ABSTRACT
              In a written discourse consisting of a string of
"psychological paragraphs," there is in each such psychological
paragraph a "head" structure containing the topic which derives from
the deep structure of the discourse. That "head" assertion differs
from all other assertions in the psychological paragraph in that it
carries new information. The topic expressed in the head assertion is
maintained through the remainder of that psychological paragraph by
the operation of "focus" which is achieved through appropriate choice
among available syntactic alternatives. An attempt to provide
empirical verification of these assumptions is described. It seems
that native and non-native speakers differ in their ability to
determine what presuppositions may in fact be shared between writer
and reader in a given communication setting (a cultural problem).
Secondly, native and non-native speakers differ in the strategies
they can bring to bear on the maintenance of any given topic because
they have available different sets of syntactic alternatives among
which to choose. The non-native speaker uses available syntactic
alternatives from his native language and arranges those alternatives
in terms of the rhetorical preferences of it. Therefore it would
appear that knowledge of the syntax of the second language is not in
itself sufficient. There is a need for more elaborated studies of the
intersentential syntax underlying focus in various languages.
(Author/AMH)

CONTRASTIVE RHETORICS:
Further speculations
(A paper read at the AAAL Convention, December 1978)
by
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Recently, during a visit to Australia, I was introduced to a brand new

ESL textbook which had, as its opening exercise, something like the following

rather traditional dialogue:

P	Oh, Spiros, is that a new photo?
S	Yes, Philia, it is.
P	Is it a photo of your sister?
S	Yes, it is a photo of my sister.
P	Is she young?
S	Yes, she is young.
P	Is she short?
S	No, she is tall.
P	Is she fat?
S	No, she is slim.
P	Is she pretty?
S	Yes, she is very pretty.
P	May I see her photo?
S	Yes, you may.
P	Thank you.

Note that this text con-
sists of 15 utterances
and that it contains 65
words; that is, there is
an average of 4.33 words
per utterance. Note too
that there is a very high
proportion of redundant
information (intentional
in the nature of the ex-
cise, since it provides
practice in answering
yes/no questions which
require subject/verb posi-
tion shifts).

My concern is not with the quality of the dialogue as dialogue or as teaching

device; my concern is what is happening in terms of real language. (Note that

the whole dialogue could have been avoided--or telescoped--by establishing that

a photograph existed and then simply asking to see it, as Philia finally does

in her seventh question.) Though this particular example is stilted, repetitive,

and quite far from the realities of conversation, it does operate on the basis

of questions and answers. Let me call attention to the fact that, absurd as it is,

the dialogue conveys a modicum of information, but let me also note that the same

information might have been conveyed in a number of other ways; e.g.:

My name is Spiros. I have a new photo
of my sister. She is tall, slim, and
very pretty. I will show this photo
to my friend, Philia.
(4 utterances/28 words--average 4
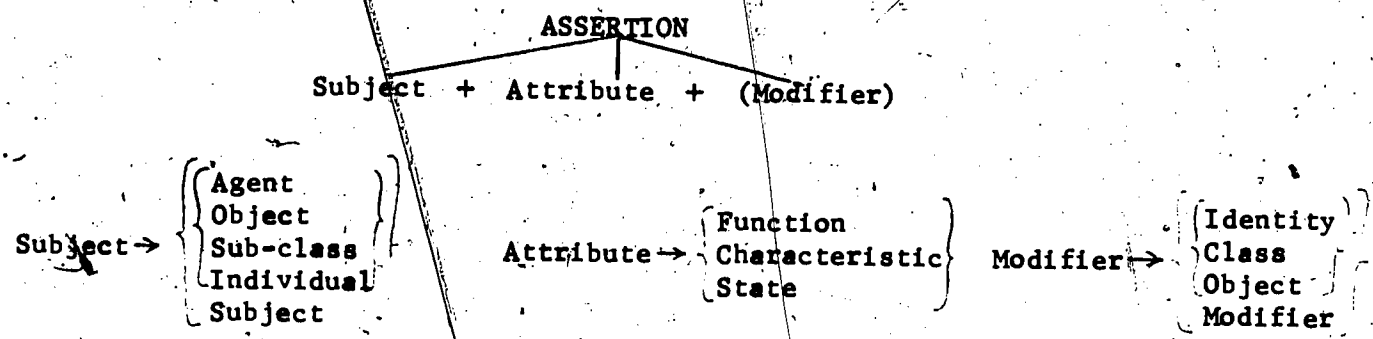words/utterance)

My name is Spiros and I have a new photo
of my tall, slim, very pretty sister
which I will show to my friend, Philia.
(1 utterance/25 words)

The latter two versions, while they contain all of the basic information, obviously

will not serve as devices for practicing answers to yes/no questions. But they

illustrate the notion that written text may consist of a series of assertions

responding to stated or implied or assumed questions. Without raising the

issue of the possible variety of assertions in English or in any other language,

I want to contend that an assertion is composed of three possible elements, of

which two are obligatory:

ASSERTION

Subject + Attribute + (Modifier)

Subject → {Agent, Object, Sub-class, Individual, Subject}   Attribute → {Function, Characteristic, State}   Modifier → {Identity, Class, Object, Modifier}

Further, by definition, a modifier has one of two possible functions: either it

adds information to a subject, an attribute, or a whole assertion, or it re-

stricts the meaning of a subject, an attribute, or a whole assertion. A modi-

fier may either be preposed or postposed. Clearly, modifiers vary both in

their grammatical designation (relative clause, prepositional phrase, adjective,

etc.) and in their semantic function (causal, temporal, instrumental, locative, etc.),

but what is primarily at issue here is function, not form. To illustrate:

agent/function	she was talking	(to a neighbor)	clas(modifier)
object/function	she was shot	(with a gun)	obj (modifier)
subject/characteristic	she will be exhausted	(tomorrow)	(modifier)
subject/state/identity	she is my mother	(my angel)	iden(modifier)
individual/state/class	she is a teacher	(of chemistry)	clas(modifier)
sub-class/state/class	principals are teachers	(sometimes)	(modifier)

The issue, however, does not concern assertions per se; rather it concerns

the ways in which assertions get stuck together into discourse, particularly

written discourse.[1]   Isolated assertions have syntactic/semantic value and a

modicum of propositional value; contextualized assertions have a modicum of

syntactic/semantic value, somewhat more propositional value, and illocutionary

value. For example, the assertion "Your tie is crooked" has some value simply

because the lexical items your, tie, is, and crooked all have some denotative

semantic meaning and the arrangement of those lexical items has some syntactic

meaning (the arrangement "tie is your crooked" would not have syntactic meaning,
while the arrangement "your crooked tie is" would have a different syntactic
meaning). In isolation, the utterance is solely dependent on those features,
but once the utterance is contextuated, the pronouns may take on definite
reference, and the utterance will acquire some propositional value because a
number of suppositions will become identifiable:

    I exist (whoever I am).
    You exist (whoever you are).
    The tie exists.
    The tie is your property (or at least is presumed to be on your person).

It now becomes possible for the person addressed (you) to report to a third
person the utterance I made; e.g., "Kaplan said, 'your tie is crooked.'" This
report merely quotes exactly my words; it attributes no additional value or
interpretation. It is possible for the person addressed (you), in reporting
the event, to add interpretation; e.g., "Kaplan announced in a loud voice to
the assembled multitude that my tie was askew." or "According to Kaplan's biased
view, my tie was crooked." or "Kaplan deeply offended me when he called attention
publically to the fact that my tie was crooked." None of these interpretations
call into question the truth value of the initial assertion (though it is of
course possible to do so; e.g., "Kaplan said my tie was crooked when in fact it
wasn't."). What has happened in all of these interpretations is that a supposition
has been added to the basic set enumerated above; namely: It matters that one's
tie is crooked. The development of the context so far has presumed a "regular"
social context; but other sorts of social contexts are of course possible. If
the speaker (Kaplan) were a Master Sergeant addressing (you) a private soldier,
or if the speaker were a father addressing a young son, both situations in which
roles are hierarchically defined, the value of the utterance would be quite dif-
ferent, and the reporting would in all probability be different; e.g., "Sgt.
Kaplan called attention to my crooked tie and I straightened it at once." or
"Dad told me my tie was crooked but I straightened it before anybody saw it."
The point is that in both of the latter situations the initial utterance is no

longer an observation of a true event, with or without interpretation; rather, the initial utterance becomes a command to correct the situation. In the "regular" situation, the person addressed (you) is free to respond "It's none of your damn business." or "Stuff it in your ear." or "Gee, thanks, I'll fix it." but none on these responses is appropriate in the hierarchical situation. What has happened is that still another supposition has been added; namely: There is a role relationship between you and me that will filter what I say and how you may respond to it. Given this accretion of layers of meaning, performance errors or dialect variations in the initial utterance (which affect the syntactic/semantic value of the utterance) have lower significance: e.g., "Your tie's crooked." or "You tie crooked."

In a discourse, the bunches of individual or linked assertions of which the discourse is composed carry semantic/syntactic, propositional, and illocutionary values, and the values interact in important ways. In the past, language teachers have provided relatively good instruction with respect to the semantic/syntactic value of assertions, somewhat less effective instruction with respect to propositions values, and none at all with respect to illocutionary values. In part, the reluctance of teachers to deal with the illocutionary values stems from the fact that those values may be exophoric (as in the illustration of the Master Sergeant talking to a Private, where the role relationship provides the major cue to the fact that the assertion is not an observation but an indirect command) or endophoric or to some degree both. It is difficult in the classroom situation to deal with the exophoric because the classroom by definition inhibits some common varieties of exophoric contexts. Even in dealing with the endophoric, however, the treatment has been inadequate because the nature of the controlling mechanisms is not well understood. In a discourse, two principal endophoric controlling mechanisms are topic and focus.

Topic is relatively easy to define; it is the dominant notion that governs a sequence of discourse. As I have pointed out elsewhere[2], topic is either

definite or generic, and definite topic may be of four types: anaphoric, associative, occurring in a larger context, or occurring within an immediate reference. To oversimplify perhaps, in a given string of discourse dealing with the relationship between dogs and their masters, one would be startled to find an assertion about sub-arctic weather patterns or about U. S. foreign policy in Southeast Asia. To a large extent, topic is maintained through a longer semantic chain by the use of simple repetition or synonomy. For example, in a discourse whose defined topic was language universals, one would expect a lexis chain which might include such items as formal, form, shape, substantive, substance, material, etc. (see Appendix I).

While topic may be relatively easy to define, focus is very difficult. Tentatively, focus is that set of operations which permit the reader/listener to recognize the prominence of certain information. The operations may be syntactic; e.g., grammatical subordination, grammatical parallelism, passivization, relativization, apposition, nominalization, clefting, etc. These operations are conventionally examined within the context of a sentence, but since discourse focus has to do with establishing intersentential coherence, it becomes necessary to look at them as they operate in discourse.

> The literal meaning of an aasertion is independent of its structure; the same assertion can appear as an independent sentence, as part of a compound sentence, as part of a parallel structure, or as an additive modifier. But the role it plays in a composition, its relationship with other assertions, can be affected by different structural possibilities. For example, parallel structure is a means of showing commonality among two or more assertions. In contrast to this structure is independent structure. A fundamental advantage of independent structure is as a means of emphasizing an individual assertion.

Note, for example, the various ways in which the underlined item appears in the following different contexts:

I bought some bananas. What did you buy?

My wife and I went to the supermarket yesterday. While I bought some bananas, she did the rest of the weekly shopping.

The kidnapper was described by witnesses as a tall, well-dressed man who bought some bananas before he forced the manager's wife into his grey Volkswagon bug with the California license plates.

We had time to kill, so we went into one of those little mom-and-pop corner grocery stores. She, being practical, bought a newspaper, and I bought some bananas. Then we got in the car and began driving to Melbourne.

When I was in Brazil last year, I bought some bananas which made me ill.

It was I who bought some bananas while the market was being robbed.

To illustrate the point in another way, the following assertions need not be presented as a discourse, though certain discourse presentations are clearly more efficient and perhaps more effective.

1. He advanced slowly.   2. His ears were pricked up
3. His head turned from side to 4. He was expectant.
5. The trail broadened.   side: 6. His quarry came into view.
7. His pace quickened   8. His ears lay back.
9. He made a final headlong rush.10. He covered the last eighth of a
                                     mile in seconds.

He advanced--slowly at first, with ears pricked forward, looking expectantly from side to side, then rapidly as the trail broadened and his quarry came into view, finally in a headlong rush, with ears laid back, covering the last eighth of a mile in seconds.

In the contextualized example, the pronominal reference which occurs in the itemized list vanishes, and the assertion breaks up into three parts controlled by the rate of advance--slowly at first...then rapidly...finally in a headlong rush--but the relative rate (slowly, rapidly, in a headlong rush) is overlayed with the temporal chain (at first, then; finally). The basic assertion is simply He advanced; everything else is modification. Focal modification elucidates rate; the temporal chain is backgrounded, and the physical information (ears pricked forward, looking expectantly, ears laid back) still further subordinated, while other modifiers are still further backgrounded. Thus, there appear to be a number of levels of information:

1. → He advanced--
2. ————→ {slowly...rapidly...in a headlong rush....
            {first ...then ...finally
3. ————→ {ears pricked forward...trail broadened...ears laid back
            {looking expectantly ...quarry came in view....covering the
4. ——————————————→ from side to side   last 1/8 mile
                                                         in seconds

The hierarchical arrangement of the information is totally absent in the simple listing of the facts. It is controlled by the syntax in the final one-sentence

version.

I want to contend that, since focus is in part a syntactic phenomenon, the non-native speaker cannot deal with it precisely to the extent that s/he does not control intersentential syntax. To put it another way, one may look at topic as essentially semantic and at focus as essentially syntactic; topic is present in the deep structure, but focus can only be realized in the surface structure as a manifestation of deep-structure topic. Thus, focus is more culture-bound because it is realized through the finite possible alternatives available in the syntactic system. The non-native speaker brings with him/her the alternatives available in the L_1 and applies those alternatives in the L_2 creating a tension between the apparent relationship of ideas to topic and the possibly inappropriate realization of focus through intersentential syntax.

These notions are subject to empirical verification. The remainder of this paper will describe an attempt to provide empirical verification. An instrument was prepared consisting of sixteen contextualized assertions. A whole utterance--in a sort of extended cloze format--was deleted from a context of two or three sentences. Respondents were to select the best alternative from among three to complete the text. The items included sentences in which the subjects were postponed by using preposed place holders, passives, normal s-v-o sentences, sentences in which direct/indirect object position was inverted; in short, a number of the sorts of structures that are said to manifest focus. The distractors were designed to alter focus while the prefered choices maintained the focus of the original. The instrument was pretested on a group of fifteen naive native speakers, and confirmation was obtained for the prefered choices and for intentional ambiguities.

The instrument was then administered to a group of sophisticated native speakers (N=48), and to a group of foreign students (N=146). The native-speaker group consisted of new teaching assistants employed to teach in the University's Freshman Writing Program. This group, all graduate students, consisted of 42%

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males and 58% females (a slightly skewed sample); the mean average age of the
group was 28, and the age spread was from 22 to 48. All members of the group
held a Bachelors degree, and twelve members of the group (25%) had had one or
more years of graduate study. While the majority of the group had taken more
or less traditional undergraduate study in English (literature); the group
contained eight individuals who had studied Linguistics, five who had studied
Dramatic Writing, two who had studied Comparative Literature, and one each who
had studied Classics, Education, Journalism, Philosophy, Slavic Studies, and
Television Arts.

The non-native-speaking group consisted of all students enrolled in the
advanced level in the University's American Language Institute (that is, all
who were present on the un-announced day on which the instrument was administered).
Roughly half of the group had had at least one prior semester of ESL at the
university while the remainder had previously studied English either in their
home countries or in special English programs elsewhere in the United States
and had been at the University an average of three months at the time of the
experiment. The population consisted of 59% graduate students, and roughly 80%
was male. The mean average age was thirty and the age spread was from eighteen
to forty-six. Approximately 40% of the group was studying Engineering of some
type (e.g., aerospace, chemical, civil, electrical, industrial, mechanical, pet-
roleum, etc.) and the remainder was widely scattered over some forty-five academic
majors. Approximately 20% of the group were Farsi speakers; the second largest
group consisted of Arabic speakers (e.g., from Algeria, Bahrain, Kuwait, Lebanon,
Saudi Arabia, the Trucial States, etc.); and the third largest group consisted of
speakers of Chinese (e.g., both Cantonese and Mandarin, from Hong Kong, Taiwan,
and other areas in Southeast Asia). The remainder was scattered over some sixty
languages (e.g., Bhasa Malay, French, Finnish, German, Japanese, Korean, Russian,
Spanish, Tagalog, Urdu); thus, it was not possible to undertake any sort of language
specific correlations.

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The instrument is included as Appendix II. The results showed that in
ten items the native-speaking population clustered on the item originally
designated as the prefered choices. Six items had been designed to be ambiguous.
In two of those items, the native-speaking population chose the two prefered
alternatives equally, but in four items native speakers chose one item two to
one over the other. The non-native-speaking population distributed quite
differently; indeed, Chi^2 analysis of the data (with 2 degrees of freedom) showed
significant differences between the two populations in thirteen items. A detailed
summary accompanies the instrument in Appendix II. The data show not only sig-
nificant differences between the populations with respect to prefered choice,
but significantly different distribution among the distractors.

Another experiment is currently under way to determine to what extent the
differences demonstrated here may be a function of the recognition of a hier-
archical arrangement of information from generalization to specification. An
instrument consisting of a dozen long pieces of prose (each approximately 150
words and eight to ten sentences) with whole sentences deleted has been pre-
pared. Subjects will be required to replace the missing assertions from among
a set of four choices in which the distractors will to varying degrees violate
the order of specificity established in the text. The instrument will be ad-
ministered to some three hundred subjects, roughly one third native speakers.
Pretesting suggests that the instrument has great promise.[4]

The following claims seem to be justified: First, in a written discourse
there is a "head" assertion which contains the topic, and the topic comes from
the deep structure of the discourse. This "head" assertion is different from all
other assertions in that its NP must, being the onset of a discourse, carry new
information (whereas it is generally conceded that the NP of most sentences carries
old information deriving from prior assertions in the discourse). The topic ex-
pressed in the head assertion is carried through the remaining assertions through
the operation of focus. Focus is expressed in syntactic terms in the following

assertions; that is, focus determines which available alternatives will be chosen.

Second, the native speaker and the non-native speaker differ in their ability to determine what suppositions may be shared between speaker/writer and listener/ reader in a given communication situation. Third, native speakers and non-native speakers differ in the strategies they bring to bear on the development of any given topic through the intersentential syntactic choices they are able to make. These choices seem to be directly tied to the realizable syntactic alternatives available in the native-speaker's L_1; thus, the non-native speaker not only uses the intersentential syntactic alternatives available from the L_1 but also uses those alternatives in the framework of the rhetorical (cultural) preferences of the L_1. Knowledge of the sentential syntax of the L_2 does not seem to be of much help. There are thus two problems: First, to the extent that the set of realizable intersentential syntactic alternatives is shared between the two languages, the non-native speaker will be able to maintain focus, but to the extent that the two sets are mutually exclusive, focus will disappear or at least weaken. Second, since the alternatives fall in the range of what everybody knows, and since the initial formulation of topic also is predicated upon what everybody knows in the sense that the writer/speaker must know what presuppositions are shared with the reader/listener, it seems clear that native speakers and non-native speakers will demonstrate quite different abilities in topic formulation as well as in focus maintenance.

While the center of attention in this paper has been on topic and focus and some elements involved in the range of available alternatives, there are, as I have pointed out elsewhere[5], other mismatches between any two given rhetorics. For example, languages differ in the amount of non-direct inclusion they will tolerate in various forms of discourse, and they differ in the amount of pro-nominalization permitted as well as in the distance permitted without relexification. As Ts'ao has suggested[6], in some languages, where topic is explicitly marked, the

need for pronominalization may be abridged by the strength of topic domination.

Larkin and Shook contend that English and Cantonese differ at least in the way

relative clauses are positioned (postposed in English, preposed in Cantonese)

and therefore in the amount of information they may bear.

> ...English is basically right branching and Cantonese is always left
> branching. A very important implication of the left branching nature
> of Chinese relative clauses is that Chinese speakers cannot tolerate
> excessively long relative clauses, because short-term memory is strained
> by having to hold all the modifiers before getting to the thing being
> modified.

Obviously, this is an area that requires a great deal more study. But

essential to any such future work is the recognition that there is such a

thing as intersentential syntax and that it deserves study in precisely the same

degree of depth that sentential syntax has already been studied. It also demands

recognition that illocutionary value in discourse is at least as significant as

syntactic/semantic and propositional value and that it derives not only from exo-

phoric causes but from topic and the way in which topic is maintained through

focus. It demands recognition of the fact that focus is managed by making choices

among available alternatives in the syntax. As Göran Hammarström has suggested,

"units and relationships between units are the basic linguistic facts to be des-

cribed."[8] And units are not necessarily "sentences."

NOTES

[1] Written discourse consists of sets of assertions stuck together, and those
assertions may, in fact, be answers to implicit or explicit questions. In the
simple example from the dialogue with which this paper starts, by way of illus-
tration, the assertions can be elicited by questions other than those developed
in the dialogue:

What do you have?	I have a photo.
Is it new?	Yes.
What is it of?	My sister.
Can you describe her?	Yes. She is tall, slim, and very pretty.
What will you do with the photo?	Show it to my friend Philia

      I have a (new) photograph (of) my sister (who) is tall, slim, and
      very pretty, (and I will) show it to my friend Philia.

But note that a different set of questions will elicit a different dialogue:

What do you want?	*I have a photo.
	I want to show my new photo to Philia.
What's new about it?	*Yes. /NB: new can only be introduced if it occurs
	It was taken only yesterday. in the prior reply.
What does it show?	*My sister.
	How pretty my sister is.

Can you visualize her?	Yes. /But the answer is redundant.7
What will you do with it?	Show it to my friend Philia. /But the an-
	swer is redundant because the information
	was given in answer to the first question
	in this series.7

(I have) a photo of my sister (which) was taken only yesterday (and which shows) how pretty she is. I want to show(it) to Philia.

[2] "On the Notion of Topic in Written Discourse," Australian Review of Applied Linguistics, 2 (May, 1978), 1-10.

[3] Bennison Gray, The Grammatical Foundations of Rhetoric: Discourse Analysis (The Hague: Mouton, 1977), p. 190.

[4] This work is being carried on by Ms. Ann Martin at the University of Southern California and will appear in her forthcoming doctoral dissertation in the School of Education.

[5] Contrastive Rhetoric: Some Hypotheses," ITL, 39-40 (1978), 61-72.

[6] Ts'ao Feng-fu, "A Functional Study of Topic in Chinese: The First Step Toward Discourse Analysis," unpublished Ph. D. Diss., University of Southern California, 1977.

[7] "Interlanguage, The Monitor, and Sentence Combining," unpublished paper read at the Los Angeles Second Language Research Forum, October 7, 1978, p.3.

[8] Linguistic Units and Items (Berlin: Springer, 1976), p. v.

APPENDIX I

Language universals, Chomsky suggests, are of two basic types, <u>substantive</u> and <u>formal</u>. <u>Substantive</u> universals represent the fundamental 'building blocks' of language, the <u>substance</u> out of which it is made, while <u>formal</u> universals are concerned with the <u>form</u> or <u>shape</u> of a grammar. An analogy might make this distinction clearer. If, hypothetically, Eskimos were born with an innate knowledge of igloo-building, they would have two kinds of knowledge. On the one hand they would know in advance that the <u>substance</u> out of which igloos are made is ice and snow just as thrushes automatically know that their nests are made of twigs, not bricks or worms or glass. On the other hand, their innate knowledge of igloo-building would include the information that igloos are round in <u>shape</u>, not square or diamond-shaped or sausage-like, just as thrushes instinctively build round nests, not ones shaped like bathtubs.

Italics have been added to this text to pick up the first level lexis chain; obviously, there is a second level chain made up of such words as <u>made</u>, <u>ice</u>, <u>snow</u>, <u>twigs</u>, <u>bricks</u>, <u>worms</u>, <u>glass</u>, <u>round</u>, <u>square</u>, <u>diamond-shaped</u>, <u>sausage-like</u>, <u>bathtubs</u>, where the first seven items relate to substance and the remaining five items to form. Almost 15% of the total word count in this bit of discourse is made up of lexical items which are fairly directly related to the notions of form and substance which occur in the topic assertion.

It is, of course, possible to construct discourse which has a lexis chain giving the appearance of "free association":

Once upon a time there was a lovely young princess who lived in a castle in a far off mythical kingdom. The castle was designed by her uncle Hernando who was an architect in a nearby city. He was also a fine family man and was once an excellent swimmer. He competed against Johnny Weismuller many times during the late 1920's. This was the time of the great depression during which many huge fortunes were lost. Fortunes that occasionally equalled the amount of treasure brought back from the orient many centuries ago by Marco Polo. Or perhaps the total salaries, operating expenses, and advertising budgets of the Kansas City Chiefs, Radio City Music Hall and Darlene's Dancing Dalmations. Next door to Hernando's office was a tattoo parlor. Many of our country's brave young fighting men went there for tattoos of their mothers, Barney Google and Eleanor Roosevelt. It was these same young men who displayed such courage on Bataan and Iwo Jima. The courage that made this country safe for you, me, our children, zoo animals and restoring old Hudsons as a hobby. /Broomhilda/

One fully expects, based on the traditional opener (once upon a time) and the focus on <u>lovely young princess</u> in the first sentence, that the princess is the topic. But the second sentence picks up <u>castle</u> as its focus from the position of object of a preposition in a modifying phrase in a relative clause--a position pretty far out of focus normally. The third sentence picks up <u>Uncle Hernando</u> also out of the position object of a preposition. There is, without doubt, a lexis chain in this discourse, but it is a "lunatic" chain because the focal items are picked up out of normally out-of-focus positions.

APPENDIX II

1. To tap a private telephone line is not technically a very $Chi^2 = 37.559$; d.f.=2
   difficult process. /--/ There are several steps in the   .001 level
   process.
   a. Private telephone lines may be contrasted with party   NS=0%; NNS=7%
      lines.
   b. It is, however, essential to have the right equipment..   NS=6%; NNS=49%
   c. Tapping is a process whereby it is possible to listen
      in on someone else's conversation.   NS=94%; NNS=43%

2. As far as mathematics is concerned, he was a complete fail- $Chi^2 = 10.758$; d.f.=2
   ure. /--/ His lack of ability was a constant source of   .01 level
   frustration to him in his science major.
   a. He was very bad in athletics.   NS=0%; NNS=5%
   b. He was, however, very good in athletics.   NS=0%; NNS=14%
   c. In fact, he had trouble with simple arithmetic.   NS=100%;NNS=81%

3. Looked at politically, it was not an easy problem. /--/ $Chi^2 = 15.702$; d.f.=2
   In addition, popular opinion outside the party structure,   .001 level
   created an additional dimension.
   a. The economic issues were very complicated.   NS=13%; NNS=27%
   b. Party loyalties were a constant issue.   NS=87%; NNS=57%
   c. Of course, what is easy for one person may be hard   NS=0%; NNS=16%
      for another.

4. Geographically, ethnically, and linguistically, the $Chi^2 = 6.359$; d.f.=2
   Ryukyu Islands are closer to the Japanese mainland than   .05 level
   to their neighboring islands. /--/ But it might be
   better to suggest that the distance from the southern-
   most tip of Kyushu to the main body of the Ryukyus is
   less than 800 miles, while the nearest point in the
   Philippines is more than 1,000 miles away.
   a. With respect to geography, the distance to Tokyo from   NS=66%; NNS=46%
      Okinawa is less than 1,000 miles.
   b. Japan has a long history of activity in Southeast Asia.   NS=0%; NNS=1%
   c. The neighboring islands include Taiwan and the   NS=33%; NNS=52%
      Philippines.
   /NB: Several native speakers admitted that they had difficulty with this item
   because they were unfamiliar with the basic geography of the region./

5. It was Mary's birthday. /--/ And her sister gave her $Chi^2 = 1.814$; d.f.=2
   some perfume.   NO significance.
   a. I gave her a rose.   NS=100%;NNS=97%
   b. A rose was given to her by me.   NS=0%; NNS=.05%
   c. She received a rose from me.   NS=0%; NNS=2.05%

6. The boy who was here drank the milk. /--/ $Chi^2 = 23.419$; d.f.=2
   a. He arrived at 6:00 p.m.   NS=2%; NNS=6%
   b. He was very thirsty.   NS=50%; NNS=79%   .001 level
   c. It was sour.   NS=48%; NNS=14%

7. The boy who drank the milk was here. /--/ $Chi^2 = 8.771$; d.f.=2
   a. He arrived at 6:00 p.m.   NS=98%; NNS=80%
   b. He was very thirsty.   NS=2%; NNS=16%   .02 level
   c. It was sour.   NS=0%; NNS=3%

8. The milk was drunk by the boy who was here. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=3.619; d.f.=2
NS=4%; NNS=8%
NS=10%; NNS=20% .2 level
NS=86%; NNS=71%

9. The boy was here, and he drank the milk. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=5.640; d.f.=2
NS=6%; NNS=19%
NS=81%; NNS=64% .1 level
NS=13%; NNS=16%

10. The boy was here; consequently, he drank the milk. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=4.366; d.f.=2
NS=11%; NNS=14%
NS=44%; NNS=56% .2 level
NS=45%; NNS=26%

11. The boy drank the milk; thus, he must have been here. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=6.701; d.f.=2
NS=92%; NNS=74%
NS=6%; NNS=18% .1 level
NS=2%; NNS=8%

12. The boy was here. He drank the milk. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=6.135; d.f.=2
NS=2%; NNS=6%
NS=31%; NNS=47% .2 Level
NS=67%; NNS=46%

13. The boy drank the milk. He was here. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=4.164; d.f.=2
NS=92%; NNS=79%
NS=8%; NNS=17% .2 level
NS=0%; NNS=3%

14. Because the boy was here, he drank the milk. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=.925; d.f.=2
NS=8%; NNS=13%
NS=63%; NNS=56% NO SIGNIF.
NS=29%; NNS=30%

15. Since the boy drank the milk, He was here. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=.94; d.f.=2
NS=83%; NNS=77%
NS=13%; NNS=18% NO SINGIF.
NS=4%; NNS=5%

16. Being here, the boy drank the milk. /--/

    a. He arrived at 6:00 p.m.

    b. He was very thirsty.

    c. It was sour.

Chi^2=2.816; d.f.=2
NS=8%; NNS=18%
NS=63%; NNS=57% .3 level
NS=29%; NNS=25%

NOTES

NS=Native Speaker; NNS= Non-Native Speaker. /--/=the point at which the insertion should be made.

A number of native speakers complained that the items 6-16 were boring; it is likely that some native speakers stopped trying after item 12.

Additional analysis yielded the following results:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
df=2	.001	.01	.001	.05	NONE	.001	.02	.2	.1	.2	.1	.2	.2	NONE	NONE	.3
df=8	.001	.01	.001	.01	.5	.001	.02	.7	.1	.01	.05	.05	.1	.5	.2	.5
NGE			#	#				#		#	#	#	#	#	#	#