PERIODS OF MYSTERY:
OR
SYNTAX AND THE SEMANTIC PAUSE

by Adam Makkai

1. THE KNOWN FACTS

Imagine that you have observed the following event: a little white dog, a poodle, known as Fifi, who belongs to my neighbor, the orthodontist, snatches a piece of soup bone from my dog, a black puli, called Pogi, and runs across the street. Just at that time a drunken driver, pursued by the local police, comes tearing down the street and hits the little white dog before it reaches safety; it dies on the spot. The neighbor wasn't there to see this happen and you are now trying to relate to him what happened.

1.1. Suppose I don't know my neighbor too well

If I don't really know my neighbor and also happen to be a somewhat cautious person, I might say (and expect to receive replies to as I go along) the following:

I: Do you own a dog, Sir?
N: Yes.
I: Is it a white poodle?
N: Yes, his name is Fifi.
I: I see . . . Well . . .
N: Anything wrong?
I: Well, your little white poodle, Fifi, stole a bone.
N: Really . . . ? Who from?
I: Well, it was my dog's chewing bone.
N: When did this happen?
I: Just a few minutes ago . . .
N: What happened?
I: Fifi snatched the bone, and started out across the street . . .

Adam Makkai is Professor of Linguistics at the University of Illinois at Chicago Circle.

N: And?

I: There was a drunken driver tearing down the street being chased by the police . . .

N: Oh no . . . Did anything happen?

I: I am afraid so . . . Your dog was killed. I am awfully sorry.

In this possible exchange it actually matters more that the speaker "I" is cautious and breaks the news gradually to the neighbor after establishing the dog's identity, than the fact that "I" might also be genuinely sorry for Fifi. Let us imagine, by contrast, that I am quite familiar with both my neighbor and his dog. What might I say under those circumstances?

1.2. I know both my neighbor and his dog

I: Hey, Jack, come on over here! Quick! Look what happened . . .

N: What's wrong?

I: Fifi was running across the street with a bone in his mouth he snatched from our Pogi, and just that moment this car comes tearing along at a million miles an hour with the police after them . . .

N: Oh no . . .

I: I am afraid he's had it Jack . . . Look . . . This is really awful.

There are, of course, other ways in which my neighbor and I, if we are really close friends, can talk about such an event. But suppose now that I am the social columnist in this suburb and am writing a short piece in the weekly newspaper to fill a page:

1.3. I am the social columnist for the local newspaper

"Dr. John R. Quasimodo's valuable champion poodle, the snow-white Fifi, winner of many a trophy, met a tragic death yesterday, when a hit-and-run driver hit him on the corner of Westminster and Tara in Whispering Oaks at 3:30 P.M. Fifi was last seen when he, having snatched a bone from the front porch of Mr. and Mrs. Murgatroyd, ran across Westminster. To the great sadness of both the owner and the onlookers, he died on the spot. There having been a spate of careless driving in the area, residents are requested to keep the local police notified of any suspicious vehicles in the area."

The columnist has, of course, other concerns than the death of a dog, and so we should forgive him for making a plea to local residents about careless drivers. This is an unimportant item anyway designed mostly to fill the page, and talking just about the dog's death would seem meaningless, hence the added phrase.

1.4. I am telling my wife about what happened to Fifi

I: Oh, hi, I'm so glad you're home . . . Guess what happened just a few minutes ago?

W: Bad news?

I: It's kind o' gory . . . Poor thing . . . Fifi got hit by a car . . .

W: You mean the Quasimodos' dog?

I: Yeah, yeah—our little daily visitor . . . He snatched Pogi's chewing bone and as he darted across the street . . .

W: Oh no, I bet it was one of those drunken drivers! When will our police department do anything about *them*??!!

I: I know . . . It's awful . . . Poor Jack . . .

W: He just loved that animal so . . . Does he know already?

I: That's just it . . . They're gone . . . I sure hate to have to break the news to him . . . Do *you* want to tell Carmelita?

W: She'd be too upset . . . You call Jack first thing when his car pulls in.

I think it is obvious from this particular exchange that both "I" and "W" know all of the participants involved.

1.5. The unlikely sentence

Imagine that someone endeavors to write one elegant and exhaustive sentence mentioning all of the relevant facts (such as who was the victim, who was the aggressor, what attributes did the participants have, etc.), while taking nothing for granted. Here are some of the ways it might be put:

(a) At 3:30 P.M., yesterday, while my neighbor, Dr. John R. Quasimodo, an orthodontist, was gone, his little white male poodle, called Fifi, ran over to our porch and snatched my black puli's (Pogi's) bone, after which it started out across the street for safety when, suddenly, a drunken driver, pursued by the local police, hit and killed him.

(b) Fifi, who belongs to Dr. John R. Quasimodo, my neighbor, who is an orthodontist, was hit by a drunken driver who was being chased by the police yesterday afternoon at 3:30 as he was trying to run across the street with a chewing bone in his mouth that he'd just snatched away from my black puli, Pogi, on our front porch.

(c) Just after he had snatched a chewing bone from my black puli, Pogi, my orthodontist neighbor's white poodle, Fifi, Dr. John R. Quasimodo's dog, tried to run across the street for safety when a drunken driver, chased by the police, hit and killed him, just across from our porch where it had all started.

I call these sentences "unlikely" because in contrast to the other situations they try to pack too much information into one sentence—as if the desired goal of making the information come out in one sentence were more important than the naturalness of the message. So let us again adjust our focus. There will be no live participants in conversation involved; this is to be just a written message, as if in one's diary, but now our goal is to make the message sound more

natural, closer to real speech. We are less concerned with the one-sentence status of the message. What are some of the possibilities?

1.6. Some more likely sentences

(a) (Letter to mother living overseas; she vaguely remembers my neighbor but needs reminding.)

There isn't too much else in the way of interesting news. Oh yes, I almost forgot the mini-tragedy that we were unwilling witnesses to the other day. Remember Carmelita and Jack, next door? He's the orthodontist who's been straightening Sylvia's teeth, and the wife made that delicious dessert while you were here last July. Anyway, they're the ones with that cute little white dog, Fifi. You even remarked that it is unusual for a male dog to have a female name. Well, Fifi came over the other day and stole one of Pogi's chewing bones. So far so good, this has happened before, and he always brought them back. This time, unfortunately, he got wild and started running across the street, when suddenly a drunken driver came out of nowhere at great speed, and hit the poor little poodle. There was a cop chasing the drunken driver, that's why he must not have noticed what was in front of him. Well, poor Fifi died on the spot, and I had the sad duty of breaking the news to the Quasimodos. Carmelita sends her regards. They were wondering when you're coming again.

(b) (Letter to the owner who is at a doctors' convention in Florida. The wife can't make herself tell him what happened and asked me to do so.)
Dear Jack,

I'm afraid I've got a piece of dreary news for you. (You may, in fact, be surprised to hear from me, but Carmelita asked that I write you.) I hasten to add that she is fine and so are Timmy and Dawn—everyone's fine—they just miss you and wish you were here. It's about Fifi. Remember how I've been suggesting that you keep him on a leash? It wasn't that I was trying to bug you about the leash law here in Whispering Oaks, I was just worried that something might happen to him. He's—hang in there Jack, *was*—such a cute little sonovabitch. Jack, I am really terribly sad about this as I know how much Fifi meant to you! OK, here is what happened: You know Fifi; he ran over once again and snatched one of Pogi's chewing bones right on our front porch. Pogi was inside, so there was no nasty fight or anything. Then he headed across the street with the booty, when suddenly this drunken driver comes tearing down the road a million miles an hour trying to escape a cop who's behind him in hot pursuit. Well, Fifi got hit, and died on the spot. Jack, I am really awfully sorry about it! Your children were very brave and gave him a decent Christian funeral. Hope to see you soon, Sincerely, etc.

(c) *Lake County Animal Coroner's log entry*
Male, white, toy poodle "Fifi," age 3 years; completely smashed, drunken

driver, on corner of Tara and Westminster, Whispering Oaks; 3:30 Wednesday May 10, 1979. Owners: Dr. and Mrs. John R. Quasimodo, 510 N. Tara Lane, Whispering Oaks, Lake County, Wisconsin. Witness: Mr. Alphonse Q. Murgatroyd (next-door neighbor), attorney-at-law. Was registered with the American Kennel Club, valued at $1,600.

2. THE BASIC PROPOSITION

All of the sentences in section 1 tell "the same story" with a different slant. A great deal of the given slant has to do with the familiarity of the interactants; with the formality or the informality of the situation, or what in British linguistics is known as the *personal tenor*, the *functional tenor*, the *mode of discourse*, the *field of discourse*, and the *context of situation* (see Benson and Greaves 1973; Halliday 1973). Part of the functional and the personal tenor, however, is formally interwoven with the fact that the same basic proposition can be realized as one long, labored sentence (1.5a, b, c) or as a number of smaller sentences in sequence. One of the functional tenors (1.6c) is extreme; even though the mode is "written," the text is not intended to be read either silently or aloud, nor to be spoken, but for the sole purpose of being filed away like the record of a sale or an otherwise closed transaction. Thanks to stratificational diagramming (see Lockwood 1972) as well as to earlier versions of sememic networks, known as "directed graphs" (Makkai 1972:130-133), it is now possible to represent all of this information in a psychologically believable model of cognitive "deep structure." Deep structure is not, however, meant here in the sense of Chomsky (1965) or, for instance, Owen Thomas (1966), or any other transformationalist work that sees deep structures as abstract "sentenceoids" whether before or after "lexical insertion." I assume that lexical insertion is *simultaneous with sememic trace formation* (see Makkai Ms. a) simply because lexemes (whose meanings, i.e., whose "sememes," are known) are more likely to suggest appropriate sentences in which they can participate than the other way round: sentence structures, close to the surface, and ready to be pronounced, but free of actual lexemes, can elicit a large number of both sensible and nonsensical sentences from a respondent. Sentence structures and appropriate lexemes co-select each other, as it were. The words in capital letters in the sememic trace (figure 1) are simply sememes in short-hand notation.

A Sememic Trace in Directed Graph format (henceforth STDG) is like a syntactic Dependency Tree, except that its primes are not sentence-formatives (lexemes) but pre-sentence network formatives, i.e., sememes. A sememe, in this sense, is the *possibility of the occurrence of a certain lexeme* or set of related lexemes, and a *sememic trace* is the *possibility of a sentence, or a related set of sentences*. Whenever more than one arrowhead points at a sememe, that sememe is *elevated* and hence there is the possibility of *thematization* in a
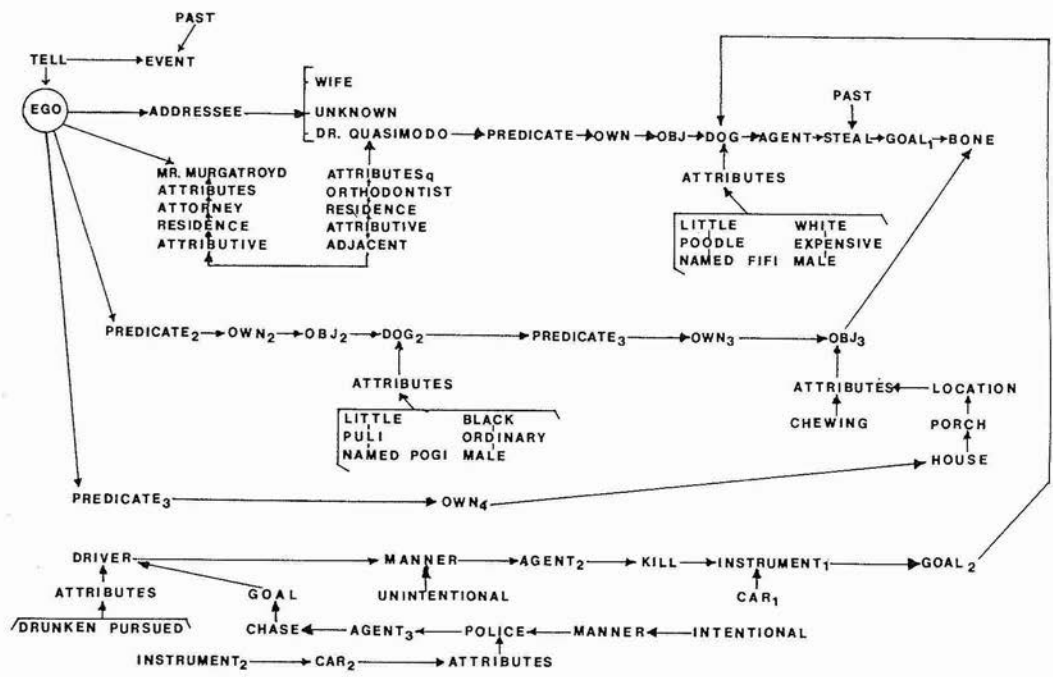
FIG. 1.

resultant clause. A sememe with one arrow leading away from it in one direction, and another pointing elsewhere, belongs to both immediately connecting sememes simultaneously. Thus the sememe ^{S}/adjacent/, located between the Attributes ^{S}/residence/ leading to the orthodontist Dr. Quasimodo on the one hand, and to the narrator, Mr. Murgatroyd, on the other, indicates that these residences are mutually adjacent to one another, i.e., that they are neighbors, which is an inherently reciprocal relationship. Converging arrows occur at the sememes ^{S}/Driver/, ^{S}/Obj.$_3$ - bone/, ^{S}/Dog$_1$/, i.e., Fifi, the victim in our story; ^{S}/Dog$_2$/, the owner of the bone of contention that leads to Fifi's demise; the ^{S}/Attr./ for the location of the bone and the kind of bone it is, etc.

When an arrow hits a vertical bracket (as in Addressee to Wife, Unknown, and Dr. Quasimodo), the STDG indicates that either one in the set in any order is eligible, or all of them at once, or all in any order. Since the consequence in each case is a different text, the STDG, like a road map, is not responsible for which exit the driver takes, although the exit taken will have further consequences with regard to the journey as a whole. When more than one line leads away from a given sememe (as in the case of Ego to Mr. Murgatroyd, Predicate$_2$, and Predicate$_3$ and, of course, to the Addressee), we are faced with a *zero theme* or a *natural theme.* Zero or natural themes occur, in fact, in every simple one-word exclamation such as *Ouch! Gosh! Wow!* and even *No!* etc. (see Makkai [Ms. b], where the theme is the unannounced fact that the speaker is obviously announcing something). This common, everyday occurrence has caused transformationalists some degree of difficulty since they, in accordance with the neat symmetry of the Np-Vp structuring of all sentences, were looking for subjects and predicates for every sentence, even if there were none to see with the naked eye. Thus *Ouch!* can be *made* to conform to the Np-Vp pattern if one imagines that it is the dependent direct object morpheme hung on a tree which begins, as all normal sentences do, with a subject noun phrase *I* with the verb phrase continuing *say to you* and ending in the dependent object, the utterance *Ouch!* itself. The trouble with this "performative" deep structure analysis is, of course, that both the *I* and the *say to you* must be deleted before we arrive at *ouch!*, the form we want. If, on the other hand, we recognize zero or natural themes, we do not have to go through the unnecessary process of generating a fully formed sentence only to have to destroy it later in order to describe what we had in the first place, i.e., the exclamation itself. A zero or natural theme, however, *can* be realized optionally; in the case of the present STDG we would have to look for the closest sememe that has two arrows pointing to it, and this is the ^{S}/Event/. Since it is the Ego who relates the event to the addressee (as normally in every human society), the narrator now has a choice of (a) either going into his story directly, or (b) first announcing that he is about to do so.

The available *narration openers* differ from genre to genre, from tenor to tenor, and depend largely on the situation of context of the interlocutors.

Thus, if this is in the genre of a fairy tale, Murgatroyd can start the story of Fifi by saying *Once upon a time there was a little white poodle by the name of Fifi . . .*, or he can use the reminding device of the letter (as in 1.6a), or the "breaking of the bad news via cushioning the blow" as in 1.6b. If he were testifying under oath, Murgatroyd could, of course, also say, "I, Alphonse Q. Murgatroyd, attorney-at-law, residing at such-and-such-an-address, having personally witnessed the accident on the corner of Tara and Westminster Lanes . . . do solemnly testify that Fifi, a 3-year old white poodle, belonging to . . . was killed . . . by a drunken driver." But then, being an attorney, Murgatroyd knows when he is testifying in court, when he is talking to his wife, when he is writing to his elderly mother who lives overseas, or when he is notifying his friend and neighbor of the death of his pet dog at the request of the saddened and timid wife, etc. At the risk of belaboring the obvious, grammarians should take note that people usually know who they are and who their interlocutor is (even if they don't know him, since then *that* is what they know); they know what is more important about a given message than something else also marginally contained in that message; they know whether what they say is true or false (save the occasional case of "moral insanity" when the speaker actually does not know truth from falsehood); and they also know if the mode is spoken or written language that has a definite purpose. The degree of consciousness with which people are aware of these factors will vary with health, age, education, occupation, etc., but a normal, sane, legally responsible adult (and I do *not* mean Chomsky's "Ideal Speaker-Hearer in the Ideal Speech Community") who is communicatively competent (to use Dell Hymes's term) in the national language spoken around him, whether as native or as immigrant, will be able to comment on an actual event as he or she perceived it. This is why legally sane, normal adults can, after all, be drafted to serve on juries. Their ability to analyze events and the roles of the participants in them does not automatically enable them also to make valid observations about the *code* they have been using, i.e., the language and its mechanisms. People are people, not linguists, BUT linguists are also people. Many a modern grammarian, especially of the mathematically oriented mutationist varieties, likes to pretend to be in the possession of a certain computationally oriented omniscience and specificity, even if the knowledge represented in a given derivation turns out to be irrelevant (e.g., the fact that *Ouch!* is an exclamation issued by me, the sufferer, to you, the hearer, or to myself when there is no hearer around to commiserate) and even if some of the information given is totally alien to our average, adult, legally sane human psychology.

3. THE SEMANTIC PAUSE

What, then, is the mechanism most likely to be responsible for making us realize a certain amount of information as one sentence or as several shorter sentences? I believe that such a mechanism can be found in the notion of the

semantic pause. The remainder of this paper accordingly will be devoted to explaining the notion of the semantic pause, how it operates, and what causes semantic pauses to occur in certain places.

3.1. Use of semantic pause

A semantic pause (henceforth SP) is a *chance to change your mind in mid-utterance.* Written texts, especially of the academic variety, are rather poor examples of SPs, since academic writing, by its very nature, is consciously controlled and edited. What we need are copious transcripts of spontaneous oral conversations. In creating the examples above of how one might tell the story of Fifi, I was trying to give several appropriate genres, including a letter sent overseas, a coroner's report, and several oral versions.

The start of every communication is, by definition, the breaking of a semantic pause; let us call it 0 SP. 0 SP————> U (utterance) symbolizes the fact that the addressor is engaging the addressee (who can be the addressor himself, as in soliloquy) in a speech act. Every subsequent period (full stop) is a *subsequent semantic pause* (SSP). SSPs are optional, as the U may continue in one sentence. SSPs are favored in normal speech, however, since not availing oneself of the possible pauses leads to the considerable strain of *composed speech* (CS). CS can be observed under natural conditions also, but the places and occasions where it arises are marked by social formality, e.g., the university classroom, the court of law, the office where one speaks into a dictaphone for eventual transcription and written editing. The opposite of CS is *spontaneous speech* (SS). One of the most striking characteristics of SS is that the semantic pauses observable in it do not necessarily get realized as periods ("full stops") replete with the customary falling intonation; rather, the person engaged in SS realizes his SPs as run-on clauses with suspended, comma intonation between the various parts.

In what follows I will try to show how various realizations of figure 1 can be accomplished using the SP and SSP method; // symbolizes SSPs.

    1. 0 SP————> U

(a) I // I saw // I saw your dog // I saw your dog Fifi // I saw your dog Fifi snatch the bone //

(b) I saw // I saw Fifi // I saw Fifi running across the street //

(c) Fifi // Fifi came and snatched Pogi's bone //

(d) A drunken driver // A drunken driver chased by the police //

(e) The police // were chasing a drunken driver //

(f) The police were chasing // a drunken driver down the street //

(g) My dog's chewing bone // my dog's chewing bone was snatched by your dog Fifi //

(h) Say, Jack // Say, Jack, I've got some bad news I'm afraid //

(i) Jack, say I've got //

(j) Jack I'm afraid I've got some //

(k) Bad news, Jack, I'm afraid //
(l) On the porch of our house // there lay Pogi's chewing bone //
(m) Pogi's chewing bone // lay on our front porch when Fifi //
(n) Pogi's chewing bone lay on our porch when a drunken driver chased by the police //

Sentences (a) through (n) are all possible 0 SP————> U events, but intermixing them is also a possibility, indeed a rather frequent one. The person who so intermixes his starts "hems and haws": he can't seem to get the message out correctly. Consider the following:

(1) I saw // hey Jack // I'm afraid // the police were chasing a drunken driver // my dog's chewing bone // Fifi came and snatched Pogi's bone // Pogi's chewing bone lay on our front porch when Fifi //

(2) My dog's chewing bone // hey Jack I'm afraid I've got some bad news // the police were chasing a drunken driver down the street //

(3) Fifi came and snatched Pogi's chewing bone // bad news, Jack, I'm afraid // the police were chasing a drunken driver down the street

It seems that (3) is the most "logical" of the possible sequences presented here, but this does not mean that other less fortunate sequencings do not occur with rather high frequency. The person so speaking is not really being illogical; he speaks in the mode of spontaneous speech, which is not composed, hence he can take the various chunks of information between semantic pauses and string them together with a variety of phonologically appropriate intonation patterns. The stress of having to relate the bad news of Fifi's accident to the owner will certainly favor SS rather than CS, hence the greater likelihood of loosely ordered sentence chunks being shifted around.

3.2. The correlation of semantic pauses and structural pauses

Let us take one of the "unlikely" sentences and see if structural breaks in its surface structure also happen to coincide with places where the narrator could actually change his mind. Let us take the sentence

Jack, your little white dog Fifi came and snatched away one of Pogi's chewing bones from our porch and then headed across the street with it just at the very moment when a drunken driver, chased by the police, came tearing down the street and hit poor Fifi.

The structural break after the vocative *Jack* is also a SP; the narrator could bargain for more time here and say *I'm afraid I've got some bad news*, or come right to the theme of the message, Fifi. *Your little white dog, Fifi*, as Subject NP in the clause, also serves as the theme of the entire sentence; after *Fifi* (followed here by *came*) the narrator could "change his mind" and say *whom all love so dearly*, or *whom we know you love so much*, or skip any of these and

move right to the predicate. *Your little white dog Fifi came* (period) would be a possibility; the speaker could then pick up the theme by saying *Well, he snatched . . .* etc., giving himself time to catch his breath and/or to prepare Quasimodo for the bad news. Continuing in this manner one could show that the traditional structural analyses associated with "post-Bloomfieldianism" and the Wellesian IC analysis method tend to yield SSPs as well where the speaker could, to varying degrees of freedom, change his mind in the course of a given narrative realized as a sequence of sentences. One implication of this is that everything in a natural language is inextricably a part of meaning and of signification, i.e., that there is no such thing as a separate semantic component or a separate semological stratum. Human languages are *pansemantic*; pansemanticity is more obviously present on some structural levels than on others. The model I would like to propose here ultimately derives from standard stratificationalism (Lamb 1966; Lockwood 1972) but is one that, generally, de-emphasizes the importance of grammar over the lexicon (see Makkai Ms. a).

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4. OUTLINE OF THE PANSEMANTIC MODEL
OF THE STRATIFICATION OF LANGUAGE

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4.1. Verbal description of the model shown in figure 2

The four central "strata" of natural languages (I. Semology, II. Lexology, III. Morphology, and IV. Phonology) are surrounded by the SEMANTIC STRATUM. The major portion of this (left side of diagram) is called INPUT SEMANTICS; the "top" of the system is called COGNITIVE SEMANTICS (Storage), and Socialization of Standard Meanings; the right side is called OUTPUT SEMANTICS, hearer's and reader's meaning, etc.

The structure inside this cortex-like hull is a funnel, wider at the top than on the bottom, because of the statistics of concepts (millions) versus sememes (hundreds of thousands), as against words and morphemes (thousands) and phonemes and syllables (dozens, or hundreds). The pansemantic nature of linguistic structure suggests that the first level (top) should be called semo-semantics. I believe that this is THE level of linguistic creativity. The *situation of context* is taken into account at this level; also at this level the speaker decides his or her role as Ego in any statement, question, command, or narrative that will follow. The various outcomes of the network in figure 1, depending on who the speaker is and whom he is talking to, depend on the cumulative INPUT SEMANTICS reaching level I from the left. The four levels in unison, acting as a huge filter, decide on the actualization of the output (our various texts dealing with Fifi's demise in various styles and ways). Semo-semantics is THE creative component, because major novelists, who use standard grammar and standard vocabulary, are nevertheless capable of creating new plots, new characters, and new situations all the time. (If they also create new vocabulary as they go along,
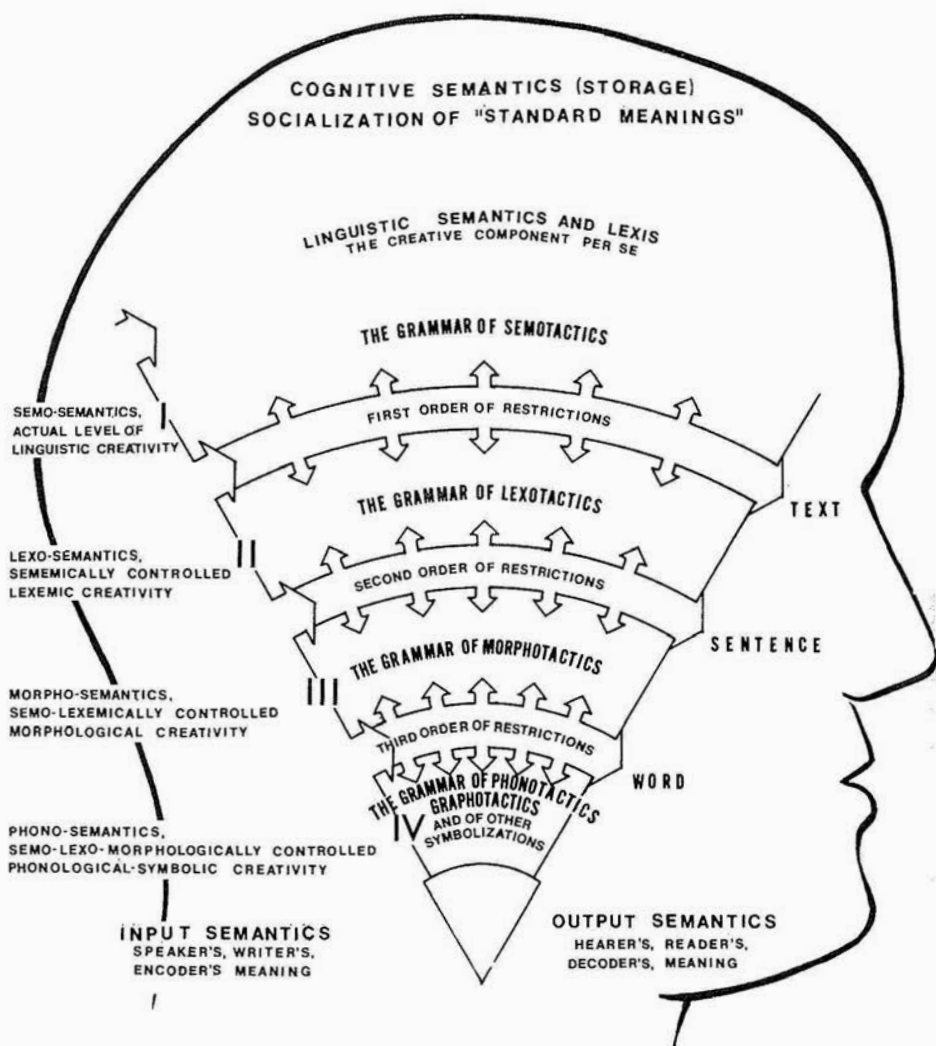
FIG. 2.

all is fine, but the new vocabulary created will be explicable only in the context of the situation they have created as writers. This also goes for new sentence patterns.)

The horizontal left-to-right corridors called First Order of Restrictions, Second Order of Restrictions, and Third order of Restrictions are the three major tactics that every natural language must have; i.e., the Semo-Lexotactics (between I and II), the Lexo-Morphotactics (between II and III) and the Morpho-phonotactics (between III and IV). The double-shafted arrows lead-

ing "up" and "down" from each of these corridors show some of the internal mechanics of the system. The fact that Fifi is a white poodle and a male enters the hearer's consciousness at level I, but levels II, III, and IV also fire simultaneously, though at a lesser power. Fifi walks into the reader's life as a concept realizable as a fairly tightly definable sememe that, further down, is realized as the lexeme ^{L}/Fifi/, a noun. This noun has a foreign "French" ring to it, as the vowels involved resemble English /iy/, but without the glide. The morphology "lets the item Fifi through," as it were—it does not stop to segment it into *Fi* plus *fi*.

Fifi could also walk into your consciousness as a contextually disembodied lexeme. Suppose I write you a memo that says *please get me half a dozen fifis at K-Mart*. You would have the right to turn to me and ask *What's a "fifi"?* The explanation I might give would be the building of some sort of sememe via *circumlexicalization* so that you might understand what it is I want. Suppose I define ^{L}/fifi/ as "that kind of newly imported French flea collar that poodles love to wear on hot, sticky summer days, selling for \$1.20 each" —you would have a reasonably clear idea of what I am asking you to buy; certainly, at least, you would not go to the frozen food section or to the auto- motive department, but much more likely towards the pet shop.

The First Order of Restrictions is the most liberal; yet it, too, constrains the world around us. It functions differently during sleep from during conscious alertness. My knowledge of the world constrains my behavior so that I do not step out of the window on the twentieth floor; yet I can safely dream that I step out and just float away. Types of fiction, fairy tales, poetry, ancient sagas, etc., function somewhat as "Dreams"; they create universes in which certain things are possible that we accept for the duration of the movie watched or the novel read and do not worry whether it is possible to have a space colony near Alpha Centauri in 2002 (see Jaynes 1976). Transformationalists have insisted in book upon book that the syntactic component is the creative one, with the semantics being interpretive and the phonology being interpretive as well.

The argument, repeated *ad nauseam* by all of its practitioners, is that we can produce sentences we have never heard before and can interpret sentences we have never heard before. Consequently, syntax must be creative. It never ceases to amaze me how such a valid observation can lead learned scholars to such an erroneous conclusion! The reason that we can indeed utter sentences we have never heard before and interpret ones we have never experienced is precisely that syntax, both in production and in reception, is a fairly narrow and restrictive domain, which, by repeating its standard patterns time after time, allows us to assimilate the speaker's meaning in terms of our own hearer's meaning, the two being mediated by the socialization of "standard meanings." The sentence *Fifi, my neighbor's white male poodle, was killed in the street by a drunken driver after he snatched away my dog's, Pogi's, bone from our porch* was never uttered before and never heard before by anyone, yet the

various ways of telling the story unfolded themselves rather naturally in the earlier part of this paper. The reason is that the experience of dogs snatching bones and running hither and thither is not uncommon; dogs getting killed by hit-and-run drivers is also fairly common. The lexical items *Fifi* and *Pogi* are certainly new to the reader, but they come tagged as "dogs' names," hence they make sense. No other lexeme (hence sememe) in the sentence is new and neither is the sentence pattern. The sentence skeleton is *My N's Adj Adjs N was V-ed LOC by Adj N after Pron. V-ed adv. Poss, Pers N. 's N Prep. Poss, N* and it could be "filled" by a variety of both sensible and nonsensical lexis, both as sentence-building practice in a class for foreigners, or for domestic amusement. The end-product of the channel called "First Order of Restrictions" is a text or several texts, possibly one single text which is produced from time to time during the individual's lifetime. Most people create texts that are not too memorable; most of them never even write them down. Conversely, the simple fact that someone decides to write his texts down does not make him a good novelist, let alone one who leaves a mark on his generation or changes the awareness of life of his contemporaries. Yet if "creativity" means anything at all, it should be used in this pristine, philosophical-artistic sense, the sense in which Shakespeare and Goethe are qualitatively different individuals from the rest of mankind.

Lexo-semantic creativity is describable by giving some real examples. French has an expression *petit bourgeois endimanché*, which means something like 'a lower middle-class person having a Sunday picnic,' or 'all Sundayed up.' (The image suggested is that he is lying under a tree, had too much to eat and drink, is huffing and puffing and can barely get up.) On one occasion at an open air picnic in Ravinia during a Mozart marathon, I dropped some food on my shirt. I was in French company, and thinking of 'making a pig of oneself' in English and not quite knowing how this is said in French, I suggested *je ne peux pas manger plus, je me suis complètement encochonné*, 'I can't eat any more, I am all **pigged up.'* The response was copious laughter and the suspicion that I heard this from French people. All of those present, including the director of the Maison Française de Chicago, were commenting on how completely well-formed French this word *encochonné* 'all pigged up' (from *cochon* 'pig') was and that they never heard it before. (Even though this word does not legally exist in French, we all agreed that a female speaker would have to spell it as *encochonnée*.) Numerous examples could be given from English, but I believe this example will suffice.

As we reach level III, it becomes harder and harder to be "creative" and make something new really stick in the language. The noun formative suffix *-th* of the forms *warmth, length, breadth, width*, etc., may give rise to an occasional analogy giving **sloth* for *slowness*, and the like, but these have very little chance of surviving the moment they are created. Note that this suffix is of early Anglo-Saxon origin in English. Speakers of English enjoy much greater

creative freedom on the morphological level when they are dealing with Latinate prefixes and suffixes, or elements of Greek origin. One look at the *Dictionary of Space English* (Makkai 1973) will convince the reader that neologisms are most frequently coined out of Greco-Latin morphological material such as *transduce, transducer, ablative cone,* etc.

The creative manipulation of level IV is the prerogative of talented poets writing in their native medium. Other than that, phonology *is* and *can be* interfered with by (a) immigrants, (b) children, (c) speakers of different dialects; this may lead to morphological changes in the language, which, ultimately, may also affect the syntax and the semantics. The history of English as traced in many standard textbooks (e.g., Pyles 1971) shows that this is exactly what happened between Old English and Middle English, and between Middle and Modern English.

5. WHY DO WE MAKE PERIODS (FULL STOPS)?

A sentence—like any object—is more than the sum of its parts. This is particularly true in live speech, since the intonation, the speed, and the rhythm are all intrinsic parts of the message. The period (full stop), which I have tried to characterize as a Semantic Pause, is also a signal that the speaker's mind is not so firmly made up as to be intolerant of someone else entering the conversation and registering doubt or disagreement. In order to test this hypothesis, try to *speak in a composed manner* in a situation and about a topic that by its nature does not call for such composed speech. Suppose you have guests in your house and are offering them the choice between tea and coffee; tea with lemon or cream, and coffee with cream and sugar or without. Since the normal ways of making such gestures are all too well known, I will not reproduce them here in any length (*Coffee any one? Tea? Lemon, cream and sugar?*) but I will report an instance told by an embarrassed participant in someone's house who offered coffee and tea as follows:

> Well, now then, if we are all agreed, I would like to propose that we leave the dinner table at this point in order to feel a little more comfortable and, while we do so, permit me to ask you if you would like to have some coffee or tea at this time also asking you, by the way, if, in case you would like to have coffee, you would also like to have cream and sugar to go with it, and, in case you should opt for tea, whether you would like to have lemon to go with it or cream.

The lady reporting this sentence to me also stated that she felt perplexed and out of place; in fact she was wondering if the host had something wrong with him. He later revealed that he used to be a judge and that he is a cured stutterer who compensated for his earlier speech impediment with this sort of long-winded, written style while speaking.

The "period" answers to both its American and to its British name.

It is indeed a "period"—an interval, if you will—during which (a) the speaker can change his mind, and (b) the hearer can get a chance to take a turn in the conversation; or rather to turn a monolog into a conversation. It also is a complete cessation of speech—a "full STOP," since it can also be the end of an entire message followed by extended silence on the part of all participants. Sentences, beyond being grammatical constructs, are also socio-psychological events, or to use the hippie term from the sixties, "happenings." Sentences hit us or caress us as we receive them, and we may return them or step aside. The game of Ping Pong is not a bad analogy for human dialog. Whenever the ball comes at you at an unexpected angle, you must position yourself to be able to return it over the net so that it touches your partner's side of the table; otherwise you lose the point, and either your partner or you must serve again. Just as sentences may be short or long, "points" in Ping Pong (or in tennis, for that matter) may be longer or short-lived. If every time you serve, your opponent smashes the ball and scores a point, and gives serves that cause you to drive the ball into the net, you will lose 21-0 in 21 short exchanges. This can happen only between a cruel pro and an innocent beginner. Benevolent pros allow the novices to return the ball in order to build up their self-confidence. The same with conversation and sentences. If every time he addresses me I cruelly answer a child, "Shut up!" I may create a lucid example of how periods (exclamation marks, in this case) are arrived at, but I will also have shown that I am turning my youngster into an introverted moron who will never be able to talk freely to others.

Whereas I do not know at present how such a statistical study could be undertaken, I have a gut feeling (this expression has been rendered respectable by the writings of James D. McCawley) that there is such a thing as an "average sentence length" in Modern American English as well as in various Commonwealth dialects. This length will probably vary with the mode (spoken or written) and the genre; but between Hemingway's short sentences and Walt Whitman's poetic mega-sentences there would be an arithmetically calculable average for written English, and presumably the same could be done for spoken varieties allowing for dialect variation both on geographical and sociological grounds. The number of verbs and nouns could be calculated per "average sentence" (specified by mode, genre, and dialect), and the information content per "average sentence" could be drawn in Semantic Networks. Such a study would indicate the amount and kind of information typically transmitted in one sentence where the sentences in question would always be viewed in the context of the kind of narrative in which they occur. Such a study would call for computer-parsing of sentences and the computer-parsing of various types of mechanically stored discourse.

Such a study would be an objective first step to the empirical investigation of *how* we make periods (or full stops). The *why* could be asked meaningfully only once we know the *how*.

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