Double-Decker Definitions: The Role of Frames in Meaning Explanations

IN THIS article I maintain that certain kinds of structured background information (or "frames") should be treated as essential components or accompaniments of word definitions. For ordinary print dictionaries, the provision of such information would amount to a very large investment. Market limitations on the price of the book or on the size of the budget that can be devoted to a given dictionary project, as well as realistic expectations of the patience of the anticipated users, make it unlikely that one can incorporate even greatly abbreviated frame information into individual dictionary entries. Instead, we should be thinking in terms of a dictionary on compact disk or preferably a web utility with hyperlinks facilitating easy access to the necessary background information. Since a single background frame, entered only once, can serve many word senses, its description could be made accessible from all of the relevant entries; it does not need to occupy space within the text of individual entries. Thus, a dictionary user who did not know about the tradition of the seven-day week should be able to get quick access to the necessary information from the entries of any one of the weekday names or from semantically related words such as week, hebdomad, weekend, and fortnight.

Supposing that one can provide such information, how could it become a part of the ordinary dictionary user’s experience? The sheer

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magnitude of a project capable of producing a full registry of frame information precludes the possibility of any single publisher's creating a database of the needed kind, but because such information will ultimately be needed for a great many natural language-processing applications, it should in principle be possible to fund the creation of such a resource by a large (and generous) consortium of academic, governmental, and corporate entities. Because the results of such a "precompetitive" effort would have to be made available to all of the consortium participants, the individual publishers could choose and amplify particular components of it, adapting them to the design of and intended market for particular types of dictionaries—technical dictionaries, children's dictionaries, adult learners' dictionaries, collegiate dictionaries, and so on.

In the past, and for very good reasons, dictionaries for ordinary use and dictionaries serving specific specialist domains had to be separate entities. Furthermore, dictionary editors had to make arbitrary decisions on the kinds of encyclopedic information a given dictionary was to include, for example, information having to do with names of persons, places, and historical events, and detailed facts about natural kinds. They then had to make dictionary-local decisions about matters such as whether to include information about a person, place, or event in an entry where the name had acquired a meaning in the regular vocabulary. They also had to decide whether the entries for plants, animals, minerals, and so on should describe their scientific classification, their distribution, and the relevant lore that might play a role in figurative uses of the words. Thus, the lexicographer was faced with many questions: Should the adjective *Freudian* lead to information about Freud himself? Should the *penguin* entry give information about habitat? Should the *owl* entry mention lore about the bird's "wisdom"? Given the kind of resource I am proposing, boundaries between dictionaries and encyclopedias or between dictionaries and thesauruses would no longer be necessary.

Conquering the limitations of page space would also make it possible to provide an abundance of example sentences, chosen to reveal typical uses, extended uses, frequent collocates, and so forth. Furthermore, this abundance would not require a limitation on the dictionary's word list. The availability of vast text corpora has aided the
lexicographer immensely in the discovery of word senses and word uses. Most important for our purposes, however, it also allows the lexicographer to select example sentences for each word sense extracted from actual attestations of language-in-use. These could then be annotated in a number of ways. Careful metadecriptions of the sample texts themselves, given a large enough corpus, could make it possible to derive generalizations about temporal, regional, and social associations of the vocabulary of the language, either through computational tools that come with the dictionary or through traditional kinds of corpus or philological research based on the body of annotated examples.

1. Traditional Uses of a Dictionary

The familiar monolingual English dictionaries serve many needs, including the following:

1. A writer may not be sure how to spell a word and consults a dictionary for help. (“How many c’s and m’s in accommodate?” “How many s’s and m’s in asymmetry?”)

2. Someone may not know how to pronounce a word encountered only in written form and hopes to find relevant information in the entry for the word. (“Where’s the primary accent in classificatory?”)

3. A typist may need to know where to break a word that starts on one line and continues on the next line. (“Does the hyphen go before or after the p in contemplative?”)

4. Players of word games such as Scrabble sometimes choose a particular dictionary to act as arbiter of players’ moves in the game. (“Is quizjax a legitimate English word?”)

5. Sometimes people look words up just to find out whether they are in the dictionary. (“Will I find ain’t in this dictionary?”)

6. And once in a while, of course, people consult dictionaries just to find out what a word means. (“What exactly does atavistic mean?”)

Only the last in this list is a universally recognized service that people expect monolingual dictionaries to offer. Speakers of Finnish
do not need a dictionary to find out how to spell or pronounce the words in their language; their writing system makes that unnecessary. Spell checkers and automatic hyphenation programs built into word processors solve most (but not all) of our problems of spelling and hyphenation for English. Yup'ik-speaking Scrabble players, if there are any, will need a morphological parser, not a dictionary, because the full set of well-formed words in their language cannot be listed: They speak a polysynthetic language. However, every dictionary worthy of the name has to help us get at the meanings of those words in the language that we do not understand.

Lexicographers have contrived another function of the dictionary, if only for the sake of advertising the completeness of the book, and this function imposes a great burden on the writers of definitions. Departing from an earlier tradition in which dictionaries included only the “hard words” (Landau 1989, 38–43), most dictionary publishers today think their role is to archive the whole vocabulary of the language, even those words that nobody capable of opening a dictionary could fail to know. The result is that lexicographers are (perhaps unfairly) called on to create definitions for words that nobody looks up and that hardly anybody needs definitions of (such as cat, horse, up, down, mouth, ear, man, and woman), among them a large collection of words that nobody could possibly be helped by seeing definitions of (such as have, of, mind, life, space, and time).³

This article does not deal with all of the aspects of dictionary making or all of the types of dictionaries. Instead, it deals with certain issues that at present one cannot easily imagine as central aspects of sign language lexicography.⁴ One of these is the access modern lexicographers of languages such as English and German have to very large digital corpora of texts, corpora prepared in a form that permits easy searching and concordance extraction. Furthermore, my emphasis on definitions means that I must limit my considerations to monolingual dictionaries. (In general, bilingual dictionaries offer translations, not definitions.) Sign lexicographers probably do not currently envision a huge ASL corpus and a sizable ASL dictionary in which each sign is explained in signs, but once the appropriate video or animation technology becomes inexpensive and easily available, they can begin work on building such dictionaries.⁵ Finally, this article
does not deal specifically with etymologies or pronunciation. I would expect the ideal dictionary to be rich in information about regional differences, as well as matters of register, style, period, genre, and the like, but I would assign this responsibility to the preparation and annotation of corpus material in which the individual texts are carefully classified and indexed in a way that allows users to mechanically derive such source information from the examples. Tools for making this information available to the dictionary user are outside the scope of my considerations here.

This article deals with the presentation of adequate meaning descriptions—definitions—in the kind of (electronic) dictionary that we can expect to become available in the twenty-first century, perhaps even in its early decades. Specifically, I propose that every definition consist of two parts: a frame-setting part, which characterizes the frame or conceptual background to each word sense, and a word-specific defining part, which takes the concepts and distinctions within the frame and uses them to create a word-specific meaning. By frame I mean a structure of knowledge or conceptualization that underlies the meaning of a set of lexical items that in some ways appeal to that same structure. Users already familiar with the frame will not need to bother with the frame-setting part, but it is an essential accompaniment to the definition.

Let us consider the frame of the seven-day week. The frame-setting part is a description of the background behind this particular family of words. In it we could distinguish the calendric concept (by which a week is anchored in an ongoing calendar) from the metric concept (by which a seven-day period can be taken as a unit for measuring spans of time) and explain that, in some Western societies, five successive days in the calendar week are devoted to work and the other two are not and that in one tradition Saturday midnight marks the moment when one full cycle ends and the next one begins. The entries that appeal to this frame, then, will include the names of the days of the week, specifying their order within the cycle, and will recognize the separation between the weekdays and the weekend and so on. A dictionary definition that identifies Wednesday merely as the middle day of the week is sufficient only when that full background can be taken for granted.
2. A Digression

The Encoding/Decoding Distinction

Before we can characterize the criteria for adequate meaning descriptions, we need to be aware of the difference between the encoding and the decoding functions of a dictionary. To exemplify this distinction, let’s imagine two different situations in which you approach a dictionary in order to learn a word’s meaning.

In the first situation, you have found an unfamiliar word in a text and want to know what information the text containing that word conveys and how that word contributes to this information. The dictionary should tell you first what meanings the word has. It should then give information that will help you decide which of those meanings are compatible with the context in which you have found the word and which of these can be integrated into the meaning of that context. This is the decoding or receptive function of a dictionary. You have encountered an unfamiliar word, and you expect the dictionary to help you figure out what is happening in the text you are reading.

In the second situation, you have come across an interesting word, and you want to make it your own; you want to add it to your active vocabulary. To achieve this you need to learn what meanings it has, what frames or conceptual backgrounds underlie its reason for existing, and what grammatical constructions it participates in for each of these senses. In this case, you would clearly benefit from seeing a reasonable variety of example sentences illustrating the word’s most typical uses. Furthermore, you need to be cautioned about whatever pragmatic, regional, or social-class associations exist for this word. Finally, you need to know what alternatives exist for this word—contrasting words, near synonyms, or words representing superordinate or subordinate categories—thus, you will be able to judge what effects you might create, in any given communicative situation, by a decision to use this word rather than any of its semantic or pragmatic neighbors. We refer to this as the encoding or productive function of a dictionary.

An example that illustrates the encoding/decoding distinction is the word carrion (Fillmore 1989, 72). If a dictionary tells us (as many do) that carrion is the rotting meat of a dead animal and says nothing
more than that, I will, on learning of some species of reptiles, birds, or insects that live on carrion, understand what they eat. But if I want to be able to use the word productively and in appropriate contexts, I need to know more than that. The definition does not inform me that I can't legitimately use the word carrion to refer to meat that had been left out of the refrigerator while the family was vacationing, nor can I use it to refer to dead animal parts that I accidentally stepped on while walking in the woods. Carrion is the word used for the food of scavengers, that is, animals that are opportunistic, nonhunting carnivores: Their diet is evolutionarily specialized to include the meat of animals that they find dying or already dead. The word belongs to a larger conceptual framework of the ethology of this group of animals. Someone who looks the word up in several dictionaries may be able to guess this background by noticing that the examples always suggest some outdoor scene involving specific kinds of birds, reptiles, and the like, from which they could eventually get the idea, but the kind of dictionary I envision will make such information explicit.

Although the decoding function of a dictionary seems simpler, to fully satisfy your decoding needs, you would still need a dictionary to provide all of the information that could satisfy your encoding needs: Understanding a word in a context, at any but the most superficial level, requires knowing something about why the word exists (what frame motivates the function it serves) and why the speaker might have chosen it (why the speaker's discourse is "in the frame").

A dictionary's decoding function is a responsibility for native-speaker lexicography that has never been questioned. The encoding function is in general not accomplished in ordinary dictionaries, is rather poorly served by familiar thesauri and synonym dictionaries, and is often not well achieved in dictionaries made for second-language learners.

3. The Case for Frames

The cause of a failure in communication, including that between the writer and the reader of a dictionary entry, should be sought at each end of the link; in this discussion I maximize the responsibility of the sender. It ought to be easier than it is for readers to learn what they need to know about a word from its entry in a dictionary; when difficulties arise they frequently are not the reader's fault.
It can be hard to find your way in a dictionary if you don’t understand the words used in the definitions. Rundell quotes an amusing passage from *Angela’s Ashes* describing the young Frank McCourt’s unsuccessful efforts to use a dictionary to learn the meaning of the word *virgin* (1998, 315). The definition contained words McCourt didn’t know, the definitions of those words contained words he didn’t know, and eventually he gave up. He knew that it had to be an interesting word, but he needed to find sources of information more reliable than the dictionary.

My sixth-grade English teacher wanted her pupils to improve their minds and expand their vocabularies through various dictionary-use exercises. A favorite assignment of hers was to ask her charges to find a word in the dictionary, learn what it meant, and demonstrate that accomplishment by composing a sentence in which they used the word properly. My memory of such exercises is that they seldom worked. It was too easy to create vacuous sentences such as “I have always been interested in enantiomorphy,” leaving the teacher to guess whether we really knew what the word meant. The shortcomings of such exercises also included times when the language of the definition did not characterize the meaning clearly. The psycholinguist George Miller tells the (apocryphal?) story of a child who did an assignment like this with the verb *erode*: Finding the defining phrase “eat out,” the child produced the sentence “My family erodes a lot.” My teacher, I assume, expected us to use dictionaries designed for children, or at least she expected us to choose words that we could imagine her wanting us to use, but still it didn’t work.

My test of this assignment sixty years later is less cooperative, but this time my purpose is not to learn the word but to evaluate the dictionary. For my new exercise I open the *Collins English Dictionary* (*CED*) at a random place, close my eyes, plop my finger down on the page, and discover that I’ve chosen—*Karmen vortex street*. The *CED* definition of this term is as follows:

a regular stream of vortices shed from a body placed in a fluid stream

There’s only one word in this definition that is not a part of the general vocabulary, yet even after learning from the same dictionary that a vortex is “a whirling mass or motion of liquid, gas or flame,
etc., such as the spiraling movement of water around a whirlpool," I
realize that I can’t possibly know what to make of the language of
this definition.9 How does a fluid stream differ from an ordinary
stream? What is a regular stream? What is a stream of vortices? And
what exactly is a body doing when it’s shedding a vortex? I quickly
convince myself that what this same dictionary tells me about the
words stream, body, and shed isn’t going to help me put it all together.

To understand the nature of my problem as a frustrated dictionary
user, it’s important to realize that the Collins dictionary gives no fur-
ther information. If there had been a subject label, such as “fluid
dynamics,” or some sort of qualifying phrase inside the definition, I
could have instantly realized that I, ignorant of that field, should not
expect to understand the definition. If I had that information, I
would at least know that there is a body of knowledge that the defi-
nition presupposes and that I don’t have. If I still needed to know
what the word meant, I would at least know who or what to consult
if I wanted to hunt down such knowledge.

The full description of the meanings of most—perhaps all—of the
lexical items should have the two parts we have characterized as the
frame-setting part (identifying and characterizing the frame and in-
roducing its frame-specific vocabulary) and the definition proper,
which specifies the portion or phase of that frame that constitutes the
profiled meaning of the word. Where the frame is known or can be
taken for granted, the definition identifies the concept in terms of its
participation in the frame; a frame setting is an explanation of the
features of the frame itself.10 To use an example of this distinction
from the work of Langacker, the frame-characterizing information
about hypotenuse includes mention of the properties of a right-angle
triangle; the definition proper identifies the property of being the
side opposite the ninety-degree angle in such a triangle (1988, 53).
The concept of right-angle triangle itself is part of a larger frame
covering closed geometric figures, and it should be possible for the
user to track through to that larger frame as well.11 Langacker refers
to what I am calling the background frame as the base, and he refers
to the concept highlighted against that frame as the profile. In short,
the individual words in our language can be understood only against
some kind of knowledge background, and thus dictionaries need a
way of identifying that background and giving enough information to help the user understand the concept. We say that a word evokes a frame and (borrowing Langacker's noun and verbalizing it) profiles some part or aspect of it.\textsuperscript{12} We need to know what frame the word belongs to, what function it has in that frame, what other words are related to it, and so on.\textsuperscript{13}

Most dictionaries I've consulted do not include \textit{Karmen vortex street} as a head word, and for this case one could argue that the term belongs in the glossary of a technical field and is of no concern to those engaged in ordinary dictionary making. But we still have the problem of words in the general vocabulary that many people know but others do not, where a dictionary ought to lead the user to a basic understanding of them. In our society, cultures, interests, jobs, and hobbies are heterogeneous; there are words from cooking, sports, investment, psychoanalysis, and religion, for example, that, although not universally known, are nevertheless parts of the ordinary daily discourse of large numbers of English-speaking people, and it should not be necessary to direct a newcomer to one of these areas to a specialist dictionary.

4. Problems of Defining without Frames

To demonstrate the importance of framing, I present some examples of what I consider failings of certain dictionaries. I know that it is easy to find fault with dictionaries, and my critiques may be unfair in many of the ways Atkins outlines (1993, 8–10). I respect the people who made the dictionaries I have examined, I have not seen the style manuals that constrained the writers, and I do not pretend that I could have done any better working under the same constraints. (And, the reader might notice, I don’t in the end offer my own definitions.) Nevertheless, I permit myself the luxury of pointing out definition styles that fall short of being really useful.

4.1 Case Study: Psychoanalysis

Many concepts from the language of psychoanalysis have entered the everyday consciousness of large numbers of English-speaking people. Understanding the psychoanalytic concepts of id, ego, and superego presupposes an awareness of Freud's theory of primitive psychic
energies and the manner of their control and modification in the maturing individual. Nobody can understand these terms without having some grasp of the network of ideas that holds them together. It would obviously make no sense to define each of them separately without referring at least indirectly to the elaborate complex of ideas Freud developed, or at least those parts that have entered the discourse and awareness of ordinary educated users of the English language. If each concept were defined (in the relevant sense) with the domain label *psychoanalysis*, that would at least be helpful; one would know where to look to learn more. If each were defined in a way that indicated the nature of its contrast with the other two, this would be more helpful still. And if each entry provided a link to a basic description of their claimed interactions, this would be ideal.

Let's try *ego* in two important dictionaries, beginning with what we find in *CED*:

**ego** 2. *Psychoanal.* the conscious mind, based on perception of the environment from birth onwards: responsible for modifying the antisocial instincts of the id and itself modified by the conscience (superego).

The subject label *Psychoanal.* in the *CED* definition is a reference to the larger conceptual framework, and the text of the entry itself shows something about the connection between *ego* and the two other basic concepts—*id* and *superego*—within that framework. The id, we learn, is associated with "antisocial instincts," and the superego is "the conscience." A dictionary reader who does not find the definition sufficiently informative as it stands at least knows where to go to acquire the missing details, beginning with definitions of the other two words in the trio. The following *CED* definitions of *id* and *superego* also refer to the other members of the full set:

**id** *Psychoanal.* the mass of primitive instincts and energies in the unconscious that, modified by the ego and the superego, underlies all psychic activity.

**superego** *Psychoanal.* that part of the unconscious mind that acts as a conscience for the ego, developing mainly from the relationship between a child and his parents. See also *id, ego.*
As a term special to psychoanalysis (all three words are tagged with the domain label Psychoanal.), the word ego, in short, joins the other words in an articulated network of interrelated concepts. Because understanding any member of this set requires understanding all of them, the Collins dictionary at least starts us on our way.14

The American Heritage Dictionary (AHD), fourth edition, by contrast, doesn't give us such a smooth ride. Here is its definition of ego:

def 2. In psychoanalysis, the division of the psyche that is conscious, most immediately controls thought and behavior, and is most in touch with external reality.

We learn that it is a concept "in psychoanalysis" and that it is a "division of the psyche that is conscious," but there is no cross-reference to id or superego. By the phrase "is most in touch with external reality" we infer that other divisions of the psyche must exist. By reading the entire dictionary, the reader eventually comes upon the words id and superego, of course. In those entries the domain indication is "Freudian theory," not "psychoanalysis.15"

id In Freudian theory, the division of the psyche that is totally unconscious and serves as the source of instinctual impulses and demands for immediate satisfaction of primitive needs.

superego In Freudian theory, the division of the unconscious that is formed through the internalization of moral standards of parents and society, and that censors and restrains the ego.

Using AHD we are eventually able to piece together, with luck and a great deal of detective work, the information that "the psyche," referred to in these definitions, has a conscious part and an unconscious part, and the unconscious part has two subparts, the id and the superego. The text of these definitions does not explicitly associate Freudian theory with psychoanalysis: The domain names included in the definitions are psychoanalysis for ego, psychiatry for psyche, and Freudian theory for id and superego.

The entries in both dictionaries do not clarify one aspect of the grammatical behavior of these words; some of them can be used with the definite article to refer to a psychic entity understood as resident
in people in general—the id, the superego, the ego, the psyche, the conscience, and the unconscious. The entries do not give us that information directly, but it is displayed in the language of the full set of definitions for this family of words. From such displays the reader cannot easily infer the extent to which such observations are generalizable; presumably this use of definite determination is not characteristic of the names of other psychological forces or structures such as memory, desire, thought, or instinct.

4.2 Case Studies: Religious Terminology

The vocabulary of religious terminology offers a number of special problems. Because of the nature of religious belief, people who operate within a given religious system are not likely to think of the frame-setting part as something that needs to—or ought to—receive explicit recognition. When the background the lexicographer assumes for a particular religious concept evokes a frame that is unacceptable to a reader, there can be objection. It may be that the adherents of a religious doctrine think a definition should merely say “what it is” and not bother to indicate that one can think of the concept in question as (merely) an element of somebody’s beliefs. Outsiders, however, need to know something about the belief system that gives meaning to the concept.

Several lexicographers have discussed the issues surrounding religious terminology. Gates, who served as religion editor for several Merriam Webster’s dictionaries, has described a number of problems he encountered while in this role (1994). Some of them concerned criteria for including a term: Names of religious organizations were to be admitted in part according to the number of members they currently have, although historical importance could win out over that criterion. Religious terms that occurred infrequently in the theological journals were to be excluded, and for this an arbitrarily chosen number of citations had to be determined, the cut-off point being different for different dictionaries—low in the case of pocket dictionaries, high in the case of the unabridged. Apart from these decisions where arbitrary criteria had to be established, Gates had to deal with mail the publishers received from religious practitioners objecting to some of the compilers’ decisions. Muslims wrote to object to letting
“Mohammedan” be a major entry: Of the three words “Moslem,” “Mohammedan,” and “Muslim,” the first two should, to recognize the sensitivities of current followers of Islam, be tagged as inappropriate, and neither of them should contain the main definition. (That is, the “Moslem” entry should carry the notation “see ‘Muslim,’” not the other way around.) Landau has described other situations, for example, one in which Mormon readers wanted their special senses of certain words to receive separate recognition in the dictionary (1989, 295).

Not many of the problems Gates and Landau record are of the kind I have in mind in this section, but we can see one of them in that light. The entry for “Judaism” in Webster’s Seventh New College Dictionary (W7) contains the phrase “the moral and ceremonial laws of the Old Testament.” Since the term “the Old Testament” exposes a Christian classifying frame that also includes “the New Testament,” there was objection to presenting the Judaic holy writ framed as a truncation of the Christian (Gates 1994, 96).16

4.2.1 God. For situations in which the majority of a language’s speakers entertain a particular belief, those who simply accept the frame and operate within it might feel they have a right to object to a definition that exposes the frame and describes it as a part of some people’s beliefs. If monotheists read a definition of God as “the principal object of worship in many monotheistic religions,” they could feel justified in complaining that the concept of God should not be defined in terms of the activities of worshipers. On the other hand, if atheists read a definition of God as “the Supreme Being who created and maintains the universe,” they could complain that the producers of the dictionary are using language that presupposes something they believe to be untrue. The inclusion of a frame-setting description can offend someone who takes the frame for granted; a frame-internal definition can annoy someone who rejects the frame.17

Now I examine several dictionaries’ entries for God. CED, identifying the domain with the label Theol., puts the frame-internal and frame-external views in the two parts of a single definition line18:
God n. 1. *Theol.* the sole Supreme Being, eternal, spiritual and transcendent, who is the Creator and ruler of all and is infinite in all attributes; the object of worship in monotheistic religions.

*AHD* introduces a minimal belief context with the qualification “conceived as”:

**god** n. 1. **God.** a. A being conceived as the perfect, omnipotent, omniscient originator and ruler of the universe, the principal object of faith and worship in monotheistic religions.

And the *New Oxford Dictionary of English (NODE)* inserts the belief context by relating the word to monotheistic religions, giving Christianity first place:

**God** n. 1. (in Christianity and other monotheistic religions) the creator and ruler of the universe and source of all moral authority; the supreme being.

Definitions of *God* are problematic because this word, with uppercase initial, is used in referential contexts as a complete noun phrase; in its grammatical behavior it is more like a proper name than something capable of definition. The act of offering a definition cannot help but reveal something about the nature of the background belief, either by being blatantly frame-internal, which works only when communicating with believers, or by characterizing the belief from the outside, which raises the possibility of doubt.¹⁹

4.2.2 *Reincarnation.* A different kind of problem arises with the concept of reincarnation. Probably most users of an English-language dictionary, at least in the United States, do not believe in reincarnation. Lexicographers sometimes feel the need to explain that the word *reincarnation* does not refer to something that necessarily happens; rather that it is part of a particular belief system. In this section I examine several definitions of the noun *reincarnation* and the verb *reincarnate*. I begin with the noun.

With the *CED* definition the definer wishes to communicate the idea that a particular account of what happens to “the soul” upon
the death of “the body” is a part of a belief system. In a dictionary prepared for people whose religious beliefs accept reincarnation, the word would not be defined as a belief. *CED* seems to offer a separate definition just for believers:

**reincarnation** n. 1. the belief that on the death of the body the soul transmigrates to or is born again in another body 2. the incarnation or embodiment of a soul in a new body after it has left the old one at physical death.

By contrast, we find *AHD* and *NODE* merely defining the term directly, without reference to an external frame (or belief system):

reincarnation n. 1. Rebirth of the soul in another body. *(AHD)*

reincarnation n. the rebirth of a soul in a new body, a person or animal in whom a particular soul is believed to have been reborn:

*He is said to be a reincarnation of the Hindu god Vishnu.* *(NODE)*

The *CED* definition of the noun gives two senses, one where the concept is described as a belief, the other (the one for believers) defined with words that could refer either to the process or the result of a process. The secondary definition in the *NODE* entry points clearly to the result meaning.

The first sense description in *CED* seems to be a finessing of the need to provide a frame-external view (indicating that reincarnation is an event type within somebody’s belief system) while simultaneously indicating the content of the belief. But that makes it seem that the word designates a belief rather than a process. A question such as “Do you believe in reincarnation?” does not mean “Do you believe in the belief that . . . ?”

Now let’s look at the verb. The *Chambers Dictionary*, *AHD*, and *CED* all have definitions of *reincarnate* as a transitive verb, although *CED* at least reports that it is “often in passive”:

**reincarnate** v.t. to cause to be born again in another body or form; to embody again in flesh. *(Chambers)*

**reincarnate** tr.v. 1. to cause to be reborn in another body; incarnate again. *(AHD)*

**reincarnate** vb. (tr.; often passive) to cause to undergo reincarnation; be born again *(CED)*
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With the *CED* definition the definer wishes to communicate the idea that a particular account of what happens to “the soul” upon
The verb entries are interesting because of a common lexicographic practice. Although the verb is almost always (“often” is misleading) used in the passive, the entries seem to treat it as an ordinary transitive verb. CED, while informing the reader that reincarnate is often used in the passive voice, also claims an intransitive use but offers no examples.  

I think an innocent dictionary user would have trouble with these definitions. First, most encountered uses of the verb in religious discourse are likely to be in passive voice, if only for lack of a believable agent. “I’ll probably be reincarnated as a fish” is a plausible attested sentence whereas “maybe they (?) are going to reincarnate me as a fish” sounds odd. By giving the word as a transitive verb, without comment, questions are raised about who does the reincarnating and whom it gets done to. Furthermore, I suspect that if our innocent reader were to ask friends what it means to be “born again” (following the second part of the CED definition), he or she would probably not hear anything that sounds like the transmigration of souls.  

It is important to see that none of these definitions says anything direct about the underlying belief system. A reader who is unaware of that system would probably have a great deal of difficulty figuring out what is meant by “to embody again in flesh,” a phrase the Chambers dictionary uses for transitive verbs. There is no way of seeing, from any of the verb definitions, that the transition is understood as occurring after the death of one being and at the birth of another, which is what reincarnation is, at least in the folk version.  

Without some frame-setting specifications, it seems to me that these definitions, assuming they are read by someone who has no idea what the underlying belief structure is, could communicate nothing at all.

4.2.3 Sins and Their Consequences. Remaining with the religious theme, let’s see what problems might arise in dealing with the terms that belong in a fairly complex cluster of interconnected concepts within Christianity. I examine the concept of sin and its consequences as elaborated in Roman Catholic eschatology; words relating to this concept include sin, grace, God, Satan, heaven, hell, the suburb limbo, and the way station purgatory. In this next exercise I explore
the difficulties in learning the meanings of this family of concepts through the standard trade dictionaries. In the process I point to the kinds of information that we would need a truly informative dictionary to provide.

Although U.S. secular law distinguishes various levels of offenses, starting with the large-scale division that separates infractions, misdemeanors, and felonies, with many subdivisions among the felonies associated with different levels of punishment, the division of sins, according to what one can learn from a dictionary, is strictly binary: There are mortal sins and venial sins. The really serious ones—the mortal sins—lead to damnation.

CED and NODE both present mortal sin as involving loss of grace, and CED contrasts mortal sin with venial sin. Venial sins are described as being not terribly serious, but the only example we can find in the entries is losing one’s patience.

**venial sin** n. Roman Catholic Church: an offense that is judged to be minor and/or committed without deliberate intent and thus does not estrange the soul from the grace of God. *(AHD)*

**venial sin** n. Christianity: a sin involving only a partial loss of grace. Compare mortal sin. *(CED)*

**venial sin** n. (in Roman Catholicism) a relatively slight sin that does not entail damnation of the soul: She lost her patience, a venial sin she must report later to Father Damien. *(NODE)*

There have been subtle changes in the definitions of **mortal sin** in the third *(AHD3)* and fourth *(AHD4)* editions of the *American Heritage Dictionary*. The two editions agree in characterizing a mortal sin as “so heinous it deprives the soul of sanctifying grace and causes damnation.” *AHD3* locates the concept in theology; *AHD4*, in Christianity. The examples in *AHD3* are first-degree murder and perjury; the examples in *AHD4* are murder and blasphemy. *AHD4* is a bit less frightening, by adding the condition that damnation is the consequence of a mortal sin “if unpardoned at the time of death.” Neither edition contrasts the two levels of sin.

A dictionary user unfamiliar with the background frame of Catholic eschatology must wonder how this relationship between wrongdoing and punishment got started. Thus, the concept of original sin, which is assumed to be genetically inherited by humans as a result of
error on the part of our supposed ultimate ancestors, is important background knowledge. I continue my practice of examining entries for the concept in question:

original sin n. a state of sin held to be innate in mankind as descendants of Adam. (CED)

original sin n. According to Christian theology, the condition of sin that marks all human beings as a result of Adam’s first act of disobedience. (AHD)

original sin n. in Christian theology, the tendency to sin supposedly innate in all human beings, held to be inherited from Adam in consequence of the Fall. (NODE)

Do the definitions taken as a whole allow us to trace the consequences of sinning? If we had several dictionaries at hand and could explore them all, we might be able to figure some things out. The two main outcomes of an individual’s completed life are thought to be long-term residence in heaven or hell, the latter serving as the default for people who do not receive some remedy (here there are conditions related to forgiveness, grace, virtuous acts, etc., depending on local doctrines and generally not included in the definitions), but the details are left to the reader to calculate. It is further instructive to consider some definitions of heaven and hell:

heaven n. 1. (sometimes cap.) Christianity: a. the abode of God and the angels. b. the place or state of communion with God after death. (CED)

heaven n. Often Heaven. a. The abode of God, the angels, and the souls of those who are granted salvation. b. An eternal state of communion with God; everlasting bliss. (AHD)

hell n. 1. Christianity: (sometimes cap.) a. the place or state of eternal punishment of the wicked after death, with Satan as its ruler. b. forces of evil regarded as residing there. (CED)

hell n. 1. Christianity: (sometimes cap.) a. the place or state of eternal punishment of the wicked after death, with Satan as its ruler. b. forces of evil regarded as residing there. (CED)

hell n. 1. a. Often Hell. The abode of condemned souls and devils in some religions; the place of eternal punishment for the wicked after death, presided over by Satan. (AHD4)
Although definitions of *hell* include mention of eternal punishment, the dictionary definitions of *heaven* do not explicitly mention reward or “grace.” (A possible reason for that is proposed in the discussion of *purgatory* in a later section.)

Limbo is generally understood as the abode—presumably eternal—of the souls of unbaptized babies and Old Testament prophets but seems now to be generously extended to good people who, because they were born before Christ, never had a fair chance to become proper Christians. There are even more generous views, my informants tell me: Limbo will be emptied into heaven “at the last trump.” Some definitions follow:

**limbo** n. 1. (often cap.) Christianity. The supposed abode of infants dying without baptism and the just who died before Christ. *(CED)*

**limbo** n. 1. Often Limbo. Theology. The abode of just or innocent souls excluded from the beatific vision but not condemned to further punishment. *(AHD3)*

**limbo** n. 1. (also Limbo) (in some Christian beliefs) The supposed abode of the souls of unbaptized infants and of the just who died before Christ’s coming. *(NODE)*

**limbo** n. 1. Often Limbo. (Roman Catholic Church) The abode of unbaptized but innocent or righteous souls, as those of infants or virtuous individuals who lived before the coming of Christ. *(AHD4)*

Alternatives to limbo are not indicated in most of these definitions, but the reference in *AHD3* to “the beatific vision” can probably be construed as heaven. In connection with purgatory, too, the alternatives are not made explicit in the definitions I’ve examined:

**purgatory** n. 1. Chiefly R. C. Church. A state or place in which the souls of those who have died in a state of grace are believed to undergo a limited amount of suffering to expiate their venial sins and become purified of the remaining effects of mortal sins. *(CED)*

**purgatory** n. 1. Roman Catholic Church. A state in which the souls of those who have died in grace must expiate their sins. *(AHD)*

The concepts of expiation and purification, together with reference to the “limited amount of suffering” identified in the *CED*
definition of purgatory, do not of themselves lead to information about what happens when all of this suffering is finished. To understand the concept of purgatory one has to be aware of a fairly complex network of ideas, connecting many parts of certain varieties of Christian doctrine. Such a structure includes notions of sin and retribution, heaven and hell, grace and salvation, and a whole host of others, all of these intimately connected with each other and with the notion of purgatory. We can't understand the point of having a concept such as purgatory if we are unaware of these related concepts. More specifically, the soul of a dead person has four possible abodes: heaven, hell, purgatory, or limbo. You more or less have to understand the whole plan in order to understand any one part of it.\textsuperscript{21}

4.3 A Lesson

With the words heaven and hell we become aware of some of the lexicographer's difficulties with this family of terms and in fact with any terms that have a single general meaning but are differently elaborated within different frames. At some level we would like a dictionary informed by a theory of frame semantics to show how the concepts and categories it introduces are related to each other, so that, for example, notions such as grace, salvation, and heaven, on the one hand, and sin, damnation, and hell, on the other hand, would all be connected within some general account of Christian doctrine. But because heaven and hell are concepts found in many religions, not just Christianity, this would require separate treatment of these words for each of many religions. A lexicography informed by the frame concept would tend to define not words but only families of words that jointly express one frame, even though the meanings of some of the words, such as heaven, might have essentially identical descriptions in different frames. No doubt a military title such as captain deserves different definitions as applied across branches of the military services, where the rank's position within its hierarchy can differ in important ways, but there seems to be something common to the general concept of heaven no matter what its "specialist" terminological setting is. The issue is something like a potential linguistic (but probably not a lexicographic) controversy about the
treatment of short: Although there is clearly something shared in the uses in which this word contrasts with long and when it contrasts with tall, we would surely want the pair dealing with simple linear extent (short vs. long) to be described separately from the pair dealing with vertical extent (short vs. tall).

The task of maintaining this separation between the most general meaning of a word (one that applies to its function in multiple frames) and the role it plays within a frame-local system of contrasts is difficult because there is no convenient mechanism for doing this. If labels such as theology and Hinduism were consistently used and definition-internal hedges about beliefs were avoided, the problem could be partly solved, but such labels generally represent categories that are too broad for the meaning to be properly anchored in its own proper belief system. A frame-based dictionary ought to allow one to choose a word such as heaven, select the frame (such as some version of Christianity) within which one is to understand it, and arrive at a description of the entire system of concepts, and the words that label them, that characterizes that frame. Simply offering definitions of the words one at a time won’t do.

5. Ordinary Frames

The examples given so far involve frames that have to become known if “outsiders” are to end up having the same understandings as the people who live within these frames. Thus far, we’ve been thinking of outsiders within the community of native speakers of English, in contexts in which it is easy to recognize that some people have beliefs or knowledge that others do not. But we may have to think about users who are outsiders (to varying degrees) to the culture and language as a whole and about monolingual dictionaries that can nevertheless make useful information available to them. Witness the thriving, especially in Britain, of English monolingual dictionaries for language learners. The effort to analyze the frame-setting background of a word’s meaning, then, can be seen as a kind of ethnography. It is necessary to make explicit the background of beliefs, experiences, practices, institutions, or ready-made conceptualizations available to the speakers of the language as the necessary underpinnings of the ways they speak and the ways they “think for speaking” (Slobin 1991).
If a word has its place within some technical universe of discourse, then the ethnography brings one into that technical field; if it's an ordinary word, however, then the analysis becomes deeper, not simpler. That is, it may be necessary to make explicit the basic cultural underpinnings of the frame behind the word. This generally requires of the native-speaker lexicographer a certain degree of exoticization: Something that is obvious to me and the people I have always dealt with might not be obvious to members of other cultures—or to those traditional aliens, Martians—and it may require a major intellectual effort to achieve that exoticization.

In certain cases experiences and perceptions are clearly universally available (such as noticing where one finds things in the surrounding environment), but different languages make interestingly different choices in expressing those relations. For speakers of English, knowing how to use and understand the preposition *in*, in its most basic location-specifying meaning, requires having access to a conceptual structure that we can refer to as “containment,” in terms of which it is possible to speak of one entity's being located with reference to the interior of another entity. Knowing the preposition *on* and how to use it (the books *on* the shelf, the mirror *on* the wall, the fresco *on* the ceiling) requires a schema involving “surface contact and support.” One must see these same schemata as underlying the semantic properties of other prepositions and preposition–complexes in English, such as *into* and *out* of alongside *in*, and *onto* and *off* of alongside *on*. Because the details are complex but thoroughly “overlearned” by native speakers, this is where the ability to exoticize is necessary. It is easy and natural for monolingual speakers of English to believe that the recognition of such relations is simply a natural concomitant of being human and being able to observe objects in space. But the detailed task of providing clear explanations of the spatial meanings of prepositions such as *in*, *on*, *under*, *over*, *above*, *below*, *beneath*, *underneath*, and the rest in a way that could allow a language learner to make the right predictions is notoriously difficult. The semantics of spatial relations has been the subject of numerous research efforts in which the results involve a surprising number of variables: interiority vs. exteriority, contact vs. distance, gravity, tightness of fit, relative size, and salience of figure vs. ground, and in some cases simple conventionality; in many cases the explanations have to be accompanied
by graphic schemata of some sort. Thus, both for concepts based on very basic cultural frames and for those based on the language-specific divvying up of spatial relations, frame information is necessary for a second-language learner to truly understand the use and meaning of a given word.

6. The Ideal Dictionary

How can we expect a frame-based dictionary to work? The idealization I have in mind is one for which the world may not yet be ready; for one thing, it begins by assuming that people will do their reading on a computer screen or with simple handheld scanners that can enter sentences into a working space within an electronic dictionary.

- The user somehow identifies a sentence containing the unknown word or words and highlights the part of the sentence that the user does not understand (the whole sentence, in case the selection of the correct sense requires access to words and phrases in the sentential context. And besides, one doesn’t always know just what it is in a phrase that one doesn’t understand).

- An attached parser analyzes the sentence, including any complex words, and tries to provide all reasonable parses, using a largest-match-first means of identifying lexical items, to make sure that idioms and fixed phrases get recognized. (If the sentence contains “trip the light fantastic,” the parser will recognize that whole phrase, and no parse will be proposed that offers separate treatments of its individual words.)

- An entry for the highlighted word or phrase is revealed in a separate window, which includes definitions, examples of its combinability with other words and phrases, and hyperlinks to information about the frame.

- If necessary, the user who is not familiar with the frame can follow links to frame descriptions of greater and greater detail to obtain a full understanding of the background frame.

- Example sentences showing how others have used the word can be extracted from a supporting corpus.

- To the extent that the lexicographers have noted significant associations of the word with domains, registers, genres, periods, regions,
present to cover technical terminology, although a frame semantics
dictionary for such items is undoubtedly feasible. The FrameNet
analysis process, based on the 100-million-word British National
Corpus (BNC), creates a database of lexical entries whose annota-
tions link specific word senses to descriptions of frames common to a
number of lexical units (the FrameNet term, taken from Cruse [1986,
77–78], for a word in one of its senses). The grammatical infor-
mation displayed in the corpus examples is also recorded in detail, linked
to the various frame elements (the categories or roles in the frame
evoked by the lexical unit). Thus, the FrameNet database provides
for each lexical unit some simplified frame-external information (the
frame description) and frame-internal information (the definition
within the lexical entry, together with the analyzed and annotated
corpus examples).

Two related but distinguishable concepts of frame belong in this
discussion; these correspond to the two separate introductions of the
term frame into the cognitive sciences. One of these is the large-scale
cognitive frame, which seems to be identifiable with a number of
concepts that have been introduced to various branches of cognitive
science since the 1970s, from frame (Minsky 1977), schema (Bransford
and Franks 1971, harking back to Bartlett 1932), image schema (Lakoff
1987), script (Schank and Abelson 1977), and various others, repre-
senting both static and procedural systems of articulated relations and
expectations, not necessarily connected with linguistic expression.
One can invoke Schank’s restaurant script for making sense of a text
that contains no lexical item that specifically evokes the script in
question, for example, words such as restaurant, waitress, and menu. A
description of these larger frames, as they figure in the kinds of de-
scriptions I envision for lexicographic purposes, should include de-
scriptions of situations, labels for the roles and aspects of situations,
constraints on the fillers of such roles, and so on.

The other concept of frame in contrast to the large-scale cognitive
frame is the small-scale frame. This describes the frames that enter
into the description of individual lexical items. This may have been
first introduced through the concept of case frame in Fillmore (1968).
For example, we might have a large-scale frame for the set of proce-
dures and expectations that make up the U.S. criminal process sys-
tem, taking into account the full passage from suspicion of the
or social, educational, and sexual characteristics of typical users, eit-
ther the dictionary will present such information directly or it will 
make it available on user inquiry.

To be user friendly, such a dictionary would have to allow various 
ways of accessing it: We could think of this as meaning that a single 
database could be the backing of a number of separate "dictionaries," 
each defined by the intended user and the needed domain of dis-
course, but all derived from a single and very large data source. (At-
kins speaks of this as preparing a single analysis for multiple syntheses 
[1992–1993].) Definitions can be formulated with sensitivity to the 
kind of knowledge we assume that users bring to the dictionary, the 
same word being defined in various ways for the sake of differently 
prepared users, that is, according to the user profile initially entered 
by or for the user.

Once we have defined such a body of information, we can char-
acterize different dictionaries derivable from it: historical dictionaries, 
learners' dictionaries, children's dictionaries, specialist dictionaries, 
and so on, these differing from each other with respect to wordlists, 
definition styles, access to cultural background, and so on. Since I am 
describing the ideal dictionary, we may as well assume that the entries 
are also represented in the kinds of formalisms that allow them to be 
usable by automatic natural-language-processing applications such as 
text understanding, document routing, information extraction, and 
machine translation. We may also assume that the project for creating 
such representations provides the formalisms needed for integrating 
lexical meanings into the meanings of sentences and texts.

7. The FrameNet Project: A Step toward the Ideal Lexicographic 
Resource

Fillmore and Atkins (1992) give an early expression of interest in the 
design of a frame-based dictionary that offers tentative frame descrip-
tions for the English word risk (i.e., both the noun and the verb). A 
large research effort that aims to build on the ideas in that study is 
the NSF-sponsored "FrameNet" project. FrameNet has as its ob-
jective to give an exhaustive account, in terms of frame semantics, of 
a large portion of the basic vocabulary of English: It is not my aim at
present to cover technical terminology, although a frame semantics
dictionary for such items is undoubtedly feasible. The FrameNet
analysis process, based on the 100-million-word British National
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first introduced through the concept of case frame in Fillmore (1968).
For example, we might have a large-scale frame for the set of proce-
dures and expectations that make up the U.S. criminal process sys-
tem, taking into account the full passage from suspicion of the
commission of a crime through trial and adjudication. A description of the entire process will provide names for the events and participants (by which, for example, identifying terms such as offender, suspect, detainee, defendant, convict, and prisoner might, in a single realization of the entire large-scale frame, refer to the same person). However, in the description of individual words that are linked to particular subparts (subframes) of this large frame, the role names will be limited to those needed for that subframe (such as arresting officer, suspect, crime, and so on in the case of the verb arrest, or judge, defendant, and charges in the case of the verb arraign).\textsuperscript{25}

To return to our simplest case, the lexical entry for Wednesday can show the link to the Week frame and identify its position within the seven-day calendar cycle. Accompanying example phrases from the corpus can include expressions combining the word with named parts of the day (on Wednesday afternoon), uses in the generic plural (on Wednesdays), combination with identifiers such as next or last, and so on.

The entry for id will provide a link to Freud’s account of the interaction of id with ego and superego. In the case of a word like this, which does not designate anything available to direct experience, example sentences will be particularly valuable because it’s difficult from a mere definition to know how people who use the word actually talk. Such examples might include phrases that reveal supposed properties of the id, such as the following excerpt from the BNC:

\begin{quote}
the impulses of the id, which seeks pleasure
the sexual instincts of the id
the powerful, but relatively unfocused, instinctual drives of the id
\end{quote}

Others might provide ways of speaking of the id’s relation to its partners, such as the following, also from the BNC:

\begin{quote}
the conflict between the drives of the id and the demands of the cultural superego
the essence of the ego’s operations was its ability to redeploy and redirect the malleable drives of the id
The ego knows that if it has to make choices in the world of actuality it can not keep its cake and eat it too; the id does not. They started to talk about the ego, id, and superego as if they were physical realities located in the body.
\end{quote}

The double-decker definitions we have been discussing will obviously need to treat different kinds of words in very different ways,
but in each case it is important to give the user access to the conceptual structure that underlies the word, information about the position or orientation of its meaning within that conceptual structure, and a generous supply of examples of how the word interacts with other words and phrases in the utterances of language users. Perhaps now is the time for writers of dictionaries to revisit the troublesome traditional distinctions between "lexical" and "encyclopedic" information in dictionary entries. Recent trends toward a grudging admission of more and more encyclopedic information may perhaps be seen as progress, for it would be impossible to categorize the information in the frame-setting part of our definitions as being only lexical or only encyclopedic. Describing the conceptual structures underlying a word requires both types of information. It is only with the advent of the electronic format that the introduction of frame-based lexicoenyclopedic information may be fully integrated into its rightful place in lexicographic descriptions. The electronic aspect of the dictionary, while itself innovative, is less revolutionary than the new type of defining that it makes possible.

Dictionaries Cited


Notes

1. The preparation of this article has profited from contributions and criticisms from Sue Atkins, Abby Wright, and Ellen Dodge. Readers who
know Atkins will recognize those passages for which her comment was simply “Dream on!”

2. To help plan a training course for her company’s employees, an acquaintance set up a means of monitoring the use of an online dictionary in a computer research company. A vocabulary-teaching program was to be established for the words people looked up most often. She found, however, that the most common hits were the “nasty” words—most likely not the words her engineering colleagues needed to learn the meanings of.

3. I am not suggesting that dictionaries can omit such words as entries. There is information language users need that goes beyond definition proper, involving contrasts, collocations, idioms, associations, and the like; Hanks makes this point (1993, 109). Furthermore, since we are envisioning a uniform database to be adapted to both human and computational needs, the latter including automatic text understanding (up to some level, at least) of familiar and common words—as well as the familiar and common frames, such as the system of weekday names—will be essential.

4. This paragraph reveals the occasion for which the article was written.

5. If linear notation schemes for signs are closer to standardization than I have been led to believe, and are easily learned, then monolingual sign dictionaries will of course become feasible, but I would still guess that the accumulation of a truly vast corpus in such a notation is an undertaking that will take decades to build.

6. Of course, machine-readable dictionaries are already abundantly available, but except for clever means of finding information and relationships in them, their actual content is usually limited to that of the print dictionary on which they are based.

7. The assumption here is that for Situation 1 the typical case would be one of polysemy, in which a word has several meanings, and perhaps more than one of these could fit the textual context. Mature users of a language, of course, might look up only rare words or technical terms that might have only one sense.

8. An important attempt to provide a learner’s lexical resource that serves the encoding function is the Longman Language Activator (LLA), advertised as “the world’s first productive dictionary.”

9. I did know what vortex means; I’m simply pointing out that if this is the only word in the definition that someone might feel the need to look up, it still would not help.

10. The frame description can be thought of as an elaboration of the “subject” that is labeled in the specialist entries in a dictionary (zoology, Buddhism, fluid dynamics, etc.), except that in our case (1) the intention is to give the dictionary reader access to the subject information needed, and (2) the concept of frame covers all of the words in the language, not just the specialist terminology.
11. I posit not only that words are associated with frames but also that frames are connected to other frames: Some frames are components of more complex frames, some frames are elaborations of more abstract frames, and so on.

12. The frame setting is a description of Langacker’s base; the frame-internal definition is the identification of the profile taking the base for granted. In Langacker’s words, the base is “the context needed for the characterization of the profile” (1987, 118).

13. The word word in this discussion introduces a well-known awkwardness since most words have multiple meanings. The term lexical unit has been proposed for the pairing of a word with a sense or, in our case, with a frame (Cruse 1986, 23f). In most uses of word in this article, that’s what is meant.

14. We are still not as far along as we would like to be. I’m not sure how someone who knew only what can be found in these definitions would fare in composing a sentence that displayed an understanding of the concepts, beyond paraphrasing the relations found in the three definitions.

15. Actually, the etymology sections of the id and superego entries mention psychoanalysis as the source of the words, so we could have traced the connections even if we had started out with one of those words—but only if we had read the entire entries, not just the definitions. Also, starting out with ego, we could have looked up psychoanalysis, where indeed we see reference to all three terms.

16. This example shows an unavoidable conflict between being culturally sensitive and explaining something to someone who does not already share the cultural knowledge.

17. A more obvious kind of frame clash could occur in the mind of someone who supports abortion rights and finds a dictionary that uses murder as the genus term in the definition of abortion. It can be difficult to state definitions in neutral terms.

18. One can see lexicographer intrusion in the CED decision to use uppercase initials in “Supreme Being” and “Creator.”

19. These definitions also show traces of being the kinds of entries that exist for the sake of satisfying the need to include all words, rather than being attempts to explain a difficult concept in simpler terms. It is hard to imagine that a description of God as “infinite in all attributes” could produce an “Oh, now I know what they mean!” reaction in a reader.

20. This generalization is intuition based. The British National Corpus has several instances of a simple active use, but these are not uses within belief systems (Hinduism, Buddhism) that assume reincarnation.

21. I don’t actually know how much of this is an official part of any church’s doctrine or whether anybody actually believes any of it, but it at least seems to be a well-defined part of folk versions of Catholic eschatology.
22. Perhaps the most detailed demonstration of the issues is Herskovits (1986); an account of the descriptive variables needed for describing French spatial prepositions is Vandeloise (1991). Comparisons with more exotic systems, including studies of their acquisition by children, are found in Bowerman (1996), Bowerman and Choi (2001), and Choi and Bowerman (1991, 1992). Experiments in characterizing spatial relations, as categorized in different languages, for learning by a computer can be found in Regier (1996). A general discussion of language differences in spatial descriptions is Talmy (1983).

23. The project is supported under NSF Grant ITR/HCI 0086132, "FrameNet++: An On-Line Lexical Semantic Resource and Its Application to Speech and Language Technology," administered at the International Computer Science Institute. The principal investigator is Charles J. Fillmore; the funding of the current phase continues through August 2003. The public website is http://framenet.icsi.berkeley.edu/~framenet.


25. The treatment as case frames in the original sense, however, assumed that the "semantic roles" needed at the level of individual verbs could be limited to a few general-purpose notions, identifying an agent, something that moved or changed, a location, and a few others.

References


