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THREE TYPES OF TERMINOLOGIES

Various types of terminologies can be distinguished, depending on the criteria used. For example, Christer Laurén (1983) has examined differences and similarities between the Swedish termin- ologies of electrotechnology, computer science, accounting, and law on the basis of such criteria as term frequency and term length. Having defined four terminological areas, he uses formal criteria to show how they can be grouped in various ways.

In the present paper some semantic criteria will be used in assigning terminological areas to certain types. These criteria are those used by Eugenio Coseriu when he attempts to distinguish terminology from ordinary language. In describing his model of lexical fields, Coseriu insists that everything belonging to terminology should be eliminated at the outset in structural lexicology. His argument is that it is essential to make a dis- tinction between what belongs to linguistic meaning and what belongs to a knowledge of extralinguistic reality:

> The matter of technical vocabulary, of terminology, belongs in this framework. Technical vocabulary is simply a nomen- clature and as such not structured on the basis of language but rather on the basis of extralinguistic reality, on the basis of the objects of the discipline in question. Terminology thus presents an objective classification constructed on logical, i.e. exclusive, distinctions: A/Not-A; e.g. acid/base in chemistry. Linguistic oppositions, on the other hand, are very often inclusive:
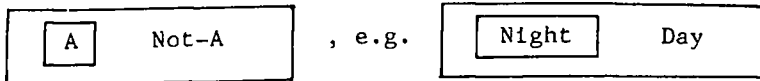
> Since in technical usage the words are really the representa- tives of the 'objects', signification and designation coincide in this case whereas in the domain of the 'natural' language they must necessarily be separated ... (Coseriu and Geckeler 1974:140-141).

Inclusive distinctions of the type where day can include night, as in "I stayed three days in London" are usually called instances of distributional markedness since a particular form can be used both in a specific 'marked' sense and in a more general 'unmarked' sense (cf. Lyons 1977). Moreover, Coseriu's dichotomy into 'signification' and 'designation' corresponds, as appears from Baldinger (1980:36), to the distinction between 'sense' and 'reference' made, for example, by Lyons (1977:173ff.). Refer- ence deals with the relationship between linguistic elements and the extralinguistic world, while sense is concerned with the internal relations of these linguistic elements, their dis- tinctive features. From the point of view of sense, green contrasts with such lexemes as red, blue, etc. However, when the word

greenroom is used, the reference does not have to be to a green room, but can be to one that is painted red or blue; we then have a discrepancy between sense and reference.

In a recent paper (Jacobson 1983) I have shown that Coseriu tries to set up a boundary between terminology and ordinary language that does not exist in reality. What we have is rather a continuum where we find lexemes based strictly on extralinguistic reality at one pole and lexemes based on purely linguistic structuring (as when day includes night) at the other.

If we look at how often instances of markedness or discrepancy between sense and reference occur in some terminologies examined, the following types can be distinguished:

(a) academic or vocational terminologies for which it is normal to reach agreement on standardization to avoid misunderstanding and achieve the maximum amount of one-to-one correspondence between terms and extralinguistic reality;

(b) academic or vocational terminologies where the influence of the individual user on term development is greater than in (a);

(c) terminologies which occur in popular movements and therefore often tend to develop like ordinary language in spite of certain attempts at regularization.

Terminologies of type (a) are common in science and technology. A regularizing institution in these fields is the International Standardization Organization according to whose rules standards should be revised every five years. This allows for change both on the expression and the content side of the terminology, i.e. terms can be created to cover new contents and already existing terms can be redefined. Another institution is INFOTERM, the International Information Centre for Terminology, which acts as a clearing-house, referential agency and analysis centre for the theory, utilization, and documentation of terminology. There are also organizations working within specific terminological areas. For example, the commissions of the International Union of Pure and Applied Chemistry have recommended rules systematizing the use of chemical terms, and the LONGMAN DICTIONARY OF SCIENTIFIC USAGE devotes an appendix to these rules.

In spite of the attempts made at one-to-one correspondence between terms and extralinguistic reality, certain instances of markedness and discrepancy between sense and reference can be found in type (a). Thus the CHAMBERS DICTIONARY OF SCIENCE AND TECHNOLOGY provides the following entry E_1 with a gloss on the term:

E_1: electron ... fundamental particle with negative electric charge ... The term electron is sometimes used generically to cover both electrons and positrons.

A similar statement is made in the NUCLEAR ENERGY GLOSSARY and in the ELECTRONICS AND NUCLEONICS DICTIONARY. Since this markedness

can lead to confusion, the term negatron has been introduced as a synonym of electron in the marked sense (see Fig. 1).

Fig. 1   electron$_1$ as a superordinate unmarked term covering both the marked term electron$_2$, with its synonym negatron, and the term positron

$$\text{electron}_1$$

electron$_2$ }
negatron }   positron
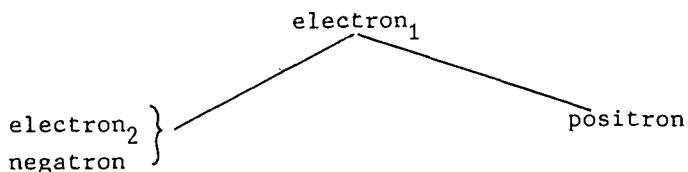
Moreover, when the CHAMBERS DICTIONARY gives entry E$_2$, then it uses galaxy in an unmarked sense, but galactic in a marked sense, referring to the Galaxy as the Milky Way.

E$_2$: galaxy ... collection of stars, dust, and gases, i.e. any extra-galactic nebula ...

In statistics average is usually synonymous with arithmetic mean (HACKH'S CHEMICAL DICTIONARY; ENCYCLOPEDIA OF PSYCHOLOGY; McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS) but is some-times used to cover   also mode and median (PENGUIN DICTIONARY OF PSYCHOLOGY; DICTIONARY OF PHILOSOPHY). In medicine cortex has an unmarked sense where it refers to the outer layer of any organ and a marked sense where it refers only to the outer layer of grey matter of the brain (PENGUIN DICTIONARY OF PSYCHOLOGY; McGRAW-HILL NURSING DICTIONARY; LONGMAN NEW UNIVERSAL DICTIONARY).

Instances of discrepancy between sense and reference are not very common in type (a). An example from mineralogy is black opal, which includes all opals of dark taint, even the fine Australian black opal, which is actually blue. Alternatively, black can here be regarded as an unmarked lexeme covering all dark colours (cf. Palmer 1981:72). Similarly, in metereology what is called black frost is seldom really black since it is simply an air frost with no deposit of hoar frost.

Proceeding now to type (b), it is interesting to note that Rosemarie Gläser (1984) believes that "the absence of standardiza-tion in the terminology of the social sciences has resulted in an unrestrained growth of new terms in a number of fields". She concentrates on scrutinizing the designations of certain categories in linguistics and suggests a revision of present terminology. It is not surprising, then, that we find more instances of marked-ness in the social sciences and linguistics than in the natural sciences and technology, and this also applies to such areas as political science, psychology, philosophy, literary criticism, geography, and commerce. Linguists tend to regard themselves as 'masters' of their language and therefore free to adapt it to their own purposes. For example, the British linguist John Lyons explicitly creates a case of markedness when he says (1981:281) "henceforth I will use 'bilingualism' to cover multi-lingualism as well". In the same book (1981:154-55), however, he finds it difficult to give a straightforward account of

oppositeness of sense because of the varying coverage of the key term antonymy (see Fig. 2 which is based on Palmer's 1981:86 diagram for the lexeme animal in ordinary language).

Fig. 2 Four levels of coverage of the term antonymy in linguistics
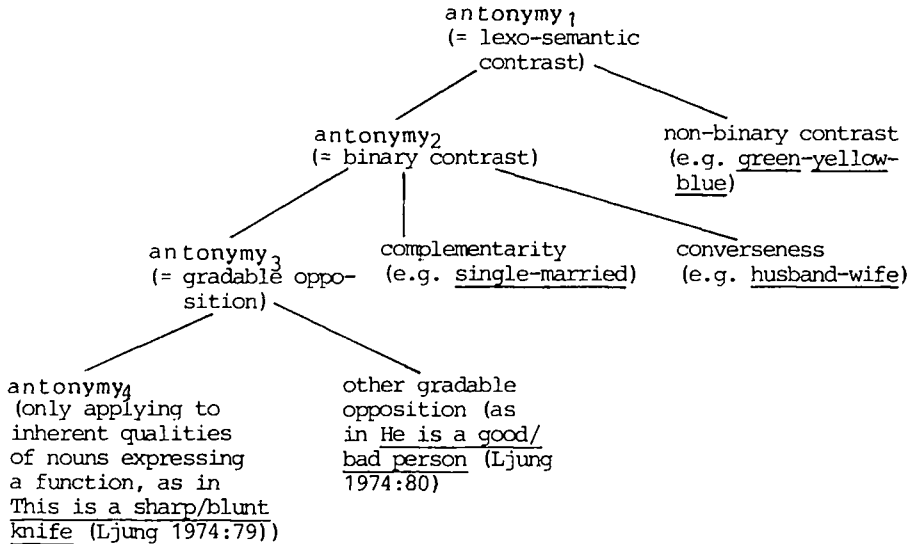
Another term with varying coverage is syntax. For example, Trampe and Viberg (1972) include morphology within syntax, but nevertheless speak of syntax and morphology as different levels of description. The term lexical field means by definition a 'field of lexemes'. Since terms are a special type of lexemes, terminological field is then, a hyponym of lexical field. However, there is no term that covers lexemes that are not terms, i.e. we have here a lexical gap. Either the term lexical field must then be used in a marked sense or be supplied with a temporary modifier like other or ordinary. The first course is followed by Coseriu, who recognizes that terminological fields could be set up but excludes them in his own lexicology (Coseriu and Geckeler 1974:51). The other course has to be followed in cases where it is necessary to avoid co-occurrence of the marked and unmarked senses, as in *There are two types of lexical field: lexical field and terminological field. Here it is natural to say instead, for example, There are two types of lexical field: terminological field and ordinary lexical field. The expression ordinary lexical field is here not a term, since it would not occur as a lexical entry. It is interesting to note in this connection that Juan Sager (1984) uses lexical unit in a marked sense when he says, "Terminological units of a particular special subject field have to be differentiated from lexical units of the general language".

In sociology polygamy (as reported by the (NEW) DICTIONARY OF SOCIOLOGY) can be either a superordinate term covering polygyny

and polyandry or a synonym of polygyny, i.e. we have the same situation as in the case of electron in Fig. 1. Sometimes various authorities disagree. Thus exhibitionism is given only the sense 'sexual exposure' by the ENCYCLOPEDIA OF PSYCHOLOGY and the DICTIONARY OF BEHAVIORAL SCIENCE, whereas the PENGUIN DICTION-ARY OF PSYCHOLOGY states that it is also used in a more general sense about any kind of extravagant behaviour to attract attention.

Sometimes opinions vary as to whether two terms are synonyms or co-hyponyms differing in sense. For example, ice-cap is, according to the PENGUIN DICTIONARY OF GEOGRAPHY, regarded by some geographers as synonymous with ice sheet, while others apply it only to smaller masses of ice and snow. In commerce we have, according to the PENGUIN DICTIONARY OF COMMERCE, the term searcher, which must refer to someone who 'examines carefully', but we have to go to its synonym landing officer to find a more adequate description of this person's occupation. This kind of synonymous set is, of course, not only found in type (b). For example, in physics the terms E-layer and Heaviside layer refer to the same region of the ionosphere, but the first describes it as having electromotive force, while the second names one of its discoverers.

The third type of terminology distinguished above, (c), occurs in popular movements like the Salvation Army and the Scout and Guide organizations. Here certain attempts are made at regulariza-tion in the form of word-lists with definitions. For example, The Salvation Army Year Book 1981 contains a glossary of Salvation Army terms, The Boy Scouts of America has published a special booklet called The Language of Scouting (1981), and many of the recent books published by the Girl Scouts of the U.S.A supply lists of terms with definitions. The literature abounds with instances of markedness and discrepancy between sense and ref-erence. In the Salvation Army corps officer is a hyponym of officer, whereas local officer is not. Therefore in Barnes (1981:14) we find the combination officers and local officers, which looks strange to an outsider.

As regards the terminology of Scouting and Guiding, I have just completed a special investigation (Jacobson forthcoming) and found a very large number of instances of markedness. For example, the American term Cub Scout is used both in a marked sense where it denotes only those pack members who are not so-called Webelos Scouts and in an unmarked sense where it includes also the latter. Further examples are given in the following list, where the underlined superordinate term to the left of the colon is unmarked in relation to one of the hyponyms enumerated to the right.

Unit:	Pack, Troop, Unit	Venture Scout:	Venture Scout, Girl Venture Scout
Post:	Post, Ship		
Guide:	Brownie Guide, Guide, Ranger Guide	Girl Scout Group:	Girl Scout Group, Girl Scout Troop

Guider:	Guider, Commissioner, Secretary, other adult on active service	Instructor:	Instructor, Occasional Instructor
Leader:	Leader, Assistant Leader	Den Leader:	Den Leader, Webelos Den Leader
		Den Chief:	Den Chief, Webelos Den Chief

To distinguish the various senses of unit, the Policy, Organization, and Rules (1977) of the British Scout Association prints it with a small u in the unmarked sense and with a capital U in the marked sense. Similarly, the book with the same name in the British Girl Guides Association, published in 1980, italicizes guide and guider in the unmarked sense, while it uses roman letters for the marked sense. Only when a contrast is made are occasional modifiers used in order to avoid the ambiguous marked term Scout, as when Deft (1976:30) facetiously talks of agricultural Scouts as opposed to Sea Scouts and Air Scouts. When markedness leads to confusion, it is also possible to clarify what is meant by expressions like Den Chiefs (including Webelos Den Chiefs). However, generalizing a term can have the advantage of saving space, as when some American Scout books contain a note saying that in order to avoid needless repetition, the term Post includes Ship.

Many terms of type (c) exhibit a discrepancy between sense and reference and thus are likely to confuse an outsider. For example, the British term Scout Leader seems to denote any leader of Scouts, but actually it is restricted to the leader in charge of a Scout troop. The American term Scout Leader is confusing in another way, for it can mean either "a leader of Scouts" or "a Scout who is a leader". The same ambiguity is displayed by the American terms Boy Scout Leader (read as Boy Scoutleader or Boyscout Leader), Explorer Leader and Youth Leader. Since Patrol Leader means "the leader of a patrol", one expects Troop Leader to mean "the leader of a troop", and it does so in the Girl Scouts of the U.S.A. and occasionally in the Boy Scouts of America, but the regular meaning in the latter organization is "a leader (boy or adult) at the troop level". In fact, if we had expected terminologies to render part-whole relations explicitly, then British Scouting would have used the terms Patrol Leader, Troop Leader and Group leader for the leaders in charge of various units since a patrol is part of a troop and a troop is part of a group. However, the actual terms are Patrol Leader, Scout Leader (see above), and Group Scout Leader.

The examples given are sufficient, I hope, to show that terms certainly display many instances of the features that, according to Coseriu, should distinguish them from the lexemes of ordinary language. It is also apparent that terminology is not a uniform entity, but that certain types can be discerned that exhibit these features in varying degrees. The types discussed in the present paper are not separated by hard and fast lines, but rather form a continuum between what Juan Sager (1984) describes as 'hardness' and 'softness' in terminological definitions. Moreover,

the number of various terminological areas is so large that it has naturally been possible to include only a selection of them in the present study.

The observations made can therefore only be claimed to display tendencies to which exceptions can certainly be found. For example, Juan Sager pointed out in the discussion of this paper at LEXeter '83 that the terminologies of some hobbies, e.g. fishing, can be very precise, although like that of Scouting and Guiding they can be said to be popularly based. He also claimed that terminological diversity in the form of synonymy and polysemy as opposed to one-to-one correspondence between terms and concepts is not altogether a bad thing, since it can serve to make a terminology more natural and attractive than it would be with the monotony that insistence on uniformity brings about. Unambiguous and uniform terms are essential whenever misinterpretation is likely to have grave consequences, as in the case of many scientific and technical areas.

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