow{15a} \quad ngila\#hinda \quad \xrightarrow{4b} \quad ngila\#hinda \\ /H L \# L H L/ \quad \quad \quad H L \# L L \quad \quad \quad H L \# L L \end{array}$$

b. Tone Copy

$$X \quad \# \quad Y \quad V \quad Z \quad \# \quad \quad \quad X \quad \# \quad Y \quad V \quad Z \quad \#$$

$$T_\alpha \quad \# \quad \quad \# \quad \longrightarrow \quad T_\alpha \quad \# \quad \quad T_\alpha \quad \#$$

Example:

$$\begin{array}{l} /ngila\#hu/ \quad \xrightarrow{15b} \quad ngila\#hu \quad \xrightarrow{4b} \quad ngila\#hu \\ /H L \# \quad / \quad \quad \quad H L \# L \quad \quad \quad H L \# L \end{array}$$

(16) Post-Mapping Rule

Alpha-Tone Absorption

$$\overbrace{[\alpha H] \quad [-\alpha H]} \longrightarrow [\alpha H] \quad / \quad \quad \# \quad [-\alpha H]$$

Example:

$$\begin{array}{l} /mbu\#ngaa/ \quad \xrightarrow{4b} \quad mbu\#ngaa \quad \xrightarrow{4c} \quad mbu\#ngaa \quad \xrightarrow{16} \quad mbu\#ngaa \\ /H L \# \quad L \quad / \quad \quad \quad H L \# \quad L \quad \quad \quad H L \# \quad L \quad \quad \quad H \quad \# \quad L \end{array}$$

Though the principle of separation of tone from segments before mapping is a part of suprasegmental theory, too, it is not strictly maintained in the revised suprasegmental analysis presented in Leben (1978). That is, one of the things accomplished by Leben's pre-mapping rule of Nominal-Compound Tone-Adjustment (given as (17))

below) is the association of a tone with a segment. Specifically, when the tone melody of the first member of the compound ends in H, Leben's rule associates the H tone with the first vowel of the second constituent of the compound. While this may seem less of an attack on the notion of the separation of tone and segments than are lexical associations, the latter are restricted to exceptional forms; this rule, on the other hand, is posited as applying to non-exceptional forms.⁹

- (17) Leben's Nominal-Compound Tone-Adjustment Rule (1978:203)

$$[X]_N \# [CV Y]_{\{N, Adj\}} \quad [X]_N \# [CV Y]_{\{N, Adj\}}$$

$$T_0 <H> \# T_0 \quad \longrightarrow \quad T_0 \# <H> L$$

Example:

$$\begin{array}{ccc} /mba\#hinda/ & \xrightarrow{17} & mba\#hinda \\ /L H\#L H L/ & & L \# H L \end{array} \quad \xrightarrow{4b} \quad \begin{array}{ccc} mba\#hinda & & \\ L \# H L & & \end{array}$$

Another feature of Leben's analysis is the introduction of an additional, language-specific mapping principle, presented in (18) below; the principle is specified by Leben as applying before the mapping principles outlined in (4). (The autosegmental analysis does not require such a rule.)

- (18) Associate a final H with the rightmost syllable.

Leben's analysis requires him to treat word-internal boundaries in an unorthodox way. In autosegmental theory, association occurs across a formative boundary, as in (19a), but is blocked by a single (or a double) word boundary, as in (19b). In the autosegmental treatment of Mende nouns, each of the word-internal boundaries is assumed to be a single word-boundary and, therefore, to block association.

- (19) a. /CVCV + V/ [CVCV-V]
 / L +HL/ L -HL
- b. /CVCV # V/ [CVCV-V]
 / L #HL/ L -HL

Leben's treatment of boundaries is detailed in (20).

- (20) a. Word-internal boundaries do not have the power to block the application of (18).
 b. When there are tones on either side of a word-internal boundary, the boundary acquires the power to block association across itself as part of the application of (4b), e.g.

$$\begin{array}{c} \text{/nyaha\#i/} \\ \text{/L H L\#H/} \end{array} \xrightarrow{18} \begin{array}{c} \text{nyaha\#i} \\ \text{L H L\#H} \end{array} \xrightarrow{4b} \begin{array}{c} \text{nyaha\#i} \\ \text{L H L\#H} \end{array} \xrightarrow{4c} \begin{array}{c} \text{nyaha\#i} \\ \text{L H L\#H} \end{array}$$

- c. For those forms for which there are no tones on one side or the other of a word-internal boundary at the time of application of the mapping principles, the boundary has no status, i.e. cannot block association across itself, e.g.

$$\begin{array}{c} \text{/mbu\#hu/} \\ \text{/H L\# /} \end{array} \xrightarrow{4b} \begin{array}{c} \text{mbu\#hu} \\ \text{H L\#} \end{array}$$

The principles in (20) are not stated in that form by Leben, but they are what the derivations which he provides reveal.¹⁰ Leben's manipulation of word-internal boundaries does yield the correct forms; however, no other motivation for it presents itself.

In summary, Leben's analysis of the forms in Table 1 suffers--at the least--not only from a violation of the principle of keeping tones and segments separate until association occurs but also from an unprincipled treatment of word-internal boundaries.

The relevance of the rules in (15) and (16)--or of Leben's equivalent--to the discussion of the Obligatory Contour Principle becomes clear with the introduction of the forms in (21).

(21) Two Types of [CVCV] Nouns

a. Uninflected	[fàndé] 'cotton'	[nàvó] 'money'
b. Indef. pl.	[fàndé-ngàa]	[nàvó-ngàa]
c. Def. sg.	[fàndè-í]	[nàvó-í]
d. With <u>hu</u>	[fàndè-hú]	[nàvó-hú]
e. In a compound	[fàndè-híndà]	[nàvó-híndà]
Underlying forms:		
f. Autosegmental	/fande/	/navo/
	/L L H/	/L H /
g. Revised Supra-segmental	/fande/	/navo/
	/ L H /	/ L H /

While [fàndé] and [nàvó] both appear on the surface as L H (in their uninflected forms) and while they have the same surface pattern for the indefinite plural as well, the two differ throughout the remainder of the paradigm.

The underlying forms posited in the autosegmental analysis, given in (21f), do not represent a new solution. Rather, they are more appropriately seen as the autosegmental variant of an analysis that has appeared in various forms in the past decade. Dwyer (1971, 1973, 1978), Voorhoeve (1975), and Leben (1971) have all had a LH on the final syllable of fàndé at some abstract level. The auto-

segmental analysis presented here draws heavily from Dwyer (1978) both with reference to the underlying forms in (21f) and to the post-mapping rule, (16). (While Dwyer's 1978 analysis is not autosegmental, it is, he notes, "not incompatible with . . . models such as that put forward by Goldsmith." (p. 170))

A further rule is required in the autosegmental analysis in order to account for the surface forms [fândé] and [fândé-ngàa]. (Using only the rules in (15) and (16) and the mapping principles in (4) would yield the incorrect [*fândě] and [*fândě-ngàa].) Specifically, a post-mapping rule of "low loss" is required; the rule is to be ordered after (16). Again, the arc over the input is meant to indicate that the rule applies only to contour tones.

(22) Low Loss

$$\overbrace{[L] [H]} \longrightarrow [H]$$

Example:

$$\begin{array}{c} \text{/fande/} \\ \text{/L L H/} \end{array} \xrightarrow{4b} \begin{array}{c} \text{fande} \\ \text{L L H} \end{array} \xrightarrow{4c} \begin{array}{c} \text{fande} \\ \text{L L H} \end{array} \xrightarrow{22} \begin{array}{c} \text{fande} \\ \text{L H} \end{array}$$

Monosyllabic nouns having a LH tone melody, e.g. mbă 'rice', do not undergo this rule; they must be marked as exceptions to it. The motivation for (22) is presented below.¹¹

It must be noted that Leben (1973, 1978) raises several objections against the earlier, non-autosegmental versions of the solution which posits the underlying forms in (21f) and the rule in (22). Those objections apply putatively to the autosegmental version as well and must be addressed. However, before doing so, it is appropriate to note that the forms in (21a) occur only rarely. The forms which usually occur in isolation, for example, or as a response to an elicitation are those like (21c). Innes (1967), referring to forms like those in (21a), calls them "indefinite" but warns against equating them with the indefinite in English. He adds, "Indefinite forms are not common except as first part of a compound," (p. 16) i.e. as in (21e). Note that in the commonly occurring forms--(21c) through (21e)--fândě and návó have different tone patterns on the surface. Moreover, if the key forms in language-learning are the most commonly occurring ones, then it is the forms in (21c), contrastive and commonly occurring, which provide the basis for the language learner's acquisition of separate paradigms for fândě and návó. For the language learner, at least, the neutralization of forms in (21a) and (21b) need not be problematic.

To return to Leben's criticisms: the first is that solutions of the type proposed in the present autosegmental analysis use a phonological feature as a diacritic. Whether or not this objection can be refuted depends upon the range of applicability of Rule (22), Low Loss. If the rule applies only to the forms like fândě and fândě-ngàa (in (21a-b)), then the rule can probably be said to exist

in order to make the solution work. On the other hand, if (22) can be shown to apply to monosyllabic forms as well, then phonological--rather than merely diacritic--motivation for the use of phonological features will have been demonstrated.

As noted above, (22) does not apply to monosyllabic nouns. But what of other monosyllabic forms? According to Leben (1971), (22) applies to possessives (illustrated in (23)); according to Spears (1967) and Dwyer (personal communication), it applies to verbs as well (as in (24)).¹²

- (23) /ngi/ 3sg. poss. /mba/ 'companion'
 /L H/ /LHL/
 /ngi#mba/ $\xrightarrow{4b}$ $\begin{array}{c} \diagup \diagdown \\ \text{ngi} \# \text{mba} \\ \text{L H} \# \text{LHL} \end{array}$ $\xrightarrow{4c}$ $\begin{array}{c} \diagup \diagdown \\ \text{ngi} \# \text{mba} \\ \text{L H} \# \text{LHL} \end{array}$ $\xrightarrow{22}$ $\begin{array}{c} \diagup \diagdown \\ \text{ngi} \# \text{mba} \\ \text{H} \# \text{LHL} \end{array}$
- (24) /pa/ 'to come' /ngɔ/ "passive" suffix
 /LH/ /L /
 /pa#ngɔ/ $\xrightarrow{4b}$ $\begin{array}{c} \diagup \diagdown \\ \text{pa} \# \text{ngɔ} \\ \text{LH} \# \text{L} \end{array}$ $\xrightarrow{4c}$ $\begin{array}{c} \diagup \diagdown \\ \text{pa} \# \text{ngɔ} \\ \text{LH} \# \text{L} \end{array}$ $\xrightarrow{22}$ $\begin{array}{c} \diagup \diagdown \\ \text{pa} \# \text{ngɔ} \\ \text{H} \# \text{L} \end{array}$

(23) is taken from Leben (1971:187); he translates the form as 'his companion'. (24) is taken from Spears (1967:238); he translates the form as 'it is come'.)

Given the wider use of (22) demonstrated in (23) and (24), it is legitimate to consider Low Loss a rule of the language and to consider the autosegmental analysis proposed here as one which uses phonological features phonologically, not as diacritics.

Leben's two other criticisms of solutions like the autosegmental one are the following: first, that words like fàndě are far more numerous than forms like nàvó yet--in analyses like the autosegmental one--are the forms which are marked, and second, that there are unexplained gaps in distribution, since there are no disyllabic H LH nouns. Dwyer (1978) has responded to these criticisms indirectly by using diachronic evidence to show how such a situation could have evolved. Very briefly put, Dwyer has reconstructed the tone system for an ancestor language of Mende's, Proto-Western Mande; he postulates two tone classes for nouns, H and L. Then, the latter class is posited as having acquired a word-final H. From this class come words of the fàndě type.

That the special status of nouns like fàndě (as accorded them by the autosegmental analysis) is not an innovation in Mende is further supported by evidence which Dwyer presents from Bandi, the language most closely related to Mende. According to Dwyer, by the time of Proto-Central Southwestern Mande, five tone classes were present (illustrated in (25)). fàndě and other words like it were in Class 2. (nàvó and words like it are borrowings into Mende from a later period.) In Bandi, Class 3 and Class 4 nouns both lost their word-final low. However, while the Class 4 nouns are now

identical throughout the noun paradigm to Class 1 nouns, Class 3 nouns behave differently from those in Class 2, suggesting--at the very least--that there is more to one of the latter two classes than a simple LH tone melody.

(25) Proto-Central-Southwestern Mande Tone Classes

		Mende	Bandi	
Class 1:	(H) H	[ngúlú]	[ngúlú]	'tree'
Class 2:	(L) LH	[nìká]	[nìká]	'cow'
Class 3:	(L) HL	[ngètê]	[ngèté]	'pestle'
Class 4:	H L	[kálì]	[kálí]	'hoe'
Class 5:	(L) L	[bèlè]	[bòlò]	'trousers'

While diachronic evidence alone is insufficient to motivate a given solution for a set of synchronic facts and while the present diachronic evidence is perhaps more suggestive than conclusive, diachronic evidence can give support for a solution which also possesses synchronic motivation. This, I wish to argue, is the case here: the peculiar facts of the language have their basis in the language's history, but the solution offered by the autosegmental analysis reflects synchronic realities as well, specifically with reference to the wider--though not exceptionless--applicability of the rule of Low Loss.

To return, then, to the original hypothesis: In Etung, Klaw, and Hausa, the evidence is incontestable that lexical associations are unnecessary once deviation from the Obligatory Contour Principle is permitted. In Mende, while the evidence is more checkered, it is again the case that lexical associations need not be used. Thus, autosegmental theory--because it is more highly constrained than revised suprasegmental theory yet can account for the facts at hand--is to be preferred to revised suprasegmental theory.

Footnotes

1. This paper developed from one given in a seminar on tone conducted by Victoria Fromkin at UCLA in 1979. For their helpful comments, I am grateful to Vicki and to the other participants in the seminar: Sorie Yillah, Andreas Wittenstein, John Watters, Ernest Byarushengo (USC), Janine Bays, and Stephen C. Anderson (USC). In what is essentially its present form, this paper was presented to a seminar on Mande languages conducted by William Welmers at UCLA earlier this year. It benefited there from the comments of Prof. Welmers and the other participants: Linda Arvanites, Thaïs Aubry, James Fordyce, Sukari Salomé, and John Watters. I am also indebted to David Dwyer, Baruch Elimelech, and Linnea Lagerquist.
2. To be sure, Goldsmith accepts the OCP at the surface level (a level at which Leben abandons it). However, the issue of the OCP's status on the surface is not relevant to the present discussion.
3. "Original suprasegmental" is employed in the present work to refer to Leben (1973), and "revised suprasegmental," to Leben (1978). It is not a distinction which Leben himself makes.

4. Most of the literature on Kɫaɔ, e.g. Elimelech (1974) and Lightfoot (1974), refers to the language as "Kru"; more recently, "Kru" has been reserved for the language group, and "Kɫaɔ" has been used to specify the language in question.

Y indicates that a vowel is [- EXPanded], i.e. [- ATR (Advanced Tongue Root)].

Elimelech (1974) argues for underlying contour tones in Klač. At the phonological level, he posits two level tones, L and H, and two contour tones, Rising and Falling. Lightfoot (1974) posits three underlying level tones, L, M, and H, and no contours. Singler (1979) presents several pieces of evidence in favor of Lightfoot's analysis (and against Elimelech's). The present discussion assumes the analysis put forth by Lightfoot.

5. Whichever analysis is employed, the following rule of Low-Tone Raising operates after mapping has occurred:

$$[+ \text{Long}] \quad \begin{array}{c} \text{V} \\ \longrightarrow \text{H} \end{array} / \begin{array}{c} \text{V} \\ \text{C}_0 \\ \text{L} \end{array} \quad \text{---} \#$$

6. For Mende, Leben states that only an H may be lexically associated with a syllable. He comments ". . . that the revised analysis makes Mende look more like a pitch-accent system than the original suprasegmental analysis did. . . . There are . . . facts about the distribution of tone in Mende that favor this interpretation over a purely segmental account." (p. 191) For Hausa, he also restricts lexical associations to H's, but he offers no principled reason for this constraint. Clearly, however, in the cases of Etung and Kɪaɔ, no such distributional restrictions are possible.

7. Leben presents several loan-words from English, many of which cannot be accounted for by the mapping principles of the language and all of which have tone melodies ending in H L. He then posits a lexical association for all these forms between the H and the word's penultimate syllable. Loan-words from English do not all demonstrate the same behavior with regard to tone, however. Presumably, lexical associations would not be assigned, for example, to such words as miki 'milk' and kõfɪ 'coffee' (from Dwyer (1978) and not discussed by Leben).

However, once the OCP is abandoned (as in an autosegmental analysis), only three of the forms introduced by Leben cannot be accounted for. Of these, Welmers (personal communication) notes that two (as transcribed by Leben)--klākī 'clerk' and plētī 'plate'--violate Mende syllable structure conditions and the vowel in the first syllable of the third--gōtā 'gutter'--is possibly long (as in its non-problematic variant gōtā̀), in which case this form, too, is non-problematic.

8. Leben (1978) presents the surface representations of mbû#1 and nyàhâ#1 as [mbû-í] and [nyàhê-í], respectively, on p. 204 but as [mbú-í] and [nyàhé-í] on p. 194. Inasmuch as Leben (1971) gives [mbû-í] as the surface form (p. 187), I have assumed that to be the correct surface representation and have further assumed that the parallel form [nyàhê-í] is correct.

9. One difference between the input and the output of (17) is the addition of an association line. This use of an association line as part of the formalism and the absence of association lines in the input perhaps combine to suggest that the input is sensitive to associations and, therefore, that the rule is blocked from applying to forms already containing an association. In fact, this is not the case, as the following derivation (from Leben (1978:203)) illustrates:

$$\begin{array}{ccc} \text{/navo\#hinda/} & & \text{navo\#hinda} \\ \text{/ L H \# L H L /} & \xrightarrow{17} & \text{L \# H L} \\ & & \searrow \quad \swarrow \\ & & \text{L \# H L} \end{array} \xrightarrow{4b}$$

Perhaps an adjustment of the formalism is in order.

10. In a footnote (p. 201), Leben proposes a restatement of (4b); by this restatement, word-internal boundaries, too, are associated as a part of this mapping principle. Leben's restatement is of limited value inasmuch as, quite frequently, the association accomplished by the "new" (4b) is subsequently dismantled. Specifically, when no association of tone to syllable has occurred across a word-internal boundary prior to the operation of (4b) and when there are no tones on one side or the other of the word-internal boundary (the instances referred to in (20c)), Leben associates the boundaries as part of (4b) and dismantles the associations as part of (4c). (The procedure suggests a Las Vegas marriage followed by a Tijuana divorce.)

It should be noted further that, in Leben's analysis, the number of forms which lack tones on one side or the other of a word-internal boundary at the time of operation of the mapping principles is not confined to forms containing underlyingly toneless "postpositions." It can also include the output of (17), the Nominal-Compound Tone-Adjustment rule, e.g.

$$\begin{array}{ccc} \text{/pelc\#hinda/} & & \text{pelc\#hinda} \\ \text{/ H \# L H L /} & \xrightarrow{17} & \text{\# H L} \end{array}$$

as well as the output of another of Leben's pre-mapping rules, the Convention on Tone Melodies, e.g.

$$\begin{array}{ccc} \text{/ngila\#ngaa/} & & \text{ngila\#ngaa} \\ \text{/ H L \# L /} & \longrightarrow & \text{H L \#} \end{array}$$

Leben (1978) also contains a very brief discussion of verbs. His solution relies upon the treatment of boundaries described in (20). A solution consistent with the autosegmental analysis and its treatment of word-internal boundaries is to posit the boundary between the verb root and the past negative marker -nì as being a single word boundary and to posit the following morphologically conditioned pre-mapping rule:

$$T \longrightarrow L \text{ / } \text{ — }] \text{ [Verb Root] \# L] [Past Neg]}$$

11. That [mbǎ] is the form which obtains on the surface is confirmed by Dwyer (personal communication).
12. The controversy over the length of the vowel in mbâ (discussed in Dwyer (1978) and Leben (1973, 1978)) is not relevant here.

The function of ngò has been subjected to a variety of interpretations; the salient point with regard to the present discussion is the assertion by Innes (1963) and by Spears (1967) that the form is a suffix (rather than a word). (That ngò is a passivizer or, indeed, that Mende has a passive at all has not yet been effectively established.)

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THE EXTENSION OF LANGUAGE UNIVERSALS:
CONSTRAINTS ON THE FUNCTION OF AXIAL REFLECTION IN
WRITING SYSTEMS WITH SPECIAL APPLICATION TO LINEAR B

Laurence D. Stephens
University of South Carolina

0. INTRODUCTION. If lexico-semantic language universals are in fact explainable in a direct and non-trivial way in terms of human perceptual structures and psychological processing strategies (E. and H. Clark 1978), then it would be expected that the typological dimensions and hierarchical relations among values on those dimensions that prove salient in the formulation of such universals should generalize in fairly straightforward ways to yield universals governing other areas of systematic human sign use. The present paper establishes two such extended universals governing the form and function of the signs of (non-pictographic) writing systems. Drawing on ethnographic, linguistic, and psychological research, the following two universals are theoretically predicted: (a) Sign forms that differ primarily only in being vertical axial reflections (VAR) of one another (e.g. \leftarrow versus \rightarrow) will be functionally distinct in a writing system only if sign forms differing primarily in being horizontal axial reflections (HAR) of one another (e.g. \uparrow versus \downarrow) are functionally distinct. (b) Sign forms that differ by HAR will be permissible, non-distinctive variants only if sign forms that differ by VAR exist as non-distinctive variants.

These two universals are established empirically on the basis of a sample consisting of the following writing systems: Albanian (Elbasan); Armenian; Arsakid, Sassanid, Book Pahlavi; Battak; Berber; Brāhmī; Buryat; Cambodian; Carian; Coptic; Cree; Cypriot; Cyrillic; Devanagari; English (lower case); Ethiopic; Older Futhark; Georgian; Glagolitic; Gothic; Greek (local alphabets ca. 500 BC); Iberian; Indonesian (Kavi); Japanese (Katakana); Kharosthi; Korean; Laotian; Lampong; Lepontic; Lycian; Lydian; Lithyanite; Maldive; Manachaeon; Mesapic; Mongolian (Galik); Manchurian; Nabataean; Numidian (horizontal and vertical); Nubian; Ogham; Old Persian; Old Turkic Runes (Orhon and Yenisey); Pāli; Punic, Ras Shamra; Redjang; Šafatene; Sidetic; Sinaitic; Sinhalese; Sogdian; Somali; South Arabic; Tamil; Thai; Thamudic; Tибetan; Tocharian; Turdetanian; Uigurian; and Venetic.

The research for this small paper is part of a larger typological and linguistic study of writing sys-

tems (Justeson 1977; Stephens and Justeson 1978; Justeson and Stephens 1979; Justeson and Stephens in press). As a self-contained work it was suggested by a problem of long standing in Mycenaean Greek philology. Since it provides an unambiguous solution, it was thought appropriate to follow a problem oriented exposition.

1. THE PROBLEM. Linear B, the syllabary employed for writing Mycenaean Greek of the second millenium BC, possessed two syllabograms *34 and *35 which are mirror images of one another, taking on, at Pylos, the forms { and } respectively. The phonetic values of these signs have never been convincingly determined. In fact it does not seem that traditional philological and combinatorial methods are sufficient to determine even whether *34 and *35 are simply formal variants of one and the same sign, i.e. whether they are allographs of a single grapheme.

Lang (1959) suggested a value ru_2 for both *34 and *35. Palmer (1963) suggested a palatalized consonant corresponding to the \underline{r} of ru_2 , and expressed the opinion that the palatalized \underline{r} series shows a tendency to spell /l/. He noted that interpreting *34-ke-u of Ta as lunkeus or lukeus "offer(s) words in the same category as ai-ke-u 'goat (motif)'," which he considers appropriate to the decorative features of tripods listed in Ta 709 and Ta 641. However, on the basis of the following two comparisons

$$(1) \quad *35\text{-ki-no-o} \stackrel{?}{=} a_3\text{-ki-no-o}$$

as well as

$$(2) \quad *34\text{-ke-u} \stackrel{?}{=} a_3\text{-ke-u}$$

*34 and *35 are usually identified as "homophones" of a_3 , i.e. ai. Comparison (2) is strengthened by the fact that each word appears in a context describing tripods, in fact in a formula that is identical except for word order:

ti-ri-po-de ai-ke-u ke-re-si-jo we-ke	Ta 641
ti-ri-po ke-re-si-jo we-ke *34-ke-u	Ta 709

Comparison (1) is less self evident: ai-ki-no-o occurs in a context clearly describing a chariot without wheels (Se 879); *35-ki-no-o, however, occurs on the obscure Vn 02 from Pylos, which apparently lists items having to do with building construction or carpentry.

The interpretation of *34 and *35 as equivalent to ai would seem to be subject immediately to one simple test. In syllabaries signs with canonical V value, as opposed to signs with canonical CV value, tend to word initial position. My own counts indicate that 7 of the 13 occurrences of *34 are word initial and 5 of the 8 occurrences of *35 are word initial. These figures, however, cannot be taken as evidence either for or against value as a canonical V sign, since the word initial relative frequencies of the seven other known Linear B V signs range from 95.23% for *85 au, to 34.87% for i, and only 14.25% for u, with mean word initial frequency for all V signs of 59.12%

On the basis of comparison (3)

(3) *34-ke-ja $\stackrel{?}{=}$ *35-ke-ja

both in the context of proper names (Fn 187 and Eb 871 respectively), an argument might be made that *34 and *35 are merely variants of one and the same sign, whatever its phonetic value. This consideration is, however, not compelling in itself, inasmuch as it cannot be ruled out a priori that, like the other so-called "homophones" (on "homophones" see Lejeune 1966), *34 and *35 actually have some values not in common. If *34 and *35 are taken as "homophones" of ai, this line of reasoning would be less likely, since it would entail a three-way "homophony" apparently requiring genuine free variation between *34 and *35 or at least an extension of the regular hierarchy of value inclusion which governs the use of other "homophonous" syllabograms. This hierarchy constitutes a typical markedness structure whereby one of the two "homophonous" signs can represent both its par excellence value and the special value of the other sign, but this second sign can only represent its special value. Either of these situations would be unparalleled in Linear B and would seem anomalous given the spelling conventions relating to facultative use of "complex" signs. However, since the identification of *34 and *35 as representing ai is by no means certain, they need not be construed as members of an unparalleled "homophony"-triple in order to avoid the interpretation of them as purely graphic variants: comparison (3) could be simply an instance of the typical behavior of normal "homophonic" sign pairs.

2. CHADWICK'S ARGUMENT. Chadwick (1973) advanced a different, purely graphical type of argument in support of the allographic interpretation of *34 and *35: "If they were distinct, this pair would be the only example

in the syllabary of the mirror image of a sign having a different value; no other sign pairs could be mistaken for each other if turned about a vertical axis" (Chadwick 1973: 386). The form and presuppositions of this neat argument should be considered in some detail. Given two analyses A_1 and A_2 such that A_1 entails a unique situation in the structural systems under analysis that A_2 does not, A_2 is to be preferred. The grounds for preferring A_2 are that it leads to a simpler, more regular system or permits a generalization to be expressed. Such an argument form will carry more than merely aesthetic weight, however, only if there is some sound theoretical reason according to which one would expect the regularity or generalization in question to hold in the particular, restricted domain under investigation. In other words, how do we know that Chadwick's graphical generalization is not merely accidental? This suspicion is not allayed by the fact that the following, **contrary** observation is as valid for Linear B as is Chadwick's: If *34 and *35 were variants of the same sign, this pair would be the only example of all the attested variants for which mirror image forms would have the same value (as noted already by Palmer 1963:23).

3. A NEW APPROACH. I believe that a new argument can be made in support of Chadwick's position. It will take the form of adducing precisely the grounds needed to demonstrate the principled and non-accidental status of the generalization concerning the graphical structure of Linear B that Chadwick wishes to preserve by analyzing *34 and *35 as allographs. First we will look briefly at a principle of human perceptual organization which will motivate a universal of grapheme form of the implicational type. Then this universal will be evaluated typologically and shown to hold across the writing systems of the world. Finally, in conjunction with another property of Linear B, Chadwick's generalization will be deduced.

3.1. PSYCHOLOGICAL CONSIDERATIONS. We must begin by looking briefly at how human perception treats reflection about natural axes. (This discussion is based largely on E. and H. Clark 1978.) The physical environment provides the human perceptual apparatus with its natural dimensions: the force vector of gravity defines the vertical axis and the local surface of the earth the horizontal plane. These natural dimensions are reflected in the basic vocabulary of human languages.

Furthermore, the natural dimensions are not equipollent. As Bierwisch (1967) has shown for German, height dominates width, and width dominates thickness. These dominance relations are confirmed by the early perceptual strategies of young children. Very importantly for our purposes, Rudel and Teuber (1963) have shown that children learn to distinguish shapes contrasting in respect to reflection about a horizontal axis more easily than shapes contrasting in respect to reflection about a vertical axis. Conversely, we would expect that shapes symmetrical with respect to reflection about a vertical axis (VAS) will be preferred over shapes symmetrical with respect to horizontal axial reflection (HAS). Indeed, over half a century ago Boas (1927) observed in striking confirmation of this dominance relation that in "primitive" art VAS predominates greatly over HAS. This too is based on the nature of the physical environment where HAS is rare, due to the fact that most objects and organisms must be supported from below, and where, for organisms, bilateral symmetry and thus VAS is common. We may also note that the forms of the Linear B signs conform to Boas's observation. If we cross-classify the 90 signs according as they do (+) or do not (-) show VAS or HAS, we obtain Table I

Table I

	+VAS	-VAS
+HAS	10	5
-HAS	38	42

Not only does +VAS dominate in overall frequency, but two-thirds of the +HAS signs are also +VAS as well, whereas only about one-fifth of the +VAS signs are also +HAS.

3.2. THE FUNCTION OF AXIAL REFLECTIONS IN SCRIPTS. The preceding discussion leads us to expect that, if the hierarchy of vertical and horizontal dimensions in human perception is in fact as fundamental as it seems, it should also be reflected in the use of sign forms in writing systems. We are concerned here with three variables: the use of sign forms that differ primarily only in regard to VAR; the use of sign forms that differ primarily only in regard to HAR, and finally the function of each kind of axial reflection: the function is to

produce allographs if the occurrence of such reflection results only in non-distinctive variants with the same phonetic value (allographs); it is graphemic if it produces distinct signs having different phonetic values (graphemes).

The perceptual hierarchy we have noted leads to the following two predictions:

- (4) VAR will be graphemic only if HAR is graphemic.

The generalization in (4) is clearly the principled basis for Chadwick's argument that we are seeking. The second prediction is the converse of (4)

- (5) HAR will be allographic only if VAR is allographic.

The generalization in (5) clearly stands in contradiction to the logical basis of the counter-argument advanced above against Chadwick's position, since it is equivalent to the proposition that if a script has only one kind of non-distinctive axial reflection in its sign forms, it will be the VAR kind.

How do predictions (4) and (5) stand up when tested against the actual usage of axial reflections in a substantial number of diverse non-pictographic scripts? The test will take the form of converting (4) and (5) into explicit typologies. Both generalizations are logically material implications of the form A implies B; such implications are tautologically equivalent to the denial of the conjunction of A and not-B. Any of the other three possible conjunctions can be true and still satisfy the implication. Accordingly, we set up two typologies of scripts. Typology 1 corresponds to prediction (4) and classifies the graphemic contrasts of each script into the following four types: a) both VAR and HAR are graphemic, b) neither VAR nor HAR is graphemic, c) HAR is graphemic but VAR is not, and finally d) VAR is graphemic but HAR is not. Typology 2 classifies the allographic variants of each script in the same way. Thus if our predictions (4) and (5) are to be confirmed, we will have to find that no script has graphemic VAR without also having graphemic HAR. Similarly, we will have to find that no script has allographic HAR without also having allographic VAR. Of course, we do not expect that there will be absolutely no exceptions; rather it is only necessary that the excluded types (graphemic -HAR & +VAR; allographic -VAR & +HAR) should occur in the scripts of the world with significantly less than chance frequency.

A sample of 56 writing systems was prepared for the evaluation of the graphemic typology 1. Because of the difficulty in obtaining adequate descriptions of allographic variation, the sample for the test of the allographic typology 2 was limited to 37 writing systems. These typologies are given in Tables II and III.

Table II

	+VAR	-VAR
+HAR	9	12
-HAR	2	33

Typology 1
Graphemic Axial Reflections










Table III

	+VAR	-VAR
+HAR	11	1
-HAR	10	15

Typology 2
Allographic Axial Reflections

Typologies 1 and 2 strongly confirm predictions (4) and (5). Although for Table II there are two exceptions, and for Table III one exception, the number of excluded types is significantly less than what would be expected if the predictions were not true. For Table II the chi-square is 11.4731 and is significant at the $p = 0.00069$ level; for Table III the chi-square is 8.8185, and is significant at the $p = 0.0034$ level. (The significance levels were calculated using the approximation of Hoaglin 1977.)

3.3. DISCUSSION OF EXCEPTIONS. The two exceptions to generalization (4) are instructive: indeed they are exceptions that "prove the rule". One of the exceptional

scripts is Numidian. The Numidian script is remarkable in that it appears in two varieties, one read in vertical columns from bottom to top, the other read horizontally in rows from right to left. Only the horizontal variety is of the exceptional -HAR & +VAR type; the vertical variety conforms to our generalization, being of the +HAR & -VAR type. (If a +HAR & -VAR type script is rotated through 90°, it will become a -HAR & +VAR type script.) There are three important characteristics of the exceptional horizontal variety of Numidian that support our contention that VAR is not a basic means of making graphemic contrasts. First, inscriptions in the horizontal variety are decidedly less frequent than inscriptions in the vertical variety; they are restricted to Thugga and the bilingual, Numidian - Punic, inscription of king Masinissa. Secondly, the left to right orientation of the horizontal variety may well be due to Punic influence; as argued by Meinhoff (1931:25): "Die hier beobachtete Schreibung ist offenbar die ältere, die in M(asinissa inscription) und T(hugga) nur in Anlehnung an punische Schreibung verändert ist." Third, and most importantly, there is only one pair of signs that contrast by VAR in the horizontal variety, those for m and s², and, furthermore, not all of the allographs of these two signs contrast in terms of VAR: whereas the unexceptional vertical variety of Numidian has the sign  for s² and  or  for m, the horizontal has  or  for m but  or  in addition to  or  for s². Thus the first allograph for s² no longer contrasts with either allograph of m in terms of VAR. It should also be noted that the Masinissa inscription uses only the first variant of the m sign in contrast to the third variant for s², so that again the contrast in terms of VAR is removed, becoming now one of orientation and form (rectilinear versus curvilinear). All of these considerations demonstrate very clearly the special status of VAR contrasts: graphemic VAR is marked in respect to graphemic HAR.

The other exceptional script is the Celtic Ogham. The Ogham is remarkable inasmuch as it was carved along the edges of blocks of stone, i.e. in two planes, one at right angles to the other, so that it is really only the projection of the script onto a single plane perpendicular to the line of sight that creates graphemic contrasts in terms of VAR.

4. CONCLUSION. We have motivated theoretically and have confirmed empirically as overwhelming statistical tendencies two generalizations concerning the function of

reflection about vertical and horizontal axes in non-pictographic writing systems: 1) VAR is graphemic only if HAR is graphemic. 2) HAR is allographic only if VAR is allographic. The Linear B syllabograms *34 and *35 contrast only in respect to VAR. There are no syllabograms in Linear B that contrast only in terms of HAR. Therefore, we conclude, by the modus tollens, with a high degree of confidence, that *34 and *35 are not two different graphemes: they are non-distinctive variants of the same sign. As noted above, there are no allographic variants in Linear B that differ only by HAR; thus our conclusion is also consistent with the second universal: if there is only one kind of allographic axial reflection, it is VAR and not HAR.

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CASE RELATIONS IN MODERN GREENLANDIC*

Robert Underhill

San Diego State University

0. Introduction.

The question whether ergativity in languages such as Eskimo is a surface phenomenon or reflects underlying structure is a matter of considerable interest in linguistics, particularly since it relates to the question of whether notions such as "subject" and "object" can be taken to be universal. Significant recent work on this topic includes that of Comrie (1973) and Dixon (1979). In an earlier paper on Greenlandic (Underhill 1979), based on secondary sources, I showed that Eskimo syntax operates entirely in terms of the subject/object distinction, while ergativity is important only for inflectional morphology. More recently, working with a native speaker, I was able to rework and update the evidence for underlying subjectivity. In addition, I discovered that the dialect of this speaker diverged in a number of remarkable ways from the "classical" language of the standard grammars (Kleinschmidt 1851, Schultz-Lorentzen 1945, Bergsland 1955). This paper thus has two purposes: one is to review the evidence for underlying subjectivity, and the other is to look at some of these changes.

I don't know to what extent these divergences were dialectal, generational, or idiosyncratic. The speaker was a high-school exchange student from Qaqortoq, or Julianehåb, on the southern tip of Greenland (standard Greenlandic is spoken around Godthåb and further north on the west coast). Like all educated Greenlandic speakers, she was bilingual in Greenlandic and Danish; she was fluent in English and had also studied French, German, and Latin (in the course of the standard Danish education in Greenland). Many of the changes in her dialect seem to have the effect of moving toward a more English or Danish-like syntax.

This is interesting because of the light it casts on the phenomenon of language death, which I use here to mean the extensive structural changes that take place in a language when it is in the process of being replaced by another. Now, Greenlandic Eskimo is not demographically in a state of language death; on the contrary, in vitality and number of speakers it may be in the best condition of any native North American language, and with recent moves toward home rule in Greenland it is approaching the status of a national language. However we seem to see in modern Greenlandic a similar situation involving heavy influence of one language on another, and it is interesting to see just what sorts of changes happen.

The relative case in Greenlandic, which normally¹ ends in -p, is used for the subject of a transitive verb. The absolutive case, which usually ends in -q or zero,² is used for the object of a transitive verb, and the subject of an intransitive verb. These functions are illustrated in (1-2):

- (1) teriannia-p nano-q taku-vaa 'the fox sees the bear'
fox -REL bear-ABS see -TR
- (2) nano-q sinip-poq 'the bear sleeps'
bear-ABS sleep-INT

In (1) terianniap is the subject of the transitive verb and is therefore relative, while nanog is the object and is absolutive. In (2) nanog is absolutive as the subject of the intransitive verb. (Transitive main verbs with 3rd. sg. subject and object end in -vaa or -paa, and intransitive main verbs with 3rd. sg. subject end in -voq or -poq. For further discussion of Eskimo morphophonemics see Underhill 1976.) If the subject or object are pronouns, they are normally deleted, and the case of any remaining noun gives its relation to the verb, so that in (3a) nanup is relative and therefore must be the subject, while in (3b) nanog is absolutive and must be the object:

- (3) a. nanu-p taku-vaa 'the bear sees him'
bear-REL see -TR
- b. nano-q taku-vaa 'he sees the bear'
bear-ABS see -TR

In Eskimo the relative case has another function, not usually found in an ergative, that of a possessive or genitive marker, as in noun phrases like (4):

- (4) nanu-p pamiu-a 'the bear's tail'
bear-REL tail -3

where nanup is the possessor, in the relative case, and the possessed noun pamiuk 'tail' has a corresponding possessive suffix indicating the person and number of the possessor.

1. Fourth Person.

The so-called "fourth person" in Eskimo is a reflexive third person, used in possessive endings and subordinate clauses to mark a third person that is coreferential with the subject. So in (5a):

- (5) a. nanup piara-a takuvaa 'the bear_i sees his_j child'
bear-REL child-3 see -TR
- b. nanup piara-ni takuvaa 'the bear_i sees his_i child'
bear-REL child -4 see -TR

the third person possessive on piaraa refers to someone other than 'the bear', while in (5b) the fourth person on piarani refers back to the subject, so that it means 'the bear sees his own child'. There is a similar contrast in (6a-b):

- (6) a. nanoq illu -a-nut iserpoq 'the bear_i enters his_j
bear-ABS house-3 -to enter-INT house'
- b. nanoq illu-mi-nut iserpoq 'the bear_i enters his_i
bear-ABS house-4 -to enter-INT house'

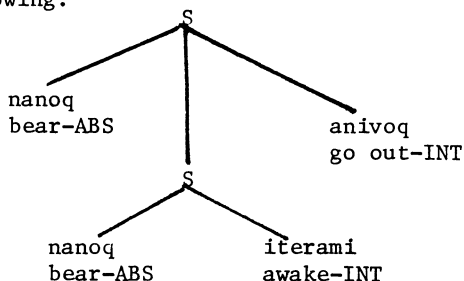
Notice that the fourth person refers to the subject in the conventional, nominative-accusative sense, so that it may refer to the relative-case subject of a transitive verb, as in (5b), or the absolutive-case subject of an intransitive verb, as in (6b).

The same distinction is made in subordinate verbs, so that we get pairs like (7a-b):

- (7) a. nanoq iter-mat anivoq 'when the bear_i awoke, he_j
bear-ABS wake -3 go out-INT went out'
- b. nanoq iter-ami anivoq 'when the bear_i awoke, he_i
bear-ABS wake -4 go out-INT went out'

In (7a) the lower verb itermat is in the Conjunctive mode, one of two modes used in adverbial subordinate clauses. It has a third person ending showing that its subject, nanoq, is not the subject of the higher verb. In (7b) iterami has a fourth person ending, showing that nanoq in this case is the subject of both higher and lower verbs.

In (7b) the noun nanoq could have originated in either sentence. I am using a reasonably traditional model of underlying structure like the following:



where there are two nanoq's, one in the higher and one in the lower sentence, and there is no way to know which one is deleted.

If the two verbs require different cases, however, there are interesting results. Consider the examples in (8):

- (8) a. nanoq iterami aalisagaq nerivaa 'when the bear_i awoke,
bear-ABS wake -4 fish -ABS eat -TR he_i ate the fish'

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graph TD
    S1[S] --- nanup[nanup]
    S1 --- aalisagaq[aalisagaq]
    S1 --- nerivaa[nerivaa]
    aalisagaq --- fish[fish]
    aalisagaq --- ABS[-ABS]
    nerivaa --- eat[eat]
    nerivaa --- TR[-TR]
    nanup --- nanoq[nanoq]
    nanup --- iterami[iterami]
    nanoq --- bear[bear]
    nanoq --- ABS2[-ABS]
    iterami --- awake[awake]
    iterami --- INT[-INT]
  
```

If we insist on retaining the higher subject, what we get is (8c), with relative nanup. What happens there is that the lower verb itermat goes back to third person, even though it still ought to be fourth. In this dialect there is considerable reluctance to use the fourth person unless it is preceded by a visible controller (and sometimes not even then). While nanup is semantically the subject of the lower verb, it doesn't look grammatically like the subject because it is in the wrong case. So there is no identifiable controller for a fourth person in the lower verb, and it reverts to the unmarked third person. Notice that nanup both precedes and commands itermat, so the absence of fourth person here cannot be explained in terms of precedence or command relationships, but rather seems to require a surface agreement constraint.

(9) a. iterami nanup aalisagaq nerivaa 'when he_i awoke, the
wake -4 bear-REL fish -ABS eat -TR bear_i ate the fish'

b. itermat nanup aalisagaq nerivaa 'when he_i awoke,
wake -3 bear-REL fish -ABS eat -TR the bear_i^j ate the
fish'

Here nanup has been moved and placed in front of the main verb, which it agrees with. In this case also there is a tendency for the lower verb to revert to third person, as in (9b). (9b) is therefore ambiguous since the subject of the lower verb can be 'the bear' or someone else.

The principle that the controller of a fourth person has to closely precede it can be used to disambiguate situations of the kind illustrated by English "Peter said the bear went to his house", where "his house" could refer either to Peter or the bear. In Eskimo both higher and lower subjects can condition fourth person on possessives which they command, so the fourth person will not help with the ambiguity; but see how it is done in (10a-b):

- (10) a. Piita oqarpoq nanoq illu-mi-nut iserpoq
 Peter said bear house-4 -to went
 'Peter_i said the bear_j went to his_j house'
 b. Piita oqarpoq illu-mi-nut nanoq iserpoq
 Peter said house-4 -to bear went
 'Peter_i said the bear_j went to his_i house'

In (10a) nanoq is right in front of illuminut, so it means 'to the bear's house'; in (10b) we have switched illuminut and nanoq, so that Piita now immediately precedes the fourth person, and now it means Peter's house.

2. Infinitive.

The construction that Kleinschmidt called "Infinitiv" is actually a device for coordinating verb phrases, and in classical Eskimo the two verb phrases have to have the same subject. For example, (11):

- (11) qimmiq nikuvi-llu-ni pisuppoq 'the dog stands up and walks'
 dog-ABS stand -INF -4 walk-INT

or 'the dog, standing up, walks', with qimneq 'the dog' as the subject of both lower and higher verbs. The infinitive suffix is -lu, or -llu after vowels, and the infinitive has one-person inflection for its absolutive term, that is, the subject in the case of an intransitive infinitive and the object for a transitive one. In (11) nikuvilluni is intransitive and its fourth person ending refers to its subject, which is also the higher subject. Another example is (12):

- (12) Annap teterfik nakkaa-llu-gu-lu seqqumippaa
 A.-REL pot -ABS drop -INF-3 -& break -TR
 'Anna dropped the pot and broke it'

or 'Anna, dropping the pot, broke it'. Here Annap is the subject of both verbs; the infinitive nakkaallugulu is transitive and the third person ending agrees with its object.

In (11) both verbs are intransitive, and in (12) both are transitive. If the two verbs take different cases, there is the same restriction in this dialect that a subject must be in the right case to go with the next following verb:

- (13) a. qimmeq (*qimmip) qiviar-lu-ni nanoq takuvaa
 dog-ABS -REL turn -INF-4 bear see -TR
 'when the dog_i turned his head, he_i saw the bear'
 b. qiviar-lu-ni qimmip (*qimmeq) nanoq takuvaa
 turn -INF-4 dog-REL -ABS bear see -TR
 'when he_i turned his head, the dog_i saw the bear'

In (13a) qimmeq is absolutive to go with the intransitive infinitive qiviarluni which follows it, and relative qimmip is not possible here. But if we move 'the dog' so that it precedes the main verb, we get (13b) with relative qimmip, and the absolutive is not possible here.

In this dialect, unlike the classical, the subject of the infinitive can differ from that of the main verb.⁴ This is a particularly remarkable development for Eskimo. However the unlike subject must be explicitly marked, as in (14):

- (14) Anna tikil-lu-ni Piita illumut iserpoq
 Anna come -INF-4 Peter house-to enter-INTO
 'when Anna arrived, Peter went into the house'

Another way to mark unlike subjects is by different verb endings if the subjects are different persons, as in (15):

- (15) tikil-lu-nga illumut iserpoq 'when I arrived, he went
 come-INF-lsg house-to enter-INT into the house'

where the first person ending on tikillunga shows that its subject is different from that of the main verb. If neither of these ways of marking unlike subjects is used, then the sentence must be interpreted as having like subjects:

- (16) qimmip nanoq taku-llu-gu-lu qimaavoq
 dog-REL bear-ABS see -INF-3 -& escape-INT
 'when the dog_i saw the bear_j, he_i ran away'

Even though 'the dog' is only mentioned once in (15), it has to be the subject of the main verb, since the sentence doesn't say anything different.

We saw that intransitive infinitives in the classical language normally have fourth person inflection, because they agree with their subject, which must also be the higher subject. Transitive infinitives usually have third person inflection, because they agree with the object, which may not be the same as the subject (otherwise the sentence would be reflexive). In this dialect, where the same-subject restriction is not enforced, the endings are frozen in this form, so that we always find fourth person with intransitive and third person with transitive infinitives, regardless of whether the term to which they refer is the higher subject. An example is (14), where the fourth person ending on tikilluni refers to 'Anna', which is not the higher subject. In (17):

- (17) qimmip nanoq taku-llu-gu-lu nanoq qimaavoq
 dog-REL bear-ABS see -INF-3 -& bear escape-INT
 'when the dog saw the bear, the bear ran away'

the infinitive takullugulu has third person inflection referring to its object, nanoq, even though 'the bear' is also the higher subject.

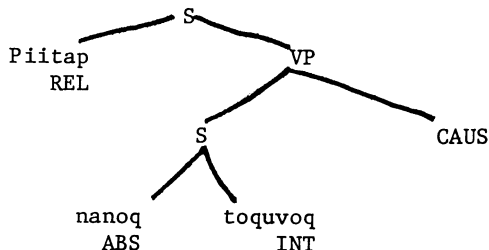
3. Causative.

Causative sentences in Eskimo are made by adding a new subject to the sentence at the same time that a causative suffix is added to the verb. While the grammars list a number of causative suffixes, only three are productive in this dialect: -tit- 'make' or 'let', -qqu- 'tell', and -sori- 'think'. Thus from (18) there are the three possible causatives (19a-c):

- (18) nanoq toqu-voq 'the bear died'
 bear-ABS die -INT
- (19) a. Piitap nanoq toqu-tip-paa 'Peter made/let the bear die'
 P.-REL bear-ABS die -CAUS-TR
- b. Piitap nanoq toqu-qqu-vaa 'Peter told the bear to die'
 P.-REL bear-ABS die -CAUS-TR
- c. Piitap nanoq toqu-sori-vaa⁵ 'Peter thinks the bear died'
 P.-REL bear-ABS die -CAUS-TR

The presumed underlying structure for (19a-c) is:

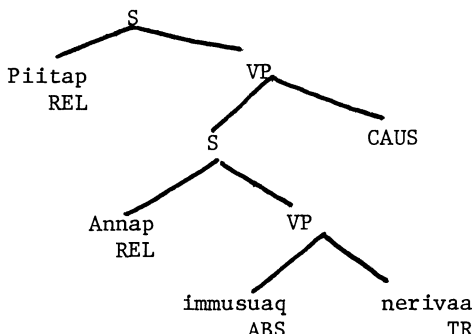
(19)



The underlying sentence is intransitive with an absolutive subject. Adding the causative makes the verb transitive, so the new subject is relative. The old subject is the new object and remains absolutive.

If the underlying sentence is transitive, things get more complicated. Suppose we take an example like (20) and try to causativize it, using the -tit- suffix.

- (20) Annap immusuaq nerivaa 'Anna ate the cheese'
 A.-REL cheese-ABS eat -TR



The interesting problem is what happens to the old subject. In this dialect, there are three possibilities, which seem to form a sequence:

- (21) a. Piitap Anna immusuaq neri-tip-paa 'Peter made Anna eat
P.-REL ABS cheese-ABS eat -CAUS-TR the cheese'
- b. Piitap Anna-mut immusuaq neri-tip-paa '(same)'
P.-REL Anna-ALL cheese-ABS eat -CAUS-TR
- c. Piitap immusuaq Anna-mut neri-tip-paa '(same)'
P.-REL cheese-ABS Anna-ALL eat -CAUS-TR

In (21a), the old subject 'Anna' cannot be relative any more because there is a new relative, and so it reverts to absolutive. In terms of relational grammar, Anna is a *chômeur*, and seems to be quite literally unemployed: she just stands around without knowing what to do. In (21b), Anna is given something to do: she goes into the allative, or dative, case. It is, of course, the standard pattern for languages with this type of causative for the subject of a transitive lower sentence to go into the dative. In (21c) Annamut is again allative and in addition undergoes a shift into the preverbal position, thereby achieving the subject - object - oblique order which seems to be preferred in Eskimo (Woodbury 1977:310). (21c) is the only one of these three possibilities which is predicted by the standard grammars.⁶

The Eskimo causative is not an argument for underlying ergativity, even though the transitive subject, which comes out allative, is treated differently from the intransitive subject and transitive object, which remain absolutive in causativization. The pattern here is the same as in many undoubted nominative/accusative languages: such as Turkish, where the old or lower subject simply occupies the highest unoccupied slot in the hierarchy, direct object if possible, otherwise dative.

In some cases the causative has the effect of adding an unlike subject for the lower verb, and thus functions something like English *Equi-NP-Deletion* in reverse:

- (22) a. tikis-samaar-poq 'he expects to arrive'
come -expect-INT

- (22) b. tikis-samaar-tip-paa 'he_i expects him_j to arrive'
come -expect-CAUS-TR
- (23) a. Piitapq pisik-kusun-neri-voq⁷ 'Peter prefers to go'
P.-ABS go -want -more-INT
- b. Piitap Ole pisik-kusut-tin-neri-vaa 'Peter prefers
P.-REL O.-ABS go -want -CAUS-more-TR Ole to go'
- (24) a. Piitapq pisik-kusu-nngi-laq 'Peter doesn't like to go'
P.-ABS go -want-NEG -INT
- b. Piitap Ole pisik-kusut-ti-nngi-laa 'Peter doesn't
P.-REL O.-ABS go -want -CAUS-NEG-TR like Ole to go'

4. Passive.

There are two ways of making the passive in classical Greenlandic, both indirect. One uses the passive participle -saq, as in nerisaq 'one which is eaten' or asasaq 'beloved', cf. asasaa 'his beloved'. Finite verbs like nerisaavoq 'it is eaten' may be formed by adding the suffix -u- 'be' to the passive participle; the passive verb is therefore a secondary formation from the participle. The other way is by a combination of the abstract noun suffix -neq and -gar- 'have', as in nerineqarpoq 'it is eaten'. So the system of passive verbs and participles is the following:

Passive Verb	Passive Participle
'it is eaten'	'one which is eaten'
neri-saa-voq	neri-saq
neri-neqar-poq	---

Kleinschmidt (1851:138) tells us that the passive is much less common in Greenlandic than in German, and is particularly rare when an agent has to be expressed. In fact Kleinschmidt gives us no examples of passive sentences with an agent overtly expressed.

In this dialect the passive system is considerably elaborated, with the formation of a new passive out of the -tit-causative, and the creation of matching passive participles for the two forms of the passive that didn't have them, by using the normal intransitive participle -toq. So we get the following passive system:

Passive Verb	Passive Participle
neri-saa-voq	neri-saq
neri-neqar-poq	neri-neqar-toq
neri-tip-poq	neri-tit-toq

Agents can be expressed freely and are in the instrumental. Examples of the three passives are given in (25):

- (25) a. timmiaq qimmi-mik neri-saa-voq 'the bird was eaten by
bird dog -INST eat-PASS-INT the dog'
- b. timmiaq qimmi-mik neri-tip-poq '(same)'
bird dog -INST eat-PASS-INT

- (25) c. timmiaq neri-neqar-poq 'the bird was eaten'
bird eat -PASS -INT

The -neqar- construction still does not normally allow an agent; when an agent does appear it has to be indefinite or non-specific, so that 'by the dog' could not be added to (25c). If an agent is needed, one of the other patterns must be used.

It is interesting to speculate on how the new passive could have arisen out of the -tit-causative. We can get some clues by examining the difference in meaning between the -tit-passive and the others. Consider (26a-b):

- (26) a. Anna Oli-mik tigi -saa -voq 'Anna was caught by Ole'
A. O.-INST catch- PASS-INT
b. Anna Oli-mik tigi -tip - poq '(same)'
A. O.-INST catch- PASS-INT

In (26a) Ole is Anna's enemy and the sentence describes a real chase. In (26b) the gloss is the same but the situation is friendly. In the case where Anna allows Ole to catch her, only (26b) is acceptable. The -tit-passive requires a subject (patient) which is alive, animate, and aware. Returning to (25), in (25a) the bird is thought of as dead, while in (25b) it is alive (at least at the beginning). In:

- (27) a. puiseq sinil-lu-ni malersor-saa-voq
seal sleep-INF-4 hunt -PASS-INT
'the seal is being hunted while it is sleeping'
b. @puiseq sinil-lu-ni malersor-tip-poq '(same)'
seal sleep-INF-4 hunt -PASS-INT

the -tit- construction in (27b) is anomalous because, we are told, the seal can't let itself be hunted while it is sleeping. This is the crucial clue: the -tit-passive seems to derive from the notion "something lets itself be ---".

My suggested derivation for the -tit-passive therefore starts with a normal causative:

- (28) Annap timmiaq qimmi-mut neri-tip-paa 'Anna makes/lets the
A.-REL bird dog -ALL eat -CAUS-TR dog eat the bird'

The allative term becomes instrumental, probably by analogy with the instrumental agent in the -saavog passive, and we now have a sentence that is passive in meaning; this stage is attested in the notes:

- (29) Annap timmiaq qimmi-mik neri-tip-paa 'Anna lets the bird
A.-REL bird dog -INST eat -CAUS-TR be eaten by the dog'

Then we get a reflexive by the Eskimo way of making reflexives, which is simply to delete the object:

- (30) timmiaq qimmi-mik neri-tip-poq
bird dog -INST eat -PASS-TR
'the bird lets itself be eaten by the dog'
'the bird undergoes being eaten by the dog'
'the bird is eaten by the dog'

There is a parallel here with the so-called "suffering passive" of Japanese, which is translated as a passive but is syntactically a causative.

5. Conclusion.

Firstly, we have a number of processes which demonstrate that Eskimo syntax is organized according to subject and object for all significant purposes. The only process which might be evidence for underlying ergativity is the causative, and I hope to have shown that it isn't. It is important to note that this proof holds for the "classical" language as well for my informant's dialect.

Secondly, turning to the ways in which modern Greenlandic seems to be influenced by Danish or English, we can summarize this as a drift toward a more surfacy kind of syntax, depending on perception strategies and word order constraints, where the syntactic rules seem to be based more on surface structures than on underlying structures.

Footnotes.

*Earlier versions of this paper were delivered at the American Anthropological Association, Cincinnati, November, 1979 and at a colloquium at U.C.S.D. I am indebted to the participants at these gatherings for many helpful suggestions. I am particularly indebted to Tove Petersen for serving as informant for my investigation of Eskimo syntax.

¹The relative suffix is -p when it is not combined with a possessive.

²The absolutive suffix is zero, but many nouns end in a -q which is apparently a vestigial singular marker, and which drops before (almost) any other suffix. For details see Underhill 1976a).

³Examples are cited in the new Greenlandic orthography. Because my informant's dialect did not distinguish single from geminate stops, there are undoubtedly errors in the spelling in this regard. Morpheme boundaries are indicated where pertinent to the discussion.

⁴The result is that sentences, rather than verb phrases, are coordinated.

⁵The combination -sori-vaa evidences morphological regularization. In the grammars this suffix is -sor-, ending in the abstract fourth vowel which combines with the transitive ending to give -soraq (Underhill 1976b).

⁶(21a) might be derived from (21b) or (21c) by some form of 3-to-2 Advancement (in Relational terms). I do not believe the derivation goes that way. In the many instances where the informant gave me more than one version of a given causative, the (21a) type tended to come first, followed by the (21b) or (21c) types after more reflection. 3-to-2 Advancement would make the old object (immusuaq) into a 2-chômeur. But 2-chômeurs in this language, which are created by the antipassive rule, are normally instrumental,

not absolute. For more on the relational grammar interpretation of the anti-passive, see Gerdtz (this volume).

Alert Eskimologists will have noticed dialectal pisik- for pisukg here.

Bergsland, however, has a number of examples of passives with overt agent, expressed in the ablative. Woodbury (323) claims that the agent of a passive can be ablative, allative, or instrumental depending on dialect.

Bergsland (1955:106) has one example of a -tit-causative that might be read as a passive.

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Subjects, Topics and Agents:
Evidence from Property-factoring

Jeanne van Oosten
University of California, Berkeley

Introduction

The term "property-factoring" has been used to relate pairs of sentences of two very different types. The first type, which I call PF1, for property-factoring-1, is exemplified in 1 through 3:

- 1a The man's singing exasperated his neighbors.
- b The man exasperated his neighbors with his singing.
- 2a The cat's antics amused me.
- b The cat amused me with her antics.
- 3a The boy's sudden appearance startled his mother.
- b The boy startled his mother with his sudden appearance.

In transformational terms, the (b) sentence of each pair is designated as the one which has undergone the property-factoring transformation. A sentence which is input to the rule has a possessive noun phrase in subject position; in the output the possessor noun has been raised to subject position and the rest of the noun phrase is shunted off to the end of the sentence in a prepositional phrase.

The second type of property-factoring, which I call PF2, for property-factoring-2, is illustrated in 4 to 6:

- 4a The price of rice went up.
- b Rice went up in price.
- 5a Sydney's weight increased.
- b Sydney increased in weight.
- 6a The factory's production improved.
- b The factory improved in production.

Again, in transformational terms, the subject of the input sentence to the rule, the (a) sentence in 4 to 6, is a possessive noun phrase and in the output of the rule the possessive has become the subject and the rest of the original subject emerges in a prepositional phrase at the end of the sentence. However, although the term "property-factoring" was first coined in a transformational framework and it is convenient to characterize the rule in transformational terms, as I have just done, let me say at the outset that in this paper I am not concerned about the formal aspects of property-factoring as a transformation. Rather, I am interested in defining the conditions under which one would use the first member of a pair of related sentences like 1 to 6, as opposed to the second, or vice versa. In what follows, I will call the (b) sentences of 1 to 3 PF1 sentences, and the (a) sentences I will call non-PF1 sentences; the (b) parts of 4 to 6 I will call PF2 sentences and the (a) parts I will call non-PF2 sentences. Further, let the noun (phrase) which occurs in the prepositional phrase at the end of a PF1 or PF2 sentence, and which corresponds to the head of the subject in non-PF1 or non-PF2

sentences be called the factored noun (phrase) and let the raised noun be the noun which occurs as the subject of PF1 and PF2 sentences, the possessor in non-PF1 and non-PF2 sentences.

In this paper I will do the following: first I will compare PF1 and PF2 sentences to discover the relevant properties of each; then I will investigate in what functional context each type of sentence gets used. I go out from the assumption that the choice of a PF1 or a non-PF1 sentence, and the choice of a PF2 or a non-PF2 sentence, depends on what NP a speaker wants to have in subject position, and that therefore the choice depends on factors associated with subjecthood, specifically agentivity or topicality. However, I argue that these notions have to be modified or refined, especially the notion of topichood, in order to accommodate the property-factoring facts.

But first a note on what I will not be talking about. There are numerous other constructions which also evidence a type of property-factoring. Some of these are exemplified in 7 through 12:

- 7a Manfred's credulity was laughable.
- b Manfred was laughable $\left\{ \begin{array}{l} \text{in} \\ \text{on account of} \end{array} \right\}$ his credulity.
- 8a Manfred's credulity was criticized.
- b Manfred was criticized $\left\{ \begin{array}{l} \text{for} \\ \text{on account of} \end{array} \right\}$ his credulity.
- 9a The cat's antics got her into trouble.
- b The cat got (herself) into trouble on account of her antics.
- 10a Jan's acting got better.
- b Jan got better at acting.
- 11a ?The color of the cherries is dark.
- b The cherries are dark in color.
- 12a ?The car's oil is low.
- b The car is low in oil.¹

In each of the pairs 7 to 12, the subject of the (a) sentence contains a possessive NP, the head of which occurs in a prepositional phrase at the end of the (b) sentence while the possessor is raised to subject status. The characteristics of these types of property-factoring sentences, including how many different classes of them there are and what restrictions hold on them, are still mysterious. I will lump all these different types into one category PF3, and concentrate in this paper on PF1 and PF2 sentences, if for no other reason than that these were the types called "property-factoring" in the transformational tradition. I will₂, however, return briefly to PF3 sentences at the end of this paper².

Properties of PF1 and PF2

Structurally, there are only two things that the two constructions have in common: first, a sentence susceptible to PF1 or PF2 has as subject a possessive noun phrase; second, a sentence exemplifying either construction has the erstwhile possessor as subject while the erstwhile head of the possessive construction occurs at the end of the sentence in a prepositional phrase. But in spite of these similarities between the two sets of sentences, there are great differences between them as well. First of all, different types of verbs occur in PF1 as opposed to PF2 sentences. In PF1 the verb is a psychological verb, like exasperate, amuse, annoy, charm, enchant, infuriate, anger, amaze and others. In PF2 the verb is a change-of-state verb, like go up, increase, improve, go down, decrease, darken, double and others. These two verbal categories are discrete, with no overlap. Second, the prepositional phrase in PF1 differs from that in PF2, in two ways. The preposition used is different, for one thing: in PF1 with is used, which is also used for instrumentals as in 13:

- 13 John sliced the salami with his knife.

In PF2 in is used, which is also used for prepositional phrases of "respect in which," as in 14:

- 14 John and I differ in our heights/outlook on life, etc.

The prepositional phrases in PF1 and PF2 sentences also differ in that in PF1 but not in PF2 sentences a resumptive possessive pronoun is used so that, in effect, the entire original subject NP is represented in the prepositional phrase³. This is not possible in PF2, as is shown in 15:

- 15a *Rice went up in its price.
 b *Sydney increased in his weight.
 c *The factory improved in its production.

The third way in which PF1 differs from PF2 is that in PF2 the factored noun designates an attribute, such as, in our examples, price, weight or (level of) production, whereas in PF1 the factored noun can designate either an attribute, as in 16,

- 16a The man's appearance intimidated me.
 b The man intimidated me with his appearance.

or an activity⁴, such as singing, antics or a sudden appearance (on the scene) in 1 through 3. In addition, the factored noun of a PF1 sentence can designate something which is neither an attribute nor an activity, but which stands in a relation of part to whole to the raised noun, as in 17:

- 17a The piano's broken key exasperated me.
 b The piano exasperated me with its broken key.

But there are to my knowledge no PF2 sentences in which the factored noun designates something other than an attribute⁵.

An activity, in the sense in which I am using the term, prototypically has the following properties:

1. An activity causes a change in the external world that is a direct result of the activity and that is perceivable by one of the major senses of sight, hearing or feeling (but especially sight). For example, the direct result of John's walking is his displacement from one point to another, which one can see.

2. An activity is something that is intentional. Thus seeing is not an activity in my sense; looking is.

3. The primary causer of an activity typically is an agent, with properties of intentionality, control and responsibility as discussed below. The primary causer is the primary energy source for the activity.

The fourth way PF1 differs from PF2 is that the subject in PF1 tends to be potentially agentive whereas in PF2 either potentially agentive nouns like Sydney or non-agentive nouns like rice can be subject. By an agentive noun I mean one whose referent can be the agent of the action expressed in the predicate. Agents typically intend to bring the action described in the predicate about, bring the action about voluntarily, have control over the action's coming about, are the primary energy source for the action and are responsible for the action and the resulting change incurred in the world of discourse (G. Lakoff 1977:244). A potentially agentive noun is one whose referent is capable of having these attributes of intentionality, volition, control and responsibility, and of being a primary energy source for an action. Humans are thus the potential agents par excellence, animals are next, and inanimate objects are last (barring anthropomorphism). The more of these properties, like intentionality, volition and control, a noun has in a certain sentence, the more agentive it is. Thus the subjects of the sentences in 18 are arranged in order of decreasing agentivity:

- 18a Mary's mother amused her with her stories.
- b Mary's cat amused her with her antics.
- c That chair annoyed me with its creaking.

Mary's mother is more agentive than Mary's cat because the former presumably intended to amuse Mary whereas the latter did not.

A sentence like 18c shows, however, that a non-potentially agentive noun can be the subject of a PF1 sentence. The activity/attribute distinction interacts with the requirement that PF1 subject be potentially agentive to some degree. If the factored noun is an attribute, the PF1 subject must be potentially more agentive than if the factored noun is an activity. PF1 sentences 19-22b illustrate this. With an attribute appearance as the factored noun, dog can occur only marginally as the raised noun, and mountain is not acceptable at all:

- 19a The man's appearance intimidated me.
- b The man intimidated me with his appearance.
- 20a The dog's appearance intimidated me.
- b ?The dog intimidated me with his appearance.
- 21a The mountain's appearance intimidated me.
- b *The mountain intimidated me with its appearance.

When the factored noun is an activity, however, the PF1 sentences can have dog as the subject, as in 22b:

- 22a The dog's growling intimidated me.
 b The dog intimidated me with his growling.

Of course, potential agents are more likely to engage in activities than non-potential agents, specifically inanimate objects. In general activities and agents go together and so it is not surprising that if PF1 sentences show a preference for activities in the factored noun they also show a preference for potential agents in subject position. We may surmise that subjects in PF1 sentences must show a certain level of agentivity in order to be acceptable, and that this can be done either by the appearance of an activity in the prepositional phrase or by the appearance of a potentially agentive noun in subject position (or both).

Nevertheless, there are exceptions to this. Consider the case of activity-like verbs such as creak, rustle, gleam, sputter and weather verbs like rain, snow, blow. They more typically occur with non-potential agents and have only the first of the three properties of activities discussed above. They do, however, bear a "family resemblance" (cf. Wittgenstein 1958:32^e; Rosch & Mervis 1975) to prototypical activities in that they do have the first property of activities mentioned above and the other two under anthropomorphism. It is therefore doubly interesting that they can occur in PF1 sentences, as in 23: the factored gerund does not designate a prototypical activity, and the raised subject is not a potentially agentive noun.

- 23a The chair's creaking annoyed me.
 b The chair annoyed me with its creaking.

Similarly, there are sentences like the following, from Fillmore 1968: 23, in which a non-potential agent combines with an attribute:

- 24a The brevity of your speech impressed us.
 b Your speech impressed us with its brevity.

By combining the nature of the factored noun and the potential agentivity of the subject, a continuum of (actualized) agentivity emerges in subjects of PF1 sentences, with on it the points mentioned in 25:

- | | | | | |
|-----|------------------------|-----|----|----------------------------------|
| 25a | The (human) | V'd | NP | with (activity) |
| b | The (animal) | V'd | NP | with (activity) |
| c | The (human) | V'd | NP | with (attribute) |
| d | The (animal) | V'd | NP | with (attribute) |
| e | The (inanimate object) | V'd | NP | with (non-prototypical activity) |
| f | The (inanimate object) | V'd | NP | with (attribute) |

The ordering of the points on the continuum seems to be as given from an intuitive point of view, and I will not justify it here, except for the ordering of 25b and 25c. That the ordering of these two points is correct as given can be seen in the following example, in which exasperate can occur in a PF1 sentence of type b but not in one of type c:

- 26a The cat exasperated us with her meowing.
 b *The man exasperated us with his obtuseness.

If we are correct in our conclusion that PF1 sentences are more favorable to agentivity than non-agentivity, then the examples in 26 would lead us to conclude that the subject in a sentence of type 25b is more agentive than the subject in a sentence of type 25c. Every psychological verb seems to have a different cutting-off point on the continuum of agentivity after which PF1 may no longer be applied (Van Oosten 1978b). Thus although you can say both 27a and 27b, using infuriate, 28a is acceptable whereas 28b is not; these sentences are identical to the ones in 27 except that anger is used instead of infuriate:

- 27a The man infuriated me with his singing.
 b The cat infuriated me with her obtuseness.
 28a The man angered me with his singing.
 b *The cat angered me with her obtuseness.

The position of these cutting-off points does not have anything obvious to do with the meaning of the verbs, since verbs semantically as close as anger and infuriate have quite different cutting-off points. A verb like annoy is allowed with (some) PF1 sentences of type 25e and anything higher on the continuum; it is not allowed with PF1 sentences of type 25f:

- 29a The weight of the rock annoyed me.
 b *The rock annoyed me with its weight.

A verb like impress is allowed with PF1 sentences even of type 25f, as was shown in 24. The verb exasperate, on the other hand, is not:

- 30a The brevity of your speech exasperated me.
 b *Your speech exasperated me with its brevity.

And in general, PF1 can be used only with subjects higher up on the agentivity scale; that is, if PF1 can be used with a subject at a certain point on the agentivity scale, then it can be used with subjects at any higher point on the agentivity scale. This finding corroborates the notion that the use of a PF1 sentence is connected with agentivity, but also points out that the connection with agentivity is not inviolate.

Although PF2 sentences do allow potential agents in subject position, this is incidental. A PF2 sentence like 5b does not impute volition, intentionality, control or even responsibility to the subject for the state of affairs expressed by the predicate. Sydney is not an agent in 5b, even though Sydney is a potential agent, that is, he might be an agent in another sentence like "Sydney hit the ball" or "Sydney amused me with his stories." Since subjects in PF1 sentences tend to be agentive whereas those in PF2 sentences are not, the use of the instrumental preposition with and a resumptive pronoun is more appropriate there than it would be in PF2 sentences, since these two mechanisms underscore the similarity of PF1 sentences with regular agentive sentences containing an instrumental, such as 13 above.

PF1 and PF2 sentences in discourse

Why does a speaker use a sentence exemplifying PF1 or PF2 rather than a sentence not exemplifying but susceptible to one of these? In order to answer this question we have to take a look at the notion of topichood. The notion of topic has been used in quite different ways in the literature, but these uses can all be divided roughly into two types which can be designated as discourse topic on the one hand and sentence topic on the other. The most commonly-used notion is sentence topic. Usually people do not define what they mean by "topic", but on way of telling which type of topic is meant is if a certain noun is designated a topic without a context being considered criterial. When a topic can be designated in a sentence considered in isolation then we are dealing with sentence topic. What Halliday calls "theme" in his "Notes on Transitivity and Theme in English" (1967-68) and elsewhere is also a sentence topic. Usually in English, and in many other languages, the first noun in the sentence is considered the sentence topic (cf. Firbas 1964; Sgall, Hajičová & Benešová 1973, where this notion is nuanced somewhat for English; Halliday 1967-68, Part II, pp. 205, 212). Left-dislocated, clefted and pseudo-clefted elements are therefore considered sentence topics by definition, not to speak of the transformation called "topicalization," exemplified by the sentence "Beans I like" (Gundel 1977; but cf. Prince 1978). If the first noun in the sentence is to be considered to be the sentence topic, then it is obvious that in English subjects are often sentence topics, since typically they come first in the sentence. Sometimes sentence topics are said to be "what the sentence is about" or "what the speaker is talking about" (for example, Halliday, Firbas and Gundel all say or imply this), but I think this is not necessarily the case. My favorite example comes from Chafe (1976), and is reproduced in 31:

- 31 A What happened to the lamp?
B The dog knocked it over.

"What the speaker is talking about" in 31B to me is without question the lamp--it--and not the dog; the dog is incidental to what the speaker is really concerned with. So sentence topics cannot be defined both as "what the speaker is talking about" and "the first noun in the sentence." The conversation fragment 32, culled from an actual taped and transcribed conversation, gives an example of left dislocation where the left-dislocated element is not a topic:

- 32 Hyour external auditory meatus, (1.8) That's- {the hol
J Yeah I
J Yeah. I know that because when m- a friend of mine
(.hhh) her son was deaf and I read up on it.
H [yeah

The left-dislocated element a friend of mine serves not to state "what the speaker is talking about" but to introduce a new and incidental participant into the conversation who has to be identified before the speaker can go on and say what's really on her mind, which is why she knows what the meaning is of "external auditory meatus."

Many people have written papers showing how the notion of topic, meaning what I am here calling sentence topics, is necessary in order to explain some aspect of the syntax of a varied array of languages (cf., for example, Hawkinson & Hyman 1974 for Shona, Lambrecht 1980 for French, and Nichols, Rappaport and Timberlake 1980 for Russian). The notion of discourse topic, on the other hand, is much less common. The term was coined, as far as I know, by Keenan and Schieffelin in their paper "Topic as a discourse notion" (1976). They define discourse topic as "a proposition (or set of propositions) expressing a concern (or set of concerns) which a speaker is addressing" (1976:343), and give 33 to illustrate discourse topic (their 3),

- 33 Allison III, 20.3½ months
 a Mother: (trying to put too large diaper on doll, holding
 diaper on) Well we can't hold it on like that.
 What do we need? Hmm? What do we need for the diaper?
 b Allison: pin/

stating that the discourse topic for Allison's utterance is the proposition 'we need something for the diaper.' Keenan and Schieffelin use the notion primarily to understand the dynamics and organization of discourse, but I have found a very similar notion to be useful in understanding when the sentences under consideration in this paper get used in their property-factoring form and when they get used in the form in which the property is still in subject position. Keenan and Schieffelin insist at several points in their paper that their discourse topic is a proposition or a set of propositions rather than a simple NP. I think they do this in reaction to the usual conception of sentence topics as an NP which occurs somewhere in the sentence or discourse fragment under consideration (cf. Gundel 1977, Nichols, Rappaport & Timberlake 1980, Lambrecht 1980). I agree that the discourse topic does not need to occur somewhere in the sentence, as in 34B:

- 34 A Why isn't Hilary going to the party?
 B She's sick.

But in the framework of this paper the discourse topic is "why Hilary isn't going to the party" rather than "Hilary isn't going to the party for some reason," as it would be in the framework of Keenan and Schieffelin's paper. That is, my definition of discourse topic differs from Keenan and Schieffelin's in that it omits the words 'a proposition (or set of propositions) expressing...' This may sound like splitting hairs but it will become important in the further development of this paper. In order to distinguish my notion of topic from Keenan and Schieffelin's I will call mine "nominal discourse topic." In this way, it seems to me, the notion of nominal discourse topic will remain as close to the non-technical meaning of topic, "what the speaker is talking about," as possible. In what follows, I will talk of "topics" tout court for ease of exposition, but will mean by this term "nominal discourse topics."

Now to get back to the question when speakers use PF1 and PF2 and when they do not. First a note of warning. Very few of the examples in this section of the paper will offer cut-and-dried proof

for my claims. I think this is because even if a speaker does not answer a question directly, their interlocutor will assume they are being relevant and will cast about for some way of adjusting their understanding of the speaker's utterance so that it becomes relevant (Grice 1975). The indirect response is acceptable as long as its relevance can be deciphered.

When does a speaker use PF2 and when is a non-PF2 sentence more appropriate? In 35 and 36 are some examples in which there is a difference in acceptability between PF2 and non-PF2 sentences:

- 35 How come John, the farmer from Illinois, is looking so glum?
 a The price of soybeans has gone way down.
 b ?Soybeans have gone way down in price.
- 36 What's a good thing to invest in in the commodities market?
 a ?The price of rice has gone up.
 b Rice has gone up in price.

In 35, the non-PF2 sentence is more acceptable as a response than the PF2 sentence. The topic is: "Why John is looking so glum." Neither "soybeans" nor "the price of soybeans" is the topic. In 36, on the other hand, the PF2 sentence sounds preferable to the non-PF2 sentence. The topic of the response is "good things to invest in in the commodities market." The price of rice is not the topic, but rice, the subject in 36b, is one good thing (in the opinion of the speaker) to invest in. Rice is then a possible referent for the topic and is acceptable as subject. Less elliptically, the utterer of the response in 36 might have uttered 37b but not 37a:

- 37 Rice is a good thing to invest in since
 a *its price has gone up.
 b it has gone up in price.

Another set of examples is found in 38 and 39. These are monologue sequences rather than dialogue sequences as in 35 and 36:

- 38 Researchers must have been working hard on instant coffee lately.
 a Its flavor has improved immensely.
 b ?It has improved immensely in flavor.
- 39 Some convenience foods have become quite palatable.
 a ?The flavor of instant coffee has improved immensely over the past few years.
 b Instant coffee has improved immensely in flavor over the past few years.

The second sentence of the monologue in 38 gives evidence for why the speaker thinks the first sentence is true. The topic of the second sentence is thus "How I know researchers have been working on instant coffee." Instant coffee is not the topic and to make it the subject would be only marginally acceptable. If anything, "the flavor of instant coffee" is a possible referent for the topic. In the example in 39, the second sentence of the monologue corroborates

the first by giving an example. The topic of the second sentence is thus "examples of convenience foods that have become palatable." Instant coffee is an example of this and is thus a possible referent for the topic and can therefore be made the subject.

PF2 sentences can thus be used rather than their non-PF2 counterparts when the raised noun is the topic or at least a possible referent of the topic. It now becomes evident that not only is the definition of topic that I have proposed more in keeping with the non-technical meaning of the word "topic" (compared with Keenan and Schieffelin's), but it is also more useful than the view of topics as propositions for explaining the distribution of PF2 sentences in discourse. The notion of referent of a topic is necessary but it is hard to consider propositions as having referents in the required sense.

In 40 is a dialogue sequence incorporating a PF1 sentence:

- 40 How did your three-year-old keep amused while he was sick?
- a The kitten's antics amused him.
- b *The kitten amused him with her antics.
- c My mother's stories amused him.
- d My mother amused him with her stories.

The topic of the response in the dialogue is "what amused the three-year-old" and what amused him was the mother's stories and the kitten's antics. It is thus to be expected that 40a and 40c are acceptable as responses. What about 40d? I suggest that my mother is acceptable as a subject because she is the agent of the sentence even though she is not the topic. The kitten is somewhat agentive in 40b, since it causes the three-year-old's amusement and bears in some sense the responsibility for his being amused, but its agentivity is not strong enough to allow it to become subject without being topic; it does not have intentionality, volition and control vis-à-vis the state of affairs expressed in the predicate. Examples in a monologue sequence are found in 41 and 42:

- 41 Take a look at these kittens.
- a Their antics will amuse you.
- b *They will amuse you with their antics.

The kittens are neither topic nor (prototypical) agent so they cannot be subject.

- 42 If you're depressed, go see the Harlem Globetrotters.
- a Their hi-jinks will amuse you.
- b They will amuse you with their hi-jinks.

The Harlem Globetrotters are not topic but they are agentive and so can be the subject.

On the basis of the foregoing we might predict that non-prototypically agentive PF1 sentences can occur only when the raised noun is topic or a possible referent for the topic. This seems to be the case, as shown by the following examples:

- 43 Why did you like John's speech?
 a Its brevity impressed me.
 b ?It impressed me with its brevity.
- 44 Which speech did you like best?
 a ?Well, the brevity of John's speech impressed me.
 b Well, John's speech impressed me with its brevity.

The topic of the response in 43 is "Why I liked John's speech" rather than "John's speech." The topic of the response in 44, on the other hand, is "which speech I liked best," of which "John's speech" is a possible referent.

- 45 Don't buy that chair.
 a Its creaking would annoy me terribly.
 b ?It would annoy me terribly with its creaking.
- 46 All the furniture in this room has something wrong with it. The upholstery on the couch is ripped, the coffee table wobbles, and
 a ?the creaking of that chair annoys me terribly.
 b that chair annoys me terribly with its creaking.

I leave it⁸ to the reader to decipher this last set of subject - topic relations.

In PF2 there is no question of agentivity because intransitive change-of-state verbs do not have agents, but, as we have seen in 35 through 39, PF2 can be used best if the raised noun is topic or a possible referent for the topic. In PF1 sentences there may be a prototypical agent, and if there is then either it or the topic can be subject as in 40 through 42. Topic can override agent, in 40c, or agent can override topic, as in 40d. These data are best formulated by saying that subjects in this subset of English code the topic or its referent if it is expressed in the sentence, or, optionally, a prototypical agent if there is one, even if it is not the topic. If there is neither an agent nor an expressed topic, as in 34, 35, 38, 41, 43 and 45, I suspect that a hierarchy of semantic case roles will determine the subject, but I have not finished my research on that aspect of the problem. This analysis implies that non-PF1 and non-PF2 sentences are more basic, in some sense, than their property-factoring counterparts, since in the former the subject does not have to be topic (although it can be). If anything, the non-property-factored sentences are sensitive to the absence of an overt topic in the sentence. This is not to say that these sentences do not have topics, but just that the topic of the sentence is not expressed overtly in it.

The notion of topic--nominal discourse topic--has syntactic relevance in helping to determine the distribution of other types of English sentences as well. One example is Psych-Movement, exemplified in 47a and b:

- 47 What made you laugh just now?
 a I was amused at the cat's antics.
 b The cat's antics amused me.

In the response there is more than one concern: the speaker himself, and the cat's antics: the cat's antics, because that is the answer to the question and therefore the nominal discourse topic, and the speaker, because that is automatically a concern if it occurs at all. Compare 48:

- 48 What made Marsha laugh just now?
 a ??She was amused at the cat's antics.
 b The cat's antics amused her.

There are other things that help determine the distribution of Psych-Movement sentences, but nominal discourse topic is one of them.

The distribution of some existential sentences can also be explained using this notion of nominal discourse topic, as in 49 and 50 (cf. Van Oosten 1978a):

- 49 What happened to the rabbit?
 a A dog tried to attack him and he died of fright.
 b ??There was a dog that tried to attack him and he died of fright.
- 50 Why are you crying over that silly Lassie episode?
 a There's a dog that's going to drown if Lassie doesn't rescue her, and her master will be heartbroken.
 b ?*A dog is going to drown if Lassie doesn't rescue her, and her master will be heartbroken.

This type of existential sentence (with a relative clause after the demoted NP) can be used only if the subject both is not in the hearer's knowledge structure (or rather, is not in the speaker's model of the hearer's knowledge structure) and is the nominal discourse topic of the sentence, what the sentence is about. In 49 the topic of the response is the rabbit, not a dog, and so a dog cannot be given special prominence by existential there. In 50 a dog is the topic of the response, and so it can be given such prominence.

PF3 sentences also seem to follow this pattern, though certainly much more study should be devoted to them. Thus for example one can devise contexts for 8 as follows:

- 51 What did people find wrong with Manfred?
 a His credulity was criticized.
 b ?He was criticized for his credulity.
- 52 That group found something wrong with everybody. John was too tall, Mary laughed too much, and
 a ?Manfred's credulity was criticized.
 b Manfred was criticized for his credulity.

In conclusion, I hope I have shown three things: first, that property-factoring is an interesting phenomenon and deserving of more work; second, that in order to understand its distribution both the notion of nominal discourse topic and the notion of agentivity must be used; and third, that the notion of nominal discourse topic is relevant at the syntactic level as well as at the level of discourse.

Notes

1. The syntactic reasons why 11 and 12 are not PF2 sentences will become clear later, when the properties of PF1 and PF2 sentences are discussed in greater detail.
2. A class of sentences closely related to PF1 sentences but differing from the latter in intonation is exemplified by (i):

- (i)a That chair annoyed me, with its ripped upholstery and its springs sticking out.
- b John bothered me, with his constant talk about an imminent holocaust.

Such sentences, as well as PF1 sentences, are closely related to sentences like those in (ii):

- (ii)a That chair annoyed me.
- b John bothered me.

I will not be dealing with these types of sentences in this paper. Not all the conclusions made about PF1 sentences are transportable to the types of sentences illustrated in (i) and (ii). In particular, although a PF1 sentence forces a more agentive reading if the subject is a potential agent, as we will see later in the paper, this is not true of the classes illustrated in (i) and (ii). That is, the subject John in (i)a, though a potential agent, may be a case-grammar object (Cook 1979:64) rather than an agent. This is shown by the ability of such sentences to appear with the simple present tense (associated with stativity), as in the dialogue in (iii):

- (iii) A Why don't you like John?
- B He bothers me, with his constant talk about an imminent holocaust.

Their inability to appear with a continuous tense (associated with non-stativity), as in (iv), shows that the subject cannot have an agentive reading (under this intonation):

- (iv) A What is John doing?
- B *He is bothering Mary, with his (constant) talk about an imminent holocaust.

Without the parenthetical with phrase, as in (ii)b, a sentence of this form with a potential agent in subject position is ambiguous but can be disambiguated by context and the choice of tense:

- (v) A Why don't you like John?
- B He bothers me.
- (vi) A What is John doing?
- B He is bothering Mary.

3. In PF1 sentences, unlike non-PF1 sentences, however, the possessive must be a pronoun; a sentence like (i) is marginal and a sentence like (ii) is totally out:

- (i) ??John₁ exasperated me with John₁'s singing.
- (ii) *Mary exasperated me with John's singing.

4. The term "activity" is used here in a different sense than it was used by Zeno Vendler (1967). Vendler uses the term in a fourfold classification of verbs into activities, accomplishments, achievements and states. He illustrates the four types of verbs as follows:

For activities: A was running at time t means that time instant t is on a time stretch throughout which A was running.

For accomplishments: A was drawing a circle at t means that t is on the time stretch in which A drew the circle.

For achievements: A won a race between t_1 and t_2 means that the time instant at which A won that race is between t_1 and t_2 .

For states: A loved somebody from t_1 to t_2 means that at any instant between t_1 and t_2 A loved that person. (1967:108)

The notion of activity as it is used in the current paper, however, can include verbs in three of Vendler's categories: those of (Vendler's) activities, accomplishments, and achievements, but does not include all verbs in those categories.

5. There are pairs of sentences like 10 (of type PF3), repeated here for convenience,

- (i)a Jan's acting got better.
b Jan got better at acting.

which are obviously closely related to PF2 sentences in general, especially in the fact that the verb is a change-of-state verb, and the subject in the (a) sentence is a possessive NP, of which the possessor is the subject in the (b) sentence and the head noun is factored out into a prepositional phrase. The use of the preposition at seems to be related to the presence of an activity rather than an attribute; when a sentence like (i)a, with get better, contains an attribute its transform will contain in:

- (ii)a Jan's acting ability got better.
b Jan got better in acting ability.

This at is probably also related to the at discussed in Ross (1969), found in such sentences as (iii):

- (iii) John was polishing shoes when I left, and he was still at it when I got back.

6. I mean, of course, the referent of the noun. I will on occasion take a somewhat lax attitude to the distinction between NPs and their referents, where a stricter approach would make a sentence too cumbersome.
7. An explanation of the transcribing conventions used may be found in Sacks, Schegloff and Jefferson 1974, or Schenkein, ed. 1978. Differences between these two sets of conventions are minor and transparent.
8. There are possible counterexamples to this analysis, as for example in (i):

- (i) Why are you so upset?
a That shutter is annoying me with its flapping.
b ?The flapping of that shutter is annoying me.

The topic of the response is "Why I am so upset," not "the shutter," and so one would predict that the (b) sentence should be more acceptable than the (a) sentence, rather than vice versa. The key, I think, is to be found in the tense of the verb: a continuous tense, which seems to imply an (anthropomorphized) agentive reading for the subject. Dialogue (i)a is then analogous to dialogue 39d, and acceptable for the same reason. Dialogue (i)b should be analogous to 39a and 39c, but the problem seems to lie with the tense: it is the continuous tense and not the non-PF1 form that is inappropriate in this context. Note that when the same dialogue contains the simple present tense, the acceptability ratings are as predicted in this paper:

- (ii) Why are you so upset?
 - a The flapping of that shutter annoys me.
 - b ?That shutter annoys me with its flapping.

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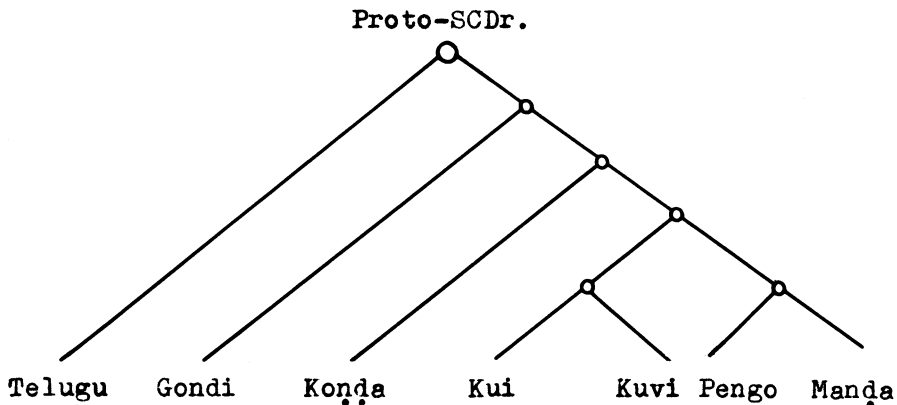
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A VOWEL-LOWERING RULE IN KUI-KUVI*

Bh. Krishnamurti

Osmania University, Hyderabad, India

§1.1. The South-Central (SC) branch of the Dravidian (Dr.) family consists of seven languages whose genetic subgrouping can be represented by the following tree diagram:



Each of these languages has essentially a five vowel system¹/i e a o u/ with contrastive length /ī ē ā ō ū/. A comparative study of the vocabulary of Kui and Kuvi shows that, at some point in the history of the pre-Kui-Kuvi stage, long mid vowels /ē ō/ merged with long low vowel /ā/, i.e.

Rule C. {ē, ō} > ā/(C)____... (Pre-Kui-Kuvi)

This is called Rule C, since it operates only on the output of two older rules, viz. the Vowel Contraction Rule (Rule A) and the Apical Displacement Rule (Rule B)

Rule A. (C₁) [e, o]C₂-a- > (C₁)[ē, ō]-

(C₁) = Any permissible PDr consonant in word-initial position:/p t c k m n ñ w/; for PSCDr. we can set up /p b t d c j k g m n w/ as (C₁).

(C₂) = Any glide or glide-like continuant derived from PDr. *y, *w, *k [-ɣ-].

Rule B. (C₁) [e, o]C₂-a- > (C₁)C₂[ē, ō]- (PSCDr.)

(C₁) = same as above; C₂ = as apical non-nasal consonant derived from PDr. *t [-r], *l, *r, *t̥, *l̥, *z̥.

Rules A and B seem to share certain common features, viz. (a) the shape of the root as (C)VC; (b) the presence of a low vowel /a/ as the nucleus of the formative suffix; (c) contraction of root and formative vowels into a long vowel with the quality of the root vowel. However, the phonological processes yielding long vowels in the two rules are quite different and their relative chronology is also different. Rule A involves contraction of two syllabics across a weakly articulated glide into a long vowel, i.e. V₁C-a > V̄₁. Rule B is an idiosyncratic development characterizing only the SCDr. sub-group. Whatever the underlying phonological process, the resultant sequences of this rule have either an apical as initial consonant if the underlying root begins with a vowel, or have an apical as C₂ in C₁C₂ if the underlying root begins with a consonant.¹

Rule A is found to operate at all stages and in all branches of Dravidian at different points of time, whereas Rule B is specifically a Proto-SCDr. rule (for details, see Krishnamurti 1978:18-19).

§1.2. The following 18 cases drawn from DED(S) show the operation of Rule C in Kui fully and in Kuvi partially.²

(1) PSCDr. *ker-a-, *ger-a-/ *krē-, *grē- 'to scoop up'. Kui grāpa (grē-t-): Kōṇḍa ker (ker-t-) 'take handfuls collect into a heap and pick up': Kui grāpa(grē-t-), Kuvi grec- (gre-t-) Pe. grē, Manda grepa, (BRR) grē- (S 290).

(2) PDr. *el-a-, PSCDr. *el-a-/ *lē- 'young, tender'. Kui lāvenju 'grown-up boy, young man', lāa 'grown-up girl'; Kuvi rā'a, lā'a, ra'a 'young woman, virgin': Te. ela, lē adj. 'tender, young'; Go. raiyōl 'adult boy', raiyā 'adult girl', layor, leyor 'young male', leyā 'young female'; Kui let 'soft'; Kōṇḍa lēṇa 'calf', lēta 'tender'; cf. Ta. Ma. ila, Kō. el, To. el, Ka. ela, Tu. ele, 'young, tender'; Pa. ilēd 'young man', ile 'young woman'; Gad. ilēnd 'bridegroom', ilēd 'bride' (436).³

(3) PDr. *il-a/*el-a, PSCDr. *el-a-/ *lē- 'silk cotton tree'. Kuvi dākāṅgi : Go. leke, Kōṇḍa lēka maran, Kuvi lēko; cf. Ta. ela, ilavam, ilavu, Ma. ilavam, ilavu, Ka. elavu (421).

(4) PDr. *cup, PSDr. *cup : *cow-ar, PSCDr. *sowar/*sōr 'salt'. Kui sāru, Kuvi hāru, Manda jār, Indi jār: Go. sovar, hovar (savor, havor by vocalic

metathesis), Konda sōru, Pe. hōr, Indi hūr (2201).

(5) PDr. *et-a-*, **et-ank*, PSCDr. **er-a-*/ **rē-* 'to descend'. Kui *jāpa* (*jā-t-*), v.int./n. , *jāppa* (*jāp-t-*) caus.:Go. *rey*, *ray*, Konda *re-* v.int., *rep-caus.*, Kuvi *rec-*, *re-* v.int., *rēph-* caus., Manda, Indi *jē*, *jēp* (439).

(6) PDr. **kil-a*, PSDr. **kel-a-*, PSCDr. **kel-a-*/ **klē* 'to crow, lament'. Kui *klāp* (*klā-t-*), 'to crow, coo, lament':OTe.*celāgu* 'to sound, cry loudly'; Go. *kilīt-* 'weep loudly'; Kui *klīri inba* 'to shriek' Kuvi *kileri kī* 'to shout', *klīri in* 'to yell'; cf. Ta. *cilai* 'to roar, sound', *cil* 'sound'; Ma. *cilekka* 'to chatter, chirp', Ko. *kilc* 'to utter shrill cry'; To. *kis* 'to crow'; Ka. *kele* 'to cry', Tu. *kilepuni* 'to crow' (1311).

(7) PDr. **kuz-a*, PSDr. **koz-a*, PSCDr. **koz-a*/ **kzō* 'pit, hollow'. Kui *krāu* (pl. *krānga*), n. 'pit, hole, cave'; Kuvi *graiyū*, *grāyu*, *glāyu*, Manda *kray*, (BRR) *krāy*: OTe. *krōlu*, *krōvi* 'tube', *groccū* 'to dig', *grōyyi* 'pit'; Go. *kori* 'ditch, hole'; Konda *kurŋi* 'to be hollowed out'; *kurk* 'to make pits'; Kui *krōdu* (pl. *krōtka*) 'tube, quiver'; Pe. *kroy* 'pit'; cf. Ta. *kuzal* 'pipe', *kuzi*, *kuzumpu* 'pit', Ma. *kuzi* 'hollow', etc. (1511).

(8) PDr. **kut-a*, PSDr. *kot-a* [*kor-a*]; PSCDr. **kor-a*/ **krō* 'to cut'. Kui *krāpa* (*krā-t-*) 'to cut, saw', n. 'act of cutting': cf. Ta. *kurai* 'to cut, reap'; *kura* 'a piece'; Ma. *kurekka*, Ko. *korv-*, To. *kwarf v.*, Ka. *kore* 'cut wood with a saw', Tu. *kudupuni* 'to cut, reap'; Pa *kud/kud* (*kutt-/kutṭ-*) 'to cut' (1544).

(9) PDr. **kel-a*, PSDr. **kel-a-*, PSCDr. **kel-a*/ *klē-* 'family'. 'family, kindred', Kui *klāmbu* (pl. *klāpka*) 'family, lineage, kin, tribe': cf. Ta. *kāl* 'kindred, friend'; *kilai* 'to ramify, to multiply', n. 'kindred, relations', flock, herd, family'; Ko. *kel*, To. *kel*, Ka. *kele*, *gele*, *gene* 'friendship'; Tu. *gene* 'coupling' (1678).

(10) PDr. **tet-a*, PSDr. **tet-a* [*ter-a*], PSCDr. **tera*/ **trē* 'to open'; Pre-Kui...Manda **re-* by loss of *t-* (see below). Kui *dāpa* (*dā-t-*) (< *jā-*) 'to open a door, clear a passage'; n. 'act of opening'; OTe. *teracu*, MTe. *teruc-* 'to open'; Go. *tarīt-*, *ter*, *terr-*, *reh-*, Konda *re-*, *tere-*, Kuvi *dē-* (*dē-t-*), Pe. *je* (*-t-*), Manda *jē* (*-t-*), (BRR) *jēp ā* 'to be opened'; Indi *jē*; cf. Ta. *tira*, Ma. *turakka*, Ko. *terv*, To. *ter*, v.; Ka. *tere v.*, *tera* n., Kod. *tora*, Tu. *terapu* n. (2667).

(11) PDr. **nil-a*/ **nel-a*, PSDr. **nel-a*; PSCDr. **nel-anj-*/ **nlēnj-* 'moon'. (**nl-* > *l* in all SCDr.

languages except Te. in which *nl-* never occurred.) Kui *dānju* (pl. *dāska*) 'moon, month, season' (In Winfield Kui *l/d* vary dialectally; here, *d* < *l*): Te. *nela*, Go. *nālēnj*, *nelenj*, *lēnj*, Konda *nela* (pl. *nelenj*), *lēnju*, Kuvi *lēnju* (pl. *lēska*), Pe.-Manda - *Indi lēnj*; cf. Ta. *nilavu*, *nilā*, Ma. *n(i)lāvu* 'moon'; To. *nes-of* 'moonlight'; Kod *nela* 'moon, moonlight' (SDr. has lost the meaning of 'month'; cf. **tinkal* 'moon, month', DED 2626); Kol. Nk. *nela* 'moon'; Pa. *neliñ* (pl. *nelñil*) 'moon, month'; Oll. *neliñ*, Gad. *nelling* 'moon', *nela* 'month' (3113).

(12) PSCDr. **por-a/prō* 'to sell'. (words meaning 'to sell' which occur only in SCDr. are mixed up with 'spread' words in this group, because of the 'a' vowel in Kui. It appears reasonable to separate the two groups in this entry). Kui *prāpa* (*prā-t*) 'to sell', n. selling; Kuvi *prah-*, *pra* (*pra-t*): Konda *por* (*por-t-*), Pe. *pro-* (*pro-t-*), Manda (BB) *prē-*, (BRR) *prē* 'to sell' (3255).

(13) PDr. **pet-a*, PSDr. *per-ukk-*, PSCDr. *per-akk*, *per-ukk-* 'rice'. Kui *prāu* 'rice, husked paddy', *prāma* 'a grain of boiled rice'; Te. *prālu* 'rice': Go. *parēk*, *perek* 'husked paddy', Konda *perku*, Pe. *preyi*, Manda *preyi* 'rice'; cf. Ta. *perukkal* rice; Nk. (Ch.) *perku id.* (3286).

(14) PDr. **pic-ar*, PSDr. **pec-ar/* **pey-ar/* **pēr-*, PSCDr. **pēr* 'name'. Kui (K) *pāru* 'name': Te. *pāru*, Konda *pēr*; cf. Ta. Ma. Ko. *pēr*; Kol. Nk. *pēr* (3612).

(15) PSCDr. **moz-al/* **mzōl* 'hare'. Kui *mrādu*, Kuvi *mrālu*, *mrālū*, Indi *mñāl*: Pe. *mzōl*, Indi *mñōl*; cf. Go. *malōl*, Konda *morōl* (4071).

(16) PDr. **mut-ā-/* **mot-a*, PSDr. **mot-a-* [*mor-a-*], PSCDr. **mor-a/* **mṛō-* 'rope'. Kui *mrāsu* 'rope made of hide', Kuvi *mārcā* 'rope attaching bullock to plough': Go. *marōnj*, *maronj* 'bark'; *moros*, *moṛos* 'rope made of fibre of paur tree'; cf. Ta. *murarci* 'a cord'; Ta. *muraje* 'rope made of straw' (4079).

(17) PDr. **mez-a*, PSDr. **mez-a*, PSCDr. **meza-/* **mzē-* 'to plaster', Kui *mrānda* 'to plaster, smear' n. 'plastering': Te. *mrēgu* 'to plaster'; Go. *marhutt-*; cf. Ta. *mezuku v./n.* (4169).

(18) PDr. **nir-yānt*, PSCDr. *nir-ōnd/nir-ōnd* 'last (completed) year'. Kui. *rāndu* 'last year'; Kui. *rāndu* 'last year': Go. *yēnd*, *hēnd* 'year before last', Konda *nirund* 'last year', Kui *rōndu* 'in a previous year, year before last', cf. *ōndu* 'a year'; *vār-ōndi* 'next year'; Pe. *iyondiñ* 'this year' (4230, S567).

§1.3. Of the above 18 items the operation of Rule C is found in the following language(s):

Kui only 1, 6, 8, 9, 10, 11, 13, 14, 17;

Kuvi only 3 (no cognate in Kui);

Kui and Kuvi 5, 7, 12, 15, 16, 18;

Kui, Kuvi and Manda 2, 4.

Kui shows the operation of Rule C in all the 18 cases (100%); Kui alone shows the change in as many as 10 out of the 18 items (56%); Kui-Kuvi share the change in eight items (45%); Manda shares the change with Kui-Kuvi in two cases (11%). It is clear that the sound change is commonly initiated at the Proto-Kui-Kuvi stage (in view of 8 shared items) and has spread more widely in Kui than in Kuvi through lexical diffusion. There is one exclusive case where Kuvi shows the change, but Kui has no known cognate. It is not clear if the Manda change is sporadic or if it carries a trace of the innovation shared presumably at the proto-Kui-Manda stage. The difficulty in holding this assumption is that Pengo, the nearest sister of Manda, has not a single case attesting the vowel-lowering rule.

The following analysis shows the sources of the mid vowel /ɛ ɐ/ by the application of Rules A and B which constitute the input to Rule C.

	ɛ	ɐ
Rule A	14	4
Rule B	1,2,3,5,6 9,10,11,13 17, 18	7,8 12,15 16

From the above distribution, there can be little doubt regarding the application of Rule C on the output of Rule B since there are 16 etymologies testifying to apical displacement resulting in long mid vowels. It is also clear that Rule B had operated in the entire subgroup, though less widely in Gondī and Kōṇḍa than in the other languages. The word-initial consonant clusters formed by Rule B were subsequently simplified by the following rule, which I call Rule B':

Rule B'. $C_1C_2V > C_1\emptyset V/\#$ — (Telugu)
 $> \emptyset C_2V/\#$ — (Gondī-Kōṇḍa-Kui-
 Kuvi-Pengo-Manda)

Out of the above cited 18 cases, there are at least two which attest the operation of B' in SCDr.:

(10) PDr. *tet-a-, PSCDr. *ter-a/ *trē : *trē > rē
(Gondi (dial.), Kōnda-Kui-Kuvi-Pēngo-Māṇḍa) (2667).

(11) PDr. *nil-a/*nel-a; PSCDr. *nel-ānj/*nlēnj:
*nlēnj > lēnj (Gondi-Kōṇḍa-Kui-Kuvi-Pēngo-Māṇḍa) (3113).

B' is also an older Rule which predates Rule C since it involves many more languages than does Rule C.

In our data, there are only two examples for Rule A which constitute input to Rule C. Item 4 is the clearest case showing vowel contraction: *sowar > sōr as a shared innovation of Kōnda-Kui-Kuvi-Pēngo-Māṇḍa. This is attributable to a common stage of these five languages rather than to PSCDr. since Gondi dialects preserve the uncontracted form *sowar (with metathesis of vowels *sawor in some dialects). The Proto-Dravidian form is *cuwar (< *cup + ar) which becomes *cowar in PSDr. by the regular sound change *u>*o before Ca in the next syllable. This change is shared by both SDr. and SCDr. The descendants of PSCDr. (except Telugu) have lost the derivatives of the root *cup 'salt'. Item 14 is not a clinching case since only Kui (K) has pāru, while Kōṇḍa has pēru. The rest of the languages have no cognates. There is another case where one would expect the vowel-lowering rule to operate in Kui-Kuvi but it does not, viz.

(19) PSDr. *tokal/*tōl, PSCDr. *tōl, PCDr. *tōl.
Ta. Ma. Ko. Ka. Te. tōl(u) 'skin, hide'; also
Ma. tukal, Ka. togal, toval, Tu. tugali, Te. togalu
id.; Go.-Kōnda-Kuvi tōl(u); Kol. Nk. Pa. tōl.
Here the contraction is found in all but the North-
Dravidian group which has no clear cognates. From
the above evidence, it appears that the output
of Rule A is not subjected to vowel-lowering as
widely as the output of Rule B. Secondly the vowel
contraction rule goes back to the PDr. stage in
19 whereas in 4, Rule B belongs to SCDr (Pre-
Kōnda...Māṇḍa stage).

§1.4. Contrasting with the above developments
is the absence of vowel-lowering in cases where
PSCDr. ē ē are traceable to PDr. *ē *ē or to
contractions resulting from [e, o] C-V₂ where V₂
is a high vowel /i u/ and not a low vowel /a/ as
in Rules A and B. Examine the following examples:

(20) PDr. *ner-u-; Pre-Kui-Kuvi *nrē- > Kui-Kuvi
*drē- 'fire'. Kui drē 'ignition', drē inba 'to be
ignited': Ta. neruppu, Ma. ṇerippu 'fire' (2389).

(21) PDr. *yāt 'river, water', PSCDr. *ēr: Go. ēr, Konda. ēru, Kui ēju, Kuvi ēyu, Pe. ēzun, Manda ey (4233).⁶

(22) PDr. *ēr/*er-V-, PSCDr. *ēr/*er-v- v. int. 'to burn, blaze': OTe. eriyu: v. int. 'to burn', Ērcu v.t., ēru n. 'ache'; Go. ērit- 'to hurt'; Konda er- 'to kindle fire'; Kui ērpa (ēr-t-) 'to light, ignite', n. 'lighting'; Kuvi er- v. (694).

(23) PDr. *kōl; PSCDr. *kōl 'stick' Go. kōla, Konda kōl, Kui kōd (pl. kōtka), Kuvi kōlū (pl. kōlka), Pe. kōl, Manda kōl (1852). There are many more cases of the type where PSCDr. *ē ē (< PDr. *ē ē) do not merge with PSCDr. *ā (< PDr. *ā) in pre-Kui-Kuvi.

§1.5. The question is how does one explain the different treatment given to ē ē derived from Rules A B from that given to continuing ē ē from the PDr. stage. When PSCDr. /ē ē/ derived from Rules A B had merged with /ē ē/ (< PDr. *ē ē), how was it possible that the former set underwent vowel-lowering and not the latter set? A solution to this should lie in one of the following assumptions: (a) The derived pair of long vowels from Rules A and B was not really /ē ē/ in quality, and therefore, there was no real merger of this pair with /ē ē/ (< PDr. *ē ē) in SCDr. Then, the derived set was phonetically mid way between the mid vowels and the low vowel leading to a subsequent merger with one /ē ē/ or the other /ā/. In other words, the derived vowels failed to produce new height contrasts in view of the small number of instances involved; subsequent changes were governed by the typological pressure exerted by the five vowel system. (b) A rule can 'look back' at the derivational history of the forms to which it applies. Here Rule C could apply only to derived long mid vowels but not to underlying long mid vowels. This kind of rule, then, would be similar to what generative phonologists call 'a global rule' in synchronic phonology, which introduces derivational constraints on the application of certain rules (Kenstowicz and Kisseberth 1977: 197-229, Kiparsky 1973).

I would rule out the second alternative because it does not make sense in historical linguistics. How would the speakers of SCDr., at whatever stage, be endowed with the historical knowledge of the sources of the two sets of *ē and *ō so that they would give one type of treatment to one set (*ē *ō > ā) as opposed to the other (*ē *ō > ē ē).

Secondly notice that Kui and Kuvi retain the qualities of * \bar{e} * \bar{o} even if they are derived from contraction rules (modified Rules A and B), provided that in the underlying environment there is no low vowel in the second syllable, i.e.

Rule A'. (C) [e, o] C-i/u > (C) [\bar{e} , \bar{o}]-

Rule B'. (C₁) [e, o] C₂-i/u > (C₁)C₂[\bar{e} , \bar{o}]-

There are several examples for Rule B' (see Item 20 above), e.g.

(24) PDr. *koz-uw, PSCDr. *k \bar{o} zuw/*k \bar{z} \bar{o} w 'fat'.
Go. korvinj, Konda korvu, Kui k \bar{r} \bar{o} ga, K \bar{u} vi korva,
kl \bar{o} wa; Pe. k \bar{r} \bar{o} 'to be fat', kor \bar{v} a 'fat'; Mand \bar{a} (?)
kr \bar{u} a (1784).

The underlying environments of A and A' are complementary and they can be collapsed into a single rule; so can be B and B'. It is only / \bar{e} \bar{o} / derived from Rules A, B that have undergone lowering and not those derived from Rules A B'. Vowel-lowering in Kui-Kuvi etc. should then be related in some way to the lowering influence exerted by /a/ in Rules A and B.

§1.6. Krishnamurti (1958) has explained how PDr. *i, *u merged with *e, *o before C-a in PSDr. This is a clear case of vowel harmony or 'umlaut' which is one of the most widely discussed and recognized sound changes in Dravidian. It is now clear that the SCDr. group also shows the sound change (high-vowel-lowering). Therefore, both SDr. and SCDr. must have inherited this sound change from a common ancestor. All South Dravidian languages retain PSDr. *e *o before C-a whereas Tamil and Malayalam shifted these to i u at an older stage, and again changed them later to e o. These developments, therefore, show neutralization of PDr. vowels *i *e on the one hand, and *u *o on the other, in two of the major branches, SDr. and SCDr.

Bright (1966) has extensively examined the spread of the high-vowel-lowering phenomenon even outside the Dravidian linguistic area. Apart from a possible areal drift, we are dealing here with specific cases where the qualities attested by the SCDr. languages represent the merger stage, i.e. *e *o before C-a even where PDr. has clearly *i *u (see particularly Items 4, 6, 7, 14, and 18 above).

In most of the Southern languages that have retained PSDr. *eC-a and *oC-a, the mid vowels are pronounced opener in the environment C-a, than when they are followed by a closed vowel (Bright 1966:316-19). The forms which constituted the input to Rules A B could therefore be expected to have had

low mid vowels allophonically before contraction took place, somewhat as follows:

(C)[e, o]C-a > (C)[ɛ, ɔ]C-a-

The resultant long vowels after contraction would be [ɛ] and [ɔ] or lowered /ɛ ɔ/, which would normally have become contrastive with /ɛ ɔ̃ ɔ̃/, since the conditioning environment -a was obscured in the process of contraction. The process is similar to what has happened in standard modern Telugu (Kelley 1963), e.g. gōru+lu [go:ru+lu] /gōllu/ 'nails', gōḍa+lu [gɔ:ḍa+lu] /gɔ:llu/ 'walls'.

Telugu speakers do not cognitively perceive two phonemes /ɛ ɔ/ here; both are treated as variants of /ɔ/ with different phonetic realizations in different underlying phonetic environments. In coastal dialects the openness of the vowel in the environment C-a is much more than it is in Telangana and Rayalasima dialects.

It appears that the resulting lowered vowels [ɛ ɔ] of PSCTDr. had merged in most of the descendant languages with ɛ ɔ. In Kui-Kuvi they were further lowered to merge with ɛ̃ dialectally. The contraction cases are naturally too few to destabilize the five-vowel system. It appears that, when allophones become 'phonemic' through secondary split, the number of cases involved in such a split would be a potential factor in determining whether the resultant 'transient' phonemes will enlarge the phonemic system or will conform to the existing system by merging with the established phonemes. For instance, Emeneau (1970: 146) shows how PSDr. root vowel *e merges with /a/ when followed by a retroflex consonant + a (derivative vowel) in Kodagu.

The fact that this change is found in Kui-Kuvi and Manda (also Indi), it is reasonable to assume that the underlying long vowels had lowered articulations in the entire subgroup that inherited the contracted forms. For instance, all languages (except Te. and Go.) viz. Konda-Kui-Kuvi-Pengo-Manda might have inherited [*sɔ:ru] (<[*sɔwar]) 'salt' in which the [ɔ:] vowel merged with ɔ̃ in Konda, but remained as [*ɔ:] at a common stage of Kui-Kuvi-Pengo-Manda. Then [ɔ:] > /ɛ̃/ in Pre-Kui-Kuvi, but proceeded as [ɔ:] to the common stage of Pengo-Manda. In Pengo [ɔ:] > ɔ̃, but in Manda [ɔ:] > ɛ̃.

Notice that there are doublets in a few cases dialectally even in Kui and the other languages of the subgroup: Kui grēpa/grēpa 'to scoop up' (S 290), Kuvi dākāngi/lēko 'silk cotton tree' (421), Kui krāu 'pit', krōḍu 'tube' (1511), Indi mṇāl/mṇōl 'hare' (4071).

In (1511) the two Kui lexical items have developed different meanings. This state of affairs suggests that the change is relatively recent and is an ongoing one.

§1.7. There are a few counter examples to Rule C, i.e. items which fulfill the structural conditions of Rule C for vowel-lowering still have not undergone it in any of the SCDr. languages.

(24) PCDr. *cir-a, PSCDr. *ser-a-/*srē- 'Chironji tree, *Buchanania latifolia*': Go. sarēka, rēka, Kui srēko, Kuvi rēko, Pe. rēka maran, Ma. rēko (2160).

(25) PSCDr. *pezan/*pžēn 'bone': Go. perka, perēka, pen?ka, pēreka, pareka, Kōṇḍa perēn, prēnu (pl. perēk, prēku), Kui prēnu (pl. prēka), Kuvi prēnu, plēnu, Pe. prēnu, Pe. prēn (prēku), Ma. prēn (pl. prēke) (3619).

Such apparent exceptions can be explained in one of the following ways: (a) All SCDr. languages merged the underlying *ē *ṣ in these with ē ṣ; (b) The environments in the non-contracted forms had a high vowel and not a low vowel; (c) Since vowel-lowering in Kui-Kuvi is still an ongoing change, there still are residual forms which may undergo the change in the future. It would be interesting to see if any of such residual forms have lower mid-vowels phonetically. The fact that a few exceptions exist will not disprove Rule C as formulated here.

§1.8. Conclusion: The vowel-lowering rule which merged PDr. *i *u with *e *o in PSDr. included not only the Southern group (Ta. Ma. To. Ko. Ka. Kod.) but also the South-Central group (Te...Manda). By this observation, we can say that the two branches, SDr. and SCDr., had a common stage of development which can still be called Proto-South-Dravidian. There are other types of evidence that would support the realignment of SCDr. as a branch of PSDr. (Krishnamurti 1976, §1.7). The mid vowels e, o preceding C-a in almost all the languages had opener allophones, somewhat like ē and ṣ. Consequently, the vowels resulting from Rules A, B could be [ē] and [ṣ]. These subsequently merged with /ā/ mostly in Kui and in quite a few cases in Kuvi, but to a much less extent in Manda (and Indi). This change is based on the following postulate: Surface phonetic contrasts which develop through merger or loss of conditioning factors (i.e. secondary split) will develop into new phonemes, if a sufficiently large number of lexical items are affected by the sound change; otherwise, they will merge with the phonemes already established in the system. Toda and Kodagu have developed new

vowel phonemes through such secondary splits because a large number of morphemes are affected by such splits.

NOTES

*Professor Emeneau's publications have significantly contributed to comparative Dravidian phonology in addition to other areas, during the past three decades. If this short paper which is based on the data provided by the Dravidian etymological dictionary (DED) (1961) and its supplement (DEDS) (1968) can advance our knowledge of this area by another inch or so, I am sure my Guru will be happy to look at it as a small flower tucked in the bouquet of papers being presented to him by the BLS. I am grateful to the BLS for inviting me to join in their tribute to this great scholar and teacher.

The theme of this paper was conceived during my Fellowship year (1975-76) at the Center for Advanced Study in the Behavioral Sciences, Stanford, and a short mention of the underlying idea occurs in my review of Zvelebil's Comparative Dravidian Phonology (Krishnamurti 1976: 144-5). However, this is a more detailed treatment of the problem with fuller data and a discussion of all the theoretical implications. Professor Emeneau himself had encouraged me in 1976 to write it up into a full paper.

1. Modern Telugu has developed /æ/ as a phoneme which arose from morphophonemic iā. [æ] can still be treated as a phonetic realization of underlying /iā/ in most of the native words.

2. The abbreviations used in the following etymological groups are taken from DED(S) (See References). My colleague at Osmania, B. Ramakrishna Reddy, recently did field work on Manda and also reported about another related dialect/language (?) called 'Indi'. I am grateful to him for supplying me with cognates from his unpublished field data. Lexical items preceded by (BRR) are furnished by him.

3. Burrow and Emeneau derive the Kui-Kuvi words with ā from PDr. *al- 'strength' in 248, but, in the light of the sound change discussed in this paper, Kui-Kuvi forms clearly go with 436.

4. This rule provides a shared innovation in Gondi... Manda as against Telugu. The full form of the rule is not stated here, for instance, Modern Telugu loses C₁ if it is /w/ and the following vowel is [+low], e.g. OTe. *wɾəyu > MTe. rəyu 'to write'.

5. The cluster formation rule (Rule B) has died out in Gondi but it should have operated in Pre-Gondi; otherwise, there is no way to explain forms resulting

from the operation of Rule B' in Gondi. Note that Rule B' simplifies the consonant clusters created by Rule B.

6. PDr. *yā develops to PSCDr. *ē and is treated like PDr. *ē (>PSCDr. *ē).

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The Conversational Duet
Jane Falk
Berkeley, California

Example I:

Both she and her daughter then leaned towards Martha, smiling with warm friendship, and proceeded to tell her how happy they were that Dougie was married at last, how wonderful, how suitable, how...As one woman arrived at the end of a breathless phrase, searching for the superlatives that could not express what she felt, the other took it up; it was a duet of self-immolation.

--A Proper Marriage, Doris Lessing

This paper will demonstrate that the above excerpt describes an important conversational phenomenon overlooked until now in the theoretical literature--one which both forces us to reexamine many of our existing premises and constitutes a rich object of study in itself.

Existing analyses of natural conversation, whether by linguists or our counterparts in other disciplines, pivot on the assumption that there are just two ways to participate in a conversation--as speaker or as auditor. Underlying this is the further assumption that the roles of speaker and auditor can be occupied by only one individual at a time.

But, as the Lessing excerpt suggests, there is a third alternative, intermediate between speaking and auditing. In conversations between three or more persons, two of them may undertake jointly to carry out the communicative task to a third in such a way that a written version of their resultant in-sequence text would be indistinguishable from that of a single speaker. Example I is a fictionalized portrayal of this naturally-occurring phenomenon.

The unique text is the rhetorical consequence of a particular set of conditions and intentions being enacted by the speakers. These too are accurately portrayed by Lessing:

- a) The partners (mother and daughter) have mutual knowledge of the topic at hand (Dougie and his marriage), equivalent authority to express that knowledge (it is first-hand on both their parts, presumably), and a sense of camaraderie between them.
- b) They share a like communicative goal (to express delight about the marriage).
- c) They are addressing in tandem not each other but a mutual audience (Martha).

d) They intend it to be understood that each of their contributions counts on both their behalfs. When these conditions and intentions are in effect the form of each speaker's individual contribution does not pattern with that of the single speaker or auditor. Only when taken as a unified event is the sequence interpretable, or amenable to traditional analysis. Therefore, Lessing's term for it is not a mere figure of speech. Such an event is appropriately labelled a "conversational duet".

Dueting allows one to do things one cannot do as speaker or auditor. Generalizations about conversational processes which depend on a speaker-auditor model permeate every facet of conversational analysis. Let us take the various vantage points as discrete arenas in order to consider the implications of the duet for the field.

Non-verbal behavior

Speakers and their auditors face each other. Duet partners (who most often are seated side-by-side) maintain parallel body posture and gaze direction. Even while one is speaking the other is not turned toward him, but toward their mutual audience. (Note that in Example I the mother and daughter are described as both leaning toward Martha.)

Conversation is by definition complementary. The duet is a structure of symmetry within the overall complementarity, and the extra-linguistic behavior naturally reflects this.

Turn-taking¹

Example II: (J=Jeff; R=Ruth; O=All other participants)

- 1 R: We went uh almost everywhere except that it
- 2 was foggy for half the time we were over
- 3 there
- 4 O: Yeah you don't seem too enthusiastic about it
- 5 R: [it was a good trip yeah it was yeah]
- 6 J: [Well it was a great trip except that] it was a
- 7 foggy day and we...

In speaker-auditor transactions there is ambiguity as to who has the right to next-turn only if the previous speaker has not allocated this right to a specific person. Turn-initial overlaps such the one in lines 5-6 are the consequence of spontaneous coincidental attempts by auditors to acquire a non-allocated turn.

Here, O seems to have selected Ruth, but Jeff overlaps with her as though next-speaker rights had not

been allocated. And he does get the floor. Ruth shows no evidence of being disconcerted. Nor does O.

The explanation for this lies in the fact that Jeff and Ruth have been dueting. Selection of either partner to a duet as next-speaker gives both of them the right to talk. Which one will act remains undetermined. Turn-initial overlaps therefore abound.

Among single-speakers, until a turn is allocated, every party to the conversation is equally the potential next-speaker. For dueters, whenever one partner speaks, the other can and often does speak next. He does not have to listen for whether he will be selected, as single speakers do. His is not a new turn, but a continuation of the floor-holding by the duet, in effect. A turn-taking subsystem is always potentially activated whereby the duet partners alternate with each other a number of times before a third party gets to intervene.²

The direction of turns is also affected by the involvement of a duet:

Example III:

- 1 J: And uh we uh talked about the tourists there
- 2 and we left and went to the Palace of the Le-
- 3 gion of Honor, right?
- 4 R: Again for a view of [the Golden Gate
- 5 J: [For a view of the Gol-]
- 6 den Gate Bridge and there was no view
- 7 O: Aaahhh

Strictly-speaking, Jeff broke the duet in line 3 to request verification of what he just said. Ruth's response, line 4, though in compliance, is not directed back to its requester (Jeff), as in a speaker-auditor interaction, but to a third party.

In speaker-auditor transactions, questions based on a previous speaker's utterance are assumed to be directed to that speaker. Dueters' are not:

Example IV:

- J: And uh then we went to Fort Point which was
interesting because we had a tour
R: Have you ever been there?

Ruth's question cannot be addressed to Jeff, because he just gave the information it asks for. Pragmatics approaches would also have difficulty with this example. They have thus far analyzed the appropriateness of sequences of sentences in a discourse according to two categories: "next sentence" and "next sentence where there has been a change of speakers" (Fillmore 1972).

Ruth's question, in this framework, would be appropriate only to the former. But it is the latter, when "speaker" is defined as an individual.

The above facts are not mere amendments to the existing model of turn-taking. They demonstrate that we are not talking about a system which is "context-free". In invoking the duet we have needed to go beyond the surface features of any one turn to the number of participants involved and the conversational relationships set up in the preceding discourse. The structure that exists in conversation is underlying structure, needing to be interpreted on the basis of a number of features of the whole discourse. (See Gumperz 1977, 1979)

Interruptions

It has been shown that the perception of being interrupted is not accounted for by an independently-observable definition of interruptions (Bennett 1978, Mishra forthcoming). It is also true that auditors sometimes "interrupt" the speaker to complete his sentence as a display of understanding and rapport (Tannen 1979). But a dueter-interrupter, as in Example III/5-6, continues the turn lexically and prosodically just as the partner undoubtedly would have, to the same audience she was addressing. (Note that a third party responds, line 7, and not Ruth, the interruptee.)

In a duet, competition for the floor is not competition to express a separate point of view, nor a mark of good listening behavior. It is merely competition for who will be the spokesperson for a mutual view, and that is an issue of far less consequence than the one implied in speaker-auditor transactions. As a matter of fact, it often happens that after being overlapped, a dueter will "recycle" his partner's overlapped portion rather than his own, as below:

Example V:

O: But actually shouldn't that have given you a greater sense of camaraderie?

R: [It was fun]

J: [Oh it did] It was a lot of fun

Dueters are engaged in an essentially cooperative enterprise. This fact overrides many behaviors which outside of a duet would have considerably more impact, among which is being interrupted.

Form of turns

Example VI:

- J: Because we had already planned everything we
 had an itinerary planned we couldn't change
 R: There were five cars with directions

As in Example V, duet turns are typically characterized by the absence of a transition that would address the relation of the turn to a prior one and display the speaker's understanding of it ("Yeah", "Oh", prosodic contrasts, etc.). Understanding between duet partners is presupposed; it does not need to be displayed.

Nor do explicit interruption markers occur (e.g., "Wait a minute"), or initial appositionals ("Well", "Y'know", etc.) Dueters will often echo or paraphrase a partner without apparent reason, as self-editing single speakers are wont to do. The effect of "single-speaker unity" that characterizes the text is in large part attributable to these features.

Role of speaker

In order to accommodate the duet, the fact of speaking needs to be distinguished from the role of speaker. While it is true that for the most part only one person speaks at a time, that does not preclude there being more than one speaker at a time. All the above "deviations" follow logically when it is understood that dueters are sharing a single conversational role. That is, they are co-speaking. One-to-one conversation can be understood as the exchange of "solo" performances--each role is occupied by a single person. But in group conversations two (or more) persons may participate as though they were one, by dueting. There are actually three ways to participate in a conversation--as speaker, as auditor, or as dueter, calling on features from both.

Backchannels

Backchannels (Yngve 1970) are those short interventions which serve to spur the speaker on. It is assumed that they are the domain of an auditor. But dueters' subturns, because they too reflect support and understanding of the partner's talk, function as backchannels, to the extent of diminishing the need for any input from the third party. Married couples (the foremost candidates for dueting) often duet blithely on in their own private code, with apparent obliviousness to the fact that no one else is understanding them or supplying feedback.

Syntax

The duet governs formulation and interpretation of utterances on all levels, including the syntactic:

Example VII: (H=Husband; W=Wife)

Host: You can come over for lunch you really can
 H: Nope can't do it I'm gonna go birding
 W: I might come over for lunch though if you
 can get John to drive tomorrow.

The absence of a subject in the husband's first sentence would ordinarily be disambiguated by the "I" in the next. But the ambiguity occurs in the context of an ongoing duet, so the sentence is assumed to have a deleted "we", making his going birding reason for both not to be able to come for lunch, in the eyes of his wife (or in her projection of the eyes of the host).

Socio-psychologically oriented discourse analysis

The duet can also be a valuable instrument in the inquiry into the correlation between language behavior and aspects of personality. In one case in my data, the parents of a schizophrenic son use the duet form to obfuscate their communication, while all along conveying the impression that they are being perfectly clear. How both parents relate as a team to their son obviously affects his development.

Whether one duets at all may carry significance (and may be ethnically or geographically determined to some degree), as does the particular way a couple duets. In the Jeff-Ruth examples above, Jeff does the major work and Ruth merely supplements for the most part. What other variations are possible? Is a degree of disagreement obscured by the use of the duet? There are well- and ill-formed duets: one partner using "I", the other "we", while in all other respects dueting seems to violate a cooccurrence rule of sorts. What do the differences reflect about the dueters and the relationship between them? Are some circumstances more conducive to dueting than other? These are all potentially fertile areas of further study.

The duet is an interpretation, based on the cooccurrence of signals on these many channels of the communication (See Gumperz 1978). It in turn should constitute one variable in an interpretive approach to the broader questions of conversational meaning.

Notes

¹The following sections draw largely from Sacks, Schegloff, Jefferson 1974. Also drawn on are Sacks 1972, Schegloff 1972, and Sacks and Schegloff 1974.

Examples I-VI are from a videotape of a conversation between ESL teachers about class trips.

²For this reason it would be more apt to call duetters' turns "subturns" and only their whole in-sequence participation a "turn".

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