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distinctiveness from members of sister categories are both maximized. Take the categories ANIMAL, DOG, and SPANIEL. Animals are distinct enough from nonanimals, but their overall degree of mutual resemblance is relatively low; in the case of spaniels, they resemble one another highly, but differ in only minor ways from other types of dog; in the category DOG, on the other hand, mutual resemblance and distinctiveness are both high. Basic level items are also the default names for things, the names we use for simple, everyday reference. Suppose A hears a noise in the garden and asks B what it is. B looks out of the window and sees a spaniel. What does he say? Any of the following would be true:

- (i) Oh, it's just an animal.
- (ii) Oh, it's just a dog.
- (iii) Oh, it's just a spaniel.

In the absence of special circumstances, (ii), which contains the basic level item, is by far the most likely.

Some examples (in capitals) of basic level items are as follows:

- a. vehicle – CAR – hatchback
- b. fruit – APPLE – Granny Smith
- c. living thing – creature – animal – CAT – Manx cat (British)
- d. object – implement – SPOON – teaspoon

The other main type of branching lexical hierarchy is the part-whole variety. (In Figure 12.6, as in Figure 12.5, only some of the branches are shown.) Part-whole hierarchies are just as numerous in the vocabularies of natural languages as are taxonomies. They differ from taxonomies in a number of respects, but perhaps the most significant difference concerns structural levels: meronomies tend to have no, or only weakly developed, levels, hence there is no equivalent to the basic level of taxonomy.

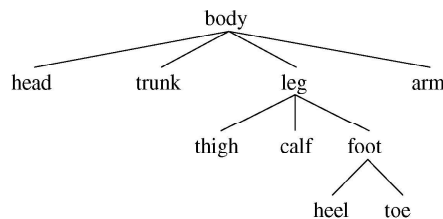


Figure 12.6

7.2 Word families

Another type of grouping of associated words is the *word family*. Most complex lexemes are built up out of a *root* and one or more *derivational affixes*. For instance, the word *undress* is composed of the root *dress* and the prefix *un-*; the noun *re-entry* is composed of the root *ent(er)*, the prefix *re-* and the suffix *-y*. A word family is composed of all the words derived from a given root. For instance, the following all belong to one word family:

nation	national (adj.)	national (n.)
nationally	nationalize	denationalize
nationality	nationalism	nationalist
international	transnational	nationhood
(etc.)		

As native speakers, we have a quite complex knowledge of which derivations are possible, and what they mean. We know, for instance, that although a *painter* is someone who paints, and a *painting* is the concrete end result of a painter's efforts, a *screwdriver* is not someone who inserts screws, but an appliance for doing this, and a *killing* is not the concrete end result of the process denoted by *kill* (i.e., a corpse), but an instance of the act itself. We also know that whereas a *diner* may be someone who is dining, it can also be a place where one dines, and we know that there is no parallel reading for *painter*.

7.3 Domain-specific vocabulary

Another type of word grouping controlled by native speakers is the vocabulary appropriate to a particular situation, for instance, a race meeting:

1	2	3	4
horse	jockey	course	bet
favorite	owner	race	run
form	trainer	fence	win
odds	bookmaker	winner's enclosure	jump
colors	steward	starting-gate	take a fence
winner	stable-boy	heavy going	come up on the inside
handicap		reins	fall
yearling			disqualify
			scratch
			etc.

A broad grouping like this is composed of a number of nested subdomains, such as weighing in, saddling, starting, running the race, laying bets, and so on.

7.4 Layers of vocabulary

We shall use the expression *layers of vocabulary* to refer to much larger groupings of words, each of which will incorporate many structures like those described, which are confined to certain areas of usage. For instance, there are technical vocabularies, such as those used by art historians, or doctors, when communicating with others of their kind. There are also collections of words which associate together at different levels of formality. These are effortlessly called up in appropriate contexts, and they must be somehow linked in storage.

7.5 The mental lexicon

Each of us has in our cognitive system some kind of inventory of all the words that we know, together with all the information – semantic, grammatical, and phonetic / graphic – necessary for their correct use. Estimates of the number of words known by an average adult speaker vary from 150,000 to 250,000 (see, for instance, the discussion in Aitchison (1987: 5–7)). This represents a vast quantity of information.

The inventory is accessed via written or spoken forms every time we hear or read something in a language we know, and via some kind of semantic representation every time we produce language (recall that, because of widespread synonymy and polysemy, the mapping between forms and meanings is not one-to-one, but many-to-many). Although much is known, the details of representation and processes of use are still very imperfectly understood; nonetheless, the astonishing speed at which words are retrieved and identified – within about a fifth of a second from the start of the word, for spoken language – points to a highly efficient and organized storage system.

Every person's mental lexicon is different from everyone else's, yet by and large we manage to understand each other; this presumably indicates an adequate degree of overlap between individual lexicons.

7.6 *Vocabularies*

In addition to the mental lexicons of individual speakers of a language, it is possible to think of the total lexical stock of a language, which covers all its speakers, including those belonging to distinct speech communities, and including those who are now dead. Of course, the boundaries of such an entity are very vague, and will differ according to the purposes of the compilers and users (how far back in time do we go? how many dialect, or specialized technical forms do we include?, etc.). The natural home for such a vocabulary is the dictionary, and the natural way of drawing it up is by studying corpuses. The contents of a dictionary do not correspond to the contents of the mental lexicon of any single speaker, nor do they represent what is common to all speakers. However, every entry must be justified by some degree of common ownership in one or other of the subcommunities using the language.

8 *Conclusion*

We have now surveyed, at least in broad outline, the whole domain of words in language, from the detailed properties of individual words, through relational properties, along the major paradigmatic and syntagmatic axes, to communities of words, large or small, tightly or loosely structured.

It should be borne in mind, however, that many detailed aspects of the lexicon are still only imperfectly understood, and of these, a number are presently the object of intense research activity. Two recent major stimuli to research on the lexicon are worth mentioning. The first has been the advent of powerful computers, and the attempts of computational linguists to develop programs capable of "understanding" natural language texts. The syntactic problems have proved relatively tractable; the big problem has turned out to be the lexicon – deciding what a computer must "know" about word meanings and how they are to be represented. The second major stimulus has been the development of large-scale corpuses of spoken and written language (together with tools for processing them), which allow an accurate picture to be gained of how words are actually used. This has, among other things, revolutionized lexicography, and no doubt the full effects of both stimuli have yet to be seen.

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