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**Dr. Lewis Barnes, Editor**

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**A DISTINCTIVE FEATURE ANALYSIS OF PALATAL UMLAUT IN  
 OLD ENGLISH**

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In The Sound Pattern of English, Chomsky and Halle describe the phonology of modern English in terms of about fourteen phonological distinctive features. One can, using their features and conventions, provide some insight into the historical phenomenon known as palatal umlaut, or as it is sometimes called: i-mutation, i/j-mutation, i-umlaut, or i/j-umlaut.

Palatal umlaut is the phonological process responsible for the difference in the quality of the vowels in such obviously related forms as mouse/mice, full/fill, doom/deem, tooth/teeth, foot/feet, goose/geese, long/length, strong/strength, heal/hale, man/men, and so on. Historically, these words contained a suffixal palatal sound segment (herein indicated by the vowel graph "i" and the glide graph "y") to which the vowel in the stem word assimilated. In feature notation, this "i" and "y" (as in \*mūsiz (mice) and \*fullyan (fill)) may be minimally characterized as -consonantal, +high, -back, and -round.

In some cases this palatal segment is a causative suffix as in \*fullyan which meant "to cause to be full." In other instances, it is a part of the plural suffix as in \*mūsiz (mice), a plural form of \*mūs (mouse). Elsewhere, it is a part of a nominalizing suffix (ipu) as in \*longipu (length) and \*brādipu (breadth).

Palatal umlaut is a matter of regressive (anticipatory) assimilation, whereby +back sound segments become -back. In the chart below, the vowel graphs "y" and "y" indicate phonetic [ū] and [ü] respectively. A macron indicates the feature +tense. The Germanic symbol "þ" (thorn) indicates phonetic [θ] (theta) as in \*longipu (length).

*Pre-Old English	Old English	Modern English
1. *mūs	mūs	mouse
2. *mūsiz	mȳs	mice
3. *full	full	full
4. *fullyan	fyllan	fill
5. *dōm	dōm	doom
6. *dōmyan	dēman	deem
7. *gōs	gōs	goose

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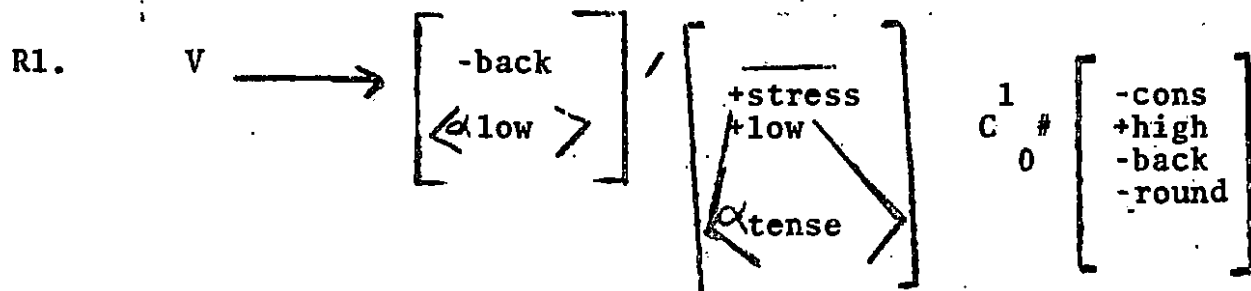
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8. *gōsiz	gēs	geese
9. *long	long	long
10. *longipu	lengpu	length
11. *brād	brād	broad
12. *brādipu	brae dpu	breadth
13. *mann	mann	man
14. *manni	menn	men
15. *hāl	hāl	hale
16. *hālyan	hælan	heal

The relevant feature description of the vowel segments (+vocalic, -consonantal) which are involved in palatal umlaut is sketched out below in the table where +tense (long) vowels are marked with a macron, and where -tense (short, lax) vowels are unmarked.

	-back -round	-back +round	+back -round	+back +round
+high -low	ī/i	ū/ü		ū/u
-high -low	ē/e	ō/ö		ō/1'
-high +low	æ/ae		ā/a	(ō/ɔ)

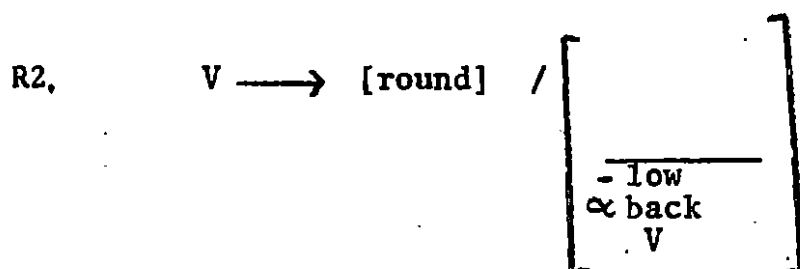
In terms of a distinctive feature phonological rule, one can state the process of palatal umlauting in the following rule, where V= vowel, C=consonant, #= word boundary:



Later in the history of English [ū / ü] and [ō / ö] fall together with their -round congeners [ī / i] and [ē / e] respectively. This change can be expressed as R2 which states that rounding correlates with backness.

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The net effect of palatal umlaut then can be charted phonetically as follows:

Pre-Old English	Old English	Modern English
1. $\bar{u}$	$\bar{u}$	$\bar{a}y$ (mice)
2. $uo$	$\bar{u}$	$\bar{i}$ (fill)
3. $oo$	$\bar{u}$	$iy$ (deem, geese)
4. $oa$	$\bar{u}$	$e$ (length)
5. $a$	$\bar{u}$	$ey/iy$ (hale, heal)
6. $a$	$\bar{u}$	$\bar{a}e/e$ (man, men)

The modern form breadth, phonetic [breθ], presupposes fronting of bræðu to phonetic [bræðe] which laxes its vowel which then vowel shifts to phonetic [e]. Finally, regressive assimilation converts the sequence [ðe] to [tθ]. One should also note that in some instances prior to the deletion of the umlaut-causing segment, there is gemination (doubling) orthographically of the consonant which precedes the palatal segment as in Germanic \*satyan (to cause to sit) which emerges in Old English as settan (modern set).

A similar kind of vowel alternation can be seen in the modern English forms that follow: wallet, well, weal, wealth, wale (northern British) and in water, wet, weather, and so on. Finally, the frontness and backness alternation of phonetically +low vowels can be seen in such doublets as: gad/god, strap/strop, drat/drot, catch/cock, and latch/lock. These forms are, of course, another matter for another day.

In summary, then, it has been our purpose to demonstrate that distinctive feature phonology as developed by Chomsky and Halle is a useful tool in historical English linguistics and this we think we have done without extreme violence to minute detail which we of course have neglected.

## Reference

Chomsky, Noam, and Halle, Morris, The Sound Pattern of English, Harper and Row, 1968.

Nota bene: I am extremely indebted for both the material and the theory in this paper to my esteemed colleague, Professor Silas Griggs.



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**Dr. Lewis Barnes, Editor**  
Volume VII Number 2

**INFORMANT-INTERACTION AS TRAINING IN CROSS-CULTURE  
COMMUNICATION IN THE FOREIGN LANGUAGE CLASSROOM**

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Last spring while in Chicago observing the Chicago Bilingual Education Centers with Ned Seeley and expounding some rather simple notions about helping kids become effective in communicating in a second language and culture I didn't dream that in no time at all I would be in a situation where I would have to "fish or cut bait". Or, to put it in a less quaint more current equivalent I found on checking this expression in the Dictionary of American Slang, "Blank or git off the pot."

I had said that current efforts to describe in detail the essential features of cultures and to devise means of teaching them to foreign language learners were worthy activities but a more roundabout than necessary way to make learning competent communicators in the languages they were studying. I agreed that making the values, assumptions, beliefs, traditions, institutions, interpersonal relations, and living patterns of a culture explicit to a student of its language was probably a step in the right direction -- that immersing him at times in a world that looks, sounds, and feels different from his own, involving him in roles and games to make features of that culture come alive for him, and quantifying for him the adequacy of his performance in those involvements would surely take a student farther toward becoming a communicator in a foreign language than was the case in past decades. Language teachers, I pointed out, when asked what percentage of their former students use the languages they have studied for genuine communication generally consider that a depressing question to answer.

What was I driving at, Ned wanted to know.

Well, I said, language teachers aren't using fully enough in their classes the most plentiful, the most authentic, the most appealing, the most motivational kind of realia available-- native speakers of the target language living in the area of the school.

Wouldn't ordinary speakers of the target language with their lack of training in teaching Americans and their lack of knowledge of the structure of their language and culture confuse and discourage the students regardless of whether they talked in

their native language or in their non-native English?

They probably would, I said, if they were used as lecturers or teacher-substitutes but not if they were treated as guest-informants ready to give the students practice, with the guidance of the teacher, in learning to interact in their language with members of their culture. The most important thing for the student to understand at the outset of his language study is that his progress depends on the extent to which he wants to be a communicator in the language. In face-to-face interaction with willing informants guided by their instructor the students can be made to feel from their first day in the course that the language studied is for genuine communication and that they should think of themselves as communicators in it to the extent that they have made a commitment to communicate whenever possible with any member of the culture available.

But wouldn't the desire to communicate in the target language with "any member of the culture available" be a rather grandiose ambition for the student in the United States just starting a course in a foreign language?

Not necessarily, I said. Students and teachers of languages have still not shaken loose from the attitudes toward language learning that prevailed throughout the centuries of instruction in Latin and Greek and that were shifted with little modification to the study of living languages -- that meticulous drill leading to "over-learning of the code features of the target language must precede any effort to really communicate in it. Despite the accelerated intermingling and interaction among the people of the world brought about by jet travel, inter-continental telephone, and Com-sat television, languages are still taught through frozen messages on the printed page or on audio-visual aids. And the student's interaction with a Computer Assisted Instruction program is considered the latest breakthrough in language learning. With Marshall McLuhan shouting that the world is a global village many language teachers still work as if living speakers of the languages they teach -- themselves sometimes excepted -- are light-years away.

The fact is that in most parts of the world there is within hailing distance an abundance of speakers of almost any language students want to learn and that most of them are delighted to help the language teacher train young persons of the mainstream culture in which they now reside to become communicators in their own language. In bringing these informants to his classes the language teacher can show his students how to begin interacting with a member of the target language and culture, how through use of a few controlling expressions, such as "Sprechen Sie ein bisschen langsamer, bitte," or "No lo he entendido, repitalo por favor" or "Paftaritye pazshaloostah" or "Vous avez raison, mais

je voudrais savoir qu'est-ce que veut dire ce que vous avez dit" or "Sansei shimas ga dozo sore wo motto kuwashiku ni setsumei shite kudasaimasen ka" the student can elicit from the informant the cultural information he is ready to receive in the language pattern he is ready to assimilate.

But in smaller communities might it not be difficult to find target-culture informants in the less commonly taught languages available often enough to make this method usable regularly?

You'd be surprised, I replied, how many speakers of particular languages are around when you begin to hunt for them. Many of them may be second or third generation members of families of ethnic groups that have maintained loyalty to their original culture while functioning in the mainstream American culture. One way of making students aware that the language they are studying is for now-communication is to involve them in tracking down all the speakers of the language in their vicinity.

But even if there are no native or near native members of the target culture available in the neighborhood, there is always the telephone. Informants can be brought into the classroom via the telephone with a "speaker" attached as quickly from a distance of a thousand miles as of a hundred miles or one block. The interaction can have been carefully prepared in advance or set up on the spur of the moment. It can be between the informant at the other end of the line and the teacher alone with the students only listening, or it can be with the students seated around the "speaker" and asking questions as the informant answers them. The stimulus of the interaction can be some special aspect of the informant's culture in which he is known to be an expert, some item of realia both the students and the informant are looking at, some graphic display ranging from a simple photograph to a famous painting, from an article in today's paper to a well-known sonnet that the informant may or may not have a copy of. As you can see, the informant can be used viva voce in any foreign language class, from the most elementary to the most advanced.

(Incidentally, an additional, more conventional, benefit can be offered the students through taping or video-taping these interaction sessions and making them available in the language lab so that the students can replay and study them with a view to improving their future performance. Or the tapes can be replayed later and discussed in class with the teacher pointing out areas for improvement.)

In areas in which no informant can be found to meet with the students in person, and in which schools cannot afford to have the telephone company install in the classroom a telephone and "speaker" there is available a delayed-interaction type of direct communication with an informant--the tape-cassette sent through

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the mail. The teacher or any of the students after establishing contact with appropriate informants through any of the tape-correspondence organizations (World Tape Pals or Tape Respondents International) or through institutions in the target culture can share playback of the informants' responses to previously asked questions about the informant's language to send for the informant to answer and mail back in turn. Once the students have had a taste of such collective tape-respondent interaction with informants they can be encouraged to continue on their own with informants they have found themselves.

But is this kind of cross-culture interaction with individual informants likely to give the students much organized knowledge of the target culture of the kind you read in books about the culture? It is the most economical way for the student to proceed toward becoming an accomplished communicator in the target language in all possible situations?

If we recognize, I said, that the highest priority in getting a student to communicate well in a second language and culture is to get him to commit himself to becoming a communicator in it as soon as possible, then the first step to take is to let him see how through the use of a few key questions and expressions in the target language with a live informant that he can get responses that he can understand and re-use and from which he can discover new questions to ask so as to gain new understanding and competence in the target language and culture.

The essence of a culture, after all, is not the physical reality of the environment in which members of the culture live but the characteristic patterns of thinking, feeling, acting, and talking of members of the culture that they exhibit to one another and to members of other cultures. The natives of a culture do not know all the culture's songs, museums, cathedrals, institutions, railroads, rivers, and rules of etiquette equally well. But they all share a greater capacity and readiness to communicate with one another than with members of another culture - unless as a result of some key experience and insight they have committed themselves to becoming communicators with members of other cultures as well as to taking advantage of every opportunity to do so.

So the essence of "knowing" the target culture is having made the commitment to interact with members of that culture as often as possible and to discover through that interaction what they "know" and how they think, feel, and act in typical situations. Degree of commitment to interact with members of the target culture, then is what we are trying to spot and to increase in students.

Weren't informants used in the ASTP language courses during World War II and though found effective for wartime conditions and goals

haven't they been generally discarded since then? In what way is your use of them better?

Mainly, I said, in that the ASTP informant was hired to serve with linguists as a subordinate member of the team, paid to demonstrate the patterns of his language that the linguist specified and to help drill the students until they achieved fluency in producing selected language patterns tied to largely military concepts and vocabulary. At war's end the forced learning, the mechanistic view of the informant, and the narrow wartime performance goals no longer seemed attractive. Language teachers then returned to what Nelson Brooks refers to in his "A Guest Editorial: Culture - A New Frontier" in the October 1971 FL Annals as the "Olympian" view of culture they had always preferred. Through bringing the student in contact with all types of informants volunteering their services as bridges between their culture and that of the student language teachers can make Professor Brooks preferred Hearthstone view of culture prevail.

Each informant is regarded as representing some unique aspect of his culture understandable through interaction with him in his own language. In the process of learning to understand him through guided interaction with him the learner steadily gains skill toward interacting effectively with other members of the target culture. Through being brought into contact with informants whose interests and backgrounds appeal to the student he will be motivated and challenged to learn to communicate in the target language more than students usually are.

What evidence do you have to suggest that learning to communicate in a second culture through interaction with a variety of informants would be more efficient for all language learners than conventional language classes in which the teacher is the informant, drill master, and evaluator rolled into one?

My primary evidence, I said, is from my own experiments with this method. I have made it a rule when I travel abroad to begin communicating with the first available informant I see a few minutes after my arrival. If I have a phrase book or can buy one immediately I will begin with an appropriate word of greeting -- Konnichiwa-Gomen nasai -- Dobri dyehn -- in the local language, followed by a short question regarding the location of some obvious thing. I will be ready to use some control-words if the response is incomprehensible until the informant has produced something I can understand. This I write down as well as I can so that I can produce it as I heard it. From this statement I will try to derive a related question and from the answer, still another until I think I have taken enough of the man's time. If I have no phrase book I try to use a bilingual approach with the chosen informant, eliciting from him some key-control-word and question-forms which I wrote down as phonetically as possible for use with my next informant.



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I have used this method in brief stops in countries like Taiwan, Malaysia, Ceylon, India, Italy, Greece, Lebanon, Jordan, Syria, Egypt, Nigeria, Ghana, Sierra Leone, Senegal, Spain and no longer ones in France, Germany, Czechoslovakia, Roumania, Venezuela, Columbia, The Congo, and Japan. In every situation I considered myself enroute to becoming a communicator in the language and culture of the country ready to resume interaction with members of the culture any time I had the chance.

The language I handle most comfortably, Spanish, I learned entirely by this method, plus later extensive reading of literature and newspapers and magazines. The other languages which I had studied in courses -- French, German, Italian, and Japanese -- came alive for me only after I applied this method to them.

Last spring I experimented with this method in an Applied Linguistics course for language teachers. To give them exposure to learning a language ~~now~~ I brought into the class foreign-student-informants in each of the following languages: Thai, Russian, Persian, Japanese, German, and Spanish. The students were startled at the fact that within a half-hour they had been led to elicit in a language they had never used before information about where the informant was born, where he had lived, what his interests were, and what his plans for the future were and to produce in response such information about themselves.

The present semester I have applied this technique to the teaching of a class in English for Foreign Students. Two of the three class periods a week are devoted to having as guest informants members of the community, members of the faculty, or student leaders. Each of the students in the class has improved markedly in ability to ask questions and interact with the American informants. The informants, in turn, have expressed surprise at the insights they have acquired about the cultures of the foreign students from their experiences.

Quite a simple, intriguing technique. Do you think you could demonstrate it in the class of any foreign language teacher who might be interested in it?

I'd be happy to try. Think what the consequences would be if all the language teachers in the world would each lead a stream of informants into their classrooms or take their students out to where the real-life action-with-informants is. What an awakening there would be among the ethnic minorities everywhere as the word goes out that they are needed, that they are valued in helping mainstream kids become better cross-culture communicators!

MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS

Dr. L.W. Barnes, Editor      Volume 7: Numbers 3 & 4

Article by      Frank L. Ryan, Stonehill College, North Easton, Mass.

(First issue(s) of the new academic year, commencing September, 1972

Zelig Harris' Discourse Analysis:  
An Application to Hemingway's A Farewell to Arms

The chief advantage to be gained from the application of linguistic analysis to literary analysis is the possession of a method which minimizes the subjectivity of the investigator who may otherwise find in a text what he wants to find and not what is there, something from which concerns with Hemingway's style have traditionally suffered. The method of discourse analysis of Zelig Harris provides such an advantage.<sup>1</sup> It is Harris' thesis that "discourse analysis within on discourse at a time yields information about certain correlations of language with other behavior."<sup>2</sup> More extensively:

The reason is that each connected discourse occurs within a particular situation - whether of a person speaking or of a conversation or someone sitting down occasionally over a period of months to write a particular kind of book in a particular literary or scientific tradition.<sup>3</sup>

Harris rules out meaning as a vital aspect of the investigation on the grounds that meaning constitutes an examination of the contents of the discourse. The investigator, he warns, should not be interested in elements chosen in advance for the interest of the investigator should not be in the fact that certain elements occur but in how they occur. He should be interested in "which ones occur next to which others, or in the same environment as which others, and so on - that is, in

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<sup>1</sup>"Discourse Analysis," The Structure of Language, eds. Fodor and Katz (New Jersey, 1964), pp. 355-383.

<sup>2</sup>p. 357.

<sup>3</sup>p. 357.

the relative occurrence of these elements with respect to each other."<sup>4</sup> The task is to collect equivalent classes, that is, elements in equivalent environments. This is simple when two elements have identical environments. But this rarely occurs in any discourse and therefore the collecting of equivalent classes must rely on setting up a chain of equivalences connecting the two environments. "This is done in descriptive linguistics when we say that the class of adjectives A occurs before the class of nouns N, even though a particular A (for example, voluntary) may never occur before a particular N (say, subjugation). It is done in discourse analysis when we say that two stretches which have the same environment in one place are equivalent even in some other place where their environment is not the same."<sup>5</sup> For example, operating on a simple advertisement consisting of six sentences, Harris finds the following equivalence: The title of the advertisement is "Millions Can't Be Wrong." Later in the text he finds "Four out of five people can't be wrong." Therefore, "Millions" and "Four out of five people" constitute members of an equivalent class. The equivalence that exists, it should be noted again, is not to be taken as an equivalence in meaning or importance but simply as an equivalence in environment.

(1) I departed from Harris' treatment of meaning. An equivalent class for Harris was based on position alone. To this was added the notion that meaning need not be separated from the method under certain circumstances, that the consideration of meaning need not diminish the effectiveness of the method as an objectively descriptive approach.

(2) There was no attempt made to exhaust the potentialities of the whole text. It was felt that the survey of a single element would reveal the existence or non-existence of a pattern of distribution.

(3) Harris, in his efforts to extend the equivalence classes quantitatively, urges the use of the text and evidence outside of the text. In the first instance the investigator could achieve transformation of a particular element by proving that a similar construction appears in the text. In the second instance transformational operations could be justified by the existence of the sought for construction in the language itself. In this study the latter was not used, simply because it was felt that a stronger case could be made for the existence of a pattern by confining the study to the text. As it turned out, surprisingly few transformations were needed to enlarge the number of members of the two equivalent classes examined.

(4) In Harris' method single words are used to establish classes... Harris suggests, however, that any units of the sentence may be used. In this study, though single words were used, the words had to be structured so that they were immediate constituents of larger units. For example, the word "Outside" was discovered to be

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<sup>4</sup>Harris, p. 359.

<sup>5</sup>  
p. 360.

an important word in the text. In some instances, however, it occurred as part of a phrase and in other instances it occurred alone. Compare "outside the window" to "outside it was getting dark." The cut in the first instance would produce "Outside/ the window" which would produce a meaningless intonation. The second instance produces outside/ it was getting dark" with an obvious meaningful intonation.

The first step, then, was to discover which word or words were particularly important to the text. This is a long but not particularly difficult task, for frequent readings of any text will soon make the reader aware of these important words, important not only because of their quantity but their functions as well. It became a matter of counting to determine quantitative weight. The ten most often used words were found to be: out, bed, room, window, rain, road, mountains, car, girls, war. Of these words, "rain" was found to be the most important in terms of emotional content.

It requires little effort on the part of a reader to realize what critics never tire of pointing out, the high connotative value of the word "rain" in A Farewell to Arms. The following passages, selected at random from many available ones, indicate this:

At the end of the first chapter:

At the start of the winter came the permanent rain and with the rain came the cholera. But it was checked and in the end only seven thousand died of it in the army.

Part of a dialogue between Frederic and Catherine:

"All right. I'm afraid of the rain because sometimes I see me dead in it."

"No."

"And sometimes I see you dead in it."

"That's more likely."

"No, it's not, darling. Because I can keep you safe. I know I can. But nobody can help themselves."

At the death of Aymo:

"Let's go then," Bonello said. We went down the north side of the embankment. I looked back. Aymo lay in the mud with the angle of the embankment. He was quite small and his arms were by his side, his puttee-wrapped legs and muddy boots together, his cap over his face. He looked very dead. It was raining."

After the death of Catherine:

But after I had got them out and shut the door and turned off the light it wasn't any good. It was like saying good-bye to a statue. After a while I went out and left the hospital and walked back to the hotel in the rain.

The importance of this connotative strength is increased by the quantitative weight of the word, and its even distribution throughout the text.

After the word "rain" was chosen because of its association with emotion and its quantitative distribution the following steps were taken: (1) The collection of those constructions which contained the word "rain" and had a relatively frequent occurrence. The constructions eventually chosen: "the rain," "in the rain," "it was raining," "it was still raining." (2) The collection of those constructions which were in the immediate environment of those constructions chosen in (1). These, too, had a relatively frequent occurrence. The constructions chosen: "outside," "in the dark," "in the room," "in the hall," "through the window." (3) The search for a pattern throughout the novel, based on these constructions or "equivalent classes." (4) The application of transformational rules to those constructions which had their analogies in the constructions chosen in (1) and (2). For example, in one of the early sentences the following construction is found: "In the dark it was like summer lightning..." (Adv. Ph. + N + V + Adj. Ph.) This is transformed into "It was like summer lightning in the dark" (N + V + Adj. Ph. + Adv. Ph.) by analogy with a construction found in the text, "It was empty in the dark" (N + V + Adj. + Adv. Ph.). By this re-positioning the two constructions can be part of the same class by their relation to "in the dark." For greater clarification of the method the first few equivalences can be shown.

(1)  $A_1$  : (equivalent to)  $B_1$

$A_1$  is "It was like summer lightning" and  $B_1$  is "in the dark" in the construction "It was like summer lightning in the dark."

2.  $A_2$  :  $B_1$

$A_2$  is "sometimes" and  $B_1$  is again "in the dark" from the context "sometimes in the dark." "Sometimes" becomes a member of the equivalent class A because it appears in the same context in which "It was like summer lightning" appeared and this latter construction had, again, appeared in the same context in which the key construction "in the rain" had appeared.

3.  $A_2$  :  $B_1$

$A_2$  is "the world all unreal" and  $B_1$  is again "in the dark" in the context "the world all unreal<sup>1</sup> in the dark."

Obviously, the procedure can become quite complex, but by limiting the number of key constructions a fairly simple yet revealing pattern (though tediously achieved) can be secured. That a pattern emerges may be seen from citation of a few of the examples forming equivalences further along in the pattern:

"outside it was getting dark"  
 "outside the rain was falling"  
 "outside through the window"  
 "outside the mist turned to rain"  
 "outside it was nearly dark"  
 "outside something was set down"  
 "outside we ran across the brickyard"

in turn:

"the breeze came in through the window"  
 "and I saw the sun coming through the window"

I think that it can be seen here that once the proper constructions are isolated the equivalency classes emerge quite clearly. The first 52 of the complete pattern which comprised 145 instances, proceeding from top to bottom, from Row # 1 to Row # 2, etc:

Row # 1	# 2	# 3	# 4
A <sub>1</sub> :B <sub>1</sub> T*	A <sub>14</sub> :B <sub>11</sub>	A <sub>25</sub> :B <sub>19</sub>	A <sub>42</sub> :B <sub>16</sub>
A <sub>2</sub> :B <sub>1</sub>	A <sub>15</sub> B <sub>11</sub>	A <sub>26</sub> B <sub>14</sub>	A <sub>43</sub> B <sub>16</sub>
A <sub>2</sub> :B <sub>1</sub>	A <sub>16</sub> :B <sub>11</sub>	A <sub>27</sub> :B <sub>16</sub>	A <sub>7</sub> : B <sub>12</sub> T
A <sub>3</sub> :B <sub>1</sub>	A <sub>9</sub> :B <sub>12</sub>	A <sub>9</sub> :B <sub>9</sub>	A <sub>43</sub> : B <sub>16</sub>
A <sub>3</sub> :B <sub>1</sub>	A <sub>9</sub> :B <sub>7</sub>	A <sub>28</sub> :B <sub>17</sub>	A <sub>44</sub> :B <sub>16</sub>
A <sub>4</sub> :B <sub>2</sub>	A <sub>17</sub> :B <sub>11</sub>	A <sub>29</sub> :B <sub>7</sub>	A <sub>45</sub> :B <sub>14</sub>
A <sub>5</sub> :B <sub>3</sub>	A <sub>18</sub> :B <sub>11</sub>	A <sub>30</sub> :B <sub>16</sub>	A <sub>46</sub> :B <sub>17</sub>
A <sub>6</sub> :B <sub>3</sub>	A <sub>19</sub> :B <sub>11</sub>	A <sub>31</sub> :B <sub>17</sub>	A <sub>47</sub> :B <sub>21</sub>
A <sub>7</sub> :B <sub>3</sub>	A <sub>20</sub> :B <sub>7</sub>	A <sub>32</sub> :B <sub>17</sub>	A <sub>9</sub> :B <sub>14</sub> T
A <sub>7</sub> : B <sub>1</sub>	A <sub>21</sub> :B <sub>7</sub>	A <sub>33</sub> :B <sub>17</sub>	A <sub>48</sub> :B <sub>5</sub>
A <sub>8</sub> :B <sub>4</sub>	A <sub>9</sub> :B <sub>13</sub>	A <sub>9</sub> :B <sub>16</sub>	A <sub>49</sub> :B <sub>17</sub>
A <sub>9</sub> : B <sub>5</sub>	A <sub>21</sub> :B <sub>14</sub>	A <sub>34</sub> :B <sub>20</sub>	A <sub>9</sub> :B <sub>17</sub> T

A<sub>9</sub> : B<sub>6</sub>

A<sub>9</sub> : B<sub>15</sub>

A<sub>35</sub> : B<sub>11</sub>

A<sub>50</sub> : B<sub>17</sub>

\* T indicates transform-  
ational procedure.

It is well to recall at this point that the members of the classes do not mean the same thing but that because of their association with particular constructions they have connotative values which are similar. This connotative association emerges originally from the word "rain" which not only has a high connotative value in the novel but a quantitative strength (one of the ten most often repeated words, occurring 105 times) and an even distribution throughout the novel. Obviously, such analysis does not exhaust the full meaning potential of the work, if such a thing can ever be realized, for that potential emerges from other sources as well. Further, other words could also produce patterns of relationship though because of the connotative and quantitative strength of "rain" it is doubtful if other words could produce the 148 equivalences produced by "rain." Possibly such analysis places at least part of criticism within the realm of computerized research. However grimly this may fall on literary ears, it should be recalled that the chief purpose is not merely the reduction of a text to a series of equivalence classes but the more accurate explanation of how an author creates effects. A Farewell to Arms is a novel which has a poignant tone from beginning to end. One of the ways through which Hemingway achieves this is by endowing a word with great emotional reference and then distributing it throughout the work. Words are dynamic elements altering the meanings of other words in the same context. The method used here reveals to some degree the extent to which a vital word does function in this dynamic process and thus helps to explain the continuity of effect achieved by Hemingway.

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**MOREHEAD STATE UNIVERSITY**  
**BULLETIN OF APPLIED LINGUISTICS**  
**Dr. Lewis Barnes, Editor**

Dr. Ruth Barnes "A Brief Look at Compound Words" Vol. 7, Numbers 5 & 6

It is an elementary matter to call attention to the morpheme. Perhaps we have been so used to considering that the word is the smallest functional unit of discourse that carries an invariable meaning that it comes as a shock to find that such is not the case. Words carry not a meaning, but meanings. Therefore, the term "invariable" itself is misleading.

In English, at least, a word is to be defined as that which carries primary stress and has at least one vowel. We need to stay with that definition, for such is the invariable case. Now, a word may be composed of a free morpheme, more than one free morpheme, at least two bound morphemes, or a combination of free morphemes and bound morphemes. Let us take a look at the term "free." We define "free morpheme" to be that word which carries primary stress and at least one vowel and which cannot be broken down any further or farther: boy, macaroni, it, Massachusetts--as examples.

There are words which are more than free morphemes. When we take a bound morpheme such as /-ness/ and add it to the free morpheme "pert," we obtain the word "pertness." "Pertness," then, is composed of a free morpheme plus a bound morpheme.

We have words composed of purely bound morphemes: /micro-/ + /-cosm/ yields "microcosm." Then we have such an example as "hypo-/ + /-dermic/ yielding "hypodermic." Obviously, there are many thousands of such examples.

We have another clustering of morphemes involving the use or usage of what is, in one instance, a free morpheme, and, in another instance, a bound morpheme. We consider that "ship" and "let" are words. However, when we use them as suffixes, we view them as "bound morphemes." We have friend + /-ship/ as "friendship." We have ham + /-let/ as "hamlet." In the case of /-ship/, we use that term as "the condition of." In the case of /-let/, we use that term as "small."

Then we have compound words fusing two free morphemes. We have such examples as "blackboard," "greenhouse," "toothpaste," or "cornmeal."



Then, there are compound words needing or requiring the use of the hyphen.

There are hosts of words employing the hyphen. There are such words as

top-heavy	well-known	down-the alley
baby-sitter	recently-employed	jack-of-all-trades
close-eyed	crash-dive	man-on-the-spot

Although I have not made such a subclassification, I could list terms that are classified as compound while being composed of words on a free morpheme "+" basis. As an example of such a "basis," I use the compound "living room." Here we are thinking of one unit. The word "room" is a free morpheme. The word "living" is a "free morpheme +" because we have the word "live" as a free morpheme, but "-ing" as a bound morpheme. Other such words might include "racing horse," "traveling man," or "dancing girl."

At this point, I wish to point out how much difference still exists in handling such language or linguistic problems as this. I, take, as one extreme, William D. Drake's The Way to Punctuate \*, and at another extreme, Stageberg's An Introductory English Grammar \*\*

First, let us consider Drake's book. In his Part II, Drake opens his discussion from a chapter entitled "Arbitrary Marks and Usages." After laying down some basic rules as to using the hyphen in dividing rules, as to not using the hyphen to break single-syllable words, and as to not dividing number and names of organizations, Drake introduces his prescriptions under a special section "The Hyphen Joins the Parts of Some Compound Words." The specific rules on compounding with the hyphen then occur:

A compound word is one which consists of two or more normally independent words:

broad jump	top-heavy	toothpaste
living room	baby-sitter	cornmeal

Compound words appear in three styles, as these examples show: open, hyphenated, and solid.

Generally speaking, the hyphen is used in compounds much less often than either the solid or open form, and the trend in recent years has been increasingly in that direction. You will be safer when in doubt to select the solid or open form. Following is a brief summary of kinds of compounds and the forms in which they should occur. \*\*\*

\* W.D. Drake, The Way to Punctuate, Scranton, Chandler, 1971, xii, 154 pp.  
\*\*

Norman Stageberg, An Introductory English Grammar, N.Y., Holt et al, xvii, 506 pp.  
\*\*\*

Drake, 6p. cit., pp.86-87.

The point that needs to be surveyed, perhaps, is that point "when there is doubt." Let us see how Drake moves to make his position more specific:

NOUN COMPOUNDS DERIVED FROM A VERB  
AND ENDING IN -ER OR IN -ING

Many such compounds are hyphenated:

baby-sitter	face-lifting
well-digger	apple-polishing

Still, this type contains more forms written solid or open than hyphenated:

troublemaker	lawnmower
proofreader	freight handler
housekeeper	horse trader

The hyphen is a most useful item when it helps avoid confusion in meaning. For example, a well digger might be a digger who feels well, but a well-digger is a digger of wells\*\*\*\*

Then, Drake goes on to develop compounds derived from a verb and adverb. He points out that Modern English uses many verb-adverb combinations such as "take over," "drive in," "make up," and "hand out." He points out that these are never hyphenated when used as verbs.

However, when they are used as compound nouns or adjectives, they are usually hyphenated..He then considers that compound adjectives derived from participles are usually hyphenated, but invariably so when used before the noun:

hot-tempered	well-advised	
wide-eyed	well-known	
double-spaced	well-groomed	*****

He considers that there are compound adjectives in which the two components keeping their own meaning are always hyphenated: (husband-wife team) \*\*\*\*\*

Among other prescriptions for hyphenation are those where a phrase is used as a compound --Jack-of-all-trades. He takes up the suspended compound situation with such a statement as "a 10- or 12-foot pole. The hyphen is also to be used for clarification-- slow-moving van-- for bound morphemes followed by a base word that is capitalized--pro British-- and for indicating that two like vowels are in danger of fusing --semi-invalid. Then, finally, numbers from "twenty-one" through "ninety-nine" are to be hyphenated. \*\*\*\*\*

\*\*\*\*\*

Drake, Op. cit., p.87.

\*\*\*\*\*

Ibid., pp. 87-92.

\*\*\*\*\* Ibid., p. 93.

Without debating the correctness of the prescriptions, I find that the treatment of hyphenation by Drake does involve some seventeen rules. In a way, I would have to agree that some of the rules are descriptions, and that Linguistics is certainly a descriptive science.

Further, in fairness to this approach used by Drake--an approach which is quite characteristic of a reasonably well-organized view of grammar and punctuation from a review point of view, from a drill point of view, and from the traditionalism that makes little specific difference between structure and function -- I would agree that those following the rules would do a reasonably good job in writing.

The fact that Drake's book reflects a real effort to establish some kind of patterning is not without considerable merit. But his repeated statements which reflect such terms as "doubt," "usually," "almost invariably," and "often" reveal only too well that there are problems in such an approach to hyphenation.

Now, it is true that it is not always possible to render the phonology basic in speech in any one-to-one relationship in written utterances of at least sentence length. Such matters as oral interpretation, fragmentation, and lack of language-rhythms make transferring the juncture in the oral utterance to the graphic representation difficult at times. Nevertheless, in Drake's listing there are very few rules which carry the invariability requisite to the patterning and ordering I consider basic to language as used in its normal and everyday sense. Let us look at the Stageberg approach, one which is almost purely phonological.

Stageberg tackles the problem from "Stress." (The assumption is made that the readers or students agree with the position that in English there are thirty-three phonemes that can be represented in some kind of letter form graphically. Additionally, there are twelve more phonemes: four pitch, four juncture, and four stress. In his introduction to his chapter on "Stress," Stageberg indicates that the four kinds of stress are primary, secondary, tertiary, and unstress(weak stress). \*\*\*\*\*

He develops his approach to compounding by a set of rules called "Patterns." His Pattern 1, for example reads:

Pattern 1. A compound is usually accompanied by the stress pattern of / \ . It is exemplified by bluebird, high school, dining room. A compound may be spelled as two words, as one, or as a hyphenated word. Both "sidewalk" and "drug store" are compounds, because of their stress patterns, regardless of the fact that one is written as a single word and the other as two. \*\*\*\*\*

\*\*\*\*\*

Stageberg, Op. cit., pp. 45-48, passim.

\*\*\*\*\* Ibid., p. 48.

I list the rest of his patterns as follows:

Pattern 2: The modifier + noun pattern is signaled by the stress pattern of  $\wedge /$  as in sick nurse, poor house, working man.

Pattern 3: A qualifier + adjective or adverb often takes the two--three stress pattern. A qualifier is a word that can occupy the position of "very." It qualifies or modifies, an adjective or adverb. Common qualifiers are "very," "quite," "more," "rather," "somewhat," and "too."

Pattern 4: The verb + noun-object grammatical pattern has a stress pattern of  $\wedge /$ , as in "They love birds" and "They are baking apples." This pattern occasionally contrasts with the compound noun stresses  $/ \wedge$ , as you will see.

Pattern 5: The verb + adverbial grammatical pattern also has a  $\wedge /$  stress pattern, as in "You must look out," and "The tent had been pushed over." The compound noun derived from such verb + adverbial combinations has the usual  $/ \wedge$  pattern, as in "The lookout had a long vigil," and "This probably is no pushover."

Pattern 6: In Pattern 1 we observed the compound-noun stress pattern of  $/ \wedge$ , as in "greenhouse." This is heard extensively. There is also another compound noun stress pattern which reverses that of Pattern 1. It is  $\wedge /$ , as in "Rhode Island." This pattern is used in a smaller number of words, many of which are proper names. Some compound nouns take either of the two, as short story or short story. \*\*\*\*\*

This approach certainly does much more for the phonology that is a part of grammar. Works in the tradition represented by Drake invariably pay some attention to syntax and morphology, with strong emphasis on the semantic components of the language. Stageberg represents a more modern and systematic approach to handling the language in including phonology, together with syntax and morphology, in defining grammar.

Yet, the work by Stageberg in compounding would be more effective, perhaps, had he not "dodged" the "hyphen" issue. He avoids the issue, indicating that "hyphens are somewhat deceptive." This simply cannot be done. Since the entire English Grammar in his approach is so carefully structured, the presence and operation of hyphens cannot be so ignored, or left to the dictionary. Stageberg's work cited is to be open to criticism on the grounds of its treating pitch, stress, and juncture in a consistently-less-than-sentence-utterance. Having committed himself to the compound of one word, to the compound of two words, and to the existence of hyphenation, there simply must be some patterns for the class he cited, but then ignored--the hyphenation class. \*\*\*\*\*

Stageberg, Op. cit., pp. 49-54.

It is true that a thorough inspection of the use of the hyphen should involve a reference to several traditional grammars, transitional grammars, thoroughly-modern grammars, and specific articles or treatises on the use of the hyphen. Nevertheless the treatment by Drake and the lack of treatment by Stageberg indicate more concern by the linguist with compound words as single or as multi-termed than with the hyphenation subclass. Yet, hyphens are to be used in a context wider than that used where the word is simply carried from one line to the next.

I shall take another look at the whole area of compounding. I can certainly make one more descriptive observation. It is not certain that we can always distinguish a secondary stress from a tertiary stress. Nor is it always certain that we can distinguish a primary stress from a secondary stress. It can be urged that one can always go to the dictionary. But, in so doing, he may run into certain embarrassing variations.

The dictionary, a collection of certain items as words, indicates through its items the range of meanings that can be carried through the single word. It is not likely--nor is it desirable-- that the words will be utilized or scanned as separate entities. The complete dictionary is one which reveals much about the language through its handling of the individual word items. However, for the individual user of words, each word will be in a specific and unique context. The context is more than likely to be that of the sentence-or -greater. While there is always the rich benefit of being able to obtain from a dictionary all that is needed for a single oral or written utterance, there should be the recognition that a dictionary is more likely to indicate the range of possibilities for the word than to indicate the specific certainty. It does occur to me that it is a valid objection on the part of those urging reference to the dictionary to point out that our unabridged dictionaries carry the range of virtually all meanings and forms at one time. Therefore, each individual should be able to select that one form appropriate to his specific condition. If the dictionary does not carry such a value, then its definition in itself is useless.

On the other hand it can be urged with force that the dictionary is not that definitive insofar as compound words are concerned, that it is not feasible for the individual to refer to the dictionary for each individual item in an almost stimulus-response fashion for each particular word he needs, and that the dictionary is always at least ten years behind our contemporary use and usage. I believe that the answer comes about through reconciling the claims of grammatical rules, on the one hand, with the claims or demands of the dictionary, on the other hand. Insofar as compounding is concerned, I believe that there is one solid rule that is always operative. Where there are two words with each a free morpheme and where the two terms are subsumed as one word or term and where the stress in context is heavy on the first word, the two words are blended as one.

Thus, in the following sentences, we would have the two words, as a compound, fused into the single word.

The breakthrough was successful.  
 The blackboard was too far away for me to see clearly.  
 I had the pleasure of seeing the blackbird sitting on the birch tree near my front window.  
 The baby's toothpaste was his noon meal today.  
 I enjoy a dish of cornmeal when the weather is very cold--near freezing point.

When would I have the situation where the words that are subsumed as a single term from the point of view of meaning are found as two words? Again, I go to phonology, but I go to phonology in the sentence --or greater--context.

In the case where the free morphemes constitute, semantically-speaking, one term but consist of two words, at least, there will be two words if the stress in context is as much on the second word as on the first or more on the second word than on the first. I give some examples for reference:

broad jump	green house
high jump	brown bread
break through	raisin cake
drive in	black bird
hand out	hot house
long hand	high chair

Thus far I have kept my "rules"--descriptions--tightly-restricted to two free morphemes. I have not considered the compounds where one or both of the words may consist of a free morpheme + a bound morpheme. In order to make my meaning clear, I refer, specifically, to such cases as

traveling man	walking horse
dancing girl	racing horse
Latin teacher	cutting up
smoking room	handing out

As I look at the list, I am inclined to say that where we have two words and where the two words are to be subsumed as one whole term or action and where one or both of the words is a "free morpheme +," I will find that I need to keep the two words separated. In order to verify my observation and tentative conclusion, I add to the list. I can easily do so, and, in so doing, provide several hundred such items. However, I then run into the following instances:

outspoken	loudspeaker
ongoing	headmaster
incoming	outgoing

Then, of course, I become somewhat unhappy. For each of the terms consists of two words; one of which, at least, consists of a "free morpheme +." Therefore, I cannot say that when there are two words subsumed as one but where one, at least, is a "free morpheme +," the two words must always be separated.

I then go back to test my first descriptive rule. I find that when I stress the first word--in context --much more than I stress the second word, I have the two words represented graphically as one. When I stress the second word--in context--as much as I do the first word or more than I do the first word, I have the words appear graphically as two words. I do find that the two rules work. Therefore, for the time being, at least, I abandon my third speculation--that having to do with the "free morpheme +"-- as not significant.

Since I have restricted my observations to compound words where the words must be at least of free morpheme status or stature, I am not concerned with what I need to do when I have a bound morpheme as a prefix before free morphemes or greater-than-free morphemes. I now look at the hyphenation problem only insofar as it is concerned with compound words.

By way of review and by way of becoming more specific as to juncture, I consider that there is the juncture between words where the cut in the speech stream is pronounced because the second word of a compound word has stress, in context, great enough to force a graphical division of the two words.

When there is a cut in the speech stream so great as to to exceed the limits of closed juncture, but not great enough for open juncture, we have the use of the hyphen. Now, I restrict the discussion of the use of the hyphen to the use of compound words. And I further restrict the meaning carried by "compound" words not to include the prefix before a free morpheme. Thus, for the purposes of this paper, I do not discuss such words as

semi-invalid	pro-American
de-emphasize	anti-imperialism
ex-president	self-employed.

In order to ensure that there is no misunderstanding as to the term "self-employed," let me point out that while "self" is a word on occasion, on other occasions there is "self-" which is not a word, but an affix--here, an affix of the "suffix" variety. I remind that reader that there are other affixes which are words on occasions where they are not affixes. In this list, I find such terms as /-let/, /-ship/, and /-wise./ Of course, these three affixes are suffixes. It is good form and good judgment to indicate the difference between a word and an affix by some convention. The difference between the word "self" and the affix /self-/ is indicated by the use of the dash for the affix.

I take the words used by Drake in his hyphenation section. Such words as "top-heavy," "baby-sitter," "well-digger," "face-lifting," and "apple-polishing" are hyphenated. I am certain that they are hyphenated because, in context, their articulation indicates a position between closed juncture and open juncture. It is of little value to assert as Drake asserts that "many such compounds are hyphenated." "Many" simply is not good enough. The language is left far too formless for what we really know about the language.

If the same words are hyphenated on one occasion and not on another occasion, the explanation is clear and logical. If the sentence is given normal intonation, then the same two words hyphenated on one occasion but separate on another occasion carry different meanings. The fact that the cut between the two words is entirely open indicates that the compound words differ functionally -- which would not be true where the compounding requires the hyphen.

This point can be made clear through the following examples or illustrations. Consider the following sentences:

The power dive was a movement of beauty and skill.  
There is no question that he will power-dive his  
way to glory.

Assuming, again, that I am using normal intonation patterning and that I am not engaging in oral interpretation, there is open juncture in the "power dive" and a restricted open juncture in "power-dive." The same observations will hold in the following illustrations or instances:

The double space left room for written observations.  
You would do well to double-space.

The following sentences should illustrate the point made about hyphenation:

The black-white confrontation proved of doubtful significance.  
The husband-wife team manages the core program well.  
The purple-gold sunset was unusual for this part of Kentucky.  
I am not aware of the technical name for that cotton-nylon  
fabric. \*\*\*\*\*

In reading the sentences with normal rhythm and intonation, I find there can be no question that the compound terms are too much for closed juncture and far from enough for open juncture. It would not appear possible to fuse the two words as one, or possible to keep them separate as words with the normal open juncture.

It is certain that Drake's book is an excellent one of its kind, but it is equally certain that the inability to define the compound words in a few classes with any degree of assurance is a drawback to any system that avoids the phonology of the language. While there are areas where it would appear difficult to equate the phonology and the graphics of a system on a one-to-one basis, such a difficulty does not exist with respect to describing compound words. Stageberg's patterning tends to break down because he compiles his number of patterns in terms of compound words not in sentence context. Again, he has a real problem in setting up distinctions between his primary and secondary stresses and between his secondary and tertiary stresses.

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Drake, Op. Cit., pp.88-89.



In our use of language on its true or oral level, we take care of many of our nonverbal levels of meaning through the syntax and phonology of the language.

When our nonverbal levels postulate a view toward experience that we call "poetic," we have phonology, morphology, and syntax ordering the grammar of the verbalization. For example, when we state "I do not care for the stars that shine," we are certainly not in the poetic mode on either the nonverbal or verbal levels.

When we utter "I care not for the stars that shine," it would appear that our neural apparatus is functioning so as to indicate some poetic level of nonverbalization. From the verbal point of view, there must be some correspondence. The correspondence is not in terms of the specific word, but in terms of a total syntactical, morphological, and phonological ordering, one that seems a faculty of the mind itself. When the poetic impulse or mode is one that is lyrical, and thus universal, there would appear to be within the thinking processes themselves some inner way of distinguishing the lyricism essential to indicate the timelessness so universal to the lyrical statement.

Specifically, for nearly all languages, this lyrical poetic mode intuited to the lyrical syntax of the language demands the universal "is." Thus, we have, in the lyric such lines as

"This is the one and only love"

"Heard melodies are heard, but those  
unheard are sweeter;"

"My mistress' eyes are nothing like the sun,"

"Whatever is begotten, born, and dies."

Then, too, we have the language of fiction, that of the so-called "past" or past tenses. Then we have such complex nonverbal levels as the mythopoeic, the psychological, the philosophical, the sociological, the historical, the anthropological, and many other "ical" levels. These have to be verbalized.

While we need not verbalize these levels in oral conversation, we can, should we so desire, provide semantic markers for the different kinds and degree of forms and levels of meaning-- up to the very point where the "semantic traffic might be congested.

We can indicate a level of primary assertion of fact, as in "Two plus two can be considered as "four." We can mark the nonverbal source of "Jones will win." Here we have an opinion about an event which has not yet occurred. Such a verbalization could occur as "Jones will win<sub>o</sub>." The subscripted "o" could stand for a decision based on some kind of expectancy where the physical realization has not yet taken place-- or may not take place.

We could have a sentence such as "Jones is a skunk<sub>m</sub>." The subscripted "m" would indicate that the sentence is metaphorical.



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# MOREHEAD STATE UNIVERSITY

## BULLETIN OF APPLIED LINGUISTICS

Dr. Lewis Barnes, Editor

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Dr. Lawrence Ramesen "Transformation, Generation, and Language Teaching"

"Transformation" and "Generation" are familiar terms but also much misunderstood terms. For example, some people believe that transformational grammar demands, by its structure, that the teaching of language should consist of drills through which transformational drills, such as changing the assertion to the question, the assertion to the command, and the active utterance to the passive utterance, handle the problem. I believe that Anita Pincas\* is correct in believing that sentence transforms are a part of the theory in Transformational Grammar, but only a small part of that theory. The entire complete or general approach to language is the important focus for both linguists and teachers. There are several points in this theory of Transformational Grammar.

Transformational Grammar consists of sets and subsets of language-generating rules which can be summarized or categorized symbolically. Through the sets and subsets which view the language or describe the language in both logical and orderly fashion, this grammar handles both deep and surface structures. Happily, the rules of this grammar show the cluster of choices that are available at each stage in the development or generation of the utterance. Then, finally, transformational grammar rules should reveal a creative process that cannot be entirely-accounted-for by any habit-formation system." \*\*

The "traditional" grammar and the modern structural grammar deliberately aim all efforts at describing all English. Transformational Grammar sets out to produce a set or system of rules or steps. If these rules or steps be followed, there would result all well-formed utterances in English. That is, this system would produce every well-formed utterance in English without producing any unacceptable or "non-well-formed" utterance or sentence in English. It is in this sense that I use the term "Generation" for grammar. A "transformationist"--in America, a "transformationalist"--considers that the human mind can be used as a generator of language utterances.

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 LCC Institute Language Training, Birmingham.

Dr. Anita Pincas, "Modern Grammar and the EFL,"  
 article in Un. Kent Centaur, 1.2, November, 1969.

I rely at this point on Wingfield's statements on the generative aspect of grammar:

The transformationists regard the brain as a language-generator. They try to discover what rules our brain obeys in generating utterances. Instead of working from the language back to its analysis, they work from an analysis forward to a synthesis of the language. As for a verification of the grammar, they say that if by obeying the rules you find you produce all the only acceptable English sentences, this is proof that the rules are the right ones. \*\*\*

Now, I certainly hope that no one interprets my use and usage of "rules" to mean that linguists sit down and legislate rules or dicta. When I observe that it is a rule of English grammar that I have a verb that can have a certain number of slots to its left and that these slots which do not have to be filled can be filled by certain auxiliaries, I am not making the rules of the language. Since these slots are invariably there although they may be optionally filled, this description of such a condition is a rule.

However, it is true that no individual learns all of the rules of grammar in the way they are given in grammar instruction. The rules are always given in logical order. It is possible to approach chronological order. It is even possible to approach an operational order. In formal instruction it is advisable to use whatever formal order we can provide. All that the transformationist claims in his generation theory is that a human being is necessarily a language-generator--through his cerebral processes--and that the rules of language and of a particular language have to be built in.

Thus, any modern grammar and any contemporary transformational generative approach, and any modern teacher of modern grammar take the task in language to be that of having students produce any but only acceptable--well-formed--English statements.

I believe that the majority of linguists and transformationist-linguists, specifically, would open with the rule that for English the sentence is the minimal functional unit of discourse. If they have so agreed, there is the invariable opening rule:

S → NP + VP (the sentence consists of a noun phrase and a verb phrase)

VP → Aux + MV (here we assert that in English, at least, all that is not the subject is the verb phrase, and all that is not to the right of ~~the main verb must belong to the auxiliary system.~~)

$MV \longrightarrow V$  (Adv) (the main verb can consist of one of the verbs, or of one of the verbs plus an optional adverb. The adverb is optional because although the slot after the main verb can be filled, the slot does not have to be filled.)

$V \longrightarrow \left\{ \begin{array}{l} V_{be} + Pred. \\ V_i + \emptyset \\ V_t + NP^2 \\ V_c + Comp \end{array} \right\}$  (at this point there is a choice among four kinds of verbs, and their verb completers.)

Now, this sort of phrase-structure writing could go on until I managed to take care of all the kinds of determiners that can go before nouns, until all the kinds of auxiliaries have been mentioned, until all the possible breakdowns of verb completers have been accomplished.

The procedure, at first, is quite detailed, but the whole step-by-step procedure gains and requires accuracy and precision. When all of the symbols have been used in defining the syntax of the grammar, the point is reached where we come to the lists of words for any language. We call the total list the lexical definitions for the language.

Part of a lexicon might be somewhat like the following:

$N \longrightarrow$  boy, Jerry, chair, orange ..

$Adv. \longrightarrow$  quickly, hopefully, in, happily..

$Adj. \longrightarrow$  red, square, large, ..

$Art. \longrightarrow$  a, an, the..

$Aux. \longrightarrow$  may, can, could, have+en..

$V_t \longrightarrow$  kick, rush, sell..

$V_i \longrightarrow$  sleep, rest, dream.. pet, sell

$V_c \longrightarrow$  remain, taste, appear..

Now, I can take such strings as will represent the sentence types that exist in English. I can have the following strings, for example:

$Det + N + N^0 + Aux + V_{be} + Pred + (Adv)$

$Det + N + N^0 + Aux + V_t + Det + N^2 + N^0 + (Adv)$

$Det + N + N^0 + Aux + V_i + \emptyset + (Adv)$

$Det + N + N^0 + Aux + V_c + Comp + (Adv)$

In filling these strings by words from the lexicon, I can produce English sentences. Some are acceptable, and some are not acceptable:

Jerry may rest. (acceptable)

The orange will sell. (acceptable within a certain context)

The orange will pet. (unacceptable, except in some kind of metaphor or literary sense)

I distinguish between structure and function, but will not do much here by way of example. From a structural point of view, the concern is with breakdowns from what the thing is in the gross sense to what the thing is in the specific sense. For example, once the noun has been identified by structure, the next rule is to define the substructures of nouns. Nouns can be subclassified-- and should be-- as mass, count, masculine, feminine, concrete, abstract, animate, inanimate, among other kinds of subclasses.

But, at each step along the way, I point out that the entire operation has only one main kind of correctness in mind or view: do the rules produce acceptable sentences, or well-formed sentences? If the answer is in the affirmative, then the rules are correct, and are working correctly. If they do not produce the acceptable utterance, then adjustments must be made.

When the job is done properly, the rules will generate all acceptable sentences and will not generate any unacceptable sentence.

In the rules set out thus far, I point out that one main sentence type is the transitive verb type. However, we need to have a breakdown in greater detail.

I can have a transitive verb which will take an animate subject. I can have a transitive verb which will take an inanimate subject. To ensure that the proper rule is set out, there would need to be a subclassification of the subjects and of the transitive verbs. If I have the rule

$$\text{Art} + \text{N}_{al} + \text{N}^0 + \text{Aux} + \text{V}_{tan} \dots$$

I know that I have a transitive verb-type sentence pattern where the subject is animate and where the verb used will support such a subject. The sentence "The cow kicked the barn door regularly" would be such a sentence that the rule would generate. There are certain kinds of nouns that a verb requires. Classifying words so that they are not semantically unacceptable is a part of the work of the transformationist. But, I must point out that nouns are also classified, by necessity, on other than semantic-acceptability bases. Nouns also have to be considered with respect to being singular or plural. I point out as a specific item of interest that sometimes nouns must be given a rather sophisticated classification to take care of such items as "ham and eggs" where the two items constitute the single dish.

So, on the syntax-level and on the lexicon-level every effort is made to describe the language. Every effort is also made to have the classification and subclassification take care of all sentences that can be generated, and to exclude all sentences that cannot be generated. Of course, the doctrine of semantic understanding becomes critical, since, eventually, all must go to meaning.

One of the first areas of concern in the development of a language-approach or linguistics-approach to English and other languages was--and still is-- focused on what is correct by phrase-structure, but what turns out to be "unacceptable" as a specific example.

In this business the next important component is the morphophonemic. In the morphophonemic component there is the set of rules which indicate such critical matters as the following:

the singular noun	tense formations
the plural noun	adjective forms
the possessive (my, you, his John's)	

This component is closely-related to the spoken version of the language because certain aspects such as the English plural must be dealt with by reference to the sound.

Thus far the procedures akin to those used in traditional grammar have been employed in this discussion. I have indicated a breaking of a sentence into parts, followed by the labelling of the parts as in the parsing in traditional grammar and in the procedures of working with the immediate constituents of structural linguistics. I said, earlier, that a new view needs to be employed.

Let us consider two sentences:

Harry is hard to satisfy.

Harry is reluctant to satisfy.

I use these two examples because those usually used (John is easy to please, and John is eager to please) are a bit tiring and trying.

Harry/ is hard to satisfy.

Harry/ is reluctant to satisfy.

Each sentence can be broken down into : NP<sup>1</sup> + VP.

Harry/is/hard to please.

Harry/is/ reluctant to please.

Each can be indicated as a V<sub>be</sub> sentence pattern.

Harry/is/hard/ to please.

Harry/is/ reluctant/ to please.

Each can be considered a V<sub>be</sub> pattern, at this point, where the predicate is rewritten in terms of one of its three options. The options for the predicate are the NP<sup>1</sup>, the Adjectival, and the Locational. In this instance, the NP<sup>1</sup>, or nounal verb completer has been employed. Then, after the verb completer, for each case, we have what appears to be the infinitive.

The branching tree diagram would not reveal the difference between each sentence. The difference is in meaning, of course. But we have to go to a deeper set of rules to obtain the difference. Logic tells us that in one case, Harry is acted upon by outside agencies which find him easy to please. In the second case, Harry is willing to demonstrate his eagerness to do something or to represent some quality.

We can develop a set of rules for testing sentences such as those. It can be shown that the transformationist can detect the difference between surface structure and deep structure. The surface structure of the a/n'd sentences is the same for each. How can I know that the two sentences are not alike?

I can have the transform

"to please Harry is hard"

but I cannot have

the transform

"to please Harry is reluctant."

I can say that "Harry is reluctant to please someone." I cannot say that "Harry is hard to please someone."

I point out, now, that there is more to grammar than division into parts. Dividing the two sentences into parts did not reveal the deep structure of the two sentences. The other part of grammar is required--that of transformation. Thus, grammar-analysis consists of division into parts + transformation.

I agree that the approach which first puts English sentences into a sentence structure of basic patterns or kernel patterns from which all other patterns must be derived is the sound approach.

The transforms resulting from transformations come through the processes of combination, inversion, addition, substitution, re-arrangement, and deletion.

There are two principal ways or methods that account for transformations. There is that of combining two or more sentences into one sentence. Then there is the transformation which results in a transform brought about by re-arrangement. (Editor's note: In American texts or articles, this second method is called the "single-base" transformation.)

For the first method, I take the example "She believes the lad to be a cyclist." This sentence comes from:

She believes the lad.

The lad is a cyclist.

In my theory, the second "lad" is deleted, and the "is" is changed to "to be." The formula for all this would be:

	A	B	C
	Sj.	V <sub>t</sub>	NP <sup>2</sup>
+	D	E	F
	Sj	he	NP <sup>1</sup>

where C=D results in

A + B + C + to + E + F = She believes the lad to be a cyclist.

Then, we have a class expressed by the resultant formula, one that will generate a vast number of sentences like "She believes the lad to be a cyclist."

If I had to verbalize this rule, I would write that if there are two sentences, the first of which is the  $V_t$  sample and the second of which is a  $V_{be}$  sample, and if the NP2 of the first is the Subject of the second, I will obtain what I obtained, and will be able to do so in each instance.

In the second type, where there is a re-arrangement (single-base), there is the transformation of one sentence into another. The sentence "He should have been working hard" when changed to a question becomes "Should he have been working hard?"

I shall set up a formula for this affair, with the reminder that anyone can set up a formula, if the formula will take care of all such situations. The original sentence (kernel) is

He should have been working hard.

I set up my formula

A	B-3	B-2	B-1	B	D
Subj.	Modal	Have + en	Be + ing	$V_i$	Adv.

Then, for the question that results, I say that

$A + B-3 + B-2 + B-1 + B + D + Q$  results in

$B-3 + A + B-2 + B-1 + B + D.$

In virtually every linguistic camp, the transformation indicated by "results in" would be expressed by the symbol universally used for such a purpose.

Now, what does this rule really say? The rule says that where there is an auxiliary before the verb and where there is a need to use the same sentence for purposes of asking a question, the first auxiliary was placed before the subject. Further experiments would result in the description (rule) that where there are two or more auxiliaries before the verb, the one farthest from the verb (to the left) will be the one placed before the subject in asking this type question.

It will be noted that I did use "-" to indicate "to the left of." I did use "B" to indicate the verb, as such. I did use "D" to indicate the adverbial. Of course, I could have used other symbols--whether words, or numbers. I could have used pictures, which, on the whole, would have been confusing.

Now, let me go back to the two sentences "Harry is hard to please" and "Harry is reluctant to please." I have discovered, through descriptive research that I can use "Someone" or "something," or "somebody" for any noun. I know that each of the sentences as indicated is not a kernel sentence. The fourth position can be filled only by an adverbial; since the fourth position in the two sentences is filled by an infinitival, then I know that there are two thoughts fused in each sentence.



The first sentence "Harry is hard to please" comes from

Someone pleases Harry. (Someone =  $Pro_d + Pro_n$ , or  $Pro_{d+n}$ )  
Pleasing Harry is hard.

A	B	C			
$Pro_{d+n}$	$V_t$	$NP^2$			
D	E	F	G	H	
$V_t$	-ing	$NP^2$	is	Adj	

results in C + G + H + to + B, or Harry is hard to please.

Of course, the conditions must be set out that  $B = V$  and that  $C = E$ . That is, the verb must be the same for each and the person discussed, Harry, must be the same for each.

The same technique would be used to handle "Harry is reluctant to please. The two sentences to be developed are the following:

John pleases someone.

John is reluctant.

It can easily be seen that the formula for the second situation will be quite different from the first. Once the formula is derived, then the transformation for each type can be handled. The critical point in the discussion at this stage is that it is imperative to realize the reality of surface structures and deep structures.

Nearly all sentences used in oral or written conversation are non-bernel. Yet each is derived or transformed from the basic types. The transforms can be known, by type, by description. No one individual can set down every possible individual sentence that is either basic or a transform. But he can derive the rules. When he applies the rules, he can obtain all sentences that are acceptable sentences.

Of course, in this brief treatment, I have not discussed the fact that there are many determiners which are available for choice. In the case of some determiners, it is essential that one be chosen for each noun. Some determiners are optional. Yet, rules can be written for these. It is a rule that there are articles, demonstratives, words used like articles, and genitives for determiners. One of these must be chosen for each instance of a noun, but only one for each. Yet, this fact is not the crux of this paper. The point stressed is that rules are prescribed for language, not by the whim of the linguist, but by the nature of language. One can learn the rules through attempting, systematically, to describe the language, systematically. Certainly, the transformationist insists that each individual does know at least the logical relationships between sentence patterns, and that the grammar of the transformationist handles these relationships more effectively than is true of previous or other grammars.

Naturally, much more research into the nature of language needs to be done--and is being done. Habit-formation cannot explain totally how one learns the rules of his language. This formation cannot account for the fact that speakers are always using sentences they have not heard before, that they have not used before. If learning language were but repetition of the kind that simply recalls or re-uses words that are learned, there would be no invention. If I use a sentence that I have not used before, why am I able to create the statement and why do other individuals understand what I have just said?

My answer to myself is that I am using the same mechanism that I have always used, but I am simply using one of the new combinations available to me, a new combination of what I have heard, somehow or somewhere in the past. The increase in language and language-learning comes from the methods of combining choices from basic structure.

The transformational part of man's mind always asks the question "What does this person have to know before he can produce this sentence?" The transformationist has succeeded in the areas of identifying parts, describing the relationships among parts, indicating that language consists partly of operations that are performed on sentences, greater-than-sentences, and less-than-sentences. This grammar also handles rules ignored by earlier grammars and not known by earlier grammars. Surface and deep structure patterns are understood.

The native learner of his own language can learn his rules in a rather leisurely fashion. The foreign-language student cannot have such an allotment of time. Furthermore, the foreign language-student has an interference problem. The more that he is concerned with two languages, the less competent he can be with each language. The foreign-language student and teacher do not have as much time to experiment as is the case of the native learner and teacher of language.

Context is important for all language-learners and for all teachers of language. But context for the foreign-language learner is of critical importance. If the patterns are considered only in total isolation, much of their import will be missed or lost. Drills have their values, but drills for the sake of drilling only is not likely to be of much assistance to the foreign-language learner. Apart from considering the basic patterns and their transformation and generation operations, the phonological benefits which come from using them in contextual situations is of the utmost value.

Even where the teacher is not trying to teach a foreign-student the native language he is seeking to learn but is, instead, trying to improve the language sophistication of native speakers, the transformationist approach, in contextual situations, is certain to be highly-rewarding.



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**MOREHEAD STATE UNIVERSITY**  
**BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

Dr. L.R.Jensen "Sounds, Music, Language" Volume VII, No. 49

If we pay attention to what we hear, a simple set of specifics makes itself clear to us. Within our total experience, we know that there are many sounds, and that they are specific sounds. I can hear the screech of the car, the murmuring of Aunt India, the jarring note of the telephone, the barking of the dog, the yelling of my ten-year old child, the chiming of the clock, and the tolling of the village church bells. I do not hear all of these at once. Presumably, if all are going off at the same time, my total nervous system makes one set of sounds more audible to my attention than the others. In other words, there is a conscious sorting out of sounds and an unconscious sorting out of sounds.

Now, let us get away from particular sounds, and let us go to the whole area of sound. There is always sound---always that which is heard. I can hear my own systems within me--- the beat of my heart, the sound of my breathing, the cracking or creaking of my joints, the half-whistling noises that I give out. It would appear that any kind of experience I have is never entirely free from sound.

Thus, it would appear that the fact that language involves system(s) of articulated sounds is a useful and inevitable fact, considering the nature of man and his auditory nature of experiences, themselves.

We will waive the question as to whether there are sounds that are independent of the listener. Certainly, there is sound, and there are sounds. Some of the sounds that others hear, I do not hear. But sound and sounds force themselves on me. Some are more welcome than others; some are more disturbing than others. It is a matter of fact and a matter of concern that the individual is faced with more sounds and that he is faced with the problem of making the sounds he desires to hear louder than the other varieties. It is also true, unfortunately, that he cannot escape some of the sounds that he does not care to hear. With large numbers of people closer together and with each individual desiring to shut out the others so that he can speak, the noise factor enters. The successful speaker is one who has been able to drown out all the others, or the one who is louder than the others still able to talk. However, it is true that I can learn to "tune out" other sounds that I do not wish to tolerate. I simply build up a resistance to them, and over time, it simply takes a higher thresh-hold to evoke my attention. I simply do not hear certain sounds that I do not wish to hear, and much of the tuning out is psychological.

Sound has location. We can usually tell what direction sounds come from; we can locate them geographically. But sound is not static or stationary. However, sound can surround us. When sound does surround us, we are generally in the area of music. Music, according to Ihde in his "A Philosopher Listens," encompasses and overwhelms us. That brings us to a consideration of music and language.

Both language and music are auditory. Further, they are articulated. It is claimed, with justification, that each can be reduced or transformed to writing. (We must keep in mind that language is oral and articulated.) The graphic representation of language is just that--a representation. We take what comes in language as expected. We know roughly what we can expect.

Such is also the same in music; there is an informal conversation among different musicians. They know what music will fit within a certain context, and what music will not fit. In both cases, there is a logic. The player and the listener each must operate within the logic if each is to be understood.

There are other parallels between music and language. Consider the process of learning a new language. When we hear a new language for the first time, we are not certain that we have any degree of coherence. Sometimes, it appears to be just babble. However, through more exposure and over time, we detect certain recurrent patterns. These patterns are related to meaning. The very patterning would appear to be meaning. The beginning confusions, over time, disappear when the patternings set the limits and when we can operate within the finite number of patterns for each language. Of course, the language that is easiest to learn is that which is more closely related to the language that is already known by us.

Then, just as one concentrates on learning a new language, one must concentrate on learning to appreciate a new kind of music. And not all music is the same: for example, oriental music does not divide notes but glides them into each other. Music is a language and music speaks through many tongues.

Music resembles language in auditory appearances. Not all languages have been reduced to writing, but we are familiar with many that have been. Whether all languages have been represented in graphic form is not relevant to this discussion, because all languages, whether graphically represented or not, are complex and complete in themselves. The advantage is that languages which are capable of being represented graphically can accumulate written records of the culture in which the language operates, or they can be measured as a part of the culture or cultures. Of course, we have to realize that all nuances of tone or gesture are also left out of the written representation. But essentials are preserved that would not otherwise be preserved. We are not "complaining." We also reduce, or distill, or simplify, or record through records and videotaping. Of course, much the same happens with music.

Writing affects a culture and becomes a part of that culture. Such is also true of musical notation. Some sounds have to be kept out of musical language, and a part of sound is concealed--for it is thought that our notation would not be able to handle a twenty-two tone scale series. The attitude of the musicians is highly influenced by theory--as is true of other disciplines. Musicology is the metaphysics (philosophy) of music education. One language is not superior to another. It is doubtful that a music is superior to another. All living languages are complex, and all musical languages tend toward complexity.

Inde ("A Philosopher Listens) indicates that the sitar is no less complex than the piano, although the piano has eighty-eight strings and the sitar has seven playing strings and twenty sympathetic strings. The sitar expert has many possibilities of tension on his playing strings to get micro-tones. Difference is what results. The sitar speaks a different language than the notes spoken by the piano. There are as many world of music as there are language of music.

Music is not notation, nor is music its theory. Sound is not the set of qualities of music. A naive listener has the advantage of letting music speak on its own ground or on its own terms. But we are not naive listeners. We are already immersed in the thought formed by our mother tongues. Only by a second for of being naive can we have a purity of listening. We have to concentrate and we have to be willing to suspend our own tongues and our own beliefs.

Meidegger holds that the only way to get to the essential in things, in this case, music, is by letting them be or by letting them show themselves. He holds that our being naive ought to consist not so much for looking for particular things, but in excluding as much as possible our preformed notions concerning things. We let things speak for themselves. What is said here about music and language relates to this thesis as well. We used to teach languages in a backward way, a way which all too well emphasized our theoretical "metaphysics." We began by first painfully teaching grammar and theory and then applying it to a living language. Clearly, this is not the way children learn. Today, we have correctly begun to re-invert the emphasis through our total immersion and other techniques which begin by using a living or speaking language. Living language comes before grammar, just as music precedes musicology. We begin by listening and playing by allowing ourselves to be immersed in the sounds, to be commanded by them, to allow them to flow over us and into us no matter how strange they might seem. Music will speak but it will speak in many tongues and those tongues will be rich and give forth strange new sounds as well as familiar old ones. To me, the best education is one which emphasizes the multi-lingual, and such is true, whether in the language, or in musical language. I will be naive and listen to all voices present.



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Morehead State University**MOREHEAD STATE UNIVERSITY****BULLETIN OF APPLIED LINGUISTICS****Dr. Lewis Barnes, Editor**

Dr. S.L. Slusher "Semantic Economy" Vol. VII; No. 10

Tight, concise writing is usually associated with journalism, but many literary artists have recognized the value. For example, we have the nineteenth century romanticist, Robert Southey. Ironically, he was noted for writing that was more a result of perspiration than inspiration. Yet, Southey stated "Words are like sunbeams; the more they are compressed, the deeper they burn." Perhaps in fairness to Southey, he found himself compared and contrasted with Wordsworth and Coleridge--with the result that he was in company far too gifted for a fair evaluation. Goethe came out with the utterance that "Compression is the first sign of the master."

The first step in learning to make lean and taut sentences is to recognize redundancy. The phrases that follow can certainly be compressed, in nearly every instance:

"dead body" can be reduced to "corpse"	"made out of iron" to "iron"
"the city of Boston" to "Boston"	"seemed to be" to "seemed"
"start off" to "begin"	"actual fact" to "fact"
"the year of 1972" to "1972"	"complete monopoly" to "monopoly"
"lift up" to "raise"	"two twins" to "twins"
"in a dying condition" to "dying"	"first of all" to "first"
"old adage" to proverb"	"in the meantime" to "now"
"the hour of midnight" to "midnight"	"Christmas Day" to "Christmas"
"winter months" to "winter"	"each and every man" to "each man"
"new recruits" to "recruits"	"all men" to "men"
"large sized" to "large"	"close proximity" to "near"

Were we to analyze the larger phrases, we would be able to advance some reasons why they are longer than the product down for each one. We would find that the longer phrasing could be more poetic, longer and flattering in tone, more intellectual in tone, and, in some cases, simply the carry-over from earlier phrasing. Certainly, the language tends to be less polluted when the verbal elements are shorter. The tendency to exaggerate enters the picture. Since our language does not tend to understatement, as is true of the English-English, we find our utterances expanded to macrocosmic statements--such as in "first of all" or "complete monopoly" or "super deluxe." Let us see how we can make a report taut.

The reporter in the report which follows loaded his first sentence with far too much loosely-written information.

Opener

"Pawtucket, Rhode Island," November 17, (UPI)--  
 Ten Cleveland police patrolmen arrested today after being accused by  
 a former policemen in a spree of burglaries face lie detector tests in an  
 effort to clear themselves."

## Revision

Ten Cleveland policemen were arrested today and face lie detector tests  
 on charges of burglary.

Opener

The patrolmen were questioned singly by Inspector Richard Jones, and at least  
 three agreed to take the test."

## Revision

This sentence had too many small details before the reader was given an  
 overview. Therefore, that sentence was deleted.

## Opener

Their accuser is William Marlowe, 40, an 11 year veteran of the force  
 who was caught in a police trap the day before.

## Revision

They were accused by William Marlowe, 40, a policeman with 11 years service  
 who was trapped in a burglary and resigned.

(Note the directness of the revised sentence. In the next sentence, "nabbed"  
 is self-conscious slang. "A safe purposely left open" takes tight writing  
 to a jerky extreme. "Made Marlowe's hands glow" has less direct impact than  
 "glowed on Marlowe's hands." )

## Opener

Marlowe was nabbed as he left a West Side Lumber company with \$67 he had  
 taken from a safe purposely left open. The money had been dusted with  
 fluorescent powder which made Marlowe's hands glow under black light."

## Revision

Marlowe was caught as he left a West Side lumber company with \$ 67  
 he had taken from a safe which had been left open. The money had been  
 dusted with fluorescent powder which glowed on Marlowe's hands under  
 black light.

## Opener

Before resigning from the force, Marlowe named ten fellow members of the third platoon as having received money from the burglaries.

(Deleting the first five words is minor, but important; like "members of the third platoon," they offer information not essential to the story.)

## Revision

Marlowe named fellow policemen as having received money from several burglaries.

## Opener

Marlowe said in two instances a 28-year old patrolman aided him twice in hauling safes from stores and breaking them open with tools stolen from the yard.

## Revision

He said a 28-year old patrolman aided him twice in hauling safes from stores and breaking them open in a coal yard with tools stolen from the fuel company.

(In this revision, it was essential to indicate that the yard did not own the tools).

## Opener

Police were put on the patrolman's trail by Marlowe's patrol car partner who became suspicious of his activities that led to entrapment at the lumber yard where Marlowe admitted he has taken \$ 480 in an earlier burglary.

## Revision

The case was broken when Marlowe's patrol car partner became suspicious; that led to the trap at the lumber yard. Marlowe admitted he had taken \$480 in an earlier burglary there.

(In the next sentence, "wholesale" is not only a trite overstatement but also used long after the reader has evaluated the number for himself.)

## Opener

The wholesale arrests led Mayor Ralph Lochner to order all available personnel to be assigned to the case "to check out every lead thoroughly and to handle the matter with toughness so that the bad apples are promptly removed from the police department."



( Off duty on" is awkward and redundant)

The patrolmen were arrested as they came off duty on the night shift.

Revision

The 10 were arrested as they came off the night shift this morning.

(The context in the next makes it clear that Chief Story confronted the 10 accused in his office)

Police Chief Frank Story confronted the 10 accused men with their accuser in his office.

Revision

Police Chief Frank Story confronted them with their accuser in his office.

Opener

He read off the charges in a signed statement by Marlowe implicating them in 16 burglaries since 1961 for a total of \$ 2,500.

Revision

He read the charges from Marlowe's statement implicating them in 16 burglaries since 1961, for a total of \$ 2,500.

( Read off" was redundant)

Opener

Each man denied the charges and one of them shouted, as he was taken upstairs to be booked, "He's a damned liar." At least three agreed to lie detector tests.

Revision

Each denied Marlowe's charges. One shouted, "He's a damned liar." At least three agreed to lie detector tests.

(The sentence beginning "But he said" is dangerous, a clear implication that the men are guilty, which has not been proved.)

Opener

Story said, " I am skeptical that we have enough evidence to charge these men." But he said he believed Marlowe was trying to make a clean breast of the affair.

Revision

"I am skeptical that we have enough evidence to charge these men," Story said.

Here, as we go through the statements, can be seen the value of a semantic tautness and starkness in reporting the event(s).



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**MOREHEAD STATE UNIVERSITY**  
**BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

Robin S. Flatterson "Semantic Implications of a Caption"  
Volume VII, Number II.

The question of words and their meanings is indeed a serious one if we have in mind what is true in a verifiable and concrete sense. We have language--carried through words--which reports, infers, and judges.

By "report," I take the position that the words stand for some kind of experience which is verifiable at least sensorially. By "inference," I refer to moving from the fact to the aspect of experience not the fact. And, by "judgment," I refer to statements emotionally-charged with value words: virtues or vices; dyslogistic or eulogistic words.

It is to be noted that I have taken the position held and stated by Hayakawa in his "Reports, Inferences, and Judgments." The problem comes in the case of each individual listener or reader who must make a decision in terms of what he hears over television and radio and what he reads in the newspapers or magazines. Of course, the reader or viewer of television not only sees but also hears. And, in doing so, he reads television. For our part, let us look at some of the language problems as derived from reading the newspaper. In this instance, The Lexington Herald, Vol. 102, No. 207, dated Monday, October 23, 1972.

Let us look at a first-page news item, with the caption: "WAR ACTION CONTINUES DESPITE TALKS." We note the harshness of "despite." The "sp" tones are generally negative when not followed by an "l." The use of the present tense (timeless tense) suggests a universal and continuing meaning. Why "WAR" needs to be followed by "ACTION" is difficult to explain logically. It is true that any nounal ending in /-ion/ with its (N-1) as a pure noun carries quite an emotive wallop. The caption of the article by one Richard Pyle is followed by the following statements.

"The allied commands reported sustained U.S. bombing of North Vietnam and ground action in the South as top-level diplomatic consultations continued Sunday on the subject

<sup>1</sup> Where (N-1) is a pure noun to the left of the subject, direct object, or object of a preposition. The ( ) = "optional." the "-" = to the left of."

of peace." We note the harshness and sharpness of "sustained" which reinforces the title word "CONTINUES." Here the word appears to be used in the sense of carrying the meaning that which is relentless, continuous, or never-ceasing.

The phrase "top-level diplomatic consultations" stands in stark contrast and in deliberate contrast to the phrasing which indicates an around-the-clock bombing. Then follows the statement "continued Sunday." Here the tone of "CONTINUES" and "sustained" is reinforced by the word "continued," followed by "Sunday." The use of "Sunday" is not only factual, but slanted.

Cleverly, the writer has thrown into sharp contrast that discussion continued "on Sunday on the subject of peace" with the verbal insistence that we focus on an all-out bombing while the talks themselves were going on.

The word "subject" before "of peace" depersonalizes "of peace" to the extent that one senses that the meanings are to carry, among other impacts, the concept that our very high-level diplomats are talking not of something desirable--peace-- but about it, as though it were some vague abstraction on ponders.

Then we come to the continuing lines:

"Although fighting slackened somewhat in the recently-embattled region just north of Saigon, senior commanders said they saw no indications that the peace maneuverings are in any way affecting battlefield events, and predicted more efforts by enemy forces at disruptive and spectacular attacks around the capital. "

We note, when looking carefully, the term "peace maneuverings." The term "maneuver" itself suggests a deliberative tone that is quite out of keeping with the noun "peace" which comes just before the verb used as a nounal --"maneuverings." Whereas in "WAR ACTION" we have a powerful redundancy or tautology, we have what appears a contribution to antithesis in the "peace maneuverings," for the first word is in opposition to the second. However, by applying a vigorous word associated with "war," the term "peace" followed by "maneuverings" takes on the context which suggests that the principles of war are being applied to peace, or that the whole top-level discussion is itself a grand irony, with "peace" as such but a verbal pawn.

Taking a little wider semantic view, we are told that "senior commanders"--presumably ours--see no let up in the enemy action just because there are high-level talks going on.

On the one hand, we have the top-level diplomats. On the other hand, we have senior commanders. The language, then, pushes discussion to a level above the flesh-and-blood concerns of the fighting soldier.

Here, Pyle is abstracting and, thus, depersonalizing. There is the suggestion made that it was expected that the high-level maneuvering on peace talks were not having any effect on battlefield events/ What were the maneuvers supposed to affect or to effect?

Would the maneuvers result in decreased action to indicate a good faith in the sincerity of the top-level discussions? Would the maneuvers, on the other hand, be such that each side would endeavor to gain some advantage at the peace table by securing a tactical battlefield victory?

After saying that indications showed that the peace talks were not affecting battlefield events, Pyle, then, reverses himself through his statement: "... and predicted more efforts by enemy forces at disruptive and spectacular attacks around the capital."

How are we to connect up the abortive peace-level discussions and predictions of more spoiling and firework-like attacks?

We then have the statement: "A heavy rocket barrage against the big combined U.S. South Vietnamese air base at Bien Hoa, 15 miles northeast of Saigon, bore out intelligence reports that had been obtained from prisoners and other sources, officers said."

We are given the opening abrasive phrasing "A heavy rocket barrage against the big combined U.S. South Vietnamese base at Bien Hoa," whereby we are offered the interpretation that not only the U.S. but the South Vietnamese are the victims of war action while the talks going on are fruitless. We are not told what the "intelligence reports are." Here, uniquely, the reporting is not slanted against one side with respect to the other, but against both sides, sides which are continuing, in their own way, hostile action while depersonalized talks are going on.

From here on in to the end of the report, the facts are quite concrete and specific. Nevertheless, the entire report is subsumed against abstractions which yield the inferences and implications that there is no serious effort to stop the mechanics of war.



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## **MOREHEAD STATE UNIVERSITY**

### **BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

Robin S. Flatterson "Designation, Appraisal, and Incitiveness," Volume VII, Number 12.

Consider that language can be informative, evaluative, and incitive.

The words are so organized as to inform; they are so organized as to evaluate; and, they are so organized as to incite--or to move to action or away from action.

For the purposes of this issue, "information" is that stated with no intent other than to describe or relate. The intent is to be derived from the words whose factual nature rest on some verification, sensorially. Ideally, information involves having in the minds of the readers or listeners that which was in terms of the words within the scope and scan of the writer or speaker.

By "evaluation," the meaning to be carried here is that some judgment is made of an appraisive nature. Virtues and vices or eulogistic or dyslogistic terms are normally used in making evaluations. One would expect to find such terms as the following in evaluation:

terrible	nasty	notorious
brutal	lousy	famous
kind	stupid	cautious
good	idiotic	daring
generous	frightening	squeamish
vicious	fleecey	selfish

Then, too, nouns are also placed in the evaluative class: "Waterloo," "Hitler," "Jim Brown," "Queen," among hosts of others--and all because of their associations in the allusive sense--either positively or negatively. Then, we have the "incitive" statement.

Here, there is an attempt to move one to action. Some step is to be taken, or not to be taken. Someone is addressed, explicitly or implicitly. The whole range of readers may be addressed. One specific individual must be addressed--all with respect to having some action or inaction come into play.

When the writing or speaking is well-organized, we can tell where communication starts and ends, where expressiveness ends; and where judgment begins and ends.

A well-written editorial should have elements of each-- communication, expression, and communion-- to be effective. There is an editorial from the Lexington Herald, Vol. 102, Number 108, dated October 24, 1972--Tuesday.

The editorial entitled "Getting Tough," reads as follows:

The Kentucky Racing Commission demonstrated toughness in handing out penalties for four persons involved in the 10th race at Churchill Downs last Derby Day.

It is a welcome development and we urge the commission to continue in this direction.

The licenses of two owners and a trainer were revoked for the rest of the year. And a ten-day suspension was given the jockey who rode Postal Milargo, winner of the 10th race.

The penalties take on added meaning since Kentucky has a reciprocity agreement with all other racing states.

Two of the men, including the jockey, were penalized for giving conflicting testimony at two public hearings-- held July 6 and September 7. The others were penalized for their curious handling of a lease arrangement involving Postal Milargo.

Maybe this commendable action means that the commission is now going to tighten up its enforcement program. It is needed. We have been critical of the commission in the past for its lax attitude.

A few suspensions and license revocations ought to get across the clear message that the commission means business, that it will not tolerate questionable racing practices that reflect on the integrity of a sport which means so much to Kentucky.

Unfortunately, the commission did not throw any light on the unusual betting pattern that existed in the 10th race, however. An overwhelming 69% of the money wagered on Postal Milargo to win was through the \$50 windows. Left unexplained is whether or not the race was actually fixed.

Let us consider the gross structure, at least, of the editorial insofar as communication, expression, and incitiveness are concerned.

Let us make columns, one each for the communicative statement, the expressive statement, and the incitive statement.

## Communicative

## Expressive

## Incitive

The Kentucky Racing  
Commission ....  
handing out penalties  
for four persons  
...10th race at  
Churchill Downs last  
Derby Day.

demonstrated  
toughness

we urge the  
commission to  
continue...

welcome development

The licenses...  
winner of the 10th  
race.

take on added meaning

curious handling

Two of the men...  
Involving Postal  
Milargo.

commendable action

is now going  
to tighten up  
its enforcement  
program.

lax attitude

It is needed.

It is needed.

The commission  
did not throw  
any light  
...10th race,

...ought to get  
across the clear mess-  
age

commission  
means business

however,  
reflect on the  
integrity of the sport

will not tolerate  
questionable  
racing practices

Unfortunately

overwhelming 69%

..race was actually  
fixed

It is clear that there is much expressive writing, or quite a few appraisal statements. The incitive or action statements are not as clearly-stated as one would wish. However, the point is not that we are going to pass judgment on this particular editorial as to evenness of quality. The point is that we have a technique for assessing the weight of total statements in terms of three elements: the information, the expression, and the exhortation to action.



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**MOREHEAD STATE UNIVERSITY**  
**BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

Volume VII, Number 13

R. Kesting: "Lord Kames: Definitions on Emotions and Passions"

Some kind of psychology or some kind of literary criticism is always involved when anyone talks about passions, emotions, and attitudes. Eventually and essentially, we come to words when we want to articulate the problems that are attitudinal or volitional. Today, we are more likely to talk about attitudes and emotions than we are to talk about passion or the passions. Yet, literary critics have some predisposition toward the term "passionate" with respect to ascribing it to some attribute(s) of a literary figure or some literary work.

However, let us get rather basic about one point. Whether we talk about a passion or an emotion, each does not exist in a vacuum. No emotion or passion ever starts up in the mind without some good reason or cause.

I do not love; I love a person, thing, or experience. I do not resent, but resent something or someone. Generally, I do not pity, but pity some person or lesser animal. We love what is pleasing to us; we hate what is displeasing to us. Somehow, we have to have an antecedent for this love or for this hate. While all this may be true, we need to consider that what is agreeable to me may not be agreeable to you. At the same time, however, although the singularity of the event may be a matter of love for me and one of hate to you, the statement, generally, is true. For unless we are in the area of indifference, we either move toward love or toward its antithesis, hate.

We need not stay with "love" as such, for its definition, alone, is a tough task--and such would also be the case for hate. But if we desire to say that perception of external objects will occasion pleasant or painful emotions, we can concern ourselves with the meanings carried by "painful" or by "pleasant" and come up with a reasonable range of agreement. Unless we desire to make out the case for masochism or for sadism, we will assume that the majority of those reading this article will consider pleasant emotions as those which move us to desire a repetition of experience with them, and "painful" emotions will be those which will make us desire no further acquaintance with them.

When we see a gently-flowing river, a well-kept garden, an act of kindness, or a brilliantly-colored landscape, we are likely to have pleasant emotions evoked. A rusted-out automobile, a dirty lawn, a half-starved lad, or a vicious act are likely to evoke unpleasant emotions.



Without going into a philosophical consideration of the matter as to whether we have built-in categories which make gently-flowing rivers pleasant and rusted-out cars unpleasant, let us say that the properties or qualities of the external object perceived raise the emotions, or evoke the emotions. Now, if the external properties that we apprehend, for example, as gentle, towering, and sunny are pleasant, then internal properties such as wit, mildness, sympathy, courage, or generosity are likewise pleasant.

Can we go so far as to say that when we perceive these qualities in others, we instantaneously feel pleasant emotions, and do so without the slightest need to consider, reflect, or ponder? If so, it is almost unnecessary to add that when we perceive just the opposite qualities--such as dullness, stupidity, inhumanity, or cowardice-- we register painful emotions.

Living beings affect us by their actions: that which is graceful, skillful, or dignified seems to evoke the pleasant emotions. But we now run into a problem or so. We have a problem with motive or intent. We cannot, as such, see the intention. We can not see, immediately, the whyness of the act. 1.

I see someone patting someone else on the back, but I can make out nothing significant unless I know why the pat on the back was given. If it is given to encourage a noble act or a decent act for an individual, then this action pleases me, arousing the pleasant emotions. If I find that the pat on the back was given to encourage a bully, to abet some evil act, or to condone some piece of villainy, then I have evoked my unpleasant emotions. The actions are, then, from this point of view, qualified by the intention, not by the event. It is said that if the act is well-intended we should have pleasure, whatever the event may be, or whatever the result. What I am really saying, in hewing to a traditional view or statement as to emotions and pleasure and intent, is that human actions are seen as right or wrong, and that perception qualifies the pleasure or pain resulting from them.

Emotions are evoked in us, not only by the qualities and actions of others, but also by the others' expressions of feeling(s). If I see a man in pain, I am also filled with painful emotions. If I see him in pleasure and joy, such emotions are also evoked deeply in me.

Then, an agreeable or painful object recalled is also the time of the evoking of unpleasant or painful emotions.

What has been said thus far reflects the views of Lord Kames on Elements of Criticism. It is interesting to note that his book, written in 1873, defines terms in his preliminary treatment of literary criticism for the emotions and passions, and does so to the extent of some one hundred pages. Without commenting on his correctness in terms of what he asserted as right or wrong, or as sound literary criticism, or poor literary criticism, it is vital to note that he made every effort to indicate the initial position taken. He attempted to establish a careful frame of reference for his assertions. Whether his work with "emotions" and "passions" is good work, or not, he made every effort to highlight his definitive pattern with examples and illustrations. Few writers make such efforts at this time, but more writers are making more efforts than was the case some twenty or thirty years ago. While his distinctions made with respect to the differences between "emotions" and "passions" have been attacked, the distinctions were made. Thus the reader, handling the book, is not faced with too high a level of abstraction.

In the distinctions between "emotions" and "passions," Kames, in his book, has an emotion + desire equal to a passion. When the desire is fulfilled, the passion "is gratified." If there is no desire, there is no passion.

Kames tried to take care of all cases within the framework of his thesis on emotions and passions. He realized that some events-- fortunate or unfortunate-- were the results of accident. They were not foreseen. They were not thought of. Therefore they could not be the object of desire. Then he admitted that these accidents do arouse an emotion not qualitatively different from the emotions coming when the event is not accidental. Of course, in the light of modern psychology and modern aesthetics, he had a problem. He said that "there can be no gratification where there is no desire." Then, Kames, understandably enough, tried to extricate himself from the position of indifference or accident :

We have not, however, far to seek a cause: it is involved in the nature of man, that he cannot be indifferent to an event that concerns him or any of his connections; if it be fortunate, it gives joy; if unfortunate, it gives him sorrow. \*

His solution, in the lines of his work, is that events may be indifferent, but man's view of them cannot be. Following this passage, Kames tried to account for the pleasure that attends a gratified desire to be rid of physical pain, itself. Kames struggled to work around the problem through asserting that the cessation of pain is not of itself pleasure, only that the nature of man is so fixed that he is happy when he has no pain. He is unhappy when he cannot enjoy himself. The interest here is primarily semantic and methodological. Apart from an interest in Kames' historic book cited, the attempts to define and to work within the definition are interesting and informative.

\* Lord Henry Homes of Kanes, Elements of Criticism, Editor, James R. Boyd, D.D., New York, A.S. Barnes & Co., 1873, 486 pp.,



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**MOREHEAD STATE UNIVERSITY**  
**BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

William R. Sandstone "An Earlier View of Usage" Vol VII,  
Number 14

When we talk about "usage," we have an abstraction on too high a ladder for communication. We need to make its meaning carried more specific.

First, we are going to eliminate, for this time and place, "usage" in an oral sense. We are going to talk about usage as described in its prescriptive written form(s). We will further limit the term to carry the meaning of "the better of two forms," or "the best of two forms for carrying a more effective form of meaning." For example, we would say that using the gerund rather than the infinitive is the better usage when action or dynamism in verbal utterance is preferred.

We would say that good usage demands that we tell the difference between going into a matter in more detail and indicating going a greater distance, in the physical sense: for that reason we do distinguish greater depth of discussion through using "further" and more distance traveled or considered through using "farther."

One would suppose that we could coin the term "standard usage" to indicate that considered correct by a certain educational level, arbitrarily set out by some group of people and "substandard" to indicate a level of usage not up to the standard form set out. Thus, we can have two interpretations of "usage" going along: the more or most effective form of usage--a somewhat rhetorical definition--for a purpose in mind as the first, and a second view of usage as that standard prescribed for the particular educational level at hand. An example of "substandard" usage could be the use of "if" instead of "whether" and the employment of "ain't."

Of course, the number(s) of errors included under "usage" does vary with the text(s) used. It is certain, however, that we do reach a certain educational level where we insist on discriminating for better meaning carriers. We wish to know, for example, how to tell the difference between taking a negative view toward a problem and having no interest at all in the problem: thus, we force consideration of "disinterested" and "uninterested."

Now, when we come to "usage," we are in the area of "function." The very linking of function with usage does indicate a certain variation or flexibility. For while we usually have but one structure, we are faced with several functions. Words, themselves, have the habit of proving this. The current set of meanings carried by "meaning" includes some eleven different meanings.

In defining words and in distinguishing between different shades of meaning, we sometimes stumble upon a notion that is not expressed by any single English word. Such notions have no names and may be called "anonyms." Differences of meaning "spring from differences of degree in the same quality. The authors set up the following table:

<u>Excess</u>	<u>Mean</u>	<u>Defect</u>
Rashness	Bravery	Cowardice
Servility	Humility	Pride
Fickleness	Versatility	Obstinacy
Loquacity	Frankness	Reserve
Ambition	Proper Ambition	Unambition

It has been commented upon in nearly every generation's concern with usage that we tend, as Anglo-Saxons, at least, to deal with the opposites. Here we find that the authors made some attempt to establish a middle or restraining point. Then, the authors moved to consideration of "Classification of Words."

For that time, some concern was paid to the usage or use of the notions such as "time," "space," "action," "quantity," "boundary," "motion," "thought," "speech," "mind," "body," and "substance."

Under time, we want words to apply to occurrences that are simultaneous, contemporary, temporary, momentary, eternal, premature, seasonable, ancient, or medieval. Then there was a real effort for establishing usage for motion.

There is that which causes motion (force), motion forward (progress), backward (retrogression), upward (elevation), downward (depression), step by step (gradation), the rate of motion (velocity), increased motion (acceleration), diminished (retardation), the tendency of anything to cause motion in another thing toward itself (attraction), the sudden communication of motion (impulse), motion of destruction (disjunction), motion resulting in impact (collision), hasty and inconsiderate motion (precipitation), the tendency to move downward (gravitation), motion increasing the space occupied (extension), motion diminishing it (compression, contraction), motion recovering the original bulk (elasticity), among several other elements of motion. Then there is a treatment of "Think, itself, and prescribed usage."

Think: How? Deeply (meditate, muse, reflect), sadly (brood, mope), quickly (quick-thoughted), slowly (dull), rightly (sensible), logically (reasonable), with tact (judicious).

This classification goes on in the same way with when? where? Of what? The same technique is employed with such terms as "Anger," "Surprise," and other emotions.

The concern of the authors--and the time, presumably-- is with the usage inferred by the examples given. It is interesting to note, however, that where the American tendency is to handle usage through subdividing the standard, the English view of usage is more slanted to subdividing the object--asking "for what purpose." Usage for the 1890's, at least, was a more rhetorical business than now.

In a rather remarkable book English Lessons for English People. by The Rev. Edwin Abbott and by J.R Seeley, Boston, Roberts Brothers, 1891, xxiv, 304 pp., the authors place the content into four divisions, or parts. Parts II and III carry the usage statements. Separate items are called:

Poetic Diction	The Diction of Prose
The Elevated Style	Impassioned Prose
Grotesqueness	Exceptional Poetic Prose
Tameness, Bathos	Speech Guide to Prose
Misapplication of Elevated Style	Difference Between Speech and Prose
Pedantry	Writing More exact than speech
Deficiency of Grace	Writing Less Brief Than Speech
The Forcible Style	Slang
Coarseness	Technical Slang
The Want of Force	Fine Writing
The Simple Style	Patch-work
Childishness	Obscurity
	Appropriate Rhythm

Then we have errors in reasoning, and they are placed under "usage?"

#### Sources of Error

- I. Prejudice
- II Malobservation
- III False Induction
- IV Confusion
- V False Ratiocination

Each item is included under usage. Several examples of each kind is given. The rather formidable group of subclasses under each item indicates that some substantial degree of memorization was implied. The terseness reminds one of the marshalling of the evidence for geometrical propositions. However, it is important to note that every effort was made to indicate the need for simple, concise prose.

One of the main difficulties is that of trying to give one specific meaning for one specific statement. The authors decided that "words should be defined by usage." They proceeded by setting out two columns: "Group of Synonyms" and "Word to Be Defined." We find such result as the following:

Group of Synonyms	Word to Be Defined
Total, whole, entire	Complete
Bravery, courage, gallantry	Fortitude
Aware	Conscious
Un-natural, non-natural	Super-natural
Religious, holy	Pious
Intelligent, clever, sensible	Wise

The list must go on, nearly endlessly.



THE MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS

Dr. L.W. Barnes, Editor: "The Language of Mathematics Part I:  
Vol.VII.

No. 15 The word "door" is not the door. The word "John" is not my friend. The word "six" is not the number. The word "anger" is not the emotion. The word can never be the thing, idea, event, institution, or person. The word is not the referent. In fact, it is doubtful that such abstractions as "goodness," "kindness," "anger," "joy," and other such terms have referents.

Yet, in this society, at least, we are bound with words, and we are bound by words. What we do is done, and done well or badly, with words or through words. What we do with the mathematics most of us know as "mathematics" is done mainly through words and through graphic representations of the numbers.

We always have to face the fact that words carry more than one meaning, and that can be troublesome in science. We can also digest the fact that we have more than one word to designate a thing. We are happiest, however, in science when terms carry as little ambiguity as possible.

It may be that we do much better with the graphic representations of words, signs, and symbols in mathematics than we do with the sounds. The word "one" and the designation of "One" by "1" is easier to handle than the sound that can be interpreted as "one" or "won."

It is true that we do manage our words in mathematics reasonably well when we state or describe rather than when we interpret or explain. Once we enter the field(s) of word problems" and once we start explaining why things are thus and so in the worlds of mathematics, we have trouble. We really have to define rather carefully, and people do not like careful definition. When we consider that we can define "definition" but poorly, and when we consider that the poor definition of "definition" is best accomplished through twenty-five usages of showing "definition," we ought to pause and pity the student or other individual striving to make sense of mathematics.

It is ironical that many of us give up and go to the thorny if sweet rose garden of literature, with its hopeless mass --if not mess-- of ambiguities, leaving the relatively more orderly fields of science and mathematics misunderstood. Without being unkind, it would seem that the flight to literature might well be based on the ground: that no one really expects order and sense out of literature, or that, more kindly, when feeling and thinking are mixed, the aesthetic rewards are greater than the concurrent or attendant

On the whole, we do not do well with mathematics. Despite the fact that the youngsters start out with some clearly defined ideas of "more" or "less"--as witness their reactions to candy, applesauce, spinach, or orange juice--the trouble appears to set in when they are finally asked to determine "how much more" or "how much less."

On an individual basis, we intuit very well, even mathematically speaking. Either that or our bio-physical makeup, in concord with our bio-psychical makeup, lets us know when we have enough, when we have too much, or when we want more. Even if emotions in the light of "like" or "do not like" are mixed with the matter of taste and with the further matter of capacity, individually, we can determine the aspects of "enough," "more," and "less."

It would appear, however, that we need to lapse into seriousness. Thus, we will admit that with large numbers of people and with large numbers and with very small numbers, we need to rely on more than the emotions and on more than taste and capacity. Thus, we are faced with rather stern and complicated measurements of trying to find out how much more or how much less. In a sneaky sort of way--even if a sound way--we could say that the number "182" simply represents how much more "182" is than "1", or any other number we choose by comparison.

But, somewhere along the route, we have addition, subtraction, multiplication, division. We have square root. We have cube roots. We square and cube numbers. We have ratio and proportion. We have short division, and we have long division.

Then we have trigonometry in addition to arithmetic. We have geometry--solid and plane. We have sets, and we have logic--and, strangely enough, some of us understand what it is all about.

While I do not want to labor the point as to whether we can in any way represent or teach arithmetic, algebra, or geometry correctly when we use words, I will suggest that nearly all of us are very much involved with words when we come to teach, to understand, or to use mathematics. Perhaps some of our problems come when we have to master the processes or directions in adding, subtracting, multiplying, or dividing. Ask the next ten people you meet to explain precisely what is meant by "addition," "by subtraction," "by multiplication," and "by division."

Now, I think that I know how to add, how to subtract, how to multiply, and how to divide. I think so, although the past has some records of errors or misdirections on my part. But it may well be possible that I cannot define these terms. I know how to do the operations, but I do not understand the operations. Therefore, it may be that I am doing poorly when I should be doing better.

I suppose that in talking about the language of mathematics, I need to point out that we must talk about the language of the "New Math." Now, we know, or ought to know, that we are more likely to chat about the speed of the jet than about the speed of the old if noble dobbin. We replace nags with automobiles in terms of time-rate- and distance problems. Now there is certainly a generation gap between the adults and their children when it comes to concepts in mathematics and when it comes to the linguistic representation of these new concepts.

It so happens that mother and father cannot often help little Archie with his arithmetic or other kinds of mathematics. If little Archie happens to be in the far-too-many systems where the curriculum in mathematics has not changed over the past ten years, Archie, himself, will be completely lost when he comes in contact with other students his own age in systems where the curriculum has necessarily changed.

It is not that mother and father are that dull. In fact, in many cases their intelligence approaches that of their children, a possibility seldom entertained by today's young geniuses. But, in all seriousness, Mother cannot help her child very often these days. The concepts are different; the ranges of very large numbers and very smaller have increased; and, then, there are just too many new terms, completely out of the range of even the most intelligent mothers-- and fathers.

More often than not, therefore, mother and father simply do not understand what their youngster is talking about when he asks for help in mathematics. Is it that this new mathematics has such entirely different subject matter than was true of their time? No, not really. Much by the way of mathematics has been developed within the past two decades or so. But there are many, many concepts which were well known and equally well-mastered by the parents of today's children. It is strange to the adults today because of different organization, different arrangement, different and more precise language, and different kinds of symbols. Parents are baffled, however, mainly by the symbols and by the use of logic.

Many parents, logically-enough, yearn for a return to the language of rote and drill. They did much of what they had to do through learning arithmetical processes and arithmetical facts by memory. It was drilled in. The parents are being used hardly and severely by children who cannot understand their parents' inability to shift from rote mastery to an insight into what mathematicians today like to call "precise logical structures of aesthetically-pleasing patterns," patterns which can be "discovered."

The next few articles will be directed along the lines of the language considered appropriate for the new patterns. We might state, in conclusion, that the teacher on the elementary grade, fresh from the ambiguities of social studies and English language arts finds this language of mathematics quite a challenge to handle in teaching.



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GO ARMY!!

The Morehead State Bulletin of Applied Linguistics

Dr. L.W. Barnes, Editor      Volume VII, Number 16

"The Language of Mathematics: Part II"

We cannot undertake to handle every aspect of arithmetic in one or two articles. We pick certain high spots to point out processes and their linguistic support or representation. We can remember, for example, mastering facts for different numbers. We may have made up tables for all numbers up to ten in addition, multiplication, and subtraction, at least. Now, the trend is to let students make their own tables. Through making their own tables, presumably they engage in a higher order of intellectual speculation than obtains through memorizing let us say, "the facts of addition."

Let us suppose that we have two rows of objects surrounded by a circle, or within a circle. Let us suppose that the two rows, horizontally ordered, have three bells in the top line and four bells in the bottom line. This might suggest that  $3 + 4$  will be 7. Now, such is the case. But in modern mathematics, as in the more traditional mathematics, there is a grave problem. If the child suggests that three bells plus 4 bells is equal to 7, he is in bad shape. It would be sounder to reason as follows and to ensure that the language is appropriate to the direction or thrust of the reasoning.

There are three of those bells in the first line.  
There are four of those bells in the second line.

Now, before we can reach the concept that  $3 + 4 = 7$ , it is essential that "there are" and "of those bells" must be linguistically eliminated. The child must understand, then, that "three bells plus four bells will make seven bells." Then enough linguistic work should be devoted to showing that "of those bells" when eliminated will bring us to the point where  $3 + 4 = 7$ . Thus, in order to distinguish between  $3 + 4 = 7$  and "three bells plus four bells as equal to seven bells," the two steps should always be taken, moving to the abstract  $3 + 4 = 7$  from the prior "three bells plus four bells equal to seven bells." After the student works with stars, coins, pencils, and other objects, he can make a table, somewhat like the one that follows. However, it is important that he knows the difference between the table and the objects in the circle. In one he is dealing with objects, in the other with numbers that are not attached to objects.

Now, let me repeat! It is important not so much that the teacher understands the difference between  $3 + 4 = 7$  and three bells plus four bells equal to seven bells as that the student understands. The teacher must ensure that the student does understand. There is the greatest difference possible between counting objects and adding numbers.

+	0	1	2	3	4	5
0	0	1	2	3	4	5
1	1	2	3	4	5	6
2	2	3	4	5	6	7
3	3	4	5	6	7	8
4	4	5	6	7	8	9
5	5	6	7	8	9	10

Evelyn Rosenthal points out, in Understanding New Mathematics Fawcett, Greenwich, 1965, that the class summary from the inductive additions will lead to tables that the child can then use as the arena for discovering facts. Of course, he is guided somewhat in making his discoveries. He forms his own definitions and, hopefully, he does so in terms precise enough for him to guide himself accurately on each occasion. Rosenthal does not point out--as perhaps she should have pointed out--that discovery is one thing. Formulating the verbalizations indicating a move from the concrete to the abstract level is another matter, and a vital one.

But, from such tables, the child can understand what is called the "commutative" nature in or of addition. For example, the child, if diligent enough, can discover that there are 6 5's. Each must have a name. Thus--and precisely--we have "0+5," "1+4," "2+3," "3 + 2," "4+1," and "5 + 0." Each of the 6 5's has a different graphic representation and a different linguistic title. Rosenthal, being more of a mathematician than a linguist, would make her excellent case even stronger were she to insist on listening careful to the different syntax or morphology in entitling each of the names for "five" or "5."

Then, she points out that changing an odd number by 1 will result in an even number; changing an odd number by 2 gives an odd number. All these facts are readily discernible. Then, however, we are left with the need to arrive at an understanding of addition through some definition, and we need to ensure that the child does understand what is meant by "odd" and "even." Now, how would we work through language to represent that understanding or to point to such an understanding as having come about?

Language-wise, how does one define "even?" "odd?" Let us suppose that we talk about "divide!" Then we have to define "divide;" and we have to define "odd" and "even" in such a way that nothing is left over for "even."

Now, let us suppose that we are near despair, but we still would like to deal with the situation of that which is "odd" or "even."

I put two sticks together. I toss one to the left and one to the right, or I toss one up and the other down. I then say "even." I take four sticks: I toss one to the left, the second to the right, the third to the left and the fourth to the right. I then yell "even." I do that with six sticks, eight sticks, and so forth, each time calling out even.

I then put one stick in the circle. I throw the stick to the left. I then look, and find there is no stick to put to the right. I then cry out, in anguish, "odd." I do that with three sticks, five sticks, seven sticks, and so on. Apparently, I will reach a certain conclusion about that which is "odd" and that which is "even." I conclude that when I separate the sticks by moving them to the left and to the right alternately and have one on each occasion for the right hand to toss away, I come out "even." By a similar form of reasoning based on finding a point over time when there is nothing left for the right hand to throw away, I come out "odd." Of course, I say nothing at this point about the fact that some sticks could be longer or heavier than others. They could be straight, balanced, or some other condition. However, I seem to have staggered into some concept about "odd" or "even."

Suppose, however, that some bright young rascal finds that he has a stick for his left hand and none for his right hand. He then takes the stick left for his left hand and breaks it so that there is a piece left for his right hand.

Hopefully, something like the following happens. He, the young rascal, will count what has been tossed aside by the left hand and that which has been tossed aside by the right hand. I discover after breaking the final stick in two, that I have something left for the right hand, that there are on the left --let us say-- three whole sticks and part of a stick; on the right, there are three whole sticks and part of a stick. Thus, we are "even." But I have not yet verbalized this matter of even or of "even-ness." Thus, when in such a precise area as mathematics, verbalization is difficult. It may be easier to go to Social Studies or to Literature. Further, we have not avoided the problem of separating sticks evenly and separating the number "6" into two even parts. Numerically, we may be "even" when we have three sticks to the left and three sticks to the right. Now, how do we move to the matter of determining evenness when we want to get two "3's?" Perhaps we cancel out, as in 3 sticks + 3 sticks. We then have  $3 + 3 = 6$ . Then some bright young thing--not this writer--comes along and wants to cancel out the "3's" as well! When we "divide" --define that-- and have nothing left over, we are "even." Otherwise, we are "odd." Now, define "nothing left over."

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MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS

Dr. L.W. Barnes Editor

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Shannon Clarkson "Communication and Tommy Wilhelm"

Editor's Observations

The pages which follow represent an attempt to use a sociolinguistical approach to language. If we take the overview that Sociology deals with man and his associations with the institutions he has created, and by which he is involuntarily involved thereafter, then we must also deal with the language elements involved in his interrelationships between himself and his institutions.

Institutions, of all kinds, are clothed with linguistical symbols, as with all other kinds of symbols. As long as these symbols are operative and relevant to those who belong to the different institutions, the institutions manage to stay "healthy." A mere matter of observation will reveal that those who attempt to alter the course of an institution change the symbols or kill the symbols supporting the institutions. No institution can survive in an unaltered form when its symbols are markedly altered. Since institutions do show a strong sense of preservation, while taking different forms or directions, it would appear that symbols which are stripped away are replaced by other symbols. If the symbols stripped away have no meaning to a continuing institution, it is possible that the institution may well thrive without their being replaced. However, on the whole, institutions losing symbols must have them replaced. Otherwise, the institution will die.

There is the strong possibility that the same symbols will remain but they may be given opposite meanings. Giradoux was quite happy to take plays, for example, treated with traditional myths and structure the subject matter so that the recreated plays would have reverse or inverse meanings. In our own time, taking the colors of the flag and using them in footwear and as footwear change the traditional symbolism inherent in the red, white, and blue to other values, values more horizontally structured than vertically structured.

Using idiom in such a way as to hand down meanings carried in contradistinction to those traditionally carried represent a sociolinguistical phenomenon. Such terms as "busted," "stoned," and "cool it" represents some of the modern alteration of linguistical symbols. To those of us who are somewhat irked at this asserted "pollution of the language, those seeking change may well urge that they have little other recourse than that of changing the meanings of words.

They are born into a world of language which changes. However, the changes are more surface-appearing than deep and significant. The dictionary pretty well controls the words carrying ranges of meaning for nearly all individuals. Since creating a whole new set of terms for a philosophy which is anti-establishment is difficult if not impossible on the spur of the moment, then those seeking to alter the symbols that are linguistically-oriented must give different meanings to words already established. These meanings are already established permanently through our major institutions, and they are already pretty much a part of the speaking lore of nearly all individuals. Thus, the plight of those seeking to coin a new language to shatter the operation of existing and dynamic institutions is far from a happy one.

To make any marked effect on the operation of institutions through linguistical symbols, those desiring to change the direction of the institutions would have to effect linguistic change in the public utterances clothing the institutions. They would have to confuse the language field of those leaders or followers actively engaged in the institutions. It can be seen, for example, that changing the language of the law would not be an easy matter. Those attempting to change the course of the law or those attempting to make a change in the language of the law are having a very difficult time.

The more successful thrust of those attempting to change the course of the law comes in attacking the forms of procedure through which the judges have regulated the operations of proceedings. The more dramatic, if not successful attacks, have focused on the law(s) of contempt. These laws have been operative in two main directions. First, they have operated to control or to constrain physical actions before the law courts. They have also operated so as to control the use of language in certain ways before the courts. The alteration of linguistical symbols have been more successful, perhaps, in social engineering operations outside the law itself.

There have been such changes as using "custodian" for "janitor," "welfare" for "charity," and "exceptional" for "slow." It might be noted that the major changes have occurred in terms used for welfare and for education in their various operations. It will be profitable to the reader to take any twenty-five or thirty terms used by major institutions some few years ago and compare and contrast them with terms used today, or to discover whether the terms used then carry the same meanings today. Of course, it must be pointed out that the observations made thus far are not to be taken as indicating that all fresh terms are used to distort, undermine, or to make incomprehensible terms that have been traditionally used. It must be understood that the language needs to be continually refreshed for many reasons, nearly all of them positive. Again, this article does not intend to yield a tone that is either plus or minus as to word alternation for institutions. The attempt, primarily, is that along the lines of description.

In the special case of the existentialist, there has been a continual set of frustrations. The existentialist, fundamentally opposed to words carrying meanings of certitude or absolutism, would like to use words of an essentialistic nature. He is, according to his tenets, fundamentally in favor of process, rather than of completion. He would like to use his statements tentatively or relatively.

For example, he favors the use of the /-ing/ form of the verb in its progressive sense. He would rather say "is choosing?" rather than "chooses." The interested reader might well profit from reading, from a language point of view, all of the plays by Albee, all of the novels of Henry Green and Saul Bellow, and, specifically, William Wirtz' A Passage of Hawks.

Now, Clarkson's short treatment "Communication and Tommy Wilhelm" is an effort directed along sociolinguistical lines. Wilhelm is a major character in Saul Bellow's Seize the Day. Like virtually all of Bellow's works, this novel contains strong existential notes.

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#### "Communications and Tommy Wilhelm "

Tommy Wilhelm, protagonist in Saul Bellow's novel Seize the Day, has difficulty in communicating with three major institutions: his father, the worlds of business, and his wife. Many of these problems are involved with language difficulties. Ironically, his communication difficulty most often arises as he attempts to express to one institution his communication problems with another institution. Wilhelm is best understood by his institutions as he confronts them linguistically and paralinguistically. Ironically, Wilhelm considers himself quite adroit at concealing any paralinguistic expressions he might have. His greatest communications success is with himself, yet "after much thought and hesitation and debate, he invariably took the course he had rejected innumerable times." But he insisted on or enjoyed, or suffered through agonies of choosing and rejecting all through his passing moments.

He was totally 'being' unable to be communicating with his father. And that was most disturbing for Tommy Wilhelm. In despairing tones, he proclaimed "his own son, his one and only son, could not speak his mind or ease his heart to him." Through frustration over his inability to be expressing himself to his father, Wilhelm often found himself responding in ways he did not like. "Injustice made him angry, made him beg. But he wanted an understanding with his father, and he tried to capitulate to him." At every try he made agonizing choices which he considered a long set of language items of "choosing." The difficulty Wilhelm had in choosing words in order to relate to his father is evinced in this remark:

"Well--" said Wilhelm, struggling to condense his many resources into a few words, "I had--to .I had to." This remark is also the basis for some of the irony that is involved in Wilhelm's linguistic problems. The reasons he is trying to condense come from his difficulty in using traditional institutional terms to his wife. Her terms are those of everyday completion; his terms of those of each-day-as - different.

Dr Adler, the father, knows that his son has difficulty in expressing himself in the usual terminology expected from son to father but has learned that it "is better not to take up Wilhelm's strange challenges." Thus, it was his habit to merely agree pleasantly, "for he was a master of social behavior." Although the doctor would not offer, linguistically, to exchange thoughts with his son, he did offer advice. "It was all he had to give, and he gave it once more." But the advice, language-wise, did not ring the right symbols for Wilhelm. The advice was prescriptive and essentialistic. The one instance when Wilhelm was successful in communicating his feelings to his father came when the doctor was convinced that Wilhelm had given himself over to his emotions about what he was saying. And, of course, that was precisely what Wilhelm was trying to do. He was trying to use language to communicate not about things but his feeling about things.

Wilhelm, throughout the novel, is aware that his father does not understand the problems he tries to explain. Wilhelm begins to rationalize early: "Old people and old ideas, and old ways are changing. It's time I stopped feeling like a kid toward him." He concludes that "Dad never was a pal to him." By changing a certain traditional distance in the relationship father-son, he finds that he needs to change the linguistic structure which defines, orally to each, the status of one another toward the other.

Wilhelm's relationship with the world of business is as incomprehensible to him as his relationships with his father. The words he chooses to express the effect the business world has on him are harsh and snarl-like. They strip away a certain awe and mystery through conferring on the business world a life, a life vindictive, coarse, dehumanizing, and decadent. He uses such terms as "Chicken," "unclean," "congestion," "Rat Race," "Phony," "Murder," "Play the Game." and "Buggers." Wilhelm uses an abundance of harsh-toned consonant clusters when describing those involved in business. "Maddest of all were the businessmen, the heartless, flaunting, boisterous business dass who ruled this country with their hard manners and their bold lies, and their absurd words which nobody could believe. They were crazier than anyone. They spread the plague." Wilhelm is trying to alter the linguistic structures of the business world institutions, as he flays businessmen for their "absurd words."

When Tommy reveals to a friend the reason why he will not be returning to work, one sees again, that Tommy's use of language appears to be his downfall. Tommy chooses the world's decision in his own terms and through his linguistic statements reflecting his terms with the world. He is so certain that he will be receiving a promotion that he "brags and makes himself look big."

Wilhelm takes the statements of the institution "business" and uses them in his own way for his own purposes. It is as though he is reversing the function of the institution to give the reward, through usurping its awarding power. He, a member of the institution, rewards himself.

Wilhelm not only fights the world of business but also takes on the whole idea of "system." He realizes the power of institutions. He realizes that "a man can't overthrow the government, or be differently born." He only has a little scope and maybe a little foreboding, too, that essentially you can't change." He changes his name in an attempt to defy the system. Yet, he has to admit that institution-wise, he is caught. "Wilky," the short form of my former Christian name, is still my inescapable self."

Talking and trying to engage in communicating so preoccupies Wilhelm's mind that though when he began to talk about these things he made himself feel worse; he became congested with them, and he worked himself into a clutch." He also realizes that "if he didn't keep his troubles before him, he risked losing them altogether, and he knew by experience that that was worse." In short, Wilhelm realizes that he is caught by the language of his institutions. Without that language, there would be nothing at all. Thus, without verbal expression, those things which mattered slipped away. Although many of Wilhelm's problems took root because of his inability to express other problems, the mere act of verbalizing keeps him abreast of many other problems.

Another language barrier presents itself to Wilhelm as he finds himself attempting to explain a situation to a priest. "They don't care about individuals; their rules come first." Through special words or terms or rules, institutions set themselves apart from individuals. Wilhelm feels isolated from the business world as he also feels isolated from the institution of religion. Language is the barrier. Wilhelm is forced against the spirit within him to contend with the institutions. But one of the main weapons or adversaries against him is the language of the institutions, the language of his friends who use the language of the institutions, and his own stomach-full of the language of the institutions.



"The System" seems merciless to Wilhelm in its stranglehold upon him. He wails "Let me out of this clutch and into a different life." He feels that he "cannot rest but will be crushed if he stumbles." Wilhelm in his own mind divides society into three groups: the upper group, the middle group, and the lower group. "The System favors the rich and the poor," he laments. The luckless middle, such as Tommy, are oppressed. "A rich man may be free on an income of a million net. A poor man may be free because he can choose and nobody cares what he does or what he chooses to do or not to do." "But a fellow in my position has to sweat it out until he drops dead." Money becomes the scapegoat. The system cannot function without money, and thus money becomes the hated object." Here Tommy determines to use language to make a means and object.

Wilhelm does not realize that though the system uses money, it really functions through words--about money. He assumes that "money makes the difference."

Wilhelm's confidante as himself refers to the 'system' as the "society mechanism." He proclaims that "This is the main tragedy of human life. You are not free." This mechanism controls everyone. Those in charge of controlling everyone Wilhelm pictures as old businessmen. These have no needs. "They don't need; therefore, they have." Continuing his theses, Wilhelm adds "I need; therefore, I don't have." But communicating with his wife is just as difficult.

Many time Wilhelm uses the same terms to express his frustration in communicating with his wife as he does in dealing with his father and with the business world. He again feels that the institution of marriage is strangling him. "One of these days I'll be struck down by suffocation or apoplexy because of her. I just can't catch my breath."

Wilhelm concludes that he will be better off with his wife than he will be if he separates himself from her. He cannot maintain his balance unless he verbalizes his problems. Even though he has to stay mainly with essentialistic terms, he prefers that to no communication. Yet he desires to control her through the use of language, but does not desire to be controlled nor to be possessed through her use of language on him, language that might force him to react in ways predictable to her.

The reader will be rewarded by going to the novel to consider these matters in more depth. Wilhelm, existentially-oriented finds himself battling the language of the institutions that he can twist a little, but only a little. He realizes that he must submit to the language if there is to be any communication at all. Without the communication, he can have no sense of identity. To lose the sense of identity would be to give the institution its triumph.



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Morehead State UniversityTHE MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS

Dr. L.W. Barnes, Editor Volume VII, Number 19

"The Language of Mathematics: Part III"

Let us suppose, in our ever-present optimism, that we finally have some useful grasp as to the meanings carried by "addition," "evenness," "oddness," and the difference(s) between a number and a number of items. (BY "items," we suggest units of experience composed of things, ideas, events, institutions, places, and persons.) Can we define addition as "counting units of experience over time," or as "putting together units of experience over time"?

Now, let us take a look at "subtraction." If we take items away from a collection of items or from a set of items, or from sets of items, are we subtracting? If I have ten sticks and from the ten sticks I take away five sticks, presumably I subtract. From the word "subtract" itself, it is difficult to arrive at the meaning in terms of its component phonemes or from its bound morphemes /sub-/ and /-tract/. The closest we can come from a dictionary definition is "the process of taking away, as a part from a whole." Certainly "taking away" will indicate the direction of "subtraction" as "putting together" or "increasing" would indicate the direction of "addition."

Now, it is rather customary to use the same table as shown in Part II of "The Language of Mathematics" to arrive at the facts of subtraction. However, in her Understanding The New Mathematics, Evelyn Rosenthal--the author--on her p. 23 makes the following statement:

The expression " $7-3 = ?$ " means "find what you must add to 3 to get 7."

Now, we know that if we have three sticks and wish to have seven sticks, we can add sticks by saying "four sticks," "five sticks," "six sticks," and "seven sticks." We have added the four statements. It would appear, then, that four more sticks added to three sticks will yield the seven sticks. If we cancel out sticks, then we can say that we will need "four more" to get 7 from 3. Now, let us suppose that some bright young thing takes a look at the expression cited by Evelyn Rosenthal: " $7-3 = ?$ " He does not agree with her that we would add "4" to "3" to get "7." Instead, he says that we must add "+3" to the "-3" that he sees in the expression " $7-3=?$ ". When he adds the "+3" to the "-3", the two terms cancel out to be "0." Then, no matter how one works it out, there is "7." He added to the "-3" term a "+3" term, and was left with the "7" in the " $7-3=?$ " expression.

Now, obviously there is a semantic problem, if not a logical one; there may well be both. The table will indicate that if one "adds" 4 to 3, he will obtain 7. The minus sign (-), as I have just shown, is a very tricky thing to state or to explain. If it is urged that the (-) sign carries the meaning of "take away," that is fine. I take away "3" from "7" and I have four left. But I am far from certain that " $7-3=?$ " means, as the modern mathematics teacher asserts, that I must add 4 to 3 to get 7. Now, it may well mean that; however, as I have shown, it can also mean something else. But that very ambiguity, which comes from showing that I can mean one thing just as well as another in a fundamental process invites and gets much trouble, and no little confusion.

Let us suppose that we have a problem which graphically looks something like the numbers cited below:

$$\begin{array}{r} 9 \ 0 \ 2 \\ - \ 6 \ 4 \ 3 \\ \hline \end{array}$$

I gather that the minus sign (-) indicates that I am to subtract 6 4 3 from 9 0 2. Now, if I add + 6 4 3 to - 6 4 3, I will have as a result "0 0 0." The final result will be "9 0 2."

However, I am supposed to obtain a result of "2 5 9." That is, I am supposed to be able to add "2 5 9" to "6 4 3." The amount that I have to add to "6 4 3" is "2 5 9" --which is what I do get when I subtract 6 4 3. The problem, then, is the minus sign. The sign simply indicates that I am doing subtraction by way of adding to the number before which the minus sign occurs an amount great enough to total the first figure--902. But, I suggest that we do not face the student with Rosenthal's expression " $902-643=?$ " means "find what you have to add to 643 to get 902." Find another way to get a more precise single statement about the whole process. If we stay with her expression, we will probably have to state that

" $902 - 643 = ?$ " means "find what you have to add to 643 to get 902, keeping in mind that we do not have "-643" but "643. The minus sign (-) merely tells us that we are handling subtraction by addition." There are probably easier ways of verbalizing. The best way to find out the better methods is to have the students in a class work together on the problem, and then come up with more precise ways of handling the matter, verbally--at least.

Now, how about trying to verbalize how to take .. larger numbers from a smaller numbers! It is reasonably clear that "643" is not as large a number as "943." But, how do we take the "3" from "2"? How do we take a number more than "0" from "0"? How do we articulate this in words? Now, I first learned the thing by a drill that went something like this: When the number one is subtracting from the other number is greater in units, tens, hundreds, and so on, there is a certain set of steps one must go through. I suppose that I had learned from position what was represented by "units," what by "tens," and what by "hundreds," and so on.

Now, how can we verbalize the solution of subtracting 643 from 902?

$$\begin{array}{r} 9 \quad 0 \quad 2 \\ 6 \quad 4 \quad 3 \\ \hline \end{array} \quad \text{subtract}$$

First, the student may say "take 3 from 2." He cannot do that. So, somewhere along the line he learns that the righthand column (define column) takes care of numbers from 0 to 9. He might learn that the righthand column is called "units." Since he cannot take 3 units from 2 units, as they are constituted as wholes and not fractions, he bogs down, intellectually and verbally. Then we tell him that in the "tens" column, one place to the left of the units column, he can borrow from that column and add what he gets to the units column, making the "2" a "12" from  $2 + 10$ .

But, even when we have solved that problem, it is seen that there is no "tens" to borrow from because there is a "0" in the tens column of 902. Then, to shorten this a bit, we get the point across that we can take one item from the hundreds column, so that we have something like this:

$$\begin{array}{r} 8 \quad 10 \quad 2 \\ 6 \quad 4 \quad 3 \\ \hline \end{array}$$

But, we are still not home free! We cannot yet take the "3" from the "2." We now take one of the available tens, and add the "10" to the "2" to make "12," Now, we are better off, perhaps:

$$\begin{array}{r} 8 \quad 9 \quad 12 \\ 6 \quad 4 \quad 3 \\ \hline \end{array} \quad \text{subtract}$$

Now, we find that we can add 259 to 643 to obtain 902, and that is what we wanted to discover. Then we learn, after the event, that it is not a good idea to have a "0" in the tens position of the number we are subtracting from until we have solved this borrowing idea for the units position alone. We pose, then, a problem much like asking the student to solve the problem of taking 47 from 63. He then can ask himself, if he wants to, how much he will have to add to "47" to get "63."

This whole process may be somewhat distorted if someone gives him "3" to get "50," another "10" to get "60" and another "3" to get "63." He can then add his 2 "3's" and the "10" to get "16." This sort of thing happens when we get change when shopping.

Now, consider the verbalization essential. It is not possible for the student to discover all the facts by tables in such a way that he can generalize without some previous verbal definition. He will probably need some solid definition as to the following: units, tens, hundreds, thousands, etc. It may well be that the current inductive method for teaching modern mathematics needs some additional verbal defining, and that we need to be patient in our defining. Furthermore, we need to have some concrete verbal proof that we can move to a higher level of abstraction, and that we can, verbally, at least, test the move(s).



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 Dr. L.W. Barnes, Editor Volume VII, Number 20  
 "The Language of Mathematics": Part IV

Now, for those who have already suspected that arithmetic is quite difficult, there may be some comfort in confirmation. Arithmetic is quite difficult. We probably start with only the intuition + some pragmatic "post" support for the concepts of "more" and "less." We may agree... that we also have some idea of "sameness, or that which is "similar." If not, if it doubtful that a young child could distinguish shapes sufficiently well to separate his parents and other known living forms so as to name or define or recognize them. It is equally possible that the child has some intuitive insight into that which is "different. We hope, for his sake in being able to read--among other matters-- that he can soon distinguish between his parents and photographs or other likenesses of them. As we indicated in Part I, the problem arising from then on is that of telling how much more or less, or how much we have by way of that which is the same or different.

We have seen that addition and subtraction have problems. Now, how do we define, carefully, "multiplication!" Taking a look at the dictionary definitions may be helpful, but there are problems. Consider the following typical statements:

... in mathematics, the process of finding the number or quantity (product) obtained by repeating a specified number or quantity (multiplicand) a specified number of times (multiplier) indicated in arithmetic by the symbol X: opposed to division. \*

Now, we are not going to get little Joe Metic to absorb this quickly. The teacher, perhaps, needs to focus on the terms "repeating" and "specified number of times." Apparently, when we use the term "counting" or "sum" we may be "adding." When we use "product" and "repeating" we may be closer to multiplication, or multiplying.

Without committing ourselves too strongly at this point, we look at a typical definition (dictionary-definition) of "multiply" as a verb form. We find that we have, "...2. in mathematics, to add to itself (any given number) as many times as there are units in another given number;...\*\*

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\* Webster's New Twentieth Century Dictionary (Unabridged, Second Edition, 1966, World Publishing Company, "p. 1180.

\*\* Ibid., p. 1181.

The crux of the matter of multiplication would appear to be "adding" a number a certain number of times, with the times indicated by "x." Let us look at the following string:  $6 + 6$ . The child will say that "6" and "6" make "12." Then we could increase the string to 3,4,5,6....n items, with each item being "6." When we add  $6+6+6+6+6$ , we will get "30." Now, according to multiplication, if we take the same number as many times as we find that number mentioned, we multiply:  $6 + 6 + 6 + 6 + 6$ . If we say that we have "6" repeated "5" times, we can then say that we have 5 "6's," or " $5 \times 6$ " or "5 times 6." We then have an answer of "30."

If I have "21" mentioned 7 times, I am repeating "21" 7 times, or, I state " $7 \times 21$ ." I then obtain "147." Or, I could put down "21" 7 times, as in  $21+21+21+21+21+21+21$ .

Here, it would appear that the important point is to show the relationship between adding and multiplying, not only as a numerical process, but also as a verbal exercise. Here we can learn by hearing and seeing differences.

Let us suppose that we are taking "90" 7 times. That would be carrying the meaning of having 7 90's. We need to ensure that the child can verbalize his understanding of "times zero." In " $90 \times 7$ ," it is clear that we will multiply-- or add "90" a certain number of times, equal here to 7 times.

90

x7

We face the "0" x the "7" problem, by having it understood, thoroughly, that we are taking "0" 7 times, and that when we take "0" any number of times, we have "0." That point needs to be hammered home until mastered. Whether we let the student hammer the point home to himself, or whether we needle him into it through teacher-hammering, that is a critical point. (Now, this hammering-home can be done by sensorial as well as by intellectual as well as by rote methods. If I hand out my hand with fingers shaped like a "zero," that handing out will stand for "0." No matter how many times I hand out my hand in like fashion, there will be nothing there save "zero" or "0." Thus, any number of times with "0" will still be "0." That is one way. It is quite a good idea to have students try to explain the same concept to each other by means other than making the fingers take the shape of "0." Of course, students can take out tape measures or yardsticks and derive the concepts inherent in mathematics. They should do so. However, it is important, again, not to confuse  $5 \times 6$  with 5 items each of 6 yards:  $5 \times 6$  is not the same as  $5 \times 6$  yards. When the student can see that repeating a number a certain number of times indicates another way of increasing numbers, and when he can tell that there is a difference between  $21 + 21 + 21$  and  $21 \times 3$  by method or technique of arriving at "63," he will be able to distinguish addition and subtraction.

Let us take a look at "divide." An out-and-out definition for division is not easy to arrive at, by any means. The dictionary definitions need not be recounted, for they are as difficult as the dictionary definitions for multiplication, addition, and subtraction. However, there is a key phrase.

The key phrase is that of "separating into equal parts." Now, through multiplication we find the product by working through the number of times a number is repeated. Thus, if we have the number "21" repeated 10 times, we have a product of "210." Of course, through addition, as such, we have  $21+21+21+21+21+21+21+21+21+21$ , or "210."

Now, in division, as well as in subtraction, we know the total. If we have "210 less 21," we know that we will have to add "189" to "21" to obtain "210." Or, we will have to add 9 21's to 21 to get 210. Now, let us suppose that we are told to "divide" 210 by a number. We want to do so in such a way that we will have an equal number of parts. If we divide 210 by 21, we want to know how many groups of 21 we will have: we will have  $210/21$ , or 10 groups, each with 21 in a group.

Now, a child can work through this sort of thing with objects. Let us say that he has 21 pennies. He wants to separate into equal parts the 21, while having 7 pennies in each part. Therefore through  $21/7$ , he gives himself the answer that he will have 3 groups or piles of pennies, with 7 pennies in a pile or group.

Of course, he can have a problem. He has, let us say, 22 pennies. He would like to separate the 22 pennies so that he will have three (3) piles or groups. He then divides and finds that  $22/3$  will give an answer with a "remainder." That is, he finds that he will have at least 7 pennies in each of three groups. He has a penny left over. Now, he can throw the penny away; he can put 8 pennies in one group, and 7 each in the other 2 groups--making 22 pennies in all. He can, of course, cut the remaining penny into three (3) parts. He would then have 3 piles with  $7\frac{1}{3}$  pennies in each pile. However, he may learn, subsequently that it would be hard to cut a penny into three equal parts, or he might find that he was not allowed to do so.

The critical point in division is that of discovering into how many equal parts, groups, or portions, a number may be divided by another number.

Then, in multiplication, we assert and show through practical manipulations that a number repeated a certain number of times gives a product. Thus, if we repeat the number "25" 12 times, we obtain "300." If we repeat the number "25" 25 times, we get "625." If we repeat the number "1" 1 time, we get "1."

If we find out into how many parts "625" can be separated so that we have "25" in each part we obtain  $625/25 = 25$ . If we want to find out into how many equal parts "1" can be separated so that we have "1" in each part, we obtain  $1/1$  or "1." Let us verbalize what we have done carefully.



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MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS

Dr. L.W. Barnes, Editor Volume VII, Number 22

"The Language of Mathematics": Part VI by

C. Cuthbert Webber " Basic Ideas of Sets and Numbers"

It is quite a problem in dealing with language and with its terms to describe the mathematical situations. And it is not easy to handle " Sets."

Probably an individual's earliest experience with numbers is through associating a word, such as "three" with a certain collection, or set of objects. Now, I know that we already have trouble. We have a word "three" but that is not the three. For, even without going to other languages, I find that I run into a term "trio" which will indicate "three." But I might be on safer ground were I to say - that I came across the word "three" in counting objects.

Well, let me try to go on. This all may have been a set of marbles or of persons or of houses. You see, what I have done thus far is to associate "collection" with "set." But, I agree that "collection" is a difficult word.

A "set" is merely a collection of things'; these "things" are called "elements" of the set. But "elements" is a bit hard on a third or fourth-grader. The "elements" belong to the set, and the set consists of its elements. In actuality, we are assuming that we "know" what is meant by a "set," or by "a collection," or by the phrase "belong to."

But, fortunately, all these ideas, represented by the phrases, are more common than may appear at first sight. We speak of a herd of cows, by which is meant the collection as a whole, not the individual cows. The points on a line form a set. But there is a problem in showing the meanings carried by "points on a line." Do we mean "places" on a line? Or do we mean that each line is made up of a set of points, or that each line is nothing but points moving from one direction to another? We refer to a flock of birds, a class of girls, a family of persons. Sometimes we refer to individual points, or to members of the set. At other times we refer to the whole collection, as a collection, and not as individually-named members. It is important that we tell the difference between the set and its members, between the herd and individual cows, between the class and members of the class. But, we do have to understand "herd," "family," "line," and "class."



Let us suppose that a set consists of the boys Harry, George, and Mike. This set can be denoted by  $\{\text{Harry, George, Mike}\}$ .

The members of the set ( or, more precisely, symbols used to represent these members) are enclosed within the braces. Again, we indicate that words are not the boys; we further indicate that the symbols for the words are not the words and not the boys. But the symbols do stand for that to which we refer, the boys. One point is that we cannot actually produce the living bodies each time we desire to refer to them or to boys; as such.

Capital letters will also be used to denote or to refer to sets; the above set might be denoted by A. Would  $\{\text{George, Mike, Harry}\}$  be the same set A? It would. The order in which the elements are named is immaterial. We will consider only sets of distinct elements; that is, no two elements of a given set will be the same.

Sets having the same elements are said to be "equal" and the symbol " $=$ " is used to denote this. Hence

$$A = \{\text{George, Mike, Harry}\} = \{\text{Harry, George, Mike}\}$$

Now, the more we try to explain all this, the more chances we have of getting clarity, but , as well, the more chances we have of not being so clear.

We have problems with the "same set A?" Would it be better to explain precisely what we mean by "braces?" Then, would it be better to say that we are representing three boys, each of the boys being names? Then would it be better to say "no matter what order we list the boys in, name-wise, from left to right, that we have the same set , or the same collection." We have the same set or the same collection if the order of the names makes no difference. Would it be a good idea , then, to say that a capital letter such as A can be used to represent a set of any number of names? We have said the last, perhaps. But would what I said earlier be better said in terms of my following statements? If so, we need to work as carefully with the words as with the ideas. Is there communication? That is what we need to know. We need to work solely toward that end. Quite often the members of a set will possess a "common property." ( We need to define "common property.") All too often we do not. Is there any thing or statement that is true about each member of the set in relationship to all of the others? Harry, George, and Mike are the only persons sitting in the front row of a certain class, then

$$A = \left\{ \begin{array}{l} \text{all persons sitting in the front row of} \\ \text{this class} \end{array} \right\}$$

This device can save time and space. That is, the notation  $\{\text{all letters of our alphabet}\}$  is much shorter than  $a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$  and is equally descriptive.

If we have three boys or any number of boys in a set, we seem to have few problems understanding such a collection, where each member is, presumably, a boy or man. It is possible that we could have a set of dogs, with each dog given a different name. We could have a set of cats with each cat being given a different name. Although it is not likely, the names of the cats could be "Harry," "George," and "Mike." Then, we have sets or collections of different kinds of things. It could be that the set of objects placed on or in the seats of the front row of each class could be, in order, from left to right, from the position of the teacher facing the class, a book, a girl, a boy, a box of chalk, and an overcoat. Somewhere along the line, it is necessary to verbalize this situation clearly.

At first glance the sets

$$\begin{aligned} A &= \{ \text{Harry, George, Mike} \} \\ B &= \{ x, y, z \} \\ C &= \{ \text{horse, book, dog} \} \end{aligned}$$

do not seem to have anything in common. No two of these sets are equal. Do they have a common property? To each element or item of A a string could be attached or tied. The other end of the string could be tied to one and only one element or item of B (in diagrams these strings will be represented by lines.)

```

Harry .....x
George .....y
Mike.....z
    
```

Now, to each item of B there is attached or tied a string which comes from one, and only one, element of A, and conversely. In these circumstances, set A is said to match set B. In this matching, elements Harry and x are said to correspond; likewise, George and y would be corresponding elements. There are other ways of matching A to B, for example:

```

Harry-----z      Harry -----y
George-----x      George-----z
Mike-----y        Mike-----x
    
```

Find other ways of matching A to B. Likewise A and C match, and so do B and C. The sets A, B, and C are matching sets; this is a common property to A, B, and C.

Could sets B and  $D = \{ p, q, r, s \}$  be matched? No. There is always someone real element of D left over, or not attached. Hence, B and D do not match. Thus, sets A, B, and C do have a common property, the property of matching each other, and this property is not shared by set D.

Now, we can have problems with "correspond," "conversely," and "represented by lines." The point I stress is that while the

ideas are getting across as to the nature and operation of sets, we must do a better job to see that the words we use are getting across, that the students understand the meanings carried by the words we are so familiar with.

Make certain that the term "common property" is understood. If the student understands the thing properly for the moment, even then he should be asked to find words to express the same concept, or his understanding of it in different and more precise ways.

There are many instances where the whole discussion about "sets" bogs down under such terms as "the property of matching each other." We need to do much work with "property." We need to have the students understand the range of meanings carried by the word. Then if "property" will not do the job, what else should we do than find another way of handling the defining situation.



THE MOREHEAD STATE UNIVERSITY BULLETIN OF APPLIED LINGUISTICS  
Dr. L.W. Barnes, Editor: Volume VII, Number 22

In this fifth part of six parts, we look beyond the language of addition, subtraction, multiplication, and division.

There may be some misunderstanding about the verbalizations of mathematicians themselves, where the verbalizations are the results of their own attempts at definition. Let us take, for example, a certain law set down by Rosenthal (Evelyn Rosenthal, Understanding the New Mathematics, Greenwich, Connecticut, Fawcett, 1965, 240 pp.) On p.237 of the text cited, the author sets out several laws. We refer to the one called "The Commutative Law."

Now, it is not urged that the author, herself, formulated the law and set it down. We cannot tell from the law's inclusion in the text where the law came from as cited. We quote directly from p. 237:

2. Commutative Law: One order is as good as the other.

$$3+5 = 5 + 3$$

$$3 \times 5 = 5 \times 3$$

Now, it would appear that in support of the statement "One order is as good as the other" the author tells us that if we add "5" to "3" we will obtain the same result as we would get from adding "3" to "5." If we take "3" "5" times, the result will be the same as would obtain were we to take "5" "3" times.

It is reasonable to believe that were we to try several thousand more examples of addition and several more of multiplication, we would obtain confirmation for the law as cited.

What happens if we say that  $6/2 = 2/6$ ? We would then be saying that if we find out how many groups of "2" we have in "6", we will get the same result if we try to find out how many groups of "6" we have in "2." But I doubt that, we would seriously maintain that "3" is the same as .666,

We would doubt that were one to assert that  $6-2$  is equivalent to  $2-6$  he would receive much serious support.

Now, you will in wrath tell us that the statements refer to "addition" and to "multiplication," but not to "subtraction" and not to "division." We point out that the law as cited makes no such limitation. That the examples given happen to be those for adding and multiplying will not in any way rule out the possibility of inferring that subtracting and dividing will also come under the law.

Now, you then tell us that we do not know enough about words. If we did we would know what is meant by "commutative." We look at you with respect, but still demur. We have heard of "cummting" someone's sentence. We believe the meaning carried there to be that of "cutting off" or "cutting down."

Further, we suggest that such statements are only all too common. More careful definition needs to be made. If we need to know the meaning carried by "Commutative," then tell us. Then, be more specific in the use or usage of words.

Just below the treatment of the "2. Commutative Law," we find-- p.237-- another statement of a law:

3. Associative Law: Group them in any way you like:

$$2 + (3 + 4) = (2 + 3) + 4$$

$$2 \times (3 \times 4) = (2 \times 3) \times 4$$

Now, we look at the law with more care. We look at the term "Associative Law." There are many associations we can make. We suggest, again, that you tell us what meanings are carried by "associative" for this time and place. You still look at us with some irritation or pity, whatever comes best. You are polite, however, and suggest that we can tell from the examples. The first has to do with addition and the next with multiplication. Therefore, we, being with some few grains of sense, conclude that this third law must be somehow related to the second law, the one that deals with the "Commutative." Of course, we consider that we do know, quite universally for mathematics, what is meant, for this time and place, by the parentheses. (In Linguistics, for verbalizations, we would consider that the " ( ) " carry the meaning of :optional."

Nevertheless, we do agree that we could infer that were we to have three terms "2," "3," and "4," we could say at  $2 + (3 + 4) = 2 + (7)$ , or "9." Then we would infer that  $(2+3) + 4 = (5) + 4$ , or "9." It would dawn on us that we can collect two of the terms and add them to the third term, as long as addition is involved. We can do that by not collecting the same two terms on subsequent occasions. By stretching the insights we have a bit, we would need to infer that we must keep the same numbers, however.

We do not desire to be difficult. If you tell us that we know what is meant" by "Commutative Law" and by "Associative Law," we understand that you are really saying that they are matters of general or universal knowledge. If so, we wonder why it is necessary to give the examples given. Then you suggest that they are given as "refreshers" or as "concretizers." We are reasonable, but believe that there was not sufficient care taken. Finally, you tell us that the whole concept of "law" refers to that level of high abstraction. But we still do not believe you did a good job. The title for p. 237 is as follows:

\*\*\*\*

SOME NEW WORDS  
and SYMBOLS

Collected and Simply Defined for Ready Reference

Laws

\*\*\*

We would suggest that we could improve sharply on the verbalizations:

We would make one improvement by asserting:

Law, Mathematical, or Laws in Arithmetic

Then under "Commutative Law," we would indicate that the law is limited to "addition" and to "multiplication." Then, we would certainly refine "One order is as good as the other." What order are we talking about? What meaning is carried by "good." What is meant by "the other."

Now, it might be a good idea to have a large number of those who have to use the law see what they can do with it, in terms of graphic representation of the words.

Now, when we come to "Associative," we might suggest that we have in mind a "bringing together" rather than a "separating." We might suggest that "Group them any way you like," needs to be refined to show:

meaning carried by "them"  
meaning carried by "Group"  
meaning carried by "any way"  
meaning carried by any way you like"

Now, it is certain that Evelyn Rosenthal understood the meanings set out in the laws cited. It is certain that many other individuals do so understand. But it is equally certain that many other individuals do not have the meanings that clearly derivable from the words and from the word order of the words. What we are saying here is that mathematics, by its very nature, has a precision that needs to be approached by the verbalizations used to represent the concepts of mathematics. We cannot legislate a precision of words ever equal to mathematical precision, but we can try to be more precise than we currently are.



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*Is this eagle stupid looking or what?*  
**MOREHEAD STATE UNIVERSITY**

## **BULLETIN OF APPLIED LINGUISTICS**

**Dr. Lewis Barnes, Editor**

Morehead State University Bulletin of Applied Linguistics

Dr. L.W. Barnes, Editor      Volume VII, Numbers 23, 24, 25, 26  
 Robert L. Crosley: "Language of Floral Poesy"

There is not the slightest claim in this set of statements made that is to be construed as saying that any manifestation of nature has one and only one meaning.

It is true that a black cloud can have a rather universal sign to the effect that rain is about to fall. But a black cloud is not rain, nor is a black cloud a certainty of rain. Nor are the words "black cloud" to be construed as "rain" or as a "threat of rain."

Among the various treatments of symbols, we have Cirlot's A Dictionary of Symbols. (J.E. Cirlot, A Dictionary of Symbols, N.Y., 1962, Philosophical Library, liv, 365 pp.) The majority of the symbols indicated are those which are met in ideas and in the history of intellectualization. As Herbert Read has pointed out "Man is a symbolizing animal." This treatment of man and his symbols -- by Cirlot -- is a comprehensive concretization of Read's quotation.

Cirlot's substantial introduction (liv pp.) indicates his concern with articulating the nature of symbols and his belief in their complexity -- as well as their vital force in man's life. It is not within the scope of this purview to justify or debate the various kinds of symbols and their essence or nature.

We can see that there are, broadly-speaking, two approaches to the problem: there is the symbolizing activity with its symbols; then, there is the verbalization of the symbols. Shortly, when man looks out at his world of experience -- ideas, institutions, persons, places, things, and time -- he has to stabilize his neural reactions to experience. He does so by the arts and by language. Man is a symbolizing animal: if, as of this hour, he lost his whole array of symbols, he would create more arrays. His symbols, specifically, may be lost, but apparently his faculty or propensity for creating symbols is an integral part of his being a man. It is a part of the germ-plasm of being a human being.

There is a rather significant statement in Cirlot's introduction, one more than indirectly connected with the symbolism of flowers. The question that gave rise to the quotation was whether any legend or myth could be kept dynamic if each succeeding generation did not have very pressing reasons for belief. Cirlot points out a symbolic significance:

The symbolist meaning of a phenomenon helps to explain these "intimate reasons" since it links the instrumental with the spiritual, the human with the cosmic, the casual with the causal, disorder with order, and since it justifies a word like "universe" which, without these wider implications, would be meaningless, a dismembered and chaotic pluralism; and, finally, since it points to the transcendental.

(Cirlot, op.cit., xiii).

Symbols order our world; they fix our world; and, certainly, they give some kind of synthesis to the world of the material and the ineffable. By "ineffable" we refer to that which is known, but not by ordinary means. We cannot provide concrete proof for what we are certain that we understand.

When man talks about justice, kindness, and mercy, he has to provide concrete examples to make his case specific. The problem with using individual examples is that the very specificity robs the whole abstraction of the universality we desire in our symbols.

We look to the concreteness of nature at times to help us. We ascribe certain qualities to clouds, certain to the moon, and certain to the sun, among other elements of nature. Rivers become symbols of the flow of life, a flow primarily one directional. On the other hand, ponds, as such, have -- or carry -- a symbolism of a restrictive passive nature: for example, that of being stagnant.

The winds carry their various symbols and symbolisms. Animals have symbolic natures. The bear, for example, carries the air or atmosphere of that which is hidden, brutish, dark, and devious. The lion carries the symbolism(s) of the continual struggle in life, of the light of the sun, of royal mien, and of eventual triumph. And recourse to any substantial book of symbols will reveal symbols carried or represented by other animals. Numbers carry a substantial amount of symbolism.



This recourse to nature or to the external world is one of the ways we have in linking man and his external world of experience. It is also a way of linking the inner life and the outer life. That will be a position taken in our discussion of the symbolism -- or, poesy -- of flowers, or of floral matters in experience -- in literature, primarily. Now we need to take a look at the kinds of symbols we may be talking about.

We will consider that Fromm's statements of three kinds of symbols that are different in degree are what may be called the "conventional," "the private, or the universal.

The conventional sign has no optical or philosophical basis for acceptance. We refer to signs often used rather arbitrarily in science and mathematics.

By "private" we refer to symbols which have meaning for a very few people, perhaps one or two. Such symbols may be the private expression -- oral or otherwise -- between lovers.

By "universal" we refer to some intrinsic relationship between the symbol and what it represents. We agree that classifying symbols is not that easy to do. However, let us say that we know something about "tenacity" as an idea. We see in an object some quality, as physical attribute, that seems characteristic of "tenacity." We then try to see whether we have this quality or attribute as rather universally recognized. We then make that object symbolic -- entirely symbolic -- of "tenacity." Now, it may be true that this object will also be symbolic of some other quality. It may also be possible that the object will not be the only object that gives the quality of tenacity. There must be some close correlation then between the abstraction and the concrete object that is supposed to typify it, something in a whole-part manner, of course.

Now, it is true that we all are moved, today, by some psychological sophistication, to insist that the symbol is entirely within the mind, itself. According to Cirlot:

The symbol is projected -- from its being in the mind -- upon Nature, either accepting language as its being and its form or converting being and form into dramatic characters.

(Cirlot, op. cit., xxxi).

Now, there is no critical difference between this point of view and the one which insists the very large (macrocosm) = the very small (microcosm). In each instance the minute element of experience for the individual goes to the great world for its universal identification, one which links the human mind or soul with qualities of some experience objectified in nature.

Now, when we come to apply the principles of symbolism to the phenomena in external nature, we can well appreciate the fact that man establishes whatever view he has of his experience through seeing similarities and differences among the discrete elements he must live by. By "discrete" elements, I mean that man has some grasp on reality through being able to break up the streams of experience into events separated from other events. That is, his world is not a continual or continuous stream of stimuli which impinges itself on his nervous system without being separated into smaller elements.

Man's nervous system orders his experience. In so doing, the freedom he gains by this ordering can itself be limited by the fact that man does condition himself. This condition has to be within some frames of reference. We cannot say precisely what these frames of reference are, other than to note the common ways through which man behaves. We also learn by the differences through which man orders experience. The ordering is done to or through--as you will--his thinking, his sensing, and his emotive responses. All this ordering leads man to many abstractions, abstractions which he names: freedom, justice, mercy, kindness, viciousness, cruelty, beauty, among others. Then, because of his intellectual nature, man has to compare and contrast. Further, he seems obliged to do his ordering of his experience in an "as.....as..... when sense, or in a "so... that" sense.

In short, once he has decided what is "bothering" him, he has to give it a tag and give it a location. It would seem that man, everywhere at all times has certain ways of looking at his world. Let us say that he finds pleasure. Let us say that he has a pleasurable sensation or view of some part of the world he would like to call beautiful. Now, what happens if someone walks up to me and says "She is beautiful." For the term itself, there would appear to be no direct referent. If I say an object is "heavy," I am on quite safe ground. For I can measure that which is "heavy." That is, I can do so in a physical sense. I would say "how heavy?" You would say "150 pounds." Then I would know that you mean that the pull of gravity of a certain mass is equated at a certain figure which can be broken down into ounces, for example. Of course, if you mean that she is "heavy" in a dull intellectual sense, or that a burden not physical is "heavy," then we have a more difficult problem.

When we come to "the beautiful," "the wise," and "the unjust," we have problems. Yet, were we to abolish such terms and all of the terms that refer to virtues or vices--which have no direct referents, we would find ourselves in a human quandary. Mankind always insists on these abstractions. Abolish all of them today; and he would reach them tomorrow, through the same or through different words or ways.

But that does not help me when I talk about someone or something as "lovely". My comments that "Exelda is lovely," will not help too much because I have no standard against which I can measure "lovely." Presumably "lovely" is a positive sort of experience, rather than a negative one. But when I say that "Exelda" is lovely, I tell you nothing about her, only my feelings for her. I describe myself, but do not do a very good job with that. But, if I have a standard of comparison that is physical, that is objectified, and that can be verified, then we can do something about the "lovely Exelda."

So, I tell you that "Exelda is as lovely as Jessie Sunly," a girl I have seen and have a rather intimate acquaintance with, as to her appearance and behavior. Now, you have seen her, as well. You know her somewhat, as well. Therefore, we can understand each other--although we may not agree. Now, that is the way we proceed in our human equations of comparison and contrast.

Now, you may say to me that "'Exelda' is much more by way of being lovely than Helatia." If I do not know our referent "Helatia," then I am not much better informed than I was before the utterance. Each might be quite unattractive. I simply have to know one of the two. There must be a boundary, expressed by my mental image or through my words.

Now, words come about because of this ordering and tagging intellectual faculty, the part of the nervous-plasm of each human being. I go a very long way through being forced to go short distances. My macrocosmos of understanding come about only through sets of microcosmos through which, in their concreteness, I find similarities and differences. In people, places, things, events, and persons registering themselves on my nervous system. Then we are moved to metaphor or to simile.

Now, let us keep in mind that "simile" is not the same as metaphor, except for the "like" or "as" in simile. In simile we separate the two elements of experience. For example, we say that "He is as cunning as a fox." We do not identify

"He" and "fox" except in "cunning." Each remains for us a separate entity. In metaphor, we are asserting an indirect self-contradiction. It is indirect for the comparison is not through recourse to diametrically opposed elements as is true in oxymoron. (In "oxymoron" the contradiction is directly opposable: "nasty-nice," "bitter-sweet," "husband-wife," among others.) When I say that "Jones is a skunk." Jones is not the opposite of a skunk. ) Then, in metaphor, although the elements are indirectly opposable, they are for that time and place made "one." When I say that "Jones is a skunk," I do not separate the two as in simile. I make one identifiable or congruous with the other. Now, through simile and metaphor, as well as through other elements of figures of speech and ornaments of poetry, I reach the comparisons and contrast I need in ordering my world.

Now, when we have reference to such works as Cirlot's Dictionary of Symbols, we can see, at a sustained glance, how man has developed intricate sets of symbols that enable him to compare and to contrast. In so doing, man has enabled himself to keep a grasp on his comparisons and contrasts so as to establish some sort of a tradition through the generations of local and wider cultures. His use of numbers and animals, for example, indicates how he views his world, in ineffable as well as in concrete senses. It is true that each symbol carries more than one meaning. It is also true that an idea is represented by more than one symbol. Yet, it is also true that there is a range of meanings that can be carried by any single symbol. Further, there would appear to be some limit to the number of things that one symbol can represent. The same is true when we consider the "Language of Floral Poesy."

First, let us stress, again, that no one word carries just one meaning. No one flower can stand for any single term to the utter exclusion of other terms. Further, not every individual may have any intensive or extensive familiarity with flowers, or other forms of nature, in representing human qualities.

It would be a rather good guess to believe that nearly all persons have had some familiarity with associating good luck with a four-leaf clover. Other forms of nature have less well-known meanings. Nevertheless, there is a comprehensive list of virtues and vices associated with individual flowers. Further, individual flowers do carry more than one association expressed in terms of such words as "hope," "defiance," "thwarted-love," or "courage," among others. Whatever man feels or senses about his condition and about the condition of other aspects of experience seems to demand some kind of phrasing.

Now, if I say that the African Marigold reminds me of minds or persons that seem vulgar, there must be something about that flower that evokes such associations. I may have been the first to make such an association. Now, if through use and usage, my view of the association is one that appeals to other individuals, such a stable symbolic relationship may endure, as distinct from accidental symbolism. Or, as the case usually turns out to be, if other individuals have independently come to the same conclusion, the relationship African Marigold--Vulgarity may gain some support and persistence. We need not be surprised at what comes out of this sort of thing because there is little question that man, by his very nature, insists on thinking through images and symbols. Therefore, out of a wide but limited range of external phenomena we do select concrete elements which represent some of our emotional or intellectual qualities or faculties. Now, as far as I can discover, no other flower is widely-associated with vulgarity. So I have to make one of two conclusions: first, no other flower seems to impress too many people as being vulgar, or, second, "vulgarity" is not an abstraction that occupies the attention of those who most frequently use symbols.

Specifically, I refer throughout the rest of this paper to the symbols and poems indicated in C.M. Kirtland's Poetry of the Flowers, N.Y., Lovell, 1872, 542 pp. I enclose the complete list of flowers as used by Kirtland. This source indicated is one of the most extensive listings of the symbolic treatment of flowers in terms of value abstractions.

Let us look at the selection from Shakespeare's Hamlet :

There is a willow grows aslant the brook,  
That shows his hoar leaves in the glassy stream;  
There with fantastic garlands did she come,  
Of crow-flowers, nettles, daisies, and long purples,  
That liberal shepherds give a grosser name,  
But our cold maids do dead men's fingers call them;  
There on pendent bough her coronet weeds  
Clambering to hang, an envious sliver broke;  
When down her weedy trophies and herself  
Fell in the weeping brook.

The "she" in the third line cited refers, of course, to Ophelia who drowned herself. It is interesting to consider the range of meanings indicated by the different kinds of willows. Careful consideration should show that every meaning cited could be appropriate to the various aspects of Ophelia and her condition. Now, if the reader will go to the symbolism of daisies, nettles, and crow-flowers, he will perceive that the choice of flowers by the poet is not accidental or even incidental. They symbolize a far from simple nature. The variant meanings carried by the assortment of flowers and weeds indicate the good, the bad, and the ugly. Some poets are far more overt and uncomplicated.

There is Hood's rather explicit set of comparisons: as reflected in "The Sunflower."

#### "The Sunflower"

I will not have the mad Clytie,  
Whose head's turned by the sun;  
The tulip is a courtly queen,  
Whom therefore I will shun;  
The cowslip is a country wench,  
The violet is a nun;-  
But I will woo the dainty rose,  
The queen of everyone.

The poem, in a substantial way, fails. For the "dainty rose" he cited carries many meanings, and some of them are opposable. The degree of explicitness carried by the first flowers cited is wasted for the final flowers--called "queen of everyone"--is not sufficiently demanded or expected by the reader. It is true, of course, that a queen carries a multitude of facets, but Hood's line do not resolve any problem. The rose, as such, has the capacity to have its own set of qualities and also those of the sunflower, tulip, cowslip, and violet, but Hood defeats himself by "dainty." Then, Hood's art as a poet is not considered "first-rate."

Beaumont and Fletcher wrote a few lines on the rose:

"The Rose"

Of all flowers,  
Methink a Rose is best...  
It is the very emblem of a maid;  
For when the west wind courts her gently,  
How modestly she blows, and paints the sun  
With her chaste blushes!  
When the north wind comes near her,  
Rude and impatient, then, like chastity,  
She locks her beauties in her bud again,  
And leaves him to base briars.

There is a hint at the various meanings carried by the rose and by different roses. There is more than just a physical set of comparisons and contrasts.

However, the greater depth of feeling and the greater sensitivity to the various emotions evoked or symbolized by different flowers come from such significant poems as Goethe's "The Captive and the Flowers" and from such poems as Milton's "Lycidas" and "L'Allegro." The reader is invited to look at these poems quite closely and to do so within the context of floral symbolism.

Now, many poets have addressed their poems to certain flowers with respect to two different approaches: first, they have looked at the symbolism of a single flower by itself; otherwise, they have compared and contrasted one rose with another.

There is another approach. In this other approach, there is no address to a flower itself, as such. The use and usage of certain flowers or trees, or shrubs, or weeds is within a greater framework. Yet, within this framework, the key symbols are at the heart of the story itself.

This more subtle approach is evident, particularly, in A.E. Housman's "The Chestnut Casts His Flambeaux." Here the symbolism of the chestnut moves to a complete philosophy that we need to do man justice, but that it is a call that will probably never be realized.

Some of the poetry of Amy Lowell has flower symbolism which when attended to by the reader or critic gives her perspective an added intellectual dimension. I call attention to her excellent poem "Patterns." Her treatment of the lilac in the poem "Lilacs" reveals a mind and will capable of seeing the lilac within the context of itself as a flower and of itself as accommodating the variant responses of the human heart, itself.

For the most part, American male poets have not relied heavily upon floral symbolism. In the twentieth century, there has been fewer reliances upon floral symbolism by English poets. I would believe that many readers are aware of what was done by the English romantic poets and the Victorian poets. It is certainly well worth the effort to go to Francis Thompson's poetic art and consider his "Daisy," and "The Poppy."

It is quite true that few modern poets have moved to flowers and trees by way of significant symbolism in contemporary literature. An industrial age, less familiarity with flowers by members of all walks of life, and a lack of awareness of traditional floral symbolism have contributed to their meager use of flowers in modern poetic expression.

Suffice it to say that whenever man writes, he is concerned with power, adventure, security, and personal affection. All of these areas involve agreement, agitation, anger, audacity, avarice, prudence, beauty, bravery, falsehood, charm, change, time, confidence, disloyalty, treason, crime, courage, curiosity, cure, death, delicacy, deceit, despondency, divinity, duration, elegance, esteem, faithfulness, fame, flattery, friendship, glory, horror, viciousness, grief, and many, many other qualities--some good, some endurable, some horrible.

Since such is the case, man must go to his world of symbols. He must use birds, animals, fish, stars, and all other external and verifiable phenomena. Included must be the floral world.

It is important, therefore, to be sensitive. Whether flowers evoke specific feelings--quite explicit in nature;--whether they bring about ambiguity and opposability, or whether they stand for some complex philosophical speculation about life and man, some of all the complexities which trouble the human mind must be linguistically expressed--through words. And we need to take a look at the floral world.

Have the symbols changed from those indicated in the following pages? Are they relevant at all? That is, how many survive into usefulness? Certainly, one is rewarded by having at hand some key to aid in unlocking poetic expression sought through floral language.

# Floral Poesy

Absence	Wormwood	Aversion	Chinese or Indian
Abuse not	Crocus		Pink
Acknowledgement	Cantebury Bell	Bantering	Southernwood
Activity or		Bashfulness	Peony
Courage	Thyme	Bashful Shame	Deep Red Rose
A deadly foe is		Be Prudent	Triptilion Spinosum
near	Monkshood	Be warned in	
Admiration	Amethyst	time	Echites Atropur-
Adoration	Dwarf Sunflower		purea
Adroitness	Spider Ophrys		
Adulation	Cacalia	Beautiful eyes	Variegated tulip
Advice	Rhubarb	Beauty	Parti-colored Daisy
Affection	Mossy Saxifrage	Beauty, always	
Affection	Sorrel	new	China Rose
Affection beyond		" Capricious	Lady's Slipper
the grave	Green Locust		Musk Rose
" maternal	Cinquefoil	" Delicate	Flower of an Hour
Affectation	Cockscomb		Hibiscus
"	Amarynth	" Divine	Cowslip
Affliction	Morning Glory	" Glorious	Glory-flower
After-thought	Black Poplar	" Lasting	Stock
"	Michaelmas	" Magnificent	Calla Aethiopica
"	Daisy	" Mental	Clematis
Agreement	Starwort	" Modest	Trillium Pictum
Age	China Aster	" Neglected	Throatwort
Agitation	Straw	" Pensive	Laburnum
"	Guelder Rose	" Rustic	French Honeysuckly
Alas. For my poor	Moving Plant	" Unconscious	Burgundy Rose
heart	Sainfoin	Beauty is your	
		only attrac-	
Always Cheerful	Deep Red Carn-	tion	Japan Rose
Always Delightful	ation	Belle	Orchis
Always lovely	Coreopsis	Be Mine	Four-leaved clover
	Cineraria	Beneficence	Marshmallow
	Indian Pink	Benevolence	Potato
	" Double	Betrayed	White Catchfly
Ambassador of		Beware	Oleander
Love	Cabbage Rose	"	Rosebay
Amiability	Jasmine	Beware of a	
Anger	Whin, Furze	false friend	Francisca Latifolia
Animosity	St. John's Wort	Bitterness	Aloe
Anticipation	Gooseberries	Blackness	Ebony Tree
Anxious and		Bluntness	Borage
trembling	Red Columbine	Blushes	Marjoram
Ardor, Zeal	Cuckoo Point	Boaster	Hydrangea
	Arum	Boldness	Pink
Argument	Fig	Bonds	Convulvulus
Arts	Acanthus	Bonds of	
Artifice	Clematis	affection	Gillyflower
Assiduous to		Bravery	Oak Leaves
please	Spring of Ivy,	Bravery and	
	with tendrils	Humanity	French Willow
Assignment	Pimpernel	Bridal Favor	Ivy Geranium
Attachment	Indian Jasmine	Bulk	Watermelon, Gourd
Audacity	Larch	Busybody	Quamoclit
Avarice	Scarlet Auric-		
	ula		



Bury me amid nature's  
beauties                      Persimmon

Call me not	Rose Unique	Death	Cypress
beautiful	Buckbean	" prefer-	
Calm Repose	Hellebore	loss virtue	Dried White Rose
Calumny	Madder	Deceit	Apocynum
Change	Pimpernel		White Flytrap
Changeable			Dogsbane
Disposition	Rye Grass		Geranium
Chairty	Turnip	Deceitful	
Charming	Cluster Musk	charms	Thorn Apple
	Roses	Deception	White Cherry tree
Charms,		Declaration	
Deceitful	Thorn Apple	love	Red Tulip
Cheerfulness	Saffron trocus	Decrease Love	Yellow Rose
" Old Age	American Starwort		
Adversity	Chinese		
	Chrysanthemum	Deformed	Begonia
Chivalry	Monkshood	Dejection	Lichen
Cleanliness	Hy	Delay	Eupatorium
Cold-hearted-	Lettuce	Delicacy	Cornflower
Coldness	Agnus Castus		Bluebottle
Color of my		Depart	Dandelion Seeds
Life	Honeysuckle	Desire to please	Mezereon
Come Down	Jacob's Ladder	Despair	Cypress
Comfort	Pear Tree	" Not	White Julienne
Comforting	Scarlet Ger-	Despondency	Humble Plant
	anium	Devotion, or I	
Compassion	Allspice	turn to thee	Peruvian Helio-
Concleaed Love	Motherwort		trope
Concert	Nettle Tree	Dexterity	Sweet William
Concord	Lote Tree	Difficulty	Blackthorn
Confession Love	Moss Rosebud	Dignity	Cloves
Confidence	Hepatica	Dignity	Laurel-Leaved
	Liberwort		Magnolia
" Heaven	Flowering Reed	Disappointment	Carolina Syringa
Conjugal Love	Lime or Lin-	Disdain	Yellow Carnation
	den		Rue
Consolation	Red Poppy	Disgust	Frog Ophrys
Constancy	Bluebell	Distinction	Cardinal Flower
Consumed by		Distrust	Lavender
Love	Syrian Mallow	Divine Beauty	American Cowslip
Contentment	Moyabella	Docility	Rush
Could You Bear		Domestic	Flax
Poverty?	Browaalia	Industry	
	Jamisonii	Domestic Virtue	Sage
Counterfeit	Mock Orange	Do not despise	
Courage	Black Poplar	my poverty	Shepherd's Purse
Crime	Tamarisk	Do not refuse me	Carrot Flower
Cure	Balm of Gilead	Doubt	Apricot Blossom
Cure heartache	Swallow-wort	Durability	Dogwood
Curiosity	Aycamore	Duration	Cornet Tree
Danger	Rhododendron	Early attachment	Thornless Rose
	Rosebay	Early friendship	Blue Periwinkle
Dangerous		Early youth	Primrose
Pleasures	Tuberose	Elegance	Locust Tree
		Elegance & Grace	Yellow Jasmine

Elevation	Scotch Fir	Fickleness	Abatina
Eloquence	Lagerstaemia		Pink Larkspur
Enchantment	Holly Herb		...
Energy	Vervain	Filial Love	Virgin's Bower
" in adversity	Red Salvia	Fidelity	Ivy Plum Tree
Envy	Camomile	in Adversity	Wallflower
Error	Bramble	" in love	Lemon Blossoms
	Bee Orchis	Fire	Fleur-de-luce
	Fly Orchis	First Emotions	
Esteem	Garden Sage	of Love	Purple Lilac
" not love	Spiderwort	Falme	Fleur-delis Iris
	Strawberry	Flattery	Venus' Looking-
	Tree		glass
Estrangement	Lotus Flower	Flee away	Pennyroyal
Excellence	Camelia	Fluy with me	Venus' Car
	Japonica	Folly	Columbine
Expectation	Anemone	Foppery	Cockscomb
	Zephyr Flower	Foppery	Amaranth
Expected Meeting	Nutmeg	Foolishness	Pomegranate
	Geranium	Foresight	Holly
Extent	Gourd	Forgetfulness	Moonwort
Extinguished Hopes	Convolvulus	Forget me not	Forget me not
	Major	For once may	
Facility	Germander	pride help me	Tiger Flower
	Speedwell	Forsaken	Garden Anemone
Fairies Fire	Pyrun		Laburnum
	Japonicus	Fortitude	Dipteracanthus
Faithfulness	Blue Violet		Spectabilis
	Heliotrope	Fragrance	Camphire
		Frankness	Osier
Falsehood	Bugloss	Fraternal love	Woodbine
	Deadly Night-	sympathy	Syringa
	shade	Freedom	Water Willow
	Yellow Lily	Freshness	Damask Rose
	Manchineal	Friendship	Acacia Ivy
	Tree	" early	Blue Periwinkle
False Riches	Tall Sun-	"true	Oak-leaved
	dlower		Geranium
Fame	Tulip	"unchanging	Arbor Vitae
Fame speaks for		Frivolity	London Pride
him	Apple Blossom	Frugality	Chichory Endive
Family Union	Pink Verbena		
Fantastic Extrav-		Gayety	Butterfly orchis
agance	Scarlet Poppy		Yellowe Lily
Farewell	Michaelmas	Gallantry	Sweet William
	Daisy	Generosity	Orange Tree
Fascination	Fern	Generous amd	
	Honesty	devoted affec-	
Fashion	Queen's	tion	French Honeysuckle
	Rocket	Genius	Plane Tree
Fecundity	Hollyhock	Gentility	Corn Cockle
Felicity	Sweet Sultan	Girlhood	White Rosebud
Female		Give me your	
Fidelity	Speedwell	good wishes	Sweet Basil
Festivity	Parsley	Gladness	Myrrh
		Glory	Laurel

## Floral Poesy

Glory	Laurel	I change but	
Glory.		in death	Bay Leaf
Immortality	Daphne	I claim at least	Potentilla
Glorious beauty	Glory Flower	your esteem	Veronica
Goodness	Bonus Henricus	I dare not	Speciosa
Goodness	Mercury		
Good education	Cherry tree	I declare	
Good wishes	Sweet Basil	against you	Belvedere
Good-nature	White Mullein	I declare	
Gossip	Coboea	against you	Liquorice
Grace	Multiflora	I declare war	
	Rose	against you	Wild Tansy
Grace and		I die if	
Elegance	Yellow	neglected	Laurestina
	Jasmine	I desire a return	
Grandeur	Ash Tree	of affection	Jonquil
Gratitude	Small White	I feel my	
	Bellflower	obligations	Lint
Grief	Harebell	I feel your	
Grief	Marigold	kindness	Flax
Happy love	Bridal rose	I have lost all	Mourning Bride
Hatred	Basil	I live for thee	Cedar Leaf
Haughtiness	Purple	I love	Red Chrysanthemum
	Larkspur	I offer you	
Haughtiness	Tall	my all	Shepherd's
	Sunflower		Purse
Health	Iceland Moss	I offer you my	
Hermitage	Milkwort	fortune, or I	
Hidden worth	Coriander	offer you pe-	
High-bred	Pentstemon	cuniary aid	Calceolaria
	Azureum	I share your	
Holy wishes	Plumbago	sentiments	Double China
	Larpena		Aster
Honesty	Honesty	I share your	
Hope	Flowering	sentiments	Garden Daisy
	Almond	I shall die	
Hope	Hawthorn	tomorrow	Gum Cistus
Hope	Snowdrop	I shall not	
Hope in adversity	Spruce Pine	survive you	Black Mulberry
Hopeless love	Yellow Tulip	I surmount	
Hopeless,		difficulties	Mistletoe
not heartless	Love-lies-	I watch over you	Mountain Ash
	bleeding	I weep for you	Purple Verbena
Horror	Mandrake	I will think	
Horror	Dragonswort	of it	Single China
Horror	Snakesfoot		Aster
Hospitality	Oak Tree	I will think of	
Humility	Broom	it, or hope	Wild Daisy
Humility	Smaller	I wound to heal	Eglantine.
	Bindweed		Sweetbrier.
Humility	Field Lilac	If you love me,	
I am too happy	Cape Jasmine	you will find	
I am your captive	Peach	it out	Maiden Blush
	Blossom		Rose
I am worthy of you	White Rose	Idleness	Mesembry-
			anthemum

## Floral Poesy

Ill-nature	Crab Blossom	Joy	Wood Sorrel
Ill-natured		Joys to come	Lesser Celandine
beauty	Citron	Justice	Rudbeckia
Imagination	Lupine	Justice shall be	
Immortality	Globe	done to you	Coltsfoot, or
	Amaranth		Sweet-scented
Impatience	Yellow		Tussilage
	Balsam	Keep your	
Impatient of		promise	Petunia
absence	Corchorus	Kindness	Scarlet
Impatient			Geranium
resolves	Red Balsam	Knight-errantry	Helmet Flower
Imperfection	Henbane		(Monkshood)
Importunity	Burdock	Lamentation	Aspen Tree
Inconstancy	Evening	Lasting beauty	Stock
	Primrose	Lasting	
Incorruptible	Cedar of	pleasures	Everlasting pea
	Lebanon	Let me go	Butterfly Weed
Independence	Common	Levity	Larkspur
	Thistle	Liberty	Live Oak
Independence	Wild Plum	Life	Lucerne
	Tree	Light-	
Independence	White Oak	heartedness	Shamrock
Indifference	Ever-flowering	Lightness	Larkspur
	Candytuft	Live for me	Arbor Vitoe
Indifference	Mustard Seed	Love	Myrtle
Indifference	Pigeon Berry	Love	Rose
Indifference	Senvy	Love, forsaken	Creeping Willow
Indiscretion	Split Reed	Love, returned	Ambrosia
Indolence	Mittraria	Love is dan-	
	Coccinea	gerous	Carolina Rose
Industry	Red Clover	Love for all	
Industry,		seasons	Furze
Domestic	Flax	Luster	Aconite-leaved
Ingeniousness	White Pink		Crowfoot, or
Ingenuity	Penciled		Fair Maid of
	Geranium		France
Ingenuous		Luxury	Chestnut Tree
simplicity	Mouse-eared	Magnificence	Magnolia
	Chickweed	Magnificent	
Ingratitude	Crowfoot	beauty	Calla AEthiopica
Innocence	Daisy	Majesty	Crown Imperial
Insincerity	Foxglove	Make haste	Dianthus
Insinuation	Great	Malevolence	Lobelia
	Bindweed	Marriage	Ivy
Inspiration	Angelica	Maternal	
Instability	Dahlia	affection	Cinquefoil
Intellect	Walnut	Maternal love	Moss
Intoxication	Vine	Maternal	
Irony	Sardony	tenderness	Wood Sorrel
Jealousy	French	Matrimony	American Linden
	Marigold	Matronly grace	Cattleya
Jealousy	Yellow Rose	Mature charms	Cattleya Pineli
Jest	Southernwood	May you be happy	Volkamenia

## Floral Poesy

Meanness	Cuscuta	Passion	White Dittany
Meekness	Birch	Paternal error	Cardamind
Melancholy	Autumnal	Patience	Dock. Ox-eye
	Leaves	Patriotism	American Elm
Melancholy	Dark	Patriotism	Nasturtium
	Geranium	Peace	Olive
Melancholy	Dead Leaves	Perfected	
Mental beauty	Clematis	loveliness	White Camellia
Mental beauty	Kennedia		Japonica
Message	Iris	Perfidy	Common Laurel,
Mildness	Mallow		in flower
Mirth	Saffron	Pensive beauty	Laburnum
	Crocus	Perplexity	Love-in-a-mist
Misanthropy	Aconite	Persecution	Checkered
	(Wolfsbane)		Fritillary
Misanthropy	Fuller's Teazle	Perseverance	Swamp
Modest beauty	Trillium		Magnolia
	Pictum	Persuasion	Althea Frutex
Modest genius	Creeping	Persuasion	Syrian Mallow
	Cereus	Pertinacity	Clotbur
Modesty	Violet	Pity	Pine, also
Modesty and			Andromeda
purity	White Lily	Pleasure and	
Momentary		rain	Dog Rose
happiness	Virginian	Pleasure,	
	Spiderwort	lasting	Everlasting Pea
Mourning	Weeping	Pleasures of	
	Willow	memory	White Periwinkle
Music	Bundles of Reed	Pomp	Dahlia
	with their	Popular favor	Cistus, or
	Panicles		Pock Rose
My best days		Poverty	Evergreen
are past	Colchicum, or		Clematis
	Meadow Saffron	Power	Imperial Montague
My regrets follow		Power	Cress
you to the		Pray for me	White Verbena
grave	Asphodel	Precaution	Golden Rod
Neatness	Broom	Prediction	Prophetic
Neglected beauty	Throatwort		Marigold
Never-ceasing		Protension	Spiked Willow
remembrance	Everlasting		Herb
Never despair	Watcher by the	Pride	Hundred-leaved
	Wayside		Rose
No	Snapdragon	Pride	Amaryllis
Old age	Tree of Life	Privation	Indian Plum
Only deserve		Privation	Myrobalan
my love	Rose Campion	Profit	Cabbage
Painful		Prohibition	Privet
recollections	Flos Adonis	Prolific	Fig Tree
Painting	Auricula	Promptness	Ten-week Stock
Painting the		Prosperity	Beech Tree
lily	Daphne Odora	Protection	Bearded Crepis

## Floral Poesy

Prudence	Mountain Ash	Reward of	
Pure love	Single Red	virtue	Garland of Roses
	Pink	Riches	Corn
Pure and ardent		Riches	Buttercups
love	Double Red Pink	Rigor	Lantana
Pure and		Rivalry	Rocket
lovely	Red Rosebud	Rudeness	Clotbur
Purity	Star of	Rudeness	Xanthium
	Bethlehem	Rural	
Quarrel	Broken Corn	happiness	Yellow Violet
	Straw	Rustic beauty	French
Quicksight-			Honeysuckle
edness	Hawkweed	Rustic oracle	Dandelion
Ready-armed	Gladioli	Sadness	Dead Leaves
Reason	Goat's Rue	Safety	Traveler's Joy
Recantation	Lotus Leaf	Satire	Prickly Pear
Recall	Silver-leaved	Sculpture	Hoya
	Geranium	Secret love	Yellow Acacia
Reconciliation	Filbert	Semblance	Spiked Speedwell
Reconciliation	Hazel	Sensitiveness	Mimosa
Refinement	Gardenia	Sensuality	Spanish Jasmine
Refusal	Striped	Separation	Carolina Jasmine
	Carnation	Severity	Branch of Thorns
Regard	Daffodil	Shame	Peony
Regret	Purple Verbena	Sharpness	Barberry Tree
Relief	Balm of Gilead	Sickness	Anemone (Zephyr
Relieve my			Flower)
anxiety	Christmas Rose	Silent Love	Evening Primrose
Religious		Silliness	Fool's Parsley
superstition	Aloe	Simplicity	American
Religious			Sweetbrier
superstition		Sincerity	Garden Chervil
or faith	Passion	Slighted love	Yellow
	Flower		Chrysanthemum
Religious		Snare	Catchfly. Dragon
enthusiasm	Schinus		Plant
Remembrance	Rosemary	Solitude	Heath
Remorse	Bramble	Soon	Blackthorn
Remorse	Raspberry	Sorrow	Yew
Rendezvous	Chickweed	Sourness of	
Reserve	Maple	temper	Barberry
Resistance	Tremilla Nestoc	Speak out	Oxlip
Resolved to		Spell	Circoea
be noticed	Siphocampylos	Spleen	Fumitory
Restoration	Persicaria	Splendid	
Retaliation	Scotch Thistle	beauty	Amaryllis
Return of		Splendor	Yellow Auricula
happiness	Lily of the	Sporting	Fox-tail Grass
	Valley	Steadfast	
Revenge	Birdsfoot	piety	Wild Geranium
	Trefoil	Stoicism	Box Tree
Reverie	Flowering	Strength	Cedar. Fennel
	Fern	Stupidity	Horseshoe-leaf
Reward of merit	Bay Wreath		Geranium
		Submission	Grass
		Submission	Harebell

## Floral Poesy

Success		Timidity	Amaryllis
everywhere	Nemophila	Timidity	Marvel of Peru
Success crown		Time	White Poplar
your wishes	Coronella	Tranquility	Mudwort
Succor	Juniper	Tranquility	Stonecrop
Such worth		Tranquilize my	
is rare	Chimenes	anxiety	Christmas Rose
Sun-beaming		Transient	
eyes	Scarlet Lychnis	beauty	Night-blooming
Superstition	St. John's		Cereus
	Wort	Transient	
Surprise	Truffle	impress-	
Susceptibility	Wax Plant	ions	Withered White
Suspicion	Champignon		Rose
Sympathy	Balm	Transport of	
Sympathy	Thrift	joy	Cape Jasmine
Talent	White Pink	Treachery	Bilberry
Tardiness	Flax-leaved	True love	Forget-me-not
	Golden-locks	True friend-	
Taste	Scarlet Fuchsia	ship	Oak-leaved
Tears	Helenium		Geranium
Temperance	Azalea	Truth	Bittersweet
Temptation	Apple		Nightshade
Thankfulness	Agrimony	Truth	White Chrysan-
The color of			themum
my fate	Coral Honey-	Unanimity	Phlox
	suckle	Unbelief	Judas Tree
The heart's		Unceasing	
mystery	Crimson Poly-	remem-	
	anthus	brance	American Cudweed
The perfection of		Unchanging	
femal loveli-		friendship	Arbor Vitoe
ness	Justicia	Unconscious	
The witching soul		beauty	Burgundy Rose
of music	Oats	Unexpected	
The variety of		meeting	Lemon Geranium
your conver-		Unfortunate	
sation de-		attachment	Mourning Bride
lights me	Clarkia	Unfortunate	
Thee only do I		love	Scabious
love	Arbutus	Union	Whole Straw
There is no un-		Unity	White and Red
alloyed good	Lapagena		Rose together
	Rosea	Unite against	
Thoughts	Pansy	a common	
Thoughts of		foe	Scarlet Verbena
absent		Unpatronized	
friends	Zinnia	merit	Red Primrose
Thy frown will		Unrequited	
kill me	Currant	love	Daffodil
Thy smile I		Uprightness	Imbricata
aspire to	Daily Rose	Uselessness	Meadowsweet
Ties	Tendrils of	Utility	Grass
	Climbing Plants		

Variety	China Aster	You are cold	Hortensia
Variety	Rosa Mundi	You are my	
Vice	Darnel (Ray Grass)	divinity	American Cowslip
Victory	Palm	You are	
Virtue	Mint	perfect	Pineapple
Virtue, Domestic	Sage	You are radiant with	
Volubility	Abecedary	charms	Ranunculus
Voraciousness	Lupine	You are rich	
Vulgar minds	African Marigold	in attraction	Garden Ranunculus
War	York and Lancaster Rose	You are the	
War	Achillea Millefolia	queen of coquettes	Queen's Rocket
Warlike trophy	Indian Cress	You are charming	Leschenaultia Splendens
Warmth of feeling	Peppermint	You have no claims	Pasque Flower
Watchfulness	Dame Violet	You have many lovers	Chorozema Varium
Weakness	Moschatel	You please all	Branch of currants
Weakness	Musk Plant	You are too bold	Dipladenia Crassinoda
Welcome, fair stranger	Wisteria	You will be my death	Hemolck
Welcome to a stranger	American Starwort	Your charms are engraven on my heart	Spindle Tree
Widowhood	Sweet Scabious	Your looks free me	Ice Plant
Will you accompany me to the East?	Stephanotis	Your presence softens my pain	Milkvetch
Will you dance with me?	Viscaria Oculata	Your purity equals your loveliness	Orange Blossom
Win me and wear me	Lady's Slipper	Your qualities, like your charms, are unequalled	Peach
Winning grace	Cowslip	Your qualities surpass your charms	Mignonnette
Winter	Guelder Rose	Your temper is too hasty	Grammanthes Chloraflorea
Wisdom	Blue Salvia	Youthful beauty	Cowslip
Wit	Meadow Lychnis		
Wit, ill-timed	Wild Sorrel		
Witchcraft	Enchanter's Nightshade		
Worth beyond beauty	Sweet Alyssum		
Worth sustained by judicious and tender affection	Pink Convulvulus		
Worldniess, self-seeking	Cliaanthus		
Worthy of all praise	Fennel		



Youthful	
innocence	White Lilac
Youthful	
love	Red Catchfly
Your whims are	
unbearable	Monarda
	Amplexicaulis
Zealousness	Elder
Zest	Lemon



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BULLETIN OF  
APPLIED LINGUISTICS

Volume VII, Number 27

Dr. L.W. Barnes, Editor

Dr. Gordon Browning: "Crayfish, Crawfish, Crawdads  
and Crawdabs in the Kentucky Mountains"

Nearly all students of language know the history of the word crayfish, a folk etymology from the Old French crevisse and Middle English crevisse. From crayfish developed the equally familiar form crawfish (another folk etymology), which in turn seems to have inspired the invented form crawdad. Crawdad, although a fairly recent creation, has become the prevalent usage in certain parts of America and has apparently spawned an even more recent development: the pronunciation crawdab in the Eastern Kentucky mountains.

To establish the frequency of the usage I undertook a systematic survey of Letcher County, Kentucky, and surrounding areas by distributing a mimeographed Webster's New World Dictionary definition: "A small, fresh-water crustacean somewhat resembling a little lobster." I asked informants to record the word they would probably use and other terms they might occasionally use. Of the two dozen who responded, half were male and half female. They ranged in age from eighteen to eighty-seven and in education from grade school dropout to MD and PhD.

Of the Letcher County natives responding, only four failed to acknowledge the existence of the term crawdab. One of these was from the Fleming-Neon area, a predominately Polish coal-mining area culturally and geographically isolated from the rest of the county. Another was an 87-year-old practicing MD, whose response of crawfish elicited a vehement reaction from his son, who maintained that it was the first time he had ever heard his father say crawfish and that he had heard him say crawdab on numerous occasions.

Other responses are equally enlightening. A sixty-six-year-old male bank president and a forty-year-old woman with a grade-school education both listed

crawcab as probable usage and crawfish as occasional, adding further support to a conclusion suggested by informal interviews in Letcher and surrounding counties: that crawdab and crawdab do not exist in free variation in the mountain dialect. People appear familiar with one word or the other, seldom both. Exception to this rule was an eighteen-year-old college coed from Letcher County who listed crawdab as her only response but also indicated without prompting that "Every time I pronounced it as crawdab, someone would correct me." A twenty-eight-year-old civil engineer from Harlan County, married to a Letcher County native, preferred crawfish but listed crawdab as secondary and added in the margin that he had been corrected by parents and teachers when he said crawdab instead of crawdab and had settled on crawfish as a compromise. A thirty-two-year-old PhD in English listed crawdab as his primary choice and wrote under the heading of occasional substitutes "There are none." A female MA in English said with a laugh when she read the definition, "Why that's a crayfish!" pronouncing the word very meticulously, and then recorded crawdab as her secondary response.

Two conclusions are suggested. The first is that even the classically conservative dialect of Letcher County, spoken in an area isolated by some of the highest mountains in Kentucky and by the Kentucky River as well, nevertheless illustrates the dynamic features of sound change (i.e., in this case, dissimilation). The second--suggested by the responses of those who had been corrected in their pronunciations of crawdab--is that colorful linguistic usages, whether new or old, will have decreasing chances of survival in Appalachia as parents and teachers, sensitive about the Appalachian image, steer the younger generation toward conformity of usage.

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BULLETIN OF  
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Volume VII, Number 27

Dr. L.W. Barnes, Editor

Dr. Gordon Browning: "How Fair Is Fair?"

The O.E.D. indicates that use of fair to mean beautiful is obsolete or archaic except when it precedes words like weather and means; however, one of the exceptions also appears to be bordering on obsolescence. When a television weatherman predicts a fair day, he means the skies will be clear and sunny; but investigation reveals that he is misunderstood more often than not. I asked two classes of university juniors, seniors and graduate students, most of them English majors and minors, to record what the phrase "a fair day" meant to them. Of 47 questioned, only ten responded that the day would be clear and sunny. 36 seemed to treat the term as synonymous with mild or moderate; one, unaccountably, said it meant overcast.

Of the 36 who misunderstood the phrase, none acknowledged the possibility that a day might be fair and very warm or fair and very cold. Their descriptions included: "sweater-or light coat-wearing weather," "moderate in temperature," "not extreme," "pleasant," "in the middle temperature range," "a day when clouds are present but not in abundance," "nothing traumatic is going to happen," "comfortable," "average temperature," "sunshine about halfway," etc. Eleven used the term "moderate" in their definitions; six used "mild"; four used "pleasant." Eight specifically mentioned the possibility of clouds in a fair day; one, in fact, acknowledged that there might be "up to a 20% chance" of rain.

From this sampling we can conclude that a weatherman using the phrase "a fair day" will more often than not be understood to mean "a fair-to-middling" day. Therefore, we can anticipate a time not far distant when that is what even the forecasters will mean when they use the phrase.

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Dr. L.W. Barnes, Editor



BULLETIN OF

APPLIED LINGUISTICS

Volume VII, Number 27

Dr. L.W. Barnes: "Not That Simple"

Henry Weihofen in Legal Writing Style\* indicates that in Law, as in other pursuits, it is a good idea to strive for simplicity. In his worthwhile effort, he agrees that one must avoid the colloquial or the slangy, yet one should not be stuffy, pompous, or overly-formal.

He then proceeds to give a substantial number of words which are formal and stuffy. He then gives the "Simple" solution. In many instances, his position is well-taken. For example, it is obviously better to say "Building" rather than "Edifice." Likewise, it is more fruitful to stay with the direct "bring about" than to stay with "effectuate." Then, too, there is merit in substituting "as soon as possible" for "with a minimum of delay." However, it is possible that "minimum" might carry a more specific meaning than "as soon..."

Before altering too many of the terms which at first glance seem to be matters of jargon, formality, and stuffiness, it might be well to consider in depth the meanings carried by the terms we desire to replace.

The use of the term "apprise" might be significant enough to keep the term, rather than to substitute for it "inform." "Apprise" in a legal sense carries not only the meaning of passing information along, but also self-discovery which is then followed by both telling and justifying at the same time. If I am "apprised" of my rights, I am not only told but also told why or how.

It would not be well to substitute "write" or "telephone" for "communicate" without considering carefully all the meanings carried by "communicate." "Communicate" may well involve passing information along in terms of certain principles or allegations. Whereas I could "tell" or "telephone" or "write" in any kind of an experience where principles of law are not concerned, "communicate" in law often refers to passing along information in terms of certain steps or procedures, where these steps or procedures must be followed or met in order for "communication" to be made legally.

It is suggested that the interested reader look at some of the many terms indicated on the two pages where Weihofen develops his ideas.

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\* Henry Weihofen, Legal Writing Style, St. Paul, West, 1961, IX, 322 pp.

\*\* Ibid., pp. 59-60.

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UNIVERSITYBULLETIN OF APPLIED  
LINGUISTICS

Dr. L.W. Barnes, Editor, Volume 7, Number 28

Bradshaw William; "A Commonsense View of Language"  
There should be little question that Linguistics in many areas, as a science, has made considerable progress with respect to both theory and practice. And this progress has been remarkable in having been achieved in such a short time! That there have been problems, that there are problems, and that there will continue to be problems are truisms which stem from the fact of the human mind and from the fact(s) of human experience.

As a science--both inductive and deductive with the emphases mainly in the inductive areas, it is a matter of experience that the hypotheses can be but tentative, and that there must be continual examination made in all areas of the science of Linguistics.

Some of the problems stem from the fact that there is much to know in this world and that all there is to know cannot be subsumed at one time. Therefore, the hypotheses made are those which attempt to take into account all that is a matter of conscious material for that particular time and place. Different people look at the problems from different points of view. However, any articulation of the problems not in the areas of art and music, or sculpture are somehow articulated in or through language. It is also probably true that we also talk about art and about music in language.

Now, all of these articulations come from somewhere and have some purpose(s). We have literary criticism through which critics or surveyors of critics look to the nature of literature and to the nature of those who compose literature. Such must also be the case, by analogy, of those who look to the canons of art, music, or sculpture, or to any other form known as art. It is at least the position of this linguist that there is no linguistic approach to any area of human knowledge, only that all areas of human concern that are handled through language must somehow be a part of a linguistic survey. We can scarcely survey the articulations in language of any discipline without touching on or probing into the nature of that discipline. It would appear that any discussion of any branch of human interest or concern through language must be examined to discover whether that discipline has unique linguistic features. By "unique" I mean features which distinguish one articulation from another in respect to the particular area of experience, or kind of experience. Of course, these assertions, quite general, will evoke certain questions. One of the questions might focus on the matter as to whether or not language as such is essential to the literary experience, or the musical experience, or the artistic experience, or whatever else. If we could adopt a comfortable theory that words are simply carriers, or catalysts, and that the words, as such, are not a part of the integral or essential experience, then our concerns might be substantially cut down.

It is true that we often say, in the semantic sense, that words do not mean but carry meanings. In such a sense, words and their orders are simply items which, like the rails on the railroad, enable meanings to go from hence to thence, from author to reader, perhaps. We might then inquire--as I am certain we must--whether some words and their arrangements are more effective than others in carrying meanings. We might also look to the question as to whether some kinds of meanings are best carried by certain orders of words, rather than by other orders of words. Or, perhaps, we might say that every speaker or writer who has some view of experience to articulate has enough linguistic competence to serve his purpose. The proponents of such a theory would also go on to urge that the readers or listeners would have sufficient linguistic competence to share the experience of the writer or speaker.

Of course, those who look only to the sender might state, flatly, that the question of communication is not essential with respect to composer-product. If the listener or reader--for literature, in this case--reads or listens with perfect or imperfect understanding, that is one matter. However, the most important point is that the author has a vision of life and that he is able to express it.

Of course, here we would be taking the position that an individual has a literary view of some aspect of life and that he finds enough language at his disposal to articulate it. We infer, at least, that the experience is followed by the urge to create, to recreate, or represent the experience. Language serves his purpose. He is then satisfied. Now, if there is the desire to communicate that vision to someone else, that someone else has the same kind of linguistic competence whereby he can go to the carrier which will afford him the opportunity of sharing the creative experience. Even were the writer or speaker to complain bitterly at his not being understood or appreciated, that would be one matter entirely divorced from his own literary experience and achievement. Of course, he would then place himself in the position of asserting that his linguistic competence served him but failed a prospective audience. Such a point of view is not unknown. Certainly some kind of a common denominator theory is essential to us in considering the matter of language in any way or degree.

It is only too true that the encoding and decoding system is not known, concretely. How ideas are made and kept or formed can be approached but tentatively. Often, the best proof we have must be a sort of a negative one--in that we adopt a theory because other theories do not answer the problem at hand. It is difficult to obtain sensorial proof as to what happens when "an idea" is transformed to writing or to speech in individual "A" and decoded so as to become an idea in the consciousness of other individuals B, C, D, ....  
#2. Nevertheless, such a condition or state must be very close to what happens.

It may be a bit comforting to think that whatever goes through the personality of any single individual as a matter of the senses, of a matter of sense or as a matter of attitudes can be communicated, expressed, or communed. Unless we are talking about face-to-face oral passages, complete with non-linguistic accompaniments, or unless we are talking about communications

entirely non-verbal, we must be thinking about a language which serves to encode human experience, and which, as well, serves for the purpose of decoding. If we can avoid the thorny problem as to whether language serves to mislead or misdirect people with respect to the truth of experience, itself, we can agree that language does enable us to communicate, express, or commune to many predictable degrees. Whether we spend most of life using language to deceive ourselves perhaps is not the critical question here since we are not now talking about truth-falsity. It would probably be agreed that-for one of the few instances in human experience-- by philosophers, scientists, artists, and other individuals--that whatever chance we have of approaching real truth comes through our language structures, however they may be viewed.

When we consider the complex sensorial system of man, his complex cognitive system, and his no less complex attitudinal system, with each system inter-relating, we should appreciate the scope of a linguistic system able to handle man's oral and graphic representations of experience.

Now, however much the linguist would appear to differ in his approach to all of the aspects of language, he is invariably found to consider that we do move from "sound to sense." Each language has its system of proceeding from sound to sense--from phonology to meanings. It is probably true--and hopefully so--that the sounds unique to each language are significant in being able to be fused to meaning through oral or graphic representations. Unless the whole matter of language is a divine hoax or machination to keep man from understanding himself, others, and the nature of his physical, intellectual, attitudinal, and supranatural natures, then we start with the position that whatever man can experience he can represent through language. Of course, if it is desired to intervene at this point to assert that there is never enough linguistic competence to handle the matter of human experience, we face a limitation that arises between what is asserted as potential and what is asserted as actual performance.

On the whole, the linguist believes--as is probably the case of the "layman"--that each language which survives is able to handle all of the represented experiences that can arise. The potential is there. Certainly, it would not be urged that every individual in every language community would have the same linguistic potential or achievement. But it is urged that for any time or place a complete language has the ability to take care of all that needs to be communicated, expressed, or communed. Each individual has the ability to work, language-wise, within each language. It is probably true that every language has a greater capacity or potential than any single individual within it. It would certainly stand investigation to assert categorically that all languages do serve the total personality of each individual in a language-speaking community and all individuals in such a community. It must be true, in an "etic" sense, that there is a common core of phonological items which through kind and degree serve as a means for understanding other individuals not in a like-speaking community. It will also stand investigation to assert that there is a common denominator of human personality, a common denominator which demands common language items and structures. In going from "sound to sense," we find that we can handle the reality of human behavior in individual or group contexts, whether language leads to truth or from it.





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BULLETIN OF APPLIED  
LINGUISTICS

Dr. L.W. Barnes, Editor

Volume 7, Number 29

Bradshaw William "A Commonsense View of Language"

Hopefully it may be true that the more one sees in the disciplines in experience, the more he is able to take a commonsense view, with the added dimension of being able to see the significances in the view. In the next few issues, or so, we are taking a set of commonsense views about language. Let us first look to a rather common definition of language..

The definition has its central focus in the fact that language is a system and that the system is one of articulated sounds. Further, through the system of such articulations, we can represent individually or collectively--as through institutions-- what we think, feel, and sense about common or uncommon experiences. In so doing we can understand with one another; we can feel with one another, and, finally, we can appreciate the sensorial world of our senses in conjunction.

Now, more specifically, the articulations are those of sound, and, because of the articulations, we are moved in one direction rather than in others. The directions we are moved to or into are those of meanings. It would appear that a change in sound signals a change or more in meaning. Agreeing, quickly, that we can signal changes in meaning through other than language, we suggest that language, on the whole, may be the most efficient way of signalling a change in meaning. On the non-verbal level, it is agreed that a knife in my hand might signal a change of meaning from having a spoon in my hand. With language, a phonemic change, as in /bat/ to /kat/ would signal that we may not be talking about bats but about something else.

After pondering the matter for sometime, it is likely that nearly everyone will agree that the forty-five phonemes we have in English, for example, will, through articulation, take care of most of the kinds of meaning we have in mind or in nature to handle. If we want to explain, if we want to debate, if we want to quarrel, if we want to describe, if we want to feel, or whatever we want to do that human beings want to do--whether thinking, feeling, or sensing--the sounds, in combination, can arrange. Now, by "communication" we have in mind that a person can get across to someone else or to himself fairly well what he thought he thought about, felt about, or sensed. When that takes place, we consider that communication is effective. Presumably, we can even grade the communication as excellent, good, fair, unsatisfactory, or poor.

Such is also the case with expression. Presumably, the linguistic system can take care of the emotions we feel in the sense of having them represented through language, if we think that such expression is necessary, inevitable, or desirable. The sound units, as phonemes, become morphemes, then lexemes, and then larger units of meaning.

For any specific language-speaking community the system is able to handle whatever man believes he needs to handle through these oral articulations. Now, it is true that the oral face of language--its genuine one-- is adequate for the face-to-face conversations we have, or for the mass media representations we have. It has also become quite clear that since we are not always in actual conjunction with each other, the oral face of language is not sufficient. Therefore, mankind has evolved graphic systems of representing the sounds of language. The child progresses(?) from oral to silent reading. Through a set of processes not entirely understood, the phonology of the language can be represented graphically. There is no piece of writing as such which cannot have at least a one-to-one representation orally. Further, each oral representation of language can, for each system, be represented in writing. The whole system for each oral and graphic representation of language is its "grammar."

Simply stated, the grammar of any language is the number of ways and the kind of ways that statements can be made in that language, where the statements are essentially human. The grammar of a language consists of its sound system (phonology), of its morphological system (words and basic unit changes), of its syntax (word, phrase, and clause order), of its lexemes (whole-word order), and of its sememes (word-and-greater order). No reliance on meaning can be effective without a movement in the whole language system of sound to sense. No change in sound can be effectuated without a change or modification in the meanings. Each language has a system, and the system operates efficiently, without exceptions. Where an "exception" is asserted there is simply an unstated confession that the one asserting the exception is simply unaware of the total picture. Since language is a system of articulated sounds through which man moves to meaning, the phonology of the language exercises its prime and prior claim. That in our verb system we have "ring," "rang", and "rung" rather than "ring," "ringed", and "ringéd" is not really a matter of fact that we have an irregular verb at all. The verb is not irregular, for the sound change is entirely regular. We might, at the best--or worst--say that the expected graphic representation is not regular--and that is an entirely different matter.

Now, what do we expect from the language system? If we have differences as to our own experiences, in any behavioral way, we would expect that the system, if functioning efficiently, would provide ways of indicating what we have in mind, in the heart, and in the world of senses. We can talk to ourselves about ourselves, about the outside world, about others, and about what we think and feel about others. It is not going too far astray to assume the each individual uses his personality in the same way, or that each personality works along the same lines as would be true of other personalities. Thus the common equation or denominator for language! Now, we are quick, in theory, at least, to assert that words and their combinations are not the senses, not the ideas, and not the emotions or attitudes we find they express or represent. The word, then, is not the thing, act, idea, event, or person, or place, or time. But words stand for these elements in experience. What do we need at this point for understanding? Perhaps, we need to look at "experience." By "experience," this writer has in

mind how the thing works and what it consists of. It is often true that it is difficult to tell what an element is, but easier to come close to its nature through seeing what it does and how it operates.

It would appear to us that "experience" is the conscious reaction of a living organism to a world of elements which can be enumerated: things, ideas, events, institutions, persons, places, and time. We can, of course, re-arrange this definition to suggest that experience is the conscious response of an organism to a world of things, ideas, events, institutions, and persons all in space and time. We will not suffer too much through tentatively adopting one or the other definitions. Further, any definition that takes care of "conscious response" and the items of experience would not go too far astray. Now, we would not believe that we can have an experience without a reaction to the elements we have indicated. It will not be too unkind or too dogmatic to suggest that experience does not contain any elements not indicated in the list of elements above. If it is urged that the definition is too narrowly-psychological, it might be useful to counter with the observation that no other definition does as much or as well.

When we come to "meaning," we have another problem. Yet, we must pause to make some observation about meaning, for that is what the human mind comes back to discuss in nearly all instances. Now, we could stop and talk about many meanings carried by "meaning." And such is a useful semantic exercise to which we can direct the interested reader or the curious reader. By "meaning," we have in mind the reaction that follows the response to experience. When the stimuli of thinking, feeling, or sensing are strong enough to cause a living form to respond or attend to the items of ideas, events, people, things, and institutions in space and time, we believe that experience has taken place. When the individual responds in specific ways of thinking, feeling, or sensing, we then say that the experience has "meaning" to him. What an experience means can only be viewed fruitfully through what effects the experience has on the total personality of the individual. If the experience effects no personality change, there has been no meaning for that individual. Naturally, it follows that a like experience can have meaning for some individuals and none for others. It also follows that the like experience can have different effects in some individuals, rather than in others. It also follows, then, that it is not a good idea to say "the same experience." It is quite likely that "experience" can be defined for only one individual. It is in this sense, as well as in other senses, that each individual experiences uniquely.

Although there would appear to be a rather wide set of agreements as to like experiences among different individuals, each individual must savour the common experience uniquely. Thus, the same-language statement to which many individuals would react in similar fashion must have a unique linguistic meaning to each individual responding to it. Where the difference is not a real matter of kind, it may well be a matter of degree, at least. It will appear to the discerning observer that the language of a people is so set up as to handle that which is alike in group fashion but individually unique as to the single experiencing person.



Dr. L.W. Barnes, Editor: Volume VII, Numbers 30, 31, 32  
Dorothy L Bray: "The Apache Verb-Complex"

Southern Athapaskan languages are linguistically related to the Athapaskan-speaking people of Alaska, Canada, and Northern California. The Southern Athapaskan Group (often called the Apachean Group) includes the Chiricahua of Southern Arizona and New Mexico, the Mescalero of East-central New Mexico, the Jicarilla of North-eastern New Mexico, the Kiowa Apache of Northern Texas, the Lipan of Southern Texas, the Navajo of the Four Corners Area of New Mexico, Colorado, Utah, and Arizona, and the Western Apache of Eastern Arizona. Western Apache is sub-divided into five groups: San Carlos, White Mountain, Cibicue, Southern Tonto, and Northern Tonto. The dialects spoken by these five groups are mutually intelligible with differences in pronunciation and usage which reflect the geographic heritage of each group. For instance, the people of Elyas, though living much nearer to San Carlos than to the White Mountain region, speak a White Mountain dialect because they are descendant from White Mountain bands moved to the Gila river by the United State government in 1875. Likewise, the people of Cibicue, though geographically closer to the White Mountain region, speak a San Carlos dialect because they are descendent from San Carlos bands. This study involves information gathered from both San Carlos and White Mountain dialects; since the differences between the two are primarily in pronunciation--not syntax, spellings may differ, but the conclusions dealing with phrase and sentence structures are valid for these two dialects, as well as for others within the Southern Athapaskan groups.

The verb is the basis of the Apache language; not only are sentence elements built around the verb, but most adjective functions and many nouns are expressed through verbal forms. In fact, a complete sentence can be expressed by one Apache verb form-- a verb-complex which includes the verb stem and three or more prefixes which indicate person, number, mode, tense, and voice, as well as subject, direct object, and indirect object. Dr. Harry Hoijer has described fourteen positions or slots within this verb-complex. The following chart is adapted from Dr. Hoijer's findings (Hoijer, 1945).

CHART A

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Obj. Pos.	Post Adv.	Theme	Iter.	No.	Pir.	Dative	Adv.	Tense	Mod-	Sub.	C	S	
		Pre.	Mode	Obj.						al	Pro	1	+
												a	e
												s	m
												s	

Although there are fourteen basic positions in the typical verb-complex, Edgerton stated that only eight of these main verb prefixes appear at

any one time since some of the morphemes can be combined in certain elements which are distributed in two or more positions (Edgerton, 1963). These morphological slots are shown in Chart B, illustrating the possible combinations of fillers from Chart A.

CHART B							
I	II	III	IV	V	VI	VII	VIII
Postpos. Phrase	Mode	Number (Pl.)	Dir. Obj.	Subject	Future Tense	Class	Verb Theme
#1+#2	#5/#11	#6	#7	#8/#12	#10+#11	#13	#14/ #14+#3,4,9

Combining the information about possible positions of the basic verb-complex in Chart A with a knowledge of the combinations indicated in Chart B, one can more easily understand the construction of the Apachean verb-complex which is composed of several obligatory and optional morphemes following a definite pattern of order.

Detailed discussions of the eight slots with examples and lists of possible fillers are found in the following order:

Morphological Slot	Fillers
I Postpositional Phrase	# 1 + ( # 2 )
II Mode	#5/#11
III Number	# 6
IV Direct Object	# 7
V Subject	# 8/# 12
VI Future Tense	# 10+ # 11
VII Class	# 13
VIII Verb Theme	# 14/#14 + { # 3,4,9 }

#### I. Postpositional Phrase = # 1 + ( # 2 )

The first morpheme, reading from left to right, has been referred to by Hijer, Edgerton, and others as the pronominal indirect object; however, the unit not only expresses to whom or for whom something is done (as an indirect object); it denotes a much wider variety of ideas, such as with, about, on top of, around, for the benefit of, etc. For this reason, this unit is best described as a postpositional phrase comparable to the prepositional phrase of English. Even the structure can be compared: there is an object in Position 1 and a postposition in Position 2 -- just opposite of the English counterparts in the prepositional phrase. These two morphemes are sometimes written as one word, separate from the rest of the verb-complex for ease in written communication, although they need to be spoken with the verb in order to complete its meaning. Therefore, they are included in this discussion as a part of the verb-complex whether or not one prefers to separate them in written form.

The pronoun in Position # 1 may occur without the postposition, but this is extremely rare. When this omission does occur, however, the unit is easily compared to the indirect object of English. If Position 2 is filled, Position # 1 must be filled in this optional slot of the verb-complex:

Example: Yaa natasidaakées = They are thinking about it.

The Apache	Verb-Complex							3
1 2	3	4	6	11	12	13	14	
Ya a	na	tsi	daa	Ø	Ø	Ø	kess	
it about	around		(plural)	(Imper.)	3rd pers.	(class)		
							# 4 + #14	
							to think	

II. Mode= # 5/# 11

Every verb structure must include one--but only one--modal prefix, even though it may be Ø. The iterative mode of Position # 5 and the modal prefixes of Position 11 are mutually exclusive, constituting this obligatory morpheme of mode with possible distribution in different slots of the verb-complex.

Only one type of prefix occurs in Position # 5--the prefix indicating the iterative mode. The other prefixes appear in Position # 11: progressive, imperfective, perfective, optative, and customary.

Modal Prefix: Position # 5    Iterative    na'-repeatedly

Modal Prefixes            : Position # 11

<u>Progressive</u>	hi/hii
<u>Imperfective</u>	h/hi- h-perfective = disjunctive
	n/ni - n-imperfective = completive (Ø when preceded by pronominal or deictic prefix)
	Ø - zero-imperfective= conjunctive

Perfective

h/hi - h-perfective  
n/ni - n-perfective  
s/si- s-perfective

Optative

ho

Customary  
combined forms

III NUMBER ( Distributive Plural) = # 6

Where English verbs have different forms denoting singular and plural, the Apache verbs have differing forms for singular, dual-plural, and distributive plural--duoplural is used when speaking of two people or things, while distributive plural is used when speaking of more than two.

Position # 6 is filled with the prefix -daa/-da when distributive plural meaning is intended. Example: Tsidaakees= They are thinking.

4	6	11	12	13	14
tsi	daa	Ø	Ø	Ø	kees
	Dist. plural		3rd Person	(class)	#4 + #.14:
					(to think)

Tsikees+ He is thinking/ She is thinking.

4	11	12	13	14
tsi	Ø	Ø	Ø	kees
		3rd person	class	#4 + #14
				to think

In intransitive verb- complexes, the number prefix combines with the first person dual subject prefix, the second person dual prefix, and the deictic prefixes for the fourth person, the indefinite, and the place-time subject to form distributive plurals for these subjects. In Western Apache, the daa/da is required for the third

## THE APACHE VERB-COMPLEX

and fourth persons duoplural so that no actual differences occur in the verb-complex, exact meanings being actualized elsewhere in the conversation.

In transitive verbs, the distributive plural prefix may modify the subject, direct object, or both, the exact interpretation being determined by context: (1) When the subject is first or second person singular and the object is any person but the first or second person singular, the distributive prefix qualifies only the direct object. (2) When the subject is any person but the first or second person singular and the direct object is either first or second person singular, the distributive prefix qualifies only the subject. (3) When the subject is any person but the first or second person singular, the distributive prefix may qualify the subject, the direct object, or both.

When the distributive plural qualifies the indirect object, the plural prefix appears before position #1. If no distributive plural prefix occurs, the subject and/or direct object is assumed to be third person singular, unless definite information is given in the specific subject or object prefixes which occur in positions #1, #2, #8 and #12, as indicated above.

### IV. DIRECT OBJECT = #7

The pronominal direct object in position #7 is obligatory with the transitive verb stems. The prefixes for this slot are the same as the prefixes for the object slot of Position #1, with the addition of  $\emptyset$  which is sometimes used in the direct object slot. Lack of time has prevented formulation of rules governing the use of particular prefixes: examples-- $\acute{a}sh\acute{x}e'$  = I make it/I am making it.

3	7	11	12	13	14
a'	$\emptyset$	$\emptyset$	sh	$\emptyset$	$\acute{x}e'$
thus	3rd per	(Imperfect)	I	(class)	to make

Nkon $\acute{x}$ teeh = You (Sg.) put him (4th person) down.

3	7	11	12	13	14
n	ko	$\emptyset$	n'	$\emptyset$	teeh
na-down	him		you	(class)	to handle
	(4th person)		(singular)		an animate being

Yaadaabistii = They turned him over to him.

1	2	6	7	11	12	13	14
y	a	daa	bi	$\emptyset$	$\emptyset$	$\emptyset$	teeh
him	to	(plural)	him	(Imper.)	(3rd per)	(class)	to handle
y(a)		6+7=them			6+12=they		an animate being

## V SUBJECT = # 8/# 12

The deictic pronoun prefix of Position 8 and the subject pronouns of Position 12 are mutually exclusive and comprise one obligatory morpheme with two possible positions, although the most common position for the subject is Position # 12.

## DEICTIC SUBJECT PREFIXES POSITION # 8

The most common prefix in Position # 8 is *ch i*, indicating fourth person or personal third person. There may be other prefixes functioning in this position. Present research has not proven their existence in the speech of present -day Western Apache.

SUBJECT PREFIXES POSITION 12	
<i>i/i</i>	first person singular in all perfective paradigms with $\emptyset$ or <i>ʔ</i> classifiers
<i>ii(d)</i>	first person duoplural in all paradigms except optative ("d" not actualized, but effect of a "d" is )
<i>oo</i>	second person duoplural in all perfective paradigms
<i>oh</i>	second person duoplural in all perfective paradigms
<i>n</i>	second person singular in all perfective paradigms
<i>ni</i>	second person singular in h-imperfective
<i>sh/s</i>	first person singular in all paradigms except perfective which employs $\emptyset$ or <i>ʔ</i> classifier
<i>v</i>	second person singular in all paradigms except h-imperfective and all perfective paradigms

No third person subject prefix is actualized in the Apachean verb-complex except in the deictic forms noted above; therefore, unless a definite subject prefix appears, all verbs are third person singular.

Subject prefixes occur in well-defined sets. Since the first person duoplural (*ii(d)*), the third person singular ( $\emptyset$ ), and the deictic prefix of Position # 8 are always the same; the first and second person singular and second person duoplural subject prefixes are the only ones to be concerned with change:

Set-1 is used with future tense, progressive tense,  $\emptyset$  and n-imperfectives, iterative, and optive modes and includes subject prefixes as follows:

<u>First person</u>	<u>2nd person</u>	<u>2nd person</u>
<i>sh</i>	singular	duoplural
	plus-effect*	<i>oh</i>

\* A plus-effect produces a nasalized, lengthened, higher-toned vowel in the preceding prefix.



Set 2 is used only with the h-imperfective and includes:

sh	'n/n/ni	oh
----	---------	----

Set 3 is used with perfectives having d or l classifiers:

sh	n	o
----	---	---

Set 4 is used with perfectives having Ø or l classifiers:

i	n	o
---	---	---

## VI TENSE = # 10

The future tense is the only tense prefix in the Apachean verb-complex. The optional morpheme of future tense appears in Position # 10 and is always followed by and fused with the h-progressive modal of Position # 11: dihi. The di (future prefix), the hi (progressive prefix), and the subject prefixes combine to form a single syllable. The results of this fusion, however, are extremely irregular:

Singular		Duoplural	
1st person--	dish	1st person	nn(d)/dnd
2nd person	n/dn	2nd person	doch/doh
3rd person	doo	3rd person	doo
4th person	doo	4th person	doo

These fusions for the distributive plural are exactly as in duoplural except for the addition of the distributive plural prefix in Position # 6. For example, note the forms within the following future tense paradigm of "to make" or "to do" -le' (iii stem form for future tense); the fused prefix forms are indicated by the underscoring:

## FUTURE

Singular	Duoplural	Distributive
1. <u>adis</u> lii	1. <u>adnd</u> lii	1. <u>adaadnd</u> lii
2. <u>adn</u> lii	2. <u>adoh</u> lii	2. <u>adaadoh</u> lii
3. <u>aidoo</u> lii	3. <u>adaidoo</u> lii	3. <u>adaidoo</u> lii
4. <u>ach</u> idooii	4. <u>adaach</u> idooii	4. <u>adaach</u> idooii

## VII CLASSIFIERS + # 13

The obligatory morpheme of classifiers in Position # 13 can be filled with Ø, d/, l, or 1, depending on the type of verb stem. The distinction between passive, active, or neuter constructions is made primarily by a change of classifier. However, this assumption has too many exceptions--perhaps changes within the language have simply disregarded the "rule." From most examples where an intransitive construction is changed to a transitive construction, the primary change in form is the change of classifier to l.

## Apache Verb -Complex

One might assume, then, that the  $\lambda$  classifier would always indicate a transitive or causative construction, but there are instances where both neuter and active intransitives with the  $\lambda$  classifier are present, and there are neuter and active transitives with  $\phi$  classifier.

A definite "rule" for the correlation between classifier and verb function cannot be finalized at this point of research. All Apache verbs, however, seem to be categorized by the classifier which appears in position #13 of the verb-complex; thus, verb forms or types seem to be divided into the four classes, although many of the distinctions are not clear-cut at this stage.

VIII. VERB THEME = #14 / #14 = #3, #4, #9

The last slot in the basic verb-complex is the verb stem; it is comparable to the main verb of an English verb phrase. This stem in position #14 can stand alone as the verb theme in a verb-complex or it may require the presence of a prefix from position #3, #4, or #9. When these additional prefixes occur, the verb theme might be regarded a discontinuous morpheme similar to the disconnected verb phrase of the English question, such as: Will you go?

The adverbial prefix of position #3 may be subdivided into three classes, the fillers of which must occur in fixed order, indicated by the class number. All three subclasses may appear in sequence, or two, or one, or none. These prefixes add such ideas as: again, back, down, up, etc. Nearly all adverbial prefixes occur in this position. The adverbial prefixes of position #3 differ from the theme prefix of position #4 only in that the prefixes in position #4 must always appear with a particular stem or set of stems, while the adverbial of position #3 may occur with many stems.

### Adverbial Prefixes - Position #3 (partial list)

Note: Class numbers indicate the order in which these prefixes occur when more than one occupy position #3.

#### Class - 1

$\lambda$ a' - thus  
ha - up/out/after/for  
na/naa - here and there/round trip  
na - to a position of rest  
ni/n - to a fixed point  
 $\lambda$ o - there/away  
tsh'i'nah - in view

#### Class - 2

ga' - this way  
na' - back  
na - down

#### Class - 3

naa'/na' - again/over

The fillers for position #4 are special prefixes which must occur with particular stems in position #14. The stem gives the meaning of the verb in an abstract way, while the theme prefix adds meaning in a specific way. For instance, in hasdashii'tii' (He brought me to safety), the stem -tii' means "to handle a live

## THE APACHE VERB-COMPLEX

or animate being", while the theme prefix, hasda-, has to do with safety. Occasionally, no lexical meaning can be discovered for the stem alone, and the theme prefix is necessary for any meaning; for example, in ya'ti (He/She talks), ya- is the theme prefix of position #4 and -ti is the stem of position #14; together they mean "to talk", but neither can be defined alone.

### Theme Prefixes - Position #4

#4 + #14

di +	_____	pertains to	fire
hasda +	_____	"	" safety
k'i +	_____	"	" planting
xi +	_____	"	" color*
ya +	_____	"	" talk

The adverbial of position #9 is not used frequently in Western Apache; although there is, evidently, a position necessary for this prefix, only three such prefixes were found in the research to date. Perhaps this is a vanishing element of a changing language. These three prefixes are subdivided into two classes which must appear in sequence if both are present; however, one or none may appear.

### Adverbial Prefix - Position #9

#### Class - 1

ni/n - completive

#### Class - 2

di - inceptive (di- is also used where meaning is unknown)  
hi - consecutively

Few stems of position #14 have only one form; there may be as many as seven or eight - some form changes seem to be governed by phonetic alternants, but processes regulating these alternations are extremely irregular. For instance, the stem "-ah" (to butcher) appears in each paradigm of its conjugation, but in the theme "ya . . . ti" (to talk), the "-ti" is found in imperfective, perfective, and optative paradigms, while "-tih" is found in the progressive and iterative paradigms. Some of these irregular theme spellings become quite complex as in the stem denoting the handling of a round, solid object:

- laah - momentaneous imperfective and continuative iterative
- la - continuative imperfective
- la' - momentaneous and continuative perfective
- laax - momentaneous progressive and momentaneous optative

\* Early research indicated that this theme prefix pertained only to color, but later findings of this study indicate that this prefix functions as a special class which denotes qualities, conditions, or relationships that are not essential or inherent properties of the topic discussed.

## THE APACHE VERB-COMPLEX

- \aaʔ - continuative progressive
- \aʔah - momentaneous iterative
- \aʔ - continuative optative

In Apache, verbs which can be conjugated in seven paradigms and possess one or more distinctive stem forms are active; while those which are monosyllabic, have only one stem form, and can be conjugated in only one paradigm, but the form of that paradigm may be different for different verb stems; it will be, however, one of the following: Ø-imperfective, h-perfective, n-perfective, s-perfective, or progressive, although use of the progressive is rare.

The core of the verb-complex in Western Apache shows obligatory slots of mode, subject, class, and theme in the intransitive pattern; and direct object, mode, subject, class, and theme in the transitive pattern:

Trans. Direct: #7 Mode:#5/#11 Subj:#8/#12 Class:#13 Theme:#14/  
Object: #7 #14+#3,4,9

Intrans. Ø Mode:#5/#11 Subj:#8/#12 Class:#13 Theme:#14/  
#14+#3,4,9

The basic verb-complex also contains optional slots for the indirect object: #1 + (#2), the distributive plural: #6, and future tense: #10. There may be as few as four slots filled for a complete basic verb-complex, or there may be as many as eight slots filled with one or more syllables. Examples of basic verb-complexes utilizing these possible slots are as follows:

### Examples of the Basic Verb-complex

Four slots: future tense, subject, class, verb-theme

Naadlshbah = I will raid here and there

Future: #10 + #11 = dīi  
Subject: #12 = sh (I)  
Class: #13 = Ø  
Theme: #3 + #14 = naa . . . bah (to raid here and there)

Examples of the verb-theme using only position #14, position #14 + #3, position #14 + #4, and position #14 + #9:

Verb theme = #14/ #14 + #3, #4, #9

#14  
Nshʔīī = I am/I exist

11	12	13	14
n	sh	Ø	ʔīī
(perf)	I	(class)	to exist

# THE APACHE VERB-COMPLEX

## #14 + #3

'ashxe' = I am making it/I make it  
I am doing it/I do it

3	11	12	13	14
'a	Ø	sh	Ø	le'
thus	(imperf)	I	(class)	to make or do

## #14 + #4

xi'gai = It is white/It appears white

4	11	12	13	14
xi'	Ø	Ø	Ø	gal
	(imperf)	(3rd person)	(class)	(4 + 14)
		(It)		4 = xi'
				pertains to color*
				14 = gal
				to be white

## #14 + #9

Nach'idibah = He repeatedly starts to raid

5	8	9	13	14
na'	ch'i	di	Ø	bah
repeatedly	he	(Incept)	(class)	to raid
				(9 + 14) to begin to raid

Nach'idibah = He repeatedly starts off to raid

Mode: #5 = na (repeatedly)

Subject: #8 = ch'i (he)

Class: #13 = Ø

Theme: #9 + #14 = di . . . bah (to begin to raid)

Five Slots: postpositional phrase (indirect object), mode, subject, class, theme

Bich'i'yashti' = I was talking to him/her

Postpositional Phrase: #1 + #2 = bi (him/her) + ch'i' (to)

Mode: #11 = Ø (perf.)

Subject: #12 = sh (I)

Theme: #4 + #14 = ya' . . . ti' (to talk)

Six Slots: postposition (indirect object), mode, direct object, subject, class, theme

Bich'i'ch'i'nah'ashxaa = I showed it to him/her

Postpositional Phrase: #1 + #2 = bi (him/her) + ch'i' (to)

Mode: #11 = Ø (hi perf)

Direct Object: #7 Ø (3rd person singular - it)

Subject: #13 = sh (I)

Class: #13 = Ø (in view thus to make or do)

Theme: #4+#4+#14 = ch'i'nah . . . 'a . . . xaa

## THE APACHE VERB-COMPLEX

Seven slots: Postposition, distributive plural, direct object,  
mode, subject, class, theme

Nich'i'nádaashidee'a' = They sent me back to you.  
(Indirect Object)

Postpositional: #1 + #2 = ni + ch'i' (you to)  
Dist Plural: #6 = daa (more than two)  
Direct Object: #7 = shi (me)  
Mode: #11 = s-perf  
Subject: #12 = Ø (3rd person/he/she)  
Class: #13 = ʔ (#9 di + #11 si + #13 ʔ = dees)  
Theme: #4 + #9 + #14 = na' . . . di . . . 'a'  
(back incept to handle bulky object)

Eight slots: Postposition, distributive plural, direct object,  
future tense, mode, subject, class, theme

Nich'i'nádaashidooʔ'ááʔ = They will send me back to you.  
(Indirect object)

Postposition: #1 + #2 = ni + ch'i' (you to)  
Dist. Plural: #6 = daa (more than two)  
Direct Object: #7 = shi (me)  
Future: #10 + #11 = di + 3rd person + h-prog/doo  
Mode: #11 h-prog (obligatory with future)  
Subject: #12 = Ø (3rd person/he/she)  
Class: #13 = ʔ  
Theme: #4 + #9 + #14 = na' . . . di . . . 'ááʔ  
(back incept to handle bulky object)  
-h-prog form



Dr. L.W. Barnes, Editor, Volume VII, Number 33

Ernest L. Esterson " Four Modes of Logic and Their Graphic  
Representations"

There is a general consensus of opinion that there are four  
modes of looking at experience: the modes can be represented in  
terms of the following relationships, as and, or, if...then, or  
it is false that --negation.

It would seem as though our philosophers consider that we can  
take any experience or set of experiences, and although using some or  
all of the modes, we can look at the experiences as being  
additive, alternative, causative--resultive, or negative.  
Let us look at a few examples of each mode:

And

two and two  
happy and excited  
red and yellow  
running away and singing along  
jumping up and jumping down  
being alert and being resolved

He is a student, and he is also an excellent athlete.  
Plato was a philosopher, and he was also a sociologist.

Or

rain or snow  
jubilant or downcast  
being ready for work, or lazing in bed  
looking to the future, or living in the past  
He is going to pass the examination in Composition I, or  
he is going to fail that course.  
He must pass that examination in Composition, or he  
will just for having failed that examination fail  
that course.  
Either Jones is a bad salesman, or he has a very poor route  
for selling.

If... then

If it rains, we shall remain home today.  
If Jones wins his match, he can go on to the next  
bracket.  
If the course gets by the first committee, it must  
still pass two other committees higher up.

If you remain angry, you will develop high blood  
pressure.

Negation, or  
It is false that.....

The moon is not made of green cheese.

It is false that the moon is made of green cheese.

"Two plus two" is a statement that is not equal to five.

It is not true that "Two + two" is equal to five.

From the examples given, we have, I believe, a useful outline of the use or usage of the modes. At this point the reader might well look to his experiences to see whether they can be handled in terms of and, or, if...then, or it is false that. At first glance, it would appear that we have quite useful divisions. It would appear as though any further breakdown would result in subclasses of the four modes we have set out. But, let us look closely at one problem center, now. We have the question of alternation, or of "or."

How does the question of alternation ~~work~~ work? Let us suppose that I make the following statement:

"I will pass, or I will fail."

It would appear that the issue is clear. My "passing" will definitely exclude my "failing"--at least for this one time and place. One or the other! Let us look at another way of handling disjunction, or alternation. "His bridge bid was correct, or Jamison is a poor bridge player" is another example of alternation. However, are we asserting here that one of two things is the case? Is it possible that both statements can be true? Can Jamison's bridge bid be correct, and can he, at the same time, be a poor bridge player? It would appear that both statements could be maintained as true. It is also possible that one is correct. It is true that lawyers and nearly everyone else use the term "and/or" to express the condition that neither of two sentences or possibly both are true. The symbol "V" stands for alternation. Thus, for most individuals, "V" is used in the sense of "and/or." Thus (A V B) would be a false compound only when A and B are false sentences.

Yet, we are not entirely happy about the matter. We ought to be able to handle matters as to alternation in a much better fashion. We should be able to signal clearly when one statement ~~can~~ exclude another by alternation. Let us take another look at the sentence "His bridge bid was correct, or Jamison is a poor bridge player." The problem here is that, linguistically-speaking, we have a rather poor sentence if we are talking about linguistically-speaking in terms of a scale, one end of which would have a high rating for clear and precise statement.

Let us assume that we open with the assertion that any individual who makes an incorrect bid is a poor bridge player. Let us further stress the Jamison's bridge bid can be objectively assessed as "correct" or as "incorrect."



Four Modes

Even here we have problems. It is possible that Jamison is a poor bridge player for other reasons. It is possible that he has the reputation of being a poor bridge player because there are several canons as to distinguishing good players and poor ones and that our Jamison violates any number of these canons.

Now, we can say that our sentence excludes all other qualifications that make for good or poor bridge players other than the canon referring to making a "correct bid." Experience is against us: our knowledge of what the world is like militates against such a statement. The sentence is bad, from the beginning. It is linguistically-possible, but not linguistically--elegant. We could complain about the shift from "was" as equivalent to the past narrative to "is" as equivalent to "all time." That is, we could say that the sentence as stated could be restated to say that "He made a correct bridge bid, or Jamison is a poor bridge player." We would cause the restatement to be made so as to show that a single act is asserted as being equated with a permanent condition. In other words, one ought not to be called a poor bridge player merely because he made one bad bid. The whole question of "whole-part" comes into play. He ought not to be a wholly-bad bridge player because he made a bad bid. On the other hand, he ought not to be called a good bridge player for having made one correct bid. It is true that making correct bids is one approach to indicating bridge-playing competence. It could still be true that

It is probably true that the one making the assertion has known Jamison for some time. He has known Jamison's penchant for making bids. He has known, to his own satisfaction, what a "good bridge player is." Nevertheless, the writer is not the reader. The question of alternation is a tricky one.

A person makes the assertion: "I will pass Comp. I, or I will fail the course." Now, we must establish that the course he will fail is the "Comp. I" course. Having satisfied ourselves as to that, we are still pondering. Now, if the speaker obtains a "60" on the examination, he will fail "Comp. I." Let us suppose that he does not fail the examination? Could he fail the course for any other reason? We would have to admit that as the statement goes, the words do not exclude his failing for one or more reasons other than failing the examination.

Can our speaker solve the problem? In a linguistic sense? Yes, he can say "There is only one way through which I can fail the course, and that way is to fail the examination given for that course." Certainly, we have to admit that certitude is a problem for our experience. But we would agree that from the meaning carried by the last statement he would fail the course only through having failed its examination. When we have such a situation as exists when one of three individuals must perform an act, but only one can perform the act, the or is not as much a problem. If we have the statement "One of the three girls must go to the store for an errand, but only one: Lucy, or Joan, or Lucinda," we can understand quite well what goes on through the alternation. We could even shorten that statement.

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Ernest L. Esterseu "Four Modes of Logic and Their Graphic Representations" Part 11

In the first paper, mention was made of the four modes for handling experience as "and," "or," "if...then," and "it is false that." A few examples of each were given. The problem of handling the "or" as inclusive or exclusive was discussed. These matters were given but brief consideration. At this point, it may be advisable to take a look at the "if...then" statement. We can have such a statement as "If it rains, the party will be held in the house." The condition of "rain" having been met, the party will go indoors. In the statement "If the examination is given today, it will be held in Ratliff Building, Room 613," it would appear that the condition for having it given in a particular building in a specific room would be its being given today. Of course, it could be given in the same building and in the same room if given at another time. However, we are bound by the meanings carried by the statement, and we believe that the meanings in this statement are sufficiently limited to carry the idea that the first question for resolution is that about the giving of the examination--not the taking. Someone is to offer the examination today in order to have the test taken in the Ratliff Building in Room 613.

We cannot do much about the "truth-falsity" of "if...then" statements. When we have such a statement as "If the sky is red at night, tomorrow will be a sailor's delight," we are in the area of being forced to accept the fact that when we see a red sky at night the following day will be a fine one--in this case, a fine one for sailors. We are not absolutely certain that a red sky at night is always followed by a fair day. But, there is no question that we use many, many "if...then" statements. "We will play in the regionals if we get by Occum Academy" is one of the kind we are accustomed to hearing. Apparently Occum High must be defeated in some contest in order to have the "We" go to some regionals for further competition. Within our current knowledge, the only way to get to the regionals is to defeat this academy. It is true, of course, that the academy may waive its right to go to the regionals if it defeats us; the academy might be caught with ineligible players to our advantage, or there may be some other conditions that would keep the academy from going were we to be defeated. However, we assume that the statement was made about our going to the regionals with no consideration or expectation that Occum would not go were it to win from us. We now take a brief look at "it is false that" or "no."

The negation of "It is simple" is "It is not simple," or "It is false that it is simple." We can look at opposition and say that the statement "It is not simple" is equal to the opposition statement "It is difficult." The negation of "It is rainy" is "It is not rainy." We can say--should we so desire--"It is false that it is rainy."

The use of the term "false" may be troublesome. "False" seems to carry the meaning of "not being true in an immoral sense." If we identify "false" with being "not the case," then we may be on sounder ground.

One of the problems connected with "negation" is that the language-- in this case, the English language-- has words other than "Not," "no," or "nor" carrying the meaning of the negative. In English such words as "hardly," "scarcely," or "but" carry the meaning of the negative. If I were to say "I can but think...." I would be saying, for this language, I cannot do other than think....." If we let ourselves get carried away with some poor usage as in "I cannot help but think," we find that we are in effect-- word-wise-- suggesting that "I cannot not think."

I think perhaps that we understand that we do have the mode of "and," the mode of "or," the mode of "if...then," and the mode of "it is not the case," or it is "false that such is the case." I would gather that we do understand these modes, intellectually-speaking. How well our words serve is another matter.

But, there is a real problem with all of the modes cited. Since different linguists and philosophers from different countries do seem to believe that looking at the modes as cited is a good way of breaking up experience into such modes and moulds, it would appear that there is some very substantial agreement that the modes do take care of classifying experience as additive, alternative, cause-resultive, or negative --it is false that.

I am seized with the problem of the "if...then statement." For it would appear to me that every statement is explicitly or implicitly an "if....then" statement. When I say that "My name is Jones," I am saying, in effect, "if things have not changed and if I am the "I" I was known by in the past, my name is "Jones."

"The Square Root of twenty-five is five," is an "if... then" statement, is it not? Am I not saying, in effect, "If things mathematically are now as they use to be, the square root of twenty-five is five." You may<sup>perhaps</sup> that I am being a bit foolish, and that every thing is the same now and will be the same tomorrow, mathematically-speaking. I am inclined to agree with you, substantially. But mathematicians and physicists, and other scientists are likely to assure me--and you--that we hold such knowledge only with a reasonable degree of certitude, not with an absolute position. At the best I can note that over such a very long time multiplying five by itself will give twenty-five. But I can do no better than to urge :. "if the mathematical elements of today are operating as they were yesterday..and on back of that.. we can give reasonable credence to the fact that squaring five will result in our getting twenty-five.

You look at me coldly and say "Old Chap, listen here! Do you claim that the set of words indicating that the sun will rise tomorrow is not a set of words carrying the meaning in an absolute sense " I then make you unhappy by indicating that "if the scientific world as relates to the sun is the same tomorrow as it was today, the sun will rise." But such a statement is an "If...then" statement.

You are getting somewhat miffed at this point. You take me along with you for a drive. Finally, you direct my attention to a route sign, one marking--let us say-- the direction that should lead to Cleveland from Portsmouth. I look at "US 23" and wonder how much comfort I can be to you.

I then say, " If this sign is properly marked and properly placed, and if the route has not changed since I went over this part of the road three weeks ago, the road will take me to Cleveland." But, I am still stuck with the "if....thenness" logic,

I then point out to you the fact that I simply cannot think of any assertion that is free of--or from-- an "if...then" tone.

We are put in the position of saying we know very well what we are talking about when we have "and," and we know no less what we are talking about when we say "if...then." Thus, I can say that "Roses are red, and violets are blue." When I make the statement, I am not talking about an "if...then" situation. The assertion following the first clause and that following the "and" as the second clause do not depend upon each other. That "roses are red" has no bearing on the fact that "violets are blue." Further, if we are giving a set of consecutive directions, my taking one designated item as "Item A" and mixing it with another designated item, as "Item B" may no ~~soon~~ occur that one is a condition of the other, not an "if...then" statement. When I tentatively mention the fact that I could say, "If I have Item A at hand, then I can and should mix it with Item B," you do not seem overly-impressed. If you say "It is nine minutes after ten o'clock," you will not be impressed if I say "If nine minutes have gone by after ten o'clock it is 10:09 a.m. --or p. m. "

If I listen to you say " It is Lulabelle, or it is Mabel," then I might suggest that I could say "If it is not Lulabelle, it is Mabel." Of course, I am not into the negative, or into the "It is false" business.

You then chip in with " He designed the plans correctly, or he is a poor engineer." I suggest that we can say "If he designed the plans correctly, he can still be a poor engineer."

We try again, and you say "It is not the case that he is the man named Jones." I suggest that we could utter "If the truth be told, that man is not Jones."

It would appear that we have a real need to look at "and," "or," "if...then," and "it is false that." At the present moment I do not know what other terms I would use for the four modes, but it would be useful to consider these four modes and the language which carries them or which asserts them.



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Frank L Ryan: "Zelig Harris' Discourse Analysis: An Application to Hemingway's A Farewell to Arms"

The chief advantage to be gained from the application of linguistic analysis to literary analysis is the possession of a method which minimizes the subjectivity of the investigator who may otherwise find in a text what he wants to find and not what is there, something from which concerns with Hemingway's style have traditionally suffered. The method of discourse analysis of Zelig Harris provides such an advantage.<sup>1</sup> It is Harris' thesis that "discourse analysis within on discourse at a time yields information about certain correlations of language with other behavior."<sup>2</sup> More extensively:

The reason is that each connected discourse occurs within a particular situation - whether of a person speaking or of a conversation or someone sitting down occasionally over a period of months to write a particular kind of book in a particular literary or scientific tradition.<sup>3</sup>

Harris rules out meaning as a vital aspect of the investigation on the grounds that meaning constitutes an examination of the contents of the discourse. The investigator, he warns, should not be interested in elements chosen in advance for the interest of the investigator should not be in the fact that certain elements occur but in how they occur. He should be interested in "which ones occur next to which others, or in the same environment as which others, and so on - that is, in the relative occurrence of these elements with respect to each other."<sup>4</sup> The task is to collect equivalent classes, that is, elements in equivalent environments. This is simple when two elements have identical environments. But this rarely occurs in any discourse and therefore the collecting of equivalent

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<sup>1</sup>"Discourse Analysis," The Structure of Language, eds. Fodor and Katz (New Jersey, 1964), pp. 355-383.

<sup>2</sup>p. 357.

<sup>3</sup>p. 357.

<sup>4</sup>p. 359.

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classes must rely on setting up a chain of equivalences connecting the two environments. "This is done in descriptive linguistics when we say that the class of adjectives A occurs before the class of nouns N, even though a particular A (for example, voluntary) may never occur before a particular N (say, subjugation). It is done in discourse analysis when we say that two stretches which have the same environment in one place are equivalent even in some other place where their environment is not the same."<sup>5</sup> For example, operating on a simple advertisement consisting of six sentences, Harris finds the following equivalence: The title of the advertisement is "Millions Can't Be Wrong." Later in the text he finds "Four out of five people can't be wrong." Therefore, "Millions" and "Four out of five people" constitute members of an equivalent class. The equivalence that exists, it should be noted again, is not to be taken as an equivalence in meaning or importance but simply as an equivalence in environment.

(1) I departed from Harris' treatment of meaning. An equivalent class for Harris was based on position alone. To this was added the notion that meaning need not be separated from the method under certain circumstances, that the consideration of meaning need not diminish the effectiveness of the method as an objectively descriptive approach.

(2) There was no attempt made to exhaust the potentialities of the whole text. It was felt that the survey of a single element would reveal the existence or non-existence of a pattern of distribution.

(3) Harris, in his efforts to extend the equivalence classes quantitatively, urges the use of the text and evidence outside of the text. In the first instance the investigator could achieve transformation of a particular element by proving that a similar construction appears in the text. In the second instance transformational operations could be justified by the existence of the sought for construction in the language itself. In this study the latter was not used, simply because it was felt that a stronger case could be made for the existence of a pattern by confining the study to the text. As it turned out, surprisingly few transformations were needed to enlarge the number of members of the two equivalent classes examined.

(4) In Harris' method single words are used to establish classes . . . Harris suggests, however, that any units of the sentence may be used. In this study, though single words were used, the words had to be structured so that they were immediate constituents of larger units. For example, the word

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<sup>5</sup>Harris, p. 360.

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"outside" was discovered to be an important word in the text. In some instances, however, it occurred as part of a phrase and in other instances it occurred alone. Compare "outside the window" to "outside it was getting dark." The cut in the first instance would produce "outside/the window" which would produce a meaningless intonation. The second instance produces "outside/it was getting dark" with an obvious meaningful intonation.

The first step, then, was to discover which word or words were particularly important to the text. This is a long but not particularly difficult task, for frequent readings of any text will soon make the reader aware of these important words, important not only because of their quantity but their functions as well. It became a matter of counting to determine quantitative weight. The ten most often used words were found to be: out, bed, room, window, rain, road, mountains, car, girls, war. Of these words, "rain" was found to be the most important in terms of emotional content.

It requires little effort on the part of a reader to realize what critics never tire of pointing out, the high connotative value of the word "rain" in A Farewell to Arms. The following passages, selected at random from many available ones, indicate this:

At the end of the first chapter:

At the start of the winter came the permanent rain and with the rain came the cholera. But it was checked and in the end only seven thousand died of it in the army.

Part of a dialogue between Frederic and Catherine:

"All right. I'm afraid of the rain because sometimes I see me dead in it."  
 "No."  
 "And sometimes I see you dead in it."  
 "That's more likely."  
 "No, it's not, darling. Because I can keep you safe. I know I can. But nobody can help themselves."

At the death of Aymo:

"Let's go then," Bonello said. We went down the north side of the embankment. I looked back. Aymo lay in the mud with the angle of the embankment. He was quite small and his arms were by his side, his puttee-wrapped legs and muddy boots together, his cap over his face. He looked very dead. It was raining."

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After the death of Catherine:

But after I had got them out and shut the door and turned off the light it wasn't any good. It was like saying good-bye to a statue. After a while I went out and left the hospital and walked back to the hotel in the rain.

The importance of this connotative strength is increased by the quantitative weight of the word, and its even distribution throughout the text.

After the word "rain" was chosen because of its association with emotion and its quantitative distribution the following steps were taken: (1) The collection of those constructions which contained the word "rain" and had a relatively frequent occurrence. The constructions eventually chosen: "the rain," "in the rain," "it was raining," "it was still raining." (2) The collection of those constructions which were in the immediate environment of those constructions chosen in (1). These, too, had a relatively frequent occurrence. The constructions chosen: "outside," "in the dark," "in the room," "in the hall," "through the window." (3) The search for a pattern throughout the novel, based on these constructions or "equivalent classes." (4) The application of transformational rules to those constructions which had their analogies in the constructions chosen in (1) and (2). For example, in one of the early sentences the following construction is found: "In the dark it was like summer lightning . . ." (Adv. Ph. +N+V+Adj. Ph.). This is transformed into "It was like summer lightning in the dark" (N+V+Adj. Ph. Adv. Ph.) by analogy with a construction found in the text, "It was empty in the dark" (N+V+Adj.+Adv. Ph.). By this repositioning the two constructions can be part of the same class by their relation to "in the dark." For greater clarification of the method the first few equivalences can be shown.

(1)  $A_1$ : (equivalent to)  $B_1$

$A_1$  is "It was like summer lightning" and  $B_1$  is "in the dark" in the construction "It was like summer lightning in the dark."

(2)  $A_2$ :  $B_1$

$A_2$  is "sometimes" and  $B_1$  is again "in the dark" from the context "sometimes in the dark." "Sometimes" becomes a member of the equivalent class A because it appears in the same context in which "It was like summer lightning" appeared and this latter construction had, again, appeared in the same context in which the key construction "in the rain" had appeared.



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(3)  $A_2 : B_1$

$A_2$  is again "sometimes" and  $B_1$  is again "in the dark."

(4)  $A_3 : B_1$

$A_3$  is "the world all unreal in the dark."

Obviously, the procedure can become quite complex, but by limiting the number of key constructions a fairly simple yet revealing pattern (though tediously achieved) can be secured. That a pattern emerges may be seen from citation of a few of the examples forming equivalences further along in the pattern:

"outside it was getting dark"  
 "outside the rain was falling"  
 "outside through the window"  
 "outside the mist turned to rain"  
 "outside it was nearly dark"  
 "outside something was set down"  
 "outside we ran across the brickyard"

in turn:

"the breeze came in through the window"  
 "and I saw the sun coming through the window"  
 "fresh air came in through the window"

I think that it can be seen here that once the proper constructions are isolated the equivalency classes emerge quite clearly. The first 52 of the complete pattern which comprised 145 instances proceeding from top to bottom, from row #1 to #2 etc:

<u>Row #1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>
$A_1 : B_1$ T*	$A_{14} : B_{11}$	$A_{25} : B_{19}$	$A_{25} : B_{16}$
$A_2 : B_1$	$A_{15} : B_{11}$	$A_{26} : B_{14}$	$A_{43} : B_{16}$
$A_2 : B_1$	$A_{16} : B_{11}$	$A_{27} : B_{16}$	$A_7 : B_{12}$ T
$A_3 : B_1$	$A_9 : B_{12}$	$A_9 : B_9$	$A_{43} : B_{16}$
$A_3 : B_1$	$A_9 : B_7$	$A_{28} : B_{17}$	$A_{44} : B_{16}$
$A_4 : B_2$	$A_{17} : B_{11}$	$A_{29} : B_7$	$A_{45} : B_{14}$
$A_5 : B_3$	$A_{18} : B_{11}$	$A_{30} : B_{16}$	$A_{46} : B_{17}$
$A_6 : B_3$	$A_{19} : B_{11}$	$A_{31} : B_{17}$	$A_{47} : B_{21}$
$A_7 : B_3$	$A_{20} : B_7$	$A_{32} : B_{17}$	$A_9 : B_{14}$ T

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<u>Row #1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>
A <sub>7</sub> : B <sub>1</sub>	A <sub>21</sub> : B <sub>7</sub>	A <sub>33</sub> : B <sub>17</sub>	A <sub>48</sub> : B <sub>5</sub>
A <sub>8</sub> : B <sub>4</sub>	A <sub>9</sub> : B <sub>13</sub>	A <sub>9</sub> : B <sub>16</sub>	A <sub>49</sub> : B <sub>17</sub>
A <sub>9</sub> : B <sub>5</sub>	A <sub>21</sub> : B <sub>14</sub>	A <sub>34</sub> : B <sub>20</sub>	A <sub>9</sub> : B <sub>17</sub>
A <sub>9</sub> : B <sub>6</sub>	A <sub>9</sub> : B <sub>15</sub>	A <sub>35</sub> : B <sub>11</sub>	A <sub>50</sub> : B <sub>17</sub>

\*T indicates transformational procedure

It is well to recall at this point that the members of the classes do not mean the same thing but that because of their association with particular constructions they have connotative values which are similar. This connotative association emerges originally from the word "rain" which not only has a high connotative value in the novel but a quantitative strength (one of the ten most often repeated words, occurring 105 times) and an even distribution throughout the novel. Obviously, such analysis does not exhaust the full meaning potential of the work, if such a thing can ever be realized, for that potential emerges from other sources as well. Further, other words could also produce patterns of relationship though because of the connotative and quantitative strength of "rain" it is doubtful if other words could produce the 148 equivalences produced by "rain". Possibly such analysis places at least part of criticism within the realm of computerized research. However grimly this may fall on literary ears, it should be recalled that the chief purpose is not merely the reduction of a text to a series of equivalence classes but the more accurate explanation of how an author creates effects. A Farewell to Arms is a novel which has a poignant tone from beginning to end. One of the ways through which Hemingway achieves this is by endowing a word with great emotional reference and then distributing it throughout the work. Words are dynamic elements altering the meanings of other words in the same context. The method used here reveals to some degree the extent to which a vital word does function in this dynamic process and thus helps to explain the continuity of effect achieved by Hemingway.