Lexical Competence in English

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Introduction

The amount of vocabulary is a simple and clear index of telling the level of proficiency in a second language; learners are also always concerned with the size of English vocabulary or lexicon knowledge. What is, however, lexical competence? If this question is formally posed, it turns out difficult to answer it adequately. In teaching vocabulary, many researchers advocate "incidental learning," in which learners are simply exposed to authentic language, and are expected to acquire lexical competence incidentally or subconsciously. At the same time, we realize that incidental learning does not guarantee the acquisition of lexical competence.

Lexical competence, only when it is defined explicitly, can become a component of communicative competence or language resources. Lexical competence surely includes the size of vocabulary and the thematic range. In addition, however, we emphasize both intra-lexical competence (the ability to use a word as fully as possible) and inter-lexical competence (the ability to choose a right word among semantically related words) are equally important. In this paper, we would like to elaborate on this point.

Lexicon: General

"Lexicon" refers to a set of words or phrases in a language. An English dictionary contains an English lexicon as a collection of words recorded in the history of the language. The Oxford English Dictionary is said to contain 600,000 words and 3 million quotations, which occurred over 1000 years of English. In this case, we are dealing with a dictionary lexicon. We also have to assume a mental lexicon, which each individual has in his or her brain as a result of exploring the world with a language. In fact, when we teach vocabulary in English, we facilitate learners to construct and develop their own mental lexicon or lexical competence in English.

In discussing lexical competence in a second language, we should pay due attention to interlingual mismatching of the lexical systems between the learner's native language and the target language. The mismatching between the lexical items of the two

languages is an interlingual fact. English "red," "orange," and "yellow" correspond to the single word "okara" in Mbembe of Nigeria.

The three words "house," "oikos" in Greek, and "numuno" in a language of Papua New Guinea refer to more or less the same thing. The basic meaning underlying these words would be "building," and the contrastive component would be "that which people live in." However, these words trigger different pictures in the mind of the speakers of the respective language. The central component may be the same and even the contrastive components that distinguish it from other words in the language may be the same. And yet, there may be some cultural components that are crucial to understanding the meaning of the word. The Greek word "oikos" is happy with the sentence "Peter went up on the housetop to pray." A translation into languages of Papua New Guinea may result in a distorted understanding if simply translated with the word "numuno," of which the roof does not have room for praying (Larson 1984).

Problems in representing the word meaning in the target language emerge because a language learner tries to use his or her pre-existing knowledge relevant to the word in question. Because of interlingual mismatching, a learner's learning strategy—the search-for-translation equivalent strategy—does not often work.

According to an introductory textbook of semantics, lexical competence generally includes sensitivity to the following semantic phenomena:

1. Many words are ambiguous over more than one sense. So, for example the following sentence can be interpreted more than one way: "She watered them." ("watered" means "diluted" or "nourished").
2. Various words in certain combinations are anomalous as in "Green ideas sleep furiously."
3. Certain combinations are contradictory as in "colorless red jacket."
4. Certain combinations are redundant as in "intentional murder."
5. Certain word share one or more elements of meaning, and thus, they are related in meaning as in "embezzle," "pilfer," "filch," and "shoplift."
6. A special case of relatedness exists where some words are more specific than more general words as in "take—steal –plagiarize."
7. Sentences have logical relations to other sentences; some entail other sentences as in, "She killed him. -→ He died."
8. An element of meaning, while not strictly part of the meaning of a word, is usually associated with it, or sometimes associated with it, as in "Tigers are usually fierce."
9. Some words co-occur frequently in language usage: pro and con, ham and eggs, paper-

and-pencil tests, liberty and justice, coffee and milk, etc.

10. Some words are opposites of one another: good—bad, black—white, large—small, etc.

As for the word semantics, Miller (1978) suggests that as a minimal list, a person, who is lexically competent, must have the following information about a word.

1. Pronunciation and spelling for written language
    i. phonology (including stress features)
    ii. morphology (including inflected and derivative forms)
2. Syntactic categorization
    i. major category (noun, verb, preposition, etc.)
    ii. subcategorization (syntactic context)
3. Meaning
    i. definition (concept expressed; relation to other concepts)
    ii. selectional restrictions (semantic contexts)
4. Pragmatic constraints
    i. situation (relation to general knowledge)
    ii. rhetoric (relation to discourse contexts)

In other words, one should be able to pronounce the word in question, to know its part of speech, to know how the word is used in a clause, to know the basic meaning of the word and the restrictions on the usage, to know the situation where the word can be appropriately used, and to know the relation to other words in larger-than-sentence contexts.

To discuss lexical competence in more detail from a somewhat different yet reasonable perspective, we will make a conceptual distinction between the intra-lexical domain and the inter-lexical domain. The investigation of the inter-lexical domain reveals what kind of mental thesauruses or organized knowledge we have about words; the study of the intra-lexica domain accounts for the structure of word meaning.

The Inter-Lexical Domain

The assumption behind the idea of "mental lexicon" is that an individual goes beyond the information given. Given a set of data, we operate on it and do something. More specifically, we do two things: grouping and generalizing. We group lexical items with respect to semantic fields and hierarchical structures.

Semantic Fields and Interlexical Networks

We approach the interlexical domain in two ways: a taxonomic approach and a notional approach. First, we use a taxonomic approach, setting up semantic fields such as cooking, education, baseball, and marriage. For example, a set of lexical items will be grouped under "cooking" as follows (taken from Carter 1985):

Field: COOKING

1. Artifact (Nouns)

pot, stock-pot, kettle, pan, frying pan, skillet, saucepan, dish, jug, bowl, knife, fork, spoon, fish-slice, rolling pin, bread board, cooker, etc.

2. Process (Verbs)

boil, roast, bake, brew, stew, braise, simmer, poach, grill; seal, glaze, pick, brown; cut, dice, slice, chop, shred, peel, skin, portion; mix, stir, beat, whip, fold, strain, etc.

3. Property (Adjectives)

tender, tough, stringy; fresh (fish, bread, butter, cheese, milk), stale (fish, bread, cheese); rancid (butter); sour (milk, cream); curdled (milk); off (meat, fish, butter, cheese, milk); turned (milk); light (pastry, bread, cake), heavy, soggy, doughy, leathery; crisp (toast, biscuits), soggy, chewy; flaky (pastry); well-done, under-done, rare (steak); hard-boiled (eggs), soft-boiled, etc.

4. Phrases & Collocations

boil over, on the boil, off the boil, come to the boil, brew (tea, beer, cider), let the tea brew, carve a joint, bake bread, bake a cake, fry fish, boil eggs, toast bread, dice carrots, shred cabbage, skin onions, shell nuts, leave to simmer, etc.

5. Figurative Expressions

5.1. Proverbs, Common Sayings, Idioms:

out of the frying pan into the fire, what's source for the goose is source for gander, the pot calling the kettle black, to stew in one's own juice, take it with a pinch of salt, too many cooks spoil the broth, hunger is the best sauce, a taste of one's own gruel, etc.

5.2. Metaphors and Slang:

I was boiling (seething), she told me to simmer down, he came off the boil after a while, he likes to stir things up, there's trouble brewing, this place is an oven, they grilled him for several hours, he gave me a roasting, etc.

Likewise, we may obtain an associative network of lexical items on the basis of free

association. For example, the noun "drum" may be the target word from which associative networking spreads out like the one below:

instrument
[superordinate concept]

band
[context]

DRUM

guitar
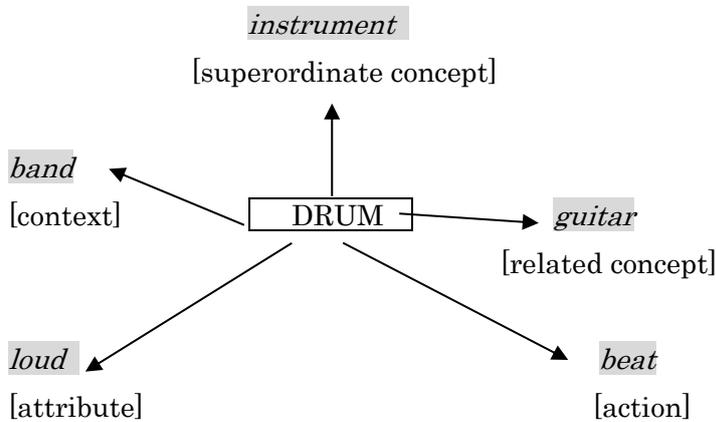[related concept]

loud
[attribute]

beat
[action]

Figure 1: Associative Network of Drum

The other type of semantic field approach is a notional one. We set up notions such as [move], [perceive], [volume], [ability] and so on. We usually give a hierarchical structure to the set of lexical items grouped by field or notion. In the case of notional classification, semantic incorporation is an underlying principle. The lexical item "steal" incorporates the semantic feature [+illegally] into "take," and "plagiarize" incorporates [+ideas, documents] into "steal".

The possibility of arranging lexical items by notion hierarchically motivates the theoretical distinction between "general notions" and "specific notions." The general notions are field-neutral, while specific notions are field-specific as in "specific notions in advertisement."

[Specific Notions in Advertising]

Advertisement; ad, adperson, business advertisement, corporate advertisement, product advertisement, public service advertisement, trade advertising, process add, opinion ad, comparative advertising, classified ad, outdoor advertising, full-page ad, insertion, ad size, volume of ads, advertising agency, advertiser, ad rates, etc.

On the other hand, general notions will be classified as the following:

General Notions

●Temporal
  Points in time
  Duration
  Frequency
  Relative time
  Sequence
  Etc.
●Spatial
  Location
  Distance
  Relative position
  Direction of movement
  Dimensions
  Etc.
●Numbers
  Ordinals
  Cardinals
  Percentage / Ratio
  Measurement
  Etc.
●Change
  Change
  Increase
  Decrease
  No change
  Rate of change
  Etc.

These examples are far from complete, and yet will suffice to illustrate how lexical items are grouped by notion. We take it that general notions are not so stringently determined by the choice of a particular topic as those for expressing certain specific notions. With the criterion of usability in mind, we put top priority on constructing a lexical inventory for general notions.

Take the general notion "change," for instance. We will list relevant lexical items as in:

CHAGE:

General change: happen, change, transform, etc.

Increase: grow, rise, increase, expand, etc.

Decrease: decrease, reduce, shrink, etc.

No change: constant, stay the same, level off, etc.

Rate of change: gradually, slowly, fast, etc.

Notice that five notions are subsumed under the umbrella notion "change" in this categorization. This way of categorization is meaningful since different items are arranged in such a way as to describe "change." As a learner's lexical competence grows, his or her repertoire naturally expands. However, the basic framework remains constant.

One more example will suffice to illustrate the point here. "Move" is a general notion, which includes the following lexical items:

Move: ascend, pivot, descend, depart, advance, enter, exit, progress, flee, leave, sink, fall, revolve, rotate, rise, drop….

With the feature [+direction], it is possible to further arrange these items more systematically:

Move + [upward]: ascend, rise

[around]: pivot, revolve, rotate

[downward]: descend, fall, sink, drop

[away]: depart, leave, flee

[forward]: advance, progress

[inward]: enter

The verb "walk" is subordinate to "move," and, at the same time, superordinate to: prance, march, goose-step, plod, stagger, limp, wander, meander, saunter, amble, stalk, job, trot, etc., which will be further classifiable with the feature [speed], [manner] and [distance]. Adjective items are subject to the same way of categorization. For example, the notion [smallness] will have a cluster of adjectives including: small, little, tiny, minute, etc.

The point to be noted here is that we should encourage learners to approach lexical learning in a meaningful way, and that grouping by notion or semantic field is certainly

a very powerful pedagogical technique.

Interlingual Competence: The case of speak / say / tell / talk

A ground rule behind inter-lexical competence is: there is one form for one meaning and one meaning for one form; accordingly, meaning changes as form changes. This assumption entails linguistic division of labor: each lexical item has its own distinctive role.

A language learner often gets confused in his selection of a right word when he tries to utter something. This is the essential matter of inter-lexical competence. Here, for the purpose of illustration, let us consider four basic verbs of utterance: "speak," "talk," "say," and "tell," and explain what problems learners are likely to encounter in distinguishing these words, and how we can handle those problems. Let us take a look at the four points of comparison between these verbs:

(1) The verbs "speak" and "talk" are synonymous in some cases as in "May I talk / speak to you?" and "He is a talker / speaker in our TV show." And yet, both are by no means synonymous in every respect as illustrated in the following contrasts:

    1. I want to buy ?a speaking machine / a talking machine.

    2. Parrots speak / talk like humans.

    3. Money talks / ?speaks.

    4. Let's talk / speak English.

    5. a summit talk / ?speech

    6. Don't speak / ?talk out.

(2) The difference between "talk" and "say" seems obvious at first sight, for we have the expression "She talked a lot, but didn't say much." And yet, both could mean almost the same thing in the comparison between "I don't get what you are talking (about)" and "I don't get what you are saying."

(3) The relation of "say" and "speak" seems to be more farther apart than the relation between "say" and "talk." The sentence "I cannot say" means totally different from "I cannot talk." We may, however, consider the following:

    1. What do people say of me?

    2. What do people speak of me?

The comparison here suggests that "say" and "speak" could mean similarly under some circumstances.

(4) The verbs "say" and "tell" can have the very similar sense, as in:

1. Please tell the truth.
2. Please say the truth.
3. He told something to Bill.
4. He said something to Bill.

However, only "say" permits the noun usage as in "I have a say about that point." Both "say" and "tell" can take the progressive –ing, and yet, "saying," which is nominal, is different in meaning from "telling," which is an adjective.

Now, a learner who is lexically competent and functional should be able to discriminate the semantic differences of these verbs. And the point to emphasize here is that <u>lexical choice is not simply a matter of convention, but is semantically motivated.</u> Thus, inter-lexical competence is learnable. Let us explain the principles of lexical choice here.

Let us first compare "talk" and "speak." Exploration into the semantics of each verb shows that each has its distinctive function, following the principle of division of labor. In the analysis of verbs of communication, we postulate the four basic components: [emittance of sounds] [directionality (one way or two way)][message] and [message conveyance to partner]. The verb "speak" emphasizes [emittance of linguistic sounds], while "talk" highlights the [two-way communication]; the [message] component is essential to "say," and the [message] and [message conveyance to partner] components are essential to "tell."

The Base Knowledge of Interlingual Competence
Speak: [+emittance of sounds]
Talk: [+two-way communication]
Say: [+message]
Tell: [+message, +message conveyance to partner]

Thus, with the sentence "He spoke," we assume that he emitted linguistic sounds; by implication, his linguistic sounds were something intelligible to someone. The remaining verbs do not permit the full interpretation unless additional information is given as in: ?He talked, ?He said, and ?He told.

According to our analysis, the act of talking is two directional; hence, the sentence "We talked" is fully interpretable. "He talked" and "We talked" are syntactically identical, and yet, semantically different. The choice of the plural pronoun in "We talked" nicely satisfies the requirement of the act of talking.

The sentence "We spoke a lot" is grammatical, and yet, is different in the intended meaning from "We talked a lot." In a telephone conversation, "Who's speaking?" is not interchangeable with "Who's talking?" in that at the time when the utterance is made, two-way communication is not yet established. The song phrase "People are talking without speaking" is a good example to illustrate the point here.

As indicated above, "speak" prototypically involves emittance of linguistic sounds; it can be extended to non-linguistic sounds as in "Trumpets spoke loudly." According to the dictionary definition, "speak" has synonyms such as: "talk," "mention," "deliver," "address," "discourse," "make a statement," "emit a sound," etc. However, the focal point in the semantic spectrum of "speak" is the act of emitting a sound. This explains why "speak" tends to collocate with manner adverbs: "He spoke softly," "She spoke with B.B.C. precision," "Speak out!," "Actions speak louder than words," and the like.

If an illness prevents someone from making vocal intelligible sounds, we may say, for example, "He is unable to speak after a stroke." The notion of "emittance of linguistic sounds" can be easily extended to the sense "reveal" as in: "Speaking words of wisdom, 'let it be,'" "She spoke French," "He spoke his mind at last."

To sum up, "speak" has the function of expressing the lexical core meaning [emittance of sounds](the notion of lexical core will be discussed later). Prototypically, it refers to emittance of linguistic sounds; it can easily take manner adverbs expressing how sounds are emitted. The target partner to whom sounds are emitted is indicated by the prepositional phrase "to NP" or "with NP."

To explain the difference between "We talked a lot" and "We spoke a lot," the notion of directionality should be introduced. While "talk" always involves the sense of two-way directionality, "speak" carries the implication of one-way directionality. The two sentences below mean virtually the same:

1. Why didn't you speak to me?
2. Why didn't you talk to me?

There is, however, a difference—speaking is a speaker-oriented act, and talking is an interactive act. A speech does not usually involve an active interaction with the audience, while a talk as in "a summit talk" brings about a scene in which participants are actively exchanging their ideas and opinions.

The claim that "talking" is an interactive act is well illustrated in the sentence "Let's talk before fighting" which does not permit the substitution of "speak" for "talk." One can talk back, but one does not speak back. "Talk" does not involve the [message] component

as its characteristic features, and usually requires prepositions like "about" and "of" to indicate the topic of talking.

The preceding discussion about "speak" and "talk" has implications in terms of their semantically related clusters.

Talking: chat, gossip, converse, etc.
Speaking: pronounce, express, deliver, voice, vocalize, etc.

The semantic feature [emittance of linguistic sounds] attached to "speak" suggests that when we say, "someone speaks," we focus on the act of uttering or making sounds. This explains why the term "speaker" is used to refer to a sound producing device or a loudspeaker. The fact that the sentence "John and Mary spoke to each other" is unacceptable suggests that in the act of speaking, interaction is not highlighted.

Let us now consider the semantics of "say" and "tell."　Among the four basic verbs of communication, "say," "talk" and "tell" are somewhat related to "tale," etymologically speaking; only "speak" departs from the "tale" cluster.

If "say," "talk," and "tell" comprise the "tale" cluster, we must account for the distinctive role of each. "Say" and "tell" serve as the "message" and "message-conveying" roles, respectively. The role of "talk" is relatively vague in that "talk" simply suggests the presence of, and verbal interaction with, an interlocutor. If someone utters a series of sound interpreted as "I like you," then the speaker is saying, "I like you." Because "say" serves as the "message role," it is the only verb that can repeat the message spoken.

1.　John said, "I like you."
2.　?John spoke, "I like you."
3.　?John talked," I like you."
4.　?John told, "I like you."

On the other hand, "tell" has the "message-conveying" role. "Tell" is the only verb that takes the interlocutor as the object without a preposition.

1.　John told me something.
2.　?John said me something.-→John said something to me.
3.　?John talked me something. →John talked to me about something.
4.　?John spoke me something. →John spoke to me about something.

The verb "talk" appears in a context such as "John talked me into something." Notice, however, that the interpretation here is "John's talking caused me to be into something." In this case, "me" is not simply the receiver of what John said.

Let us compare the two words "saying" and "telling." The word "saying" is something said (especially, an adage, a proverb, or an axiom), thus highlighting the message itself. By contrast, the word "telling" is not something told; rather, "telling" means "having an effect," or "striking" as in "a telling story," with emphasis being placed on the "conveying" part.

Thus, we suggest that the distinctive role of "say" is the utterance of a message, while in the act of telling, the conveying part is critical. This sheds light on the following ellipsis phenomenon:

1.   As I said, John didn't come.
2.   As I told you, John didn't come.
3. ?As I told, John didn't come.

The question here is why "say" can occur as in "as I said," while "tell" cannot. The semantic analysis here suggests that the act of saying involves the "message." In sentence (1) above, the message is expressed in the main clause "John didn't come."

1. As I said [x], [John didn't come]
2. As I told[[x][y]], [John didn't come.

The critical element [x] for the act of saying is expressed in the following clause; thus, the well-formedness condition obtains. The critical element for the act of telling is the goal to which the message goes, and yet in the sentence above, the element ([y]) is empty within a full clause. Thus, a well-formed sentence should go:

As I told [x], [John didn't come].

Syntactically, "tell" has the following frame structures.

[[NP] TELL [NP [TO NP]
[[NP] TELL [[NP][NP]]]

The first frame is the unmarked form; the prepositional phrase "to NP" is obligatory in

the same way that the verb "put" obligatorily motivates the locative phrase.

Thus, we have shown that the semantics of each lexical item is prerequisite to developing inter-lingual competence. When "speak" and "talk" are similar in some cases, the similarity disappears and the difference emerges with the addition of an adverb like "out." Even when "speak to" and "talk to" are used interchangeably, there are some semantic differences, which are due to the difference in lexical core meanings.

The Intra-lexical Domain

Inter-lexical categorization does not, however, end the task of lexical learning because learners need to know the meaning of a lexical item. Compare the word "take" with "subtract." Which is perceived to be more difficult by average learners of English? This problem has empirically received a general consensus with the latter being perceived to be more difficult. By and large, so called basic, or general words are more difficult to learn than non-basic, specific words. The reason is intuitively clear enough. Seemingly "difficult" words are easier to capture their senses than seemingly "easy" words. Consider the semantic relation of "move," "fall," and "sink."

Move··· [+downward] ·→fall ····[+in the liquid] ·→ sink

Semantic specificity increases along with increasing semantic incorporation. In other words, the meaning potential of a word or the degree of semantic incorporation shows a negative correlation.

Lexical competence involves the ability to use a word as fully as possible. This applies particularly in the case of basic words of which the meaning potential is great. In other words, the most important issue in discussing lexical competence in a second language revolves around the phenomenon of "polysemy," which deserves careful treatment here (cf. Ravin and Leacock 2002).

The Phenomenon of Polysemy

Dictionaries define "polysemy" as "having or being open to several or many meanings" (Webster 1988) or "having or characterized by many meanings"(American Heritage 1992). That is, when a word has multiple meanings, it is by definition polysemous. Basic verbs such as "break" and "take" are generally considered the prime examples of polysemy.

However, when we say, "a word has multiple meanings," what do we mean? Answering this fundamental question requires us to take a certain theoretical position about the nature of word meaning. Our basic position comes from Vygotsky's following statement:

"A word acquires its sense from the context in which it appears; in different contexts, it changes its sense. Meaning remains stable throughout the changes of sense." (1962, p.146)

In other words, when we discuss word meaning, we should make a conceptual distinction between "sense" and "meaning", or between the context-free and context-sensitive semantic content of the word. Thus, we should restate that a word is polysemous when it bears multiple senses, each of which is acquired through contextual modulations.

Now another question arises: If a word sense comes from the context in which it appears, do we consider the sense to be the part of the semantic content of the word? In this respect, Miller makes an argument against polysemy by claiming as follows:

".... given an occurrence of *line*, the problem is not to choose among fifty or more pre-stored concepts or rules but to sharpen a core concept in a manner appropriate to the discourse and the sentence in which the word occurs. In other words, perhaps line looks polysemous because lexicographers have dragged in a lot of contextual information that is really not part of its meaning." (1978, p. 102)

With this statement, Miller seems to suggest that we should attempt to describe the core concept, which is the essential meaning of the word, and explain the cognitive mechanism of contextual modulations through which a word obtains its context-sensitive sense.

This statement requires us to have a more precise characterization of "sense." Let us then compare the following pairs of sentences.

1. This suit is <u>light</u> (in weight).
    This suit is <u>light</u> (in color).
2. Let's go to the <u>bank</u> (to see if there is enough water in the bank.)
    Let's go to the <u>bank</u> (to withdraw some money.)
3. Liszt was a <u>good</u> [skillful] pianist, who revolutionalized keyboard technique.
    It is a <u>good</u> [suitable] day for a swim; it's warm and sunny.
4. John <u>watered</u> [poured water on] the flowers in the garden.
    Mary <u>watered</u> [diluted] her whisky because it was too strong.

5. If you <u>take</u> [subtract] 5 from 7, you have 2 left.

    The exam <u>takes</u> [requires] 60 minutes to complete.

Intuitively, we would argue that words such as "light," "bank," "good," "water," and "take" are polysemous, but to different degrees. As Lehrer (1974: 8) points out, "a traditional problem for the dictionary approach is that of distinguishing between polysemy … and homonymy." A criterion that is used to distinguish polysemy from homonymy is that words with identical etymological origins are called "polysemic," while words that only accidentally sound the same are called "homonyms" (Lyons 1977, Ullmann 1962).

More importantly, the nature of polysemy varies according to the lexical item. A comparison between "light" and "good" seems to suggest that the degree of contextual dependency comes into play when dealing with polysemy. With the word "light," two sufficiently remote senses come to us. The word "good" does not seem to carry specific senses in the same way as "light" does. When we compare "a good pianist" and " a good day," we do not feel that we are dealing with two sufficiently separate senses. Rather, we feel that the specific interpretation of "good" "arises as a result of contextual modulation (of the general sense)" (Cruse 1986: 58).

By pursuing this line of argument, we reach the following claim about lexical ambiguity: Whether a word is truly ambiguous or not is a matter of degree, where the intervening variable is the degree of contextual dependency or the degree of accessibility of different senses in our mental lexicon, as Miller suggests.

Lexical core as Context-free Meaning

It has been pointed out that one of the difficulties experienced by dictionary makers is "that of establishing appropriate divisions between the various senses of words" (Carter 1987: 136). It has also been pointed out that a dictionary uses no clear-cut criteria for deciding which senses constitute verbal polysemy. These problems amount to questioning whether dictionaries adequately represent the phenomenon of polysemy. The adequate representation of polysemy is critically important to discuss what lexical competence is in a second language. In fact, the semantics of a word is at the heart of lexical competence, without which our argument about lexical learning lacks the substance.

Here, the notion of "lexical core"—core meaning or core schema—can be a guiding principle of lexical teaching. Thus, we will explain the notion in some detail in this paper. The concept of "core schema" is relevant to action verbs and spatial prepositions. Thus,

in the following discussion, we are concerned with verbal polysemy.

Ruhl (1981) advanced a strong claim about the monosemic or core meaning hypothesis when he says: "common verbs such as "take," "give," "come," "go," "break," and "hit" are monosemic and judged polysemous by dictionaries and linguists because their essential general meanings are confused with contextual, inferential meanings." What is suggested here is that it is necessary to draw a line between the contextually-independent and contextually-dependent semantic content of a word.

We will use the term "lexical core" to refer to context-free meaning. Lexical core is by definition common to all observed senses. On this point, Bolinger (1977) states:

"Now we find a single overarching meaning which performance variables imbue with local tinges that pass for distinct senses. The deception is like what happens when we meet an acquaintance in an unexpected setting: we may not recognize him."(p.19)

The principle of cognitive economy (Rosch 1978), which excludes a nonfunctional memory burden, leads to the principle of "one form for one meaning and one meaning for one form" (Bolinger 1977). At the level of lexical core, there is a one-to-one correspondence between form and meaning. Polysemy arises as a result of contextual modulation. In this respect, Givon (1984: 181) views language as:

"a mixed, compromise system, relying to some extent on memory burden—where items and rules can be memorized in a relatively atomic, context-free fashion, while to some extent relying on disambiguation via context, where items and rules shift their meaning / usage depending on the pragmatics of context. That such a compromise should be rooted in the neurological capacity of the human organism seems too obvious to require further comment."

The idea expressed here can be directly applicable to the analysis of verbal polysemy. We have a context-free meaning termed "lexical core" and context-sensitive senses, which are probabilistically determined through contextual modulation, as illustrated in the following figure.

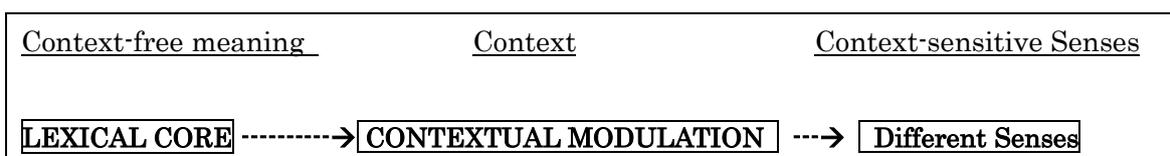| Context-free meaning	Context	Context-sensitive Senses
LEXICAL CORE ----------→	CONTEXTUAL MODULATION	---→ Different Senses

Figure 2: Lexical Core and Contextual Modulation

Conceptually, lexical core is taken as an abstraction from different senses: it can be seen as the greatest common divisor of the contextually-determined senses. With this characterization, we consider that basic verbs do not have many meanings, but only have a single overarching meaning, which is simple and vague, and because of its vagueness, their lexical core meanings can be applied to a variety of situations. The lexical core meaning here is often schematically represented, typically as an action-based schema.

To claim that "this is the lexical core of a lexical item," we should be able to demonstrate the validity of the characterization of the lexical core meaning. To this end, we follow the following criteria:

Validity Check on the Proposed Lexical core
1. Logical validity
2. Psychological validity
    Psychological reality
    Psychological plausibility

Logical validity is such that the proposed lexical core is logically consistent in accounting for the relatedness of perceived senses. Two types of psychological validity are possible: the account has psychological reality if and only if native speakers of the language feel that the account is in accordance with their intuitions. The account may not appeal to psychological reality, and yet, it is still possible that the account is psychologically valid because it meets the condition of psychological plausibility. If native speakers of the language feel the account to be convincing, and to make sense, it satisfies the condition of psychological plausibility. For example, a locative sense of "by" as in "There is a cat by the fireplace" is remote from an agentive sense of "by" as in "The computer was broken by John." In this case, it is difficult to meet the condition of psychological reality. However, consider the following account of the sentence "The computer was broken by John."

There is a state of affairs: The computer was broken. With the use of "by," John is located in proximal distance from the state of affairs. The proximity of "The computer was broken" and "John" motivates us to make an inference about the relation of the two: John must be the person who is responsible for the broken computer. Many native speakers of English feel that this account makes sense, thus meeting the condition of psychological plausibility.

Lexical core Schema: The case of "cut"

Now, in order to explain what constitutes intra-lexical competence, we will choose a verb, "cut," and make a detailed semantic analysis of it. The verb "cut" can be classified into an achievement verb (denoting a punctual event). In its typical usage, the verb "cut" has an inherent end point; it is momentous, punctual. To simplify our discussion, however, we would like to consider "cut" an action verb in the broadest sense of the term. Here the question is how we describe the meaning of "cut." As shown below, it can be used in a variety of situations:

1. I cut my finger.
2. Let's cut this cake in five.
3. Will you cut the talking, please?
4. Your words cut me deeply.
5. The baby cut his first tooth around Christmas.
6. Let's cut algebra class.
7. They cut costs to a third.
8. The editor cut the article.

With these eight word senses here, "cut" is generally taken to be a typical case of polysemy, each exemplar here representing a distinct sense. If this assumption is valid, then we are able to say that "cut" is indeed a polysemous word, and that the mental representation takes the form of a lexical network of multiple senses.

Let us, however, notice that the network model has a problematic assumption: that is, "cut" has several fixed senses and that each sense has its semantic motivation. If this assumption turns out to be faulty, then the whole attempt at making a lexical network has to be given up. If there are no fixed senses, there is, needless to say, no point of organizing those senses in the form of a network.

Intuitively we would consider that a word is polysemous if the given word evokes different senses at the word level. An English dictionary lists synonyms showing different usages, assuming that the meaning of "cut" is already understood. However, defining a word in terms of its synonyms leads to circularity of definition: i.e., A is defined in terms of B, which is defined in terms of C, which is defined in terms of A.

More importantly, verbs do not carry plural distinct senses in principle. To explain this, let us briefly compare verbs and nouns with respect to their semantic properties. In general, nouns have a referential function. Hence, we naturally tend to think that a noun refers to some object—tangible or intangible. For example, given the noun "body," we

know it can refer to a person's or animal's body, an organized group of people, the main structure of a car or an airplane, and an object that is physically separate from all other objects (in physics), and so on. This is part of our semantic knowledge about the word "body."

In other words, the noun "body" has different referential objects, which constitutes distinct senses of the word. In contrast, verbs do not literally refer to anything. Thus, the expression "This is an apple, and that is an apple, too" is acceptable, while "This is divide, and that is divide, too" does not sound right. Also note that nominal concepts are organized with respect to hierarchical conceptual structures. We tend to judge the expression "Apples are sweeter than fruits" to be strange because we know that apples are a kind of fruits. This gives a piece of evidence for the psychological plausibility of hierarchical organization of nominal concepts. On the other hand, we cannot organize verbal concepts in the same way. Thus, the expression "Divide is a kind of cut" sounds strange; "Dividing is a kind of cutting" is a better expression. Here we must note that "dividing" is a nominalized form.

We may conclude that unlike nouns, verbs do not have a referential function, and that verbs are not subject to a hierarchical relationship (or the superordinate - subordinate relationship).

As regards the case of "cut," an action verb, our claim here is that the semantic content of "cut" can be described in terms of an action-based schema, and contextual modulation of the schema brings about different senses in actual sense-making activities. There are two points to note about the action-based schema. First, a schema is action-based; it emerges on the basis of perceptual and bodily experiences. And second, it is a "gestalt schema" because when one part stands out as a figure, then the remaining part stays back as the ground (Johnson 1987).

In other words, the meaning of "cut" cannot be well described in terms of a list of fixed senses. If we pick "reduce" as a sense of "cut," then it fails to capture the difference between them. Likewise, if we pick "sever" as a sense of "cut," it fails to capture the difference between them.

If we attempt a rough sketch, the action-based schema of "cut" involves a sense of parting, and yet, the sense of "using a sharp instrument" always accompanies it. Thus, we say that "cut" has the sense of parting by using a sharp instrument. That is to say, parting and a sharp object the components of its meaning (lexical core concept). More importantly, the meaning of "cut" cannot be described with respect of a list of semantic components, because the verb indicates an action; thus, the meaning of "cut" is best represented in terms of an action-based schema.

<<Action-based Schema of "cut">>

cut
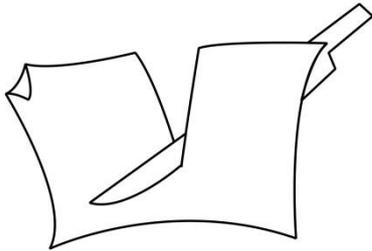
The schema involves some force exerting upon a whole object using something sharp; it involves both force exerting upon an object and the sense of division. This schema permits two possible variants: a "cutting-in" schema and a "cutting-off" schema.   And each schema can be projected into different scenes. With this semantic analysis, we can now classify the afore-mentioned examples of "cut" in the following way:

> The cutting-in schema   ---→ (1) (4)(5)
>
> Core
>
> The cutting-off schema --→ (2)(3)(6)(7)(8)
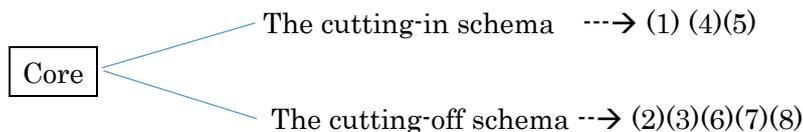
Note: The numbers correspond to the exemplars listed above.

Here, we see a semantic extension of the core schema of "cut" through "schema projection"—or "scene projection"; this accounts for the different senses of "cut." Suppose that you're cutting into a piece of paper, and stop in the middle before parting it into two. You can describe the situation by saying, "I cut a piece of paper." Also, when you cut your finger, only the "cutting-in" schema applies. As a result, you will get a cut on your finger, though the cut may be deep or shallow. The sense implied in "Your words cut me deeply" derives from the cutting-in schema through schema projection. The same schema applies in the case of "cut a horse with a whip."

A usage such as "The baby cut his first tooth around Christmas" will be interpreted in the same way as a usage such as "I'll cut you a piece of cake." These two expressions highlight the outcome of cutting. In "I'll cut you a piece of cake," "a piece of cake" is the outcome of the act of cutting, not the target of cutting. In the same way, "his first tooth" in "The baby cut his first tooth around Christmas" is not the target of cutting, but rather the outcome of cutting.

The scene of the cutting-off schema will be projected into situations such as the

following examples: "Will you cut the talking, please?," "Let's cut algebra class," "They cut costs to a third," "The editor cut the article."

　　Now, on the basis of the discussion above, we may claim that the semantic knowledge of "cut," –knowledge language learners are expected to internalize for intra-lexical competence—consists of four components: (1) an action-based core schema plus schema projection, (2) the verb script (which provides slots for WHO, WHAT, HOW and so on), grammatical constructions, and a set of exemplars which illustrate how the word is used , (3) phrasal verbs using "cut", and (4) a lexical network:

<<The Semantic Knowledge of "cut">>

A. Action-based core schema

　　　　　　　The cutting-in schema
　　　　　　　The cutting-off schema

B. Verb Script (Propositional Argument Structure)

　　CUT (WHO, WHAT, with WHAT, HOW)

Grammatical Constructions + Typical Exemplars

A [+person] cut B [+object] with C [+instrument]
　John cut a cake with a knife.
A [+person] cut B[+person] C[+object: outcome]
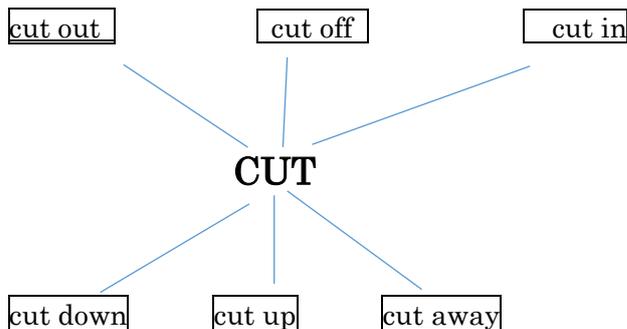　I'll cut you a piece of cake.
A [+instrument] cut Adverb [+manner]
　This knife cuts well.
A[+object] cut Adverb [+manner]
　The cake cuts easily.

C. Phrasal Verbs

| cut out | | cut off | | cut in |

CUT

| cut down | | cut up | | cut away |

The action-based schema represents the content property of an action verb; the verb script represents the functional property of an action verb. The verb script is the basic structure of story-making. The verb script for English "write," for example, contains the individual who does the writing, the implement with which the individual writes, the surface on which the writing is done, and the product of a writing act – that is, some configuration of marks on the surface (Fillmore 1977).

Core Schema and Cognitive Manipulation

The case analysis above shows that lexical competence of action verbs, for example, includes the knowledge about the action-based schemas or core schema. As already suggested in the above discussion, a core schema is not a static representation of the lexical meaning; rather, it is dynamic and flexible enough to produce different context-sensitive senses. To explain the semantic extension, we mentioned the schema projection, one of the cognitive manipulations of the schema. Besides this, we have three cognitive manipulations: schema-highlighting, schema-rotation, and schema-blending. To illustrate this, let us consider the spatial "over." The core schema of "over" will be represented as follows:
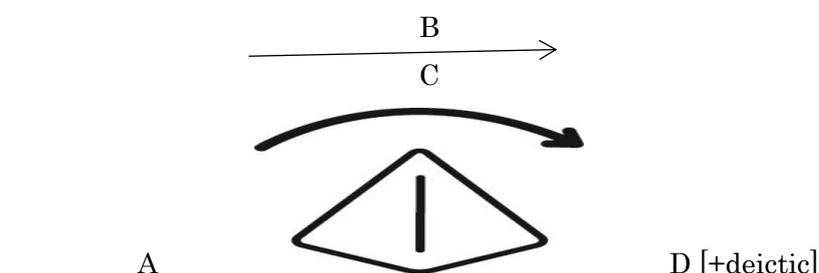

Figure 3: Core Schema of Over

X is an obstacle such as a fence, a river, or a mountain. There are four focal points we can selectively highlight: A, B, C, and D. As mentioned earlier, the core schema is a gestalt which constitutes the figure [foreground] and the ground [background].

1. The cat jumped over the fence.
2. The plane is flying over the Pacific Ocean.
3. Put some cloth over the table.
4. There is a castle over the mountain.

Thus, highlighting A as the figure, then we have exemplars such as "The cat jumped over the fence." If we highlight B, then "over" may be interchangeable with "above" as in "The plane is flying over / above the Pacific Ocean." However, if we foreground the remaining part by adding "from Narita to Los Angeles," then, "over" is the only possible choice, as in "The plane is flying over the Pacific Ocean from Narita to Los Angeles." We may also note the difference between "The plane flew over the cloud." and "The plane flew above the cloud." The former permits three interpretations: the [above and across] sense, the [jump over] sense, and the [on the other side of] sense, while the latter permits only the first sense.

Domain C will be highlighted when we want to emphasize the covering sense, as in "Put some cloth over the table." Here, "over" can be substituted by "on"; however, we should not confuse semantic facts with pragmatic facts. In other words, the sentence "Put some cloth over the table" implies the contact sense (a cloth being in contact with the table); however, this is a matter of pragmatics. Semantically, "on" emphasizes the contact sense, and "over" the covering sense. Finally, highlighting domain D involves a deictic interpretation. The speaker is standing on the other side of D, and says, "There is a castle over the mountain," implying that if you go over this mountain, then you will find a castle on the other side of the mountain.

Thus, "over" has its own core schema, which is subject to the cognitive process of highlighting. This explains different usages of "over." This schema also receives the manipulation of "scene projection." Most notably, the image schema will be projected into abstract matters, and then we produce sentences such as: "He is well over 80," "We have debating over the issue for ten hours," "The king has control over his people," and so on. These usages are explained by the principle of scene projection, or metaphorical projection. The principle of scene projection is always related to the "as if" condition. In other words, the spatial "over" is a marker of treating its object as if it were the target to go over. In "He is well over 80," the age of 80 is perceived or conceptualized as if it were something one could go over.

The cognitive manipulation of "schema rotation" becomes important when we encounter examples such as "Put your hands over your face," "Turn over the pages," and

"The ball rolled over." The core schema is drawn on the basis of a horizontal axis: something is vertically over something else. In order to understand "Put your hands over your face," it is necessary to rotate the schema 90 degrees to avoid the wrong interpretation that your hands are horizontally over your face.

Finally, the cognitive manipulation of "schema blending" works when we deal with phrasal verbs using "over" as in "take over." Interestingly, "take over" has two different senses:

1. John took over Bill's class. [carry over]
2. They took over the Capitol Hill. [occupy]

Here, the core schemas of "take" and "over" are blended. Depending on what to take, and what aspect of the "over" schema to highlight, we have different interpretations. In the case of taking over a class, domain A is highlighted; with the case of taking over the Capitol Hill, domain C is highlighted, suggesting the Capitol Hill being under control.

Thus, we maintain that a learner's lexical competence should include the ability to use a word as fully as possible. For example, in the case of the verb "put," the user of English should be able to produce the following expressions, expressions for daily activities:

"put a pan on the fire / put a letter into an envelope / put headphones on / put an 82-yen stamp on the envelope / put on (facial) foundation / put some dishwashing liquid on a sponge / put the clothes in the closet / put the dishes away / put the papers back / put an umbrella into an umbrella stand / put some pepper on a salad / put some butter on the toast / put on one's shoes / etc.

And we suggest that in order to use "put" in this way, the user needs to have its dynamic core schema.

Prototype Theory and Word Meanings

In the literature of lexical acquisition in a second language, the notion of "prototype" is widely used. And indeed, the concept of lexical core is often confused with the concept of prototype. In general, the notion of lexical core is more abstract than the notion of "prototype." For native speakers of a language, prototypes are psychologically real, while

lexical cores are often inaccessible. Rosch (1973) argues that some defining features of a concept are more salient than others: for example, some birds tend to be perceived as more "bird-like" than others. She maintains that exemplars of a concept differ in their status as exemplars, suggesting that being a member of a class does not necessarily entail equal status with other members of the class. According to Rosch (1973), there are "good" or "central" exemplars, and the status of other exemplars depends on their relation to the central exemplars, or what she calls "prototypes."

In a variety of experiments on learning, memory, and perception, it has been shown that people tend to judge certain members of a category as being more typical or representative of the category than other members (Rosch 1977, Rosch and Mervis 1975, Rosch 1981). In other words, prototype effects on categorization are psychologically plausible. Category prototypicality has been measured in terms of reaction times, free recall, production of exemplars, similarity ratings, order of acquisition, and so forth. For example, adults tend to name typical members prior to atypical members in listing members of a category.

Several explanations have been offered for the prototype effects on categorization. Rosch and Mervis (1975) assume that the most prototypical items are those with the most attributes in common with other members. The notion of "family resemblance" has been offered as a characterization of the mental representation of categories. A robin is more prototypical as a member of the bird category than a penguin is. This is so because a robin shares more defining features—[has feathers, flies, is medium sized, etc.]—with other members than a penguin does.

We consider that both "lexical core" and "prototype" are products of concept formation and categorization; the operating principles are generalizing, differentiating, and typicalizing. "Lexical core" is an overarching meaning of an item, while the "prototype" is independent of non-prototypes. In other words, we define "lexical core" as the context-free meaning of a word and "prototype" as a trans-contextual sense. Given *n* word senses, we can identify central senses as a prototype or prototypes of the word, and other senses are derived from the prototype(s) by means of construal rules.

The wording "prototype" is used to refer either to typical exemplars or to central concept. In fact, a prototype is a concept derived from prototypical exemplars. Prototype theory posits that there exists a tendency among us to formulate a prototype of a concept and to make linguistic judgment on the basis of it. Developmentally, language input and other experiences influence the child's cognitive structuring from the beginning of his or her attempts to interpret language.

By and large, early stages of lexical development are instance-bound (Brown 1971,

Carey 1978). According to Anglin (1977), prototypes arise initially from whatever perceptual information the child retains from his/her first experience with an object named in his / her presence. As the child is exposed to more instances, the prototype becomes a more generalized concept (Carey 1982).

In dealing with action verbs, we assume that people develop action-based schemas, which are core concepts, an abstraction from all possible instances. This is different from the prototype concept, which is a direct representation of prototypical instances. The concept of "prototype" is more useful for nominal polysemy than for verbal or spatial polysemy. Upon hearing the word such as "eyes" and "head," we are likely to come up with their prototypical referents. A verb like "take" may trigger different situations, and yet, the meaning of the word is not stable. For example, consider a simple sentence, "John took some pills." On the basis of our expectancy grammar, we interpret "take" here as meaning "swallow"; this first interpretation will be easily broken with additional contextual information.

John took some pills $\longrightarrow$ and put them on the table. [seize]
and got arrested. [steal]
to Mary. [carry]

In other words, "take" has its core schema, which is simple and vague, applicable to a variety of situations. Unlike nouns, it is difficult to list possible senses because interpretation of word sense is highly context-sensitive.

Collocation

A collocational approach is dominant in lexical teaching. Collocation is concerned with how words go together: which words may occur in constructions with which other words. For example, we say to students, "Coffee is strong, and soup is thick and not vice versa." The implication is that "coffee" collocationally goes with "strong" and "soup," with "thick." In the case of "drug," both "strong" and "powerful" are collocationally possible. "Smell" goes more naturally with "strong" and not with "powerful," and so on. "Soft" goes well with "drink" and "mild" goes with "beer." "Voice" can be said to be "mild voice," "gentle voice," and "soft voice." "Bright" in English collocates with objects in which intensity of light is involved, such as "sun" and "color." "Shiny" collocates with objects in which the surface is significant to the meaning, and hence, "shiny coin" and "shiny floor" are right collocations, but not "shiny sun" and "shiny color."

Every content word has its collocational range or restrictions which limit its meaningful usage. No two words have exactly the same collocational possibilities. Thus, lexical competence in relation to adjectives includes the knowledge about the collocational possibility of a word. However, there are pros and cons about a collocational approach. Words are used and understood only in context. It is, thus, important to call our attention to the collocational possibility of a word as its immediate context. We also know that natural communication does not allow us to spend time to mentally compute to determine if item A should go with item B. Rather, our linguistic knowledge should be automatic. Psycholinguistic evidence suggests that we process language by dividing sentences into chunks. A collocational approach taps this point very well.

On the other hand, we know that the expression "thick coffee" is not impossible if given the appropriate context. It may trigger in our mind the association with Turkish coffee, for example. The intrinsic problem of a collocational approach is that the learner's understanding about an item could end up with a biased representation of the item. The reason is quite obvious: within the range of reality, it is not usually possible to present every collocational possibility of an item in a classroom. This is very much so, especially with lexical items with low semantic specificity. For example, Japanese learners of English are able to use the adjective "thick" in contexts such as "thick papers," "thick fog," and "thick soup," and yet, unable to use in contexts like "thick woods" and "thick fingers." Thus, we have underextension here.

More seriously perhaps, if item A is collocationally fixed in the learner's mind with item B, then there is a possibility of item A automatically (or unconditionally) motivates item B, thus resulting in errors. For example, suppose that "listen to music" is taught as a collocation. Our learners then use "listen to" with the cue "music." This explains the error in the following (from Takahashi 1984):

"Do you [listen to / hear] the music coming from the next door? That drives me crazy."

Contextually, we know that the choice should be "hear," not "listen to," and yet, language learners use the knowledge about the collocation "listen to music" as an unanalyzable chunk. Using a language autonomously requires learners to be linguistically flexible enough to handle the problem of contextual modulation. The collocational approach is unlikely to help them develop such a flexible ability. Hence, we are put in a compromised situation:

1. Use a collocational approach with lexical items with high semantic specificity.

2.   Use a lexical core approach with lexical items with low semantic specificity.

Items such as "damage," "harm," "hurt," and "impair" do not exhibit great semantic expansion. The choice of a word highly depends on the following object complement. In this case, a language learner is required to have knowledge about a collocation table such as the following:

	damage	harm	hurt	impair
one's car	+	-	-	-
the environment	+	+	-	-
one's health	+	+	-	+
one's legs	-	-	+	-
one's pride	-	-	+	-
one's speech	-	-	-	+

(From The words you need. Rdzka, Channel, Putseys and Ostyn. 1981)

However, words such as "take," "get," "give," and "break" are highly polysemous with multiple possible senses. In fact, these words do not have multiple inherent senses, but rather, the meaning of these words is represented as a simple and vague schema, which applies to a variety of situations.

The knowledge on the associative and extended senses of a word includes acquisition of different types of fixed expressions defined in terms of collocability and idiomaticity. The difference between collocations and idioms is not categorical, but a matter of degree. Idioms such as "kick the bucket" and "spill the beans" are the cases of frozen "collocations." The associative and extended senses of a word also include proverbs (e.g., "Too many cooks spoil the soup," "Grass is always greener on the other side of the fence"), social formulas (we classify these into functional formulas) (e.g., "how" as in "How are you?" and "concern" as in "To whom it may concern"), and conversational gambits (e.g., "put" as in "Let me put it this way" and "say" as in "Could you say that again?").

We must note that the collocational approach is most suitable for dealing with adjectives in that adjectives always go with nouns restrictively or predicatively. Without nouns, there is no point in using adjectives. Thus, we turn to the question of what nouns go with a certain adjective. True, as long as interpretation is possible, "anything goes" is the principle here. However, there seems to be some tendency that a given adjective happily goes with a set of nouns as in:

> Sweet: smile, girl, heart, swing, mood, words, sound, lives, time, breeze, smell, nature, foods, revenge, etc.
>
> Bitter: regret, expression, lessons, chocolate, day, atmosphere, pill, mood, taste, quarrel, disappointment, old man, enemies, etc.

In handling collocational potentials of adjectives, we must pay attention to cross-linguistic gapping. "Sweet" corresponds to "amai" in Japanese. A collocation like "sweet words" are translated into Japanese "amai kotoba"; conversely, "sweet parents" as a translation from "amai oya" carries a totally different meaning.

Further Considerations

The learner's pragmatic knowledge about a lexical item comes into play when he or she wants to use the item functionally in a given context. Words are often marked with respect to formality, evaluation (positive vs. negative connotations), politeness, and the like. There are some loaded expressions we have to be careful in using. Some expressions may sound extremely impolite or vulgar.

A euphemism is used to avoid an offensive expression or one that is socially unacceptable, or one that is unpleasant. In the U.S., old people are called "senior citizens," and "handicapped people" are called "physically-challenged people."

In this regard, we have to consider the connotations of a lexical item. The words "father," "dad," "daddy," "pop," and "old man" are lexical items that refer to the kin who is of the previous generation, male and lineal. The word "father" has a connotation of respect; "daddy" has a connotation of intimacy. Connotative meanings are often culturally conditioned. A word which has a positive connotation in one culture may have a negative connotation in another. In English, "She is a lemon" carries a negative connotation, while the Japanese counterpart, a positive one.

Words often occur in sets which range from negative to positive. For example, the English words "skinny," "thin," and "slender" have the following connotation: negative for skinny, neutral for thin, and positive for slender. In the same way, "fat" is probably negative, whereas "plump" is more positive in connotation.

In using English as an international language, we do not have to be oversensitive to how Americans, for example, feel if we use such and such expressions. However, there should be some universalic ground rules behind the usage of "loaded expressions."

Also, we should be sensitive to style shifting. Martin Joos (1960) identifies five different styles.

frozen   formal   consultative   casual   intimate

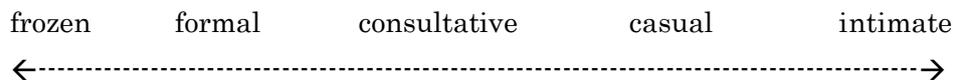←--→

Figure 4: Five styles in Verbal Interaction

The frozen style is very formal and ritualistic; both frozen and formal are more or less one way. The consultative style is typical between doctors and patients; retaining a tone of formality, verbal interaction is essential here. Both casual and intimate are both informal in style. The intimate style may be a safe style between close friends or lovers. The important point here is that we should be consistent in style. Shifting from casual to intimate may be within the range; however, it becomes anti-social if we shift from formal to intimate unless there is special reason for the shifting.

Assessing Lexical Competence

On the basis of the preceding discussion, we suggest that lexical competence will include the following lexico-semantic knowledge:

Lexico-semantic Knowledge
1. Lexical Core
2. Lexical Prototype
3. Associative (Collocational / Idiomatic) expressions
4. Interlexical Network by notion and topic
5. Pragmatics (stylistics)

(1) With the knowledge of "lexical core," the learner will see how different word senses are semantically interrelated, which, in turn, motivates and facilitates acquisition of intra-lexical competence. The knowledge on lexical core also encourages the learner to use a given word with confidence even in unfamiliar contexts. It also becomes the key of semantic differentiation, in that the difference between "hold" and "keep," for example, depends on their different lexical cores. Thus, lexical core is essential to the ability to use a word fully and differentially.

(2) At the level of performance, it is useful to learn the lexical prototype of a word at least for two reasons: (1) prototypes represent the most frequent contexts in which the word is used, and (2) they serve as the cognitive reference points of metaphorical extensions,

so that the learner can see how different senses are related metaphorically with the lexical prototype.

(3) Knowledge on associative expressions includes acquisition of different types of *conventional phrases* defined in terms of collocability and idiomaticity. A collocation refers to the case where a lexical item cooccurs with other lexical items which have a high probability of co-occurrence with the item in question. The difference between collocations and idioms is not categorical, but a matter of degree; idioms such as "kick the bucket" and "hold your horses" are the cases of frozen "collocations." The associative expressions of a word also include proverbs, social formulae, conversational gambits, and so forth.

(4) A word is semantically related to other words, producing a number of inter-lexical networks. An inter-lexical network can be defined either by topic or by notion, which provides an inclusive conceptual system into which words are clustered. If words are organized in an inter-lexical network, it becomes easier to use a word in appropriate contexts in relation to other words.

(5) The learner's pragmatic knowledge about a word comes into play when he or she wants to use the word functionally in a given situation. Words are often "marked" in terms of formality, subjective evaluation, politeness, and the like.

Finally, in order to assess the language learner's lexical competence in English, we have the following framework in mind:

Definition Those who have good lexical competence should

Have a sufficient amount of vocabulary to talk about different topics ("size" and "thematic range"); Be able to select appropriate words and to use each word as fully as possible ("differentiation" and "generalization").

Criteria for Assessment

・ Knowledge for Understanding：awareness-raising & networking
・ Knowledge for Practicing：production/comprehension & automatization
Targets of Assessment
・ the size of vocabulary and the thematic range
・ the ability to use a word as fully as possible (the case of polysemous words)
・ intuitions about the semantic boundaries of a word
・ the ability to use words differentially (the case of semantically similar words)
・ intuitions about the pragmatics of words

- knowledge about word collocations
- knowledge about the use of functional words
- knowledge about the inter-lexical relations (networking)