

Universal concepts and language-specific meaning

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Two main hypotheses in linguistic theory entail contradictory implications for the practice of dictionary-making. *Universalism*, presupposing a language level common to all languages, creates a convenient background for contrastive analysis, theory and practice of translation, and lexicography. *Relativism*, especially in its strong version, assuming not only a dynamic world-optics but also putting predetermined bonds on human perception, results in epistemological scepticism and provides insoluble problems for linguistics. One of its main dogmas, that of the definitional indeterminacy of translation, shakes the basis of any of those linguistic endeavours, lexicography being one of them, which, by their very nature, have to assume some *form of a determinate tertium comparationis*. In this paper I will try to show that neither of the radical versions of the two hypotheses really works for linguistics and I will present some evidence in support of the claim of a *composite nature of meaning* in natural language, and point out its consequences for lexicography.

1. Classical approaches to meaning

Classical universalist semantics dating back to Carnap assumes that the meaning of a word is identified with its *intension*, proposed in the form of meaning postulates or modified as in Katz and Fodor (1963) to be understood as a set of criterial properties which are both necessary and sufficient for the identification of the word. The complementary concept of the word *extension* refers to a set denoting all individuals covered by the term. Two important principles entailed by such a concept of meaning in the spirit of Frege and Carnap are: 1) the extension of a word should be determined by its intension, i.e. all the necessary and sufficient conditions applicable to the word should apply to all members of the set with no exception, and 2) words should be decomposable into sets of necessary and sufficient conditions without any remainder left. These principles are the manifestation of Aristotelian *essentialism*, i.e. the conviction that all things have their essence and this essence is accessible to cognition.

Such a view of meaning has been challenged, as we know, first by philosophers and psychologists, then by mathematicians and AI experts, as well as by linguists.

First of all, it turned out that the decomposition into sets of necessary and sufficient conditions is not an easy task. In fact, not many complete proposals of such decompositions have been published at all. There was a problem with finding

the ultimate properties, i.e. the semantic primitives that would not be further reducible and would have the status of analytic truths. Such a position caused problems even with such markers as MALE/FEMALE, which ought not to raise any objections but nevertheless appear to be questionable (cf. Wierzbicka 1980).

Offering a solution to the dilemma, Putnam (1975) – after Kripke (1972) – introduced a distinction between epistemological possibility and metaphysical necessity. For instance, we know that gold has atomic number 79, but, to use Rey's formulation (1983: 254): "Given how little I know about chemistry, I am prepared to discover that gold has atomic number 89 (i.e. it is epistemologically possible), even though, if it in fact has atomic number 79, then necessarily it does", i.e. it is then metaphysically necessary.

There are, however, further problems with the classical definition of meaning: there are category exemplars which do not quite fit the rigid taxonomy (Labov's cups and bowls) or are not the best examples of the category (like penguins in BIRDS). Here the principle of determining the extension by the intension simply fails. In the case of degrees of representativeness of category members, the members of the set have an unequal status, which cannot be captured by classical meaning criteria and the Boolean functions.

2. Prototype approaches to meaning

A more promising conception of meaning seems to be offered by the prototype approach (Rosch and Mervis 1975). It has been empirically confirmed that prototypes of the categories share most properties with other members of the category and few properties with members of contrasting categories. For more peripheral cases a common category membership is determined by the 'family resemblance' rather than by a core of common properties.

Although prototype theories of meaning seem to handle meaning much more adequately than a classical approach, by taking into consideration the language user's mind, they are guilty of not satisfactorily explaining the process of category formation and category recognition in individuals (cf. Pulman 1983). They lack what Pulman calls any 'semantic anchoring' which in classical theories was fulfilled by semantic primitives. This naturally leads to circularity and infinite regress. To quote Pulman (1983: 98): "If you can't identify something as a wing independently of identifying it as part of a bird, you can't use identification of wing as a route to the identification of birds."

There are two consequences of the above: 1) some independent holistic schemata should first be identified and their inner structure should be recognized, 2) 'unique beginners' of the perceptual/cognitive nature should be investigated. Human beings exhibit certain regularities in the way they perceive and interpret the world. We are capable of noticing salient features of objects and events. As Pulman puts it: "To say that some object or attribute is salient is simply to say

that it plays a recurrent role in this daily transaction between us and the world” (1983: 101). Some features are perceived as salient by all human beings, some others will be unique to a given culture. Some of these salient aspects of the world are named, linguistically labelled in the community. The labelling takes place according to regular patterns of inherent *preferences* (Jackendoff 1983).

3. Proposed solution

What we need then, to identify and name an aspect of reality are both its gestalt properties and the recognition of its salient perceptual/functional/emotional attributes placed in a larger recurrent frame. This does not mean, though, that we should dispense with the criterial/essential model altogether. It is possible to identify classes of lexical items in language which can be both recognized and defined by a set of necessary and sufficient conditions, although frequently sensitive to a background frame (e.g. *bachelor*). More common, however, are the words whose meanings are known to us by their ‘stereotypes’, to use Putnam’s terminology (1975), or typicality conditions, no matter whether their ‘true’ intensions are accessible to all of us, or to those of us who are ‘experts’, or to no one at all (natural kind terms, artefacts). Furthermore, there are such classes of lexemes, which can be defined uni-conditionally, i.e. by means of alternative sets of necessary conditions, none of which is sufficient (cf. Fillmore’s 1982 *climb*). Some other items prototypically cover some focal area of the meaning space, so they are characterized by what Jackendoff (1983) calls ‘centrality conditions’ (e.g. focal *red*, or modificants in Snell-Hornby’s (1983) descriptive verbs). There are also metonymic models of meaning (cf. Lakoff 1985), where the best exemplars of a category are selected to represent the whole category (*mother*). A large group of words are (metaphorical) mappings of one cognitive domain on another, the basic one being more privileged in the sense that it is felt to be more ‘literal’ (cf. Fillmore 1982 – spatial *long* extended to temporal *long*, or Lakoff and Johnson 1981 – mental *grasping* mapped from the cognitive domain of physical grasping, i.e. we conceptualize the contents of mental grasping in terms of objects of physical grasping, i.e. as a bounded object that can be taken and held and that can occupy physical space). We have also what Johnson-Laird (1981) defines as ‘constructive’ terms, like some words expressing abstract ideas or emotions. The part of their meaning which is shared by all members of a speech community is either very small or variable. Such concepts lack cohesiveness. That means that it is not only their boundaries but also almost the whole space within the boundaries that is fuzzy and vague. For that reason they will be frequently subject to possible misunderstandings and/or explicit meaning negotiation in the course of verbal interactions.

Another group of words embracing mainly some adjectives and adverbs exhibits a strong syncategorematic nature. Their function is to act on focal features

I. Conditions: necessary, typicality, cue validity-centrality based on prototypes, frame-determined

Examples: natural kind terms, artefacts

BIRD

FRAME: folk

- CREATURE/(metaphysically) necessary
 - CAN FLY (typicality)
 - HAS WINGS AND FEATHERS (cue validity-centrality)
- (prototype - defaults)

II. Conditions: necessary and sufficient, typicality, (frame-determined)

Examples: scientific terms (concept maximum)

III. Conditions: necessary, typicality-stereotypicality, centrality, frame-determined, metonymic models - radial structure

Examples: a stereotypical exemplar taken as a prototype

MOTHER

ANIMATE, FEMALE (having given birth to a child)

FRAME: BIOLOGICAL (nature) 'real' mother

FRAME: BIOLOGICAL/EXPERIMENTAL - genetic mother

surrogate mother

FRAME: SOCIAL (nurture) - stepmother, foster mother

IV. Conditions: necessary, metaphorical

Examples: basic domains extensions

LONG

V. Conditions: necessary, centrality, typicality

Examples: colour terms, descriptive verbs

CRAWL

FRAME: WORMS/SNAKE ext. to HUMANS

- ACTION / necessary
- PULL THE BODY ALONG A SURFACE (centrality)
- SLOWLY (typicality)
- NEGATIVE evaluation (metaphorical extensions)

VI. Conditions: typicality - at least one of them necessary

Examples: some verbal concepts

CLIMB - CLAMBER and/or ASCEND

KRZYCZEC (Polish: shout) - CRY OUT LOUDLY and/or NERVOUSLY

VII. Conditions: necessary, conceptualization in terms of another domain (metaphorical), negotiated (constructive)

Examples: emotions, abstract terms

LOVE

- EMOTION/FEEL /necessary
- LIKE A {
 - plant (grows, blooms...)
 - human being (is born, dies...)
 - war (conquest, victory, victim, slave...)

VIII. Conditions: semi-dependence, acting on a dominating concept (syncategorematic)

Examples: evaluative, modal, truth-value terms

Fig. 1: A list of word-meaning types

of the dominating nominal or verbal either by emphasizing, evaluating, or defeating the properties, e.g. *true, false, fake, good* (cf. Lewandowska-Tomaszczyk 1985).

The above survey of word-meaning types (see Fig. 1 for a more systematic list) introduces an issue of a distinction between 'encyclopaedic' and linguistic meaning. This problem concerns primarily the lexical meaning of nominal concepts (verbs, prepositions, etc., are not listed in encyclopaedias). As can be easily exemplified, the amount of the "encyclopaedic" knowledge that should be incorporated into the lexical meanings of different words is not invariant (cf. *girl vs carpenter*). For that reason, it is clear that postulating a priori boundaries between the two types of knowledge is neither necessary nor possible, in theory or in practice (cf. Fillmore 1982).

3.1. *Universal concepts*

In the context of what has been analysed and exemplified above it seems justified to propose a set of universal concepts of perceptual and cognitive origin. Notions underlying the concept of a 'physical object', i.e. "observability and feelability, relative permanence through space and time, and potential detachability from surroundings" (after Pulman 1983: 59) give rise to such basic semantic/cognitive parameters as space (size, shape, contour, location, distance, etc.), time, figure vs. ground, similarity and difference (cf. stability vs. change), and cause (cf. Miller and Johnson-Laird 1976). They make it possible to capture the gestalt properties of things as well as to motivate the growing awareness of the clustering of properties (whole-part) in these objects (cf. Rosch's *cue validity* of basic level categories).

Functionality principles motivate the universality of a 'be a part of' relation, which naturally stems from perception but presupposes grasping the functionality of a part in contradistinction to that of other parts and the thing as a whole.

A property that seems ontogenetically prior in naming events is the 'ego-orientation', extended later to the 'speaker-perspective'.

Of a different character are concepts expressing emotions and intentions. Ekman and al. (1971, after Lakoff 1985) described such emotions which universally correlated with facial gestures: happiness, sadness, anger, fear, surprise and interest. Various derivatives, like English 'annoyance', show weaker or stronger prototype effects, in this case, as Lakoff suggests, from prototypical 'anger'. They do not always possess immediate equivalents in other languages ('annoyance' is understood in Polish or Russian as a constructive term combining two different prototypes: 'anger' and 'sadness').

The concept of 'intentions' must follow the ontogenetically more primitive concept of 'want'. Both of them are prior to more inferentially oriented concepts of 'goals' and 'plans'.

Besides the perceptual/conceptual nameability principles which give rise to universal concepts and which are mostly responsible for what I call the *core* part of a lexical meaning, there are also other factors, of a different nature, which have a limiting or differentiating function on the universal principles. They are socio-cultural as well as more idiosyncratic (experiential) factors, intimately connected with different systems of beliefs (background frames) which have a strong impact on categorization of aspects of reality and possible relations.

In Fig. 2 a list of universal concepts is proposed, which is a simplified presentation of a highly complex interrelated conceptual network. Different languages map the concepts and relations on more specific networks and hierarchies of linguistically expressible meanings. A more detailed and complete version would require more empirical findings, but such that are not exclusively based on the common lexicographic practice (as in Sambor 1986). The universal hierarchies should be established first of all by observing and analysing authentic language practice. Lexicographic practice should be derivative in this sense.

p		SPACE/TIME
e		FIGURE/GROUND
r		THING/PERSON
c		STABILITY/CHANGE
e		
p	f	whole/part/sum of parts
t	u	
i	n	
o	n	
n		
	c	
	t	
	i	FEEL
	o	EGO-perspective
	n	INTENSITY
		want/intend
	e	SELECTION
	v	
	a	good/bad
	l	
	u	
	a	
	t	
	i	true/false
	o	
	n	
	i	(deduction/induction
	n	generalization ... analogy)
	f	
	e	
	r	
	e	
	n	
	c	
	e	

Fig. 2: Universal concepts

The proposed universals can be developed into configurations of more specific concepts (e.g. TIME – duration, intervals, etc.) or into extensions (e.g. EGO-perspective – extended to SPEAKER –, next to HEARER – orientations). They are also assumed to form hierarchies depending on the type of semantic space covered.

The ordering of universal concepts postulated in Fig. 2 can be seen as being motivated by developmental factors. Presented here are only simpler concepts. More complex forms such as, say, ACT, require an interaction among different primary concepts (EGO, INTENTION, CHANGE). PLANning, on the other hand, besides hypothesized ACTing, involves first of all WANTing and INTEND-ing. Furthermore, however, it presupposes a number of inferential capacities (and knowledge), which could allow the computation of expected gains and losses of the intended goal. The inferential capacities, then, which make it possible to compute features not directly perceived, can be observed as early as in the formation of a 'part-whole' relation and constitute a condition of any successful cognitive activity.

3.2. Conceptual – semantic hierarchies

The sub-hierarchies not shown in Fig. 2, which underlie each of the more primitive concepts, will exhibit varying configurations. They represent structured conceptual subdomains as reflected in different languages. For that reason their organization is also motivated by culture-specific and interactional parameters. A hierarchy presented in Fig. 3 below, based on Denny (1978), is an example of one such case relating to a different distribution of spatial deixis parameters in different languages, produced by differences in cultural ecology.

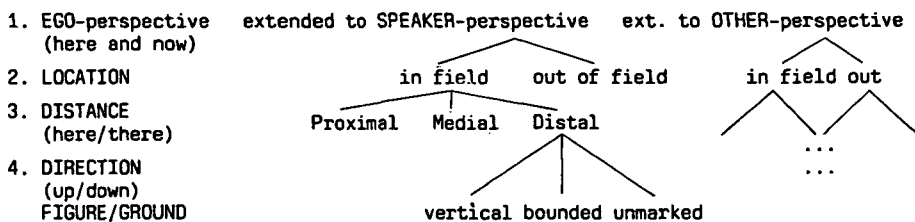


Fig. 3: Spatial deixis hierarchy

Denny's analysis shows that Eskimo, which has the most developed system of spatial deixis, utilizes the same parameters as Kikuyu, which however, assimilates fewer spatial dimensions in its linguistic system. Some of these parameters are for their part found in English (also in Polish or Russian). It is worth noticing that English once conformed to the 'higher' hierarchy structure by incorporating

(IN FIELD and DISTAL) concepts into (now obsolete) *yon* and *yonder*. It would be worth investigating whether the conceptual interpretation that I have added on the left of Fig. 3 in any sense reflects a developmental hierarchy. A category (IN FIELD MEDIAL), not discussed by Denny, represented in Japanese (cf. Fillmore 1982), reflects a highly language-specific concept in this configuration.

3.3. *Dynamic meanings*

I will conclude this discussion by saying how I understand meaning in natural language. I think meaning in natural language is based on a universal cognitive structure, adapted by language users according to specific socio-cultural and experiential parameters. Interpersonal as well as expressive content is assumed to be carried in the interactional and affective levels of meaning, which do not have strict boundaries. Context-sensitivity is taken care of by what I call the actual layer of meaning (Lewandowska-Tomaszczyk 1985a). Conventional senses of linguistic expressions, not fully determinate in isolation, assume a *default* interpretation in stereotypic contexts, and can be subject to negotiation and reconfiguration to achieve modified (background frame-sensitive) or completely new values in a less conventional surrounding. These new senses cannot be mechanically predicted except for certain trends and tendencies, but their motivation can be fully 'retrodicted', if I may use Pieter Seuren's (1984) term.

The term 'conventional' used in the description may apply both to literal and metaphorical senses of expressions and is itself a graded concept which can be closer or more distant to 'texts' (in the technical sense) considered creative. The *default*-structure captures the interactive character of the dynamics of meaning, which cannot be accounted for in classical approaches. The cognitive structure I mention, is based on the repertory of structured configurations of universal concepts acquired by human beings, which are nevertheless idiosyncratically exploited in different language systems.

4. Implications for lexicography

The main requirement made of lexicography is to provide the closest (supposedly isomorphic) paraphrases or definitions of a given lexical item in monolingual dictionaries, and in bilingual ones to provide the closest Target Language equivalent. In fact, isomorphy appears to be one of the convenient linguistic fictions, and the reason for that is, as Verhaar aptly points out, "that different levels (since the gloss makes sense only at a META-level) are involved, and different levels are invariably in COMPLEMENTARY DISTRIBUTION with one another" (1985: 32). Furthermore, he adds that since the meaning of a lexeme (in its name capa-

city) is *iconically* connected with its form, a word and its definition can never be isomorphic. Verhaar gives examples such as *brother* vs. *male sibling*, the substitution of which decreases the well-formedness of some sentences (“I want you to meet my . . .”). Lakoff (1985) gives some other examples, e.g. the notorious *bachelor* vs. *unmarried man*, whose substitution may change the truth-value of the proposition (“It can be truly predicated of the Pope that he is an unmarried man, but less so that he is a bachelor”).

In the light of the theoretical framework proposed above, however, some of the objections may be no longer valid, and the following implications for the lexicographic practice can be proposed.

In *bilingual dictionaries* the meaning component of a lexical entry should contain:

- TL explanation or paraphrase accounting for the sense of a Source Language lexical item, both invariably in background frames. Definitions (glosses) should follow the hierarchy of concepts and should whenever possible be provided both in the propositional (verbal) form and as image-schemata, capturing the ‘essence’ of some concepts (cf. Langacker 1983 for a theoretical background);
- its conventional connotations and possible directions of (figurative) extensions in terms of the interactive and affective contexts, indicating the type of context and a possible effect on the interlocutor;
- a set of closest synonyms in the TL, *each with an indication* of: the *semantic distance* between SL and TL items measured in terms of uniform sets of pre-established (cognitive, interactive, affective) parameters, obtained from independent analyses of authentic language data.

Monolingual dictionary practice encounters some of the problems similar to those mentioned in 1. In such cases universal concepts hierarchies should be followed whenever possible. The points raised in 2) and 3) deserve special attention. The indication of interactive and affective patterns as well as tendencies in word meaning extensions could make the ‘static reality’ of the dictionary get closer to the dynamic reality of language.

Meanings are neither exclusively referential, nor exclusively conceptual or social. They are at the same time psychological and interactional units that serve to make reference to both the socially accepted reality around us and the mental models we produce in the course of our interaction with this reality. And dictionaries are there to help us capture this heterogeneity.

References

- Denny, Peter J. (1978), “Locating the universals in lexical systems for spatial deixis”, in: Farkas, D./Jacobsen, W.M./Todrys, K.W. (eds.) *Papers from the Parasession on the Lexicon*, Chicago: Chicago Linguistic Society, University of Chicago, 71–84.

- Fillmore, Charles (1982), "Toward a Descriptive Framework for Spatial Deixis", in: Jarvella, R.J./Klein, W. (eds.), *Speech, Place and Action*, New York: John Wiley and Sons, 31–58.
- Jackendoff, Ray (1983), *Semantics and Cognition*, Cambridge, Mass.: MIT Press.
- Johnson-Laird, Philip N. (1983), *Mental Models*, Cambridge, Mass.: Harvard Univ. Press.
- Katz, Jerrold J./Fodor, Jerry (1963), "The Structure of a Semantic Theory" *Language* 39.2., 170–210.
- Kripke, Saul (1972), "Naming and Necessity", in: Davidson, D./Harman, G. (eds.) *Semantics of Natural Language*, Dordrecht, Reidel.
- Lakoff, George/Johnson, Mark (1980), *Metaphors We Live By*, Chicago: The University of Chicago Press.
- Lakoff, George (1985), *Women, Fire, and Dangerous Things*, Ms. (to be published by the University of Chicago Press).
- Langacker, Ronald (1983), *Cognitive Grammar*, vol. I and II, Trier: LAUT.
- Lewandowska-Tomaszczyk, Barbara (1985), "Meaning, Synonymy, and Dictionary", paper delivered at the International Conference on Meaning and Lexicography, University of Łódź, Łódź.
- Lewandowska-Tomaszczyk, Barbara (1985 a), "On Semantic Change in a Dynamic Model of Language", in: Fisiak, J. (ed.) *Historical Semantics. Historical Word-Formation*, Berlin: Mouton de Gruyter, 297–323.
- Miller, George/Johnson-Laird, Philip N. (1976), *Language and Perception*, Cambridge, Mass.: The Balknap Press of Harvard Univ. Press.
- Pulman, S.B. (1983), *Word Meaning and Belief*, London and Canberra: Croom Helm.
- Putman, Hilary (1975), "The Meaning of 'Meaning'", in: Gunderson, G. (ed.) *Language, Mind and Knowledge*, Minnesota: Univ. of Minnesota Press.
- Rey, Georges (1983), "Concepts and stereotypes", in: *Cognition* 15, 237–262.
- Rosch, Eleanor/Mervis C. (1975), "Family Resemblance Studies in the Internal Structure of Categories", in: *Cognitive Psychology* 7, 573–605.
- Sambor, Jadwiga (1983), "O budowie tzw. ciągów definicyjnych (na materiale definicji leksykalnych)", in: *Biuletyn PTJ* XL, 151–165.
- Seuren, Pieter (1985), *Discourse Semantics*, Oxford: Blackwell.
- Snell-Hornby, Mary (1983), *Verb-descriptivity in German and English. A contrastive study in semantic fields*, Heidelberg: Winter.
- Verhaar, John W.M. (1985), "On Iconicity and Hierarchy", in: *Studies in Language* 9.1, 21–76.
- Wierzbicka, Anna (1980), *Lingua Mentalis*, Sydney: Academic Press.