

Hierarchical Lexical Relations in English and Hungarian

Pál Heltai

Introduction

It is a lexicographical commonplace that some words are relatively easy, while others are difficult or impossible to define.

The easy definitions normally follow the pattern 'an X is a kind of Y that ...' They are indicative of the fact that certain areas of the vocabulary exhibit a hierarchical structure, in which terms can be defined by reference to the nearest superordinate term and by indicating distinctive features (*genus proximum* and *differentia specifica*). Hierarchical structure is especially characteristic of semantic fields whose terms classify objective reality. Thus, *Douglas fir* is a kind of *fir*, *fir* is a kind of *tree*, and *tree* is a kind of *plant*. Such semantic fields contain five or six levels (Berlin et al. 1973:215).

In most semantic fields hierarchical structure is not as neat and consistent as one would expect on the basis of some well-defined and much-analyzed semantic fields. The number of levels actively functioning in speakers' minds is usually limited to two or three. Moreover, native speakers of a language are often uncertain about the status of some intermediate or upper level terms, they are equally unaware of the existence of a superordinate term for a hyponym, or tend to disuse certain intermediate or upper level terms.

In fact, hierarchical relations are highly unstable. They may change over time and may reflect different segmentations of reality coexisting within the same language at the same time. Multiple classifications are a characteristic feature of folk taxonomies, and also of other vocabulary domains of natural languages (Conklin 1962:130), and the number of multiple classifications is increasing under the influence of scientific and technological development (Mathiot 1979:156).

Comparing Hierarchical Relations in Two Languages

Despite the difficulties of studying hierarchical relations in the lexical system of a language, analysis and comparison of corresponding hierarchical structures in two languages appears to be a worthwhile undertaking. Of particular theoretical interest would be to define the basic level of hierarchical lexical fields in one language in relation to another. The terms found on this level (called, somewhat confusingly, 'generic taxa' by Berlin et al. 1973:216) "are the basic building blocks of all folk taxonomies. They represent the most commonly referred to groupings of organisms in the natural environment, are the most salient psychologically, and are likely to be among the first taxa learned by the child ..." (Cf. also Lehrer 1974:10, Brown 1954:240, and 1958:14). Interlingual comparisons might yield other unforeseen or unexpected information on the structure of either L1 or L2, or both. Such research could be extended to cover not only comparable hierarchical lexical structures in L1

and L2, but also the use made of those structures. Thus, the superordinate term *meal* is more frequently used in English than its Hungarian equivalent *étkezés*. Phrases like 'He sat down to a good meal', or 'I have not had my meal yet' can only be rendered in Hungarian using corresponding hyponyms. The study of preferred usage, suggested by Conklin (1962:136) in a somewhat different context, has not yet received proper attention in contrastive linguistics.

Apart from theoretical interest, contrastive analysis of hierarchical relations in L1 and L2 is also essential for practical purposes.

Communicative strategies used by learners and speakers of foreign languages as well as translation strategies involve shifts from one level of the hierarchy to another (Blum and Levenston 1978:400). (The same strategies are also used by native speakers, cf. Lehrer 1974:88). There is no problem as long as hierarchical structures in L1 and L2 are congruent: problems arise when they are divergent. Therefore, in such cases it would seem desirable to include information on divergent hierarchical relations in bilingual learner's and translator's dictionaries.

It would appear that L1 polysemy and L2 synonymy are responsible for a far higher proportion of lexical problems than hierarchical relations. However, in certain semantic fields it is hierarchical relations that constitute the basic difference between L1 and L2 vocabularies. What makes such differences important, perhaps more important than would be justified by sheer frequency, is that such differences are among the least recognizable and least recognized interlingual differences, and are, therefore, a major source of interlingual interference. L2 synonymy can be usefully dealt with intralingually, as has indeed been done in Rudzka et al. (1981, 1985), and advanced foreign language learners will develop a sense for polysemy, as indicated by Kellerman's work on transferability (1978). Thus, they will realize that the word *break* has two distinct meanings, as in 'break the plate' and 'break the news', and will appreciate the difference. However, even advanced learners may fail to realize that *desk* is not a kind of *table*, as suggested by the L1 equivalent, but a 'piece of furniture', on a par with 'table', or that the word *animal* can, in some contexts (especially zoological ones), be used as a superordinate term for *chicken*, but is definitely disallowed in some other contexts, with *bird* being much more appropriate.

There are at present no reliable data available on the incidence of various types of differences in hierarchical relations between English and Hungarian. I analysed a sample from the LONGMAN LEXICON OF CONTEMPORARY ENGLISH (A33 to A127, the terms in the semantic field 'animal'), and supplemented the data obtained with data drawn from various other sources earlier contrastive studies (Csapó 1980, Heltai — 1982), a book on common errors committed by Hungarian learners of English (Doughty and Thompson 1983), and data collected during many years of teaching and translation. In view of the nature of the data my conclusions are tentative.

Results

Both the dictionary sample and the supplementary data seem to indicate that in many vocabulary domains referred to as folk taxonomies as well as in other areas, English tends to provide a more detailed segmentation of reality than does Hun-

garian. In other words, the terms at the basic level tend to be more specific in English than in Hungarian.

There are many subtypes of this type of difference, the most important ones being as follows:

(a) There is a complete lack of hyponyms in Hungarian:

TAIL			
stern	scut	brush	etc.

FAROK			
∅	∅	∅	∅

CLAW	
talon	clutch

KAROM	
∅	∅

(b) Hyponyms in Hungarian do exist and are used, but are structurally different from their English equivalents in being secondary lexemes, mostly compounds. In other words, the structures are equivalent at the level of the semantic field, but different at the level of the word field (cf. Lipka 1980:107). This difference is of great significance and will be dealt with later in this paper.

MEAT			
beef	veal	mutton	pork

HÚS			
marhahús	borjúhús	birkahús	sertéshús

(c) This is really a subtype of (b). The hyponyms in Hungarian are secondary lexemes, as in (b), derived from the superordinate term. The difference lies in usage. While the hyponyms in (b) are regularly used, the hyponyms in this subtype are only used when they come into contrast with each other.

KIND		
breed	race	variety

FAJTA		
emberfajta	állatfajta	növényfajta

Superordinates (at the level of word field) may be lacking either in Hungarian or in English at any level of the hierarchy. (Sometimes also on the level of the lexical field, cf. Hungarian 'tudomány' or German 'Wissenschaft' with English 'science/arts/scholarship').

At the intermediate and upper levels there seem to be haphazard differences: there are no superordinate terms for certain terms in L1, and there are no superordinate terms for certain terms in L2.

What surprised me in the course of my work, however, was that superordinate terms were so difficult to establish in so many cases — either because there was no superordinate term to be found, or because the dictionaries did not provide such information. Is a *toad* a kind of *frog* or is it not, if the dictionary says that it is a 'frog-like amphibian'? Apparently, information in dictionaries on hierarchical relations is conflicting and/or inconsistent because hierarchical relations are unstable and inconsistent in the mental lexicon.

There are some intermediate-level terms in English whose equivalents are lacking or of more infrequent use in Hungarian. Some terms of scientific origin seem to be psychologically more salient in English, but there are some words of non-scientific origin in this category, too.

Examples are *reptile*, *amphibian*, *insect*, *pest*, *pet*, as well as *shelter*. The status of *bird* as superordinate term to *chicken* and other domestic fowl is more secure in English than in Hungarian. Thus, *madár* ('bird') is an acceptable superordinate of *csirke* ('chicken') in the biological, but not in the poultry breeding literature. (An elicitation test to confirm this observation is being carried out in both languages.)

Hierarchical structures are different in English and Hungarian in many cases in that dictionary equivalents may be at different levels in the hierarchy. Thus, both *monkey* and *ape* are basic-level co-hyponyms in English, but only *majom* is a basic-level term in Hungarian, while *emberszabású majom* is not:

	<i>English</i>	<i>Hungarian</i>
Basic level	monkey/ape	majom
Subordinate level	∅	emberszabású majom

Motivation seems to be intricately tied up with such differences, therefore I shall now discuss the role of motivation in hierarchical relations.

The most typical difference between English and Hungarian from the point of view of motivation is this:

	<i>English</i>	<i>Hungarian</i>
Basic level	Primary lexemes	Primary lexemes
Subordinate level	Primary or secondary lexemes	Secondary lexemes

Since *primary lexemes* (mono-lexemic words, unmotivated words) are typical of the level of basic terms and basic level terms are psychologically salient, *primary lexemes* tend to be regarded as *basic level terms*.

Thus, once we have a primary lexeme, we (a) tend to use it more often than we would do if it were a secondary lexeme, and (b) tend to regard it as basic level even if it is at subordinate level. This may be the reason why it seems so difficult for speakers of a language to decide if a *porpoise* is a kind of *dolphin* or not, or if *harang* ('churchbell') is a kind of *csengő* ('bell'). Hungarians will tend to transfer their native language patterns into L2, which will lead them astray in many cases.

Effects on Vocabulary Acquisition and Translation

In general, all other things being equal, it can be said that since the number of basic level and subordinate level terms expressed by primary lexemes (unmotivated words) is higher in English, this will make for increased difficulty of learning. Firstly, the learner will simply have to learn *more* words. Secondly, some basic level terms belong to the periphery of vocabulary, and since they are not frequently used, will be learnt less successfully. They are especially difficult to remember when all one knows about the referent is the information given by the name itself (cf. Heltai 1988:243). There are many such words in human language. People know many things only by name, as shown by the extensive literature on natural kind terms (e.g. Haiman 1980:335). In cases when one is only linguistically acquainted with the referent, motivated terms (which give some information on it) are easier to remember, at least for the Hungarian learner of English.

Thirdly, differences in hierarchical relations may give rise to *interference errors*. We may reduce the many types of differences to two basic types: one-to-many (mostly two), and many-(mostly two)-to-one correspondences. The second type gives less trouble, it is the one-to-many correspondence that causes most errors. The learner may learn only one of the L2 terms and use it as the equivalent of the L1 term (cf. Arabski 1979:34–35).

Often learners learn both L2 terms and treat them as absolute synonyms, using them interchangeably, although in actual fact the L2 terms are either co-hyponyms (*rabbit and hare*) or superordinate and co-hyponym (*bill and beak*).

Interference may also be due to differences in motivation (Heltai 1988). Interference of this kind is especially marked when the L1 hyponyms are derived by compounding from the superordinate term. Learners may deliberately use the strategy of expressing a hyponym by a superordinate term plus qualifier (Blum and Levenston 1978:405), which is a major strategy for filling gaps in vocabulary, but this strategy often does not work when hyponyms are primary lexemes in English and secondary lexemes in Hungarian. When the strategy misfires, the consequence may be persistent interference errors, exemplified by the following:

<i>asztal</i>	<i>table</i>	
<i>íróasztal</i>	<i>desk</i>	* writing-table
<i>szoba</i>	<i>room</i>	
<i>dolgozószoba</i>	<i>study</i>	* working-room

Differences in hierarchical relations concerning intermediate level and upper level terms present even more difficulties for vocabulary acquisition and translation. Such terms are often associated with other kinds of differences. Thus, culture-bound terms are notoriously very difficult to translate because differences in hierarchical relations are coupled with differences in polysemy, synonymy, etc.; moreover, they do not represent different segmentations of the same reality, but of a different reality; cf. for instance educational terms (*college, university*, etc.) in English and Hungarian.¹

Intermediate or upper level terms in English that have no equivalents in Hungarian cause mostly covert errors in speech or L2—L1 translation by Hungarian learners: in speech, non-use of these terms (more specific terms are used) while in

L2—L1 translation they can usually be rendered without undue difficulty by using a phrase (*pet — díszállat or kedvtelésből tartott állat*). However, in certain contexts it is extremely difficult to find an adequate translation.

L1—L2 translation presents more serious difficulties in this case: overtranslation may be one problem (constant reference to *younger sister* or *elder brother*), or ignorance and non-use of immediate superordinate term (*shelter* or *home* as superordinate terms for *house/flat*, *bird* as superordinate term for *duck*, *chicken*, etc.)

In cases where Hungarian has a superordinate term not paralleled in English, both speech and translation suffer considerably. A case in point is Hung. *tudomány* ('Wissenschaft'). The difficulty of not only translating, but expressing the concept in English is widely recognized. Learners tend to identify one of the English hyponyms with the meaning of the L1 superordinate term and persistent interference errors will result. This is indeed a major difficulty both in speech and translation.

In addition, information on differential hierarchical relations is often hard to get. Add to this the well-known fact that translation is prone to interference since the translator actually has the L1 text before his/her eyes, the conclusion is obvious that it would be important to provide such information in dictionaries.

Information Needed in Dictionaries

The dictionary can help in solving such problems by providing information on hierarchical relations where necessary. I should like to emphasize this point, because it is counterproductive to increase the number of signs and symbols used in dictionaries.

Let us summarize what kinds of information might be useful to include in bilingual learner's and translator's dictionaries, where necessary.

— Indication of the fact that a given L2 term is *not* a synonym of another L2 term, as would be expected on the basis of L1 structure, but a co-hyponym (*frog* and *toad*).

— Indication that a given pair of L2 terms are *not* superordinate term and hyponym, as their equivalents in L1 would suggest, but co-hyponyms (*animal/insect* and *bird*).

— Indication of the fact that the superordinate of a given L2 term is not the dictionary equivalent of the L1 term (thus, the superordinate of *house* is not *flat*, but *home*).

— Indication of preferred usage (*beef, pork*, etc. as against *meat*)

— Indication of missing superordinate term in L2 (*science* and *scholarship*).

— Indication of the fact that one co-hyponym can also function as a superordinate term (*room* and *kitchen*).

— Indication that one of the co-hyponyms may, under certain circumstances, function as a superordinate term (*ape* is defined in a number of dictionaries as a 'tailless monkey', although the two terms are normally co-hyponyms).

— Indication of multiple classification.

The 64,000-dollar question is how to provide this information in the dictionary? Two things need to be done. Firstly, we must know what it is that we want to include in the dictionary. For this purpose, systematic investigations of L1 and L2 hierarchical relations are needed, based perhaps on a comparison of thematic dictionaries. However, one must be careful to consistently distinguish between hierarchical relations in everyday vocabulary and in scientific terminology: one should not supplant the latter for the former, except where they have been adopted by non-professional speakers of the language, too. Secondly, if such data are available, a selection can be made. Thirdly, simple notations should be adopted to indicate hierarchical relations. I think the symbols used in the LONGMAN DICTIONARY OF SCIENTIFIC USAGE and the COBUILD dictionary are very helpful (↑ indicating superordinates and ↓ indicating hyponyms), and could be adopted in general bilingual dictionaries. The symbol → could be used to indicate co-hyponyms. Preferred usage, I think, remains very difficult to indicate, but in a few cases it would be very helpful — perhaps by putting a circle around the arrow (↓ or ↑).

Thus, entries would look like this

table /↑ furniture, → desk/
 desk /↑ furniture, → table/
 frog /↑ amphibian, → toad/
 toad /↑ amphibian, → frog/

While the use of such symbols in alphabetical dictionaries may escape the attention of the user, they may be useful for those who are seeking exactly that kind of information.

Note

¹ Thus, a glossary of English and Hungarian educational terms (about 600 entries) contains 47 notes explaining the divergences between such equivalents. (Heltai, Pál: *Magyar—angol közoktatási szótár*. Budapest: FPI. 1978.)

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