

# Lexical Decomposition and the Teaching of Vocabulary

by Don L. F. Nilsen

Let me begin by saying that I have no simple solution for the teaching of vocabulary. In the joint ATESL-COMSEC meeting on Wednesday, Robert Kaplan pointed out a number of the complexities that exist between the English language and the real world which it represents. In my paper I do not mean to minimize this complex relationship. I do, however, want to suggest that recent linguistic research in the area of semantics has provided us with the kinds of insights that will allow us to analyze a semantically packed lexical item into its more basic meaning components.

The generative semanticists have viewed this as a synthetic rather than an analytic process. I will use an oft-cited example to illustrate their position. They would consider the adjective "dead" to be a state, and they would consider this adjective to be

---

This article by Mr. Nilsen of the University of Northern Iowa, author of *Pronunciation Contrasts in English* (Simon and Schuster, 1971), was presented at the national NAESA Convention 1972.

---

part of the predicate in such a sentence as "John is dead." Now let us consider the change of state verb "die," which has the same resultant state, "dead." The generative semanticists would synthesize the change of state element "become" with the resultant state element "dead," and they would conclude that "become dead" is equivalent to "die." If we add a causative element to "die," we would get "kill," which is said to be a synthesis of the three elements "cause," "become," and "dead." This process can be carried still further, so that "cause," "become," "dead," and "illegally," would coalesce to become "murder," and "cause," "become," "dead," "illegally," and "important person" would become "assassinate," and so on.

The synthetic process which I have just been describing is known as lexical incorporation, because it is the process by which basic lexical elements can be

incorporated together to form less-basic elements. In the present example, it should be noticed that both the basic elements and the non-basic elements are predicates. When this is the case, the process is further designated as predicate lifting or predicate raising. Predicate lifting, then, is the process by which lower predicates are incorporated together to form higher predicates, or, in our example, the process by which "become" and "dead" are incorporated into the new lexical item "die;" the process by which "cause," "become," and "dead" are incorporated into the new lexical item "kill," and so on.

Just as it is possible to incorporate two predicates together to form a new, semantically packed predicate, it is also possible to incorporate other types of information into the predicate. We can incorporate a predicate, like "to put" with a location prepositional phrase "into a bottle" to get a new predicate, "to bottle." We can incorporate a predicate like "to hit" with a body-part prepositional phrase "with a foot" to get a new predicate, "to kick." We can incorporate a predicate like "to cover" with a material prepositional phrase "with gravel" to get a new predicate, "to gravel." Or we can incorporate a predicate like "to fasten" with an instrumental prepositional phrase like "to fasten" with an instrumental prepositional phrase "with a button" to get a new predicate, "to button." The list of incorporation types could be extended greatly. Sometimes there is a choice of which deep case to incorporate. Consider an expression like "John hit the nails with the hammer to cause the window to be shut." If the Object is incorporated, this sentence will become "John nailed the window shut," but if the Instrument is incorporated it will become "John hammered the window shut." This accounts for an intuitive feeling that the verb "nailed," and the verb "hammered" are in some sense synonymous. Linguists dealing with this aspect of semantics make a distinction between transparent incorporation and opaque incorporation. Such verbs as "to

bottle," "to button," "to nail," "to hammer," and "to gravel" are transparent; we know what is incorporated by the shape of the verb—A bottle is incorporated into the verb "to bottle." But such verbs as "to kill," "to die," and "to kick" are opaque; we cannot tell from the shape of the verb "kick" that it is a foot which is incorporated. If this were an example of transparent lexical incorporation, it would be "to foot," which is a logical possibility, but which just doesn't happen to occur in English, in this sense.

Such is the method of the generative semanticists, and also, by the way, of the case grammarians. It might be argued that "cause to die," and "hit with the foot" do not mean the same as do their incorporated counterparts "kill" and "kick" respectively. I would agree with such an objection, and I would go even further, to say that not two synonyms, paraphrases, or cognates in any language or pair of languages are exactly equivalent. There is always a difference in formality, style, connotation, frequency of occurrence etc. that makes them not exactly equivalent. But this does not mean that we should abandon our investigation of paraphrase relationships of this type. In teaching vocabulary we can start with gross approximations, and later make finer and finer distinctions as our students become more capable of handling such distinctions.

In my title, I promised to talk about lexical decomposition, and to this point I have been talking about lexical incorporation. In actual fact, these are two faces of the same coin, the first being analytic, the second synthetic. For ease of presentation, let me change from a generator (if you'll excuse the expression) to an analyzer, and let me mainly change from verbs to nouns, since it is nouns which have been least analyzed in the past, in this regard. Let us begin with a word like "lake." In English, there are many words which mean "body of standing water." In descending order of size, these include "ocean," "sea," "lake," "pond," "pool," and "puddle." In order to know the meaning of "lake" in English, therefore, it is necessary to distinguish it from "ocean" and "sea" on the one hand, and "pond,"

"pool," and "puddle" on the other hand, according to relative size.

Or consider the lexical feature of space. This is one of the ways of distinguishing body parts, for example as we go from top to bottom (basically front to back with an animal) we have "head," "throat," "shoulder," "chest," "stomach," "pelvic area," "leg," "foot," "toe," etc. And the difference between such words as "great grandfather," "grandfather," "father," "self," "son," "grandson," etc. has to be accounted for by extracting the feature time. Such words as "solo," "duet," "trio," "quartet," "quintet," etc. differ from each other in number; and "officer (of the law)," "policeman," "cop," "copper," "fuz," and "pig" are really the same except for formality, or attitude. And, if I am not mistaken, such words as "run," "branch," "coulee," "bayou," "binacle," "kill," and "burn" are basically the same except for geographical dialect.

To teach the meaning of a word, it is often necessary to contrast it with other words along a number of different dimensions. Although I know nothing about metals, let me attempt to illustrate my point with four common metals: "bronze," "gold," "lead," and "silver." If these four metals are ranked according to hardness they would probably go in order "silver," "bronze," "gold," and "lead." According to brilliance, they would have a different order: "silver," "gold," "bronze," and "lead." By weight, still a different order would emerge: "lead," "gold," "bronze," and "silver," and finally, by value, still a fourth order would be necessary: "gold," "silver," "bronze," "lead." If we were teaching the meaning of the word "lead," we could contrast it other metals along these four, and along many other dimensions.

Now let me consider a slightly different type of multi-dimensional lexical system. Suppose we are teaching about animals. In this case we would have to deal with the feature of sound distinctions of such words as "neigh," "growl," "roar," "howl," "bark," "bleat," "oink," "honk," "quack," "cluck," "cackle," "meow," "purr," "hiss," "coo," etc. You would also have to distinguish between different kinds of feet,



such as "hoof," "paw," and "claw." You would have to consider male animal terms, like "stallion," "bull," "stag," "billy goat," "ram," "boar," "peacock," "drake," "tom cat," and "rooster," as contrasted with the female animal terms, like "mare," "cow," "doe," "tigress," "shewolf," "ewe," "bitch," "sow," "hen," and "nanny goat," and relate these terms to the animal itself: "horse," "cow," "deer," "sheep," "dog," "pig," "chicken," etc. The feature youth would have to be extracted from such terms as "colt," "calf," "fawn," "kid," "cub," "lamb," "puppy," "piglet," "gosling," "duckling," "chick," and "kitten." And such terms as "stable," "barn," "den," "pen," "kennel," "hutch," "coop," and "nest" would all be seen to contain the same semantic feature home. And finally, a group of the animals would have to be designated as a "herd," "pride," "pack," "flock," "gaggle," or "school." And for this exercise to be meaningful, the relationships of all these terms to the appropriate animals must be established, so that such terms as "rooster," "hen," "chick," "coop," "cluck," "eggs," "feathers," and "claws" are all associated with chicken.

But I've merely scratched the surface in indicating the types of semantic features that can be extracted from lexical items in contrasting them with other lexical items in a particular language. Such expressions as "break," "destroy," and "demolish" differ from each other mainly in intensity. "Buy" and "sell" are the same except for the point of view. The difference between "whisper," "talk," and "shout" is mainly loudness. "Fragile" is the same as "delicate" except that the former has a negative connotation that the latter does not have. There is really no difference between "taking" and "stealing" except for legality (whatever that means). "Lending" is the same as "giving" except that one is more permanent. "Enunciate" and "stammer" are both expressions of oral communication, but one is more distinct than the other.

"Strut," "prod," and "stagger" differ from each other in pride or tiredness; "walk" and "limp" are the same except that the second deviates from the norm. The main difference between "run," "scamper," "dash," and "sprint" is one of speed. "Think" and "know" differ in the quantity and/or quality of evidence. "Neighbors" differ from "foreigners" in proximity.

"Marching" is a kind of precision-group "walking." And if time would allow, I could go on and on—listing additional features, and giving additional examples of words contrasted on the basis of these features.

Fortunately for the audience, however, I must conclude at this point. What I have tried to present is a method for vocabulary teachers and materials developers of breaking semantically complex and sophisticated lexical items into less complex and more basic semantic features. There is a high negative correlation between the semantic packing of a lexical item, and its range of appropriateness to various linguistic and social contexts. Those words which are heavily packed semantically should mainly be reserved for more-advanced students, but most of the words in any language will have some semantic packing, and it is necessary to develop in the students an ability to unpack these words in order for them to see what semantic features are inherent to various lexical items.

Another point that I should like to make is that most of the semantic packing is not signalled in the surface structure of English or any other language. We know that -en, -ize, and -ify signal causative and inchoative in such English words as "straighten," "equalize," and "liquefy," respectively, but most English causative-inchoative words are like "break" in that they do not overtly signal that the causative and inchoative semantic features are present. This same covertness is true for other semantic features, and for other languages. In vocabulary study, we must rely not only on the surface-structure, language-specific relationships between form and meaning. We must also develop an ability to use intuition and introspection to figure out what the semantic elements of lexical items are. Once we are better equipped to do this, we will be able to see that the words of all languages are decomposable into exactly the same semantic features. And we will see in what ways the words of one language differ from similar words in another language (in this case English), by seeing which features are present in one, but absent in the other. And, we will be able to see that all languages are basically the same, because they all relate to the same real world (except for differences in perception), and therefore have the same significant semantic features, and they will see that languages differ only in their surface structures.