Natalya B. Gvishiani, University of Moscow

Terminology as knowledge banks: the cognitive approach (with special reference to multilingual lexicography)

ABSTRACT: In this paper my aim was to consider some aspects of lexicographic treatment of terms on the basis of the onomasiological approach, the principle of descriptor analysis and 'confrontation across metadialects' as integrated into a voluminous new direction – cognitive terminography. The methodology of contrastive analysis can serve as the basis or the multilingual dictionary of lexicological/lexicographic terms giving the reader an idea of both the standardised usage and the varying terminologies.

The aim of the cognitive approach to the study of terminology is two-fold: on the one hand it seeks to present a systematic description of terms, while on the other – it places at our disposal a hierarchy of concepts which reflect our knowledge of the object, the things themselves. It follows that the cognitive approach bridges the traditional gap between a dictionary and an encyclopeadia; its task is to bring together taxonomy and metataxonomy, the reality of the actual properties of the object, its ontology, and the system of terms of a given subject field.

As applied to terminography the cognitive approach makes for coordination between terminological and conceptual systems as used by specialists. In compiling a multilingual terminological dictionary the difficulties one is confronted with when approaching the problem of translation of terms are stupendous. Not infrequently it transpires that formal word-by-word translation gets us nowhere since there exist different frames-of-reference. Only by carrying out an overall contrastive analysis of the terminological systems in question can we arrive at a way of expressing a given metalinguistic content in the target language. The same applies to one's native terminology: it takes the knowledge of the system as a whole to be able to find a reliable notional equivalent of a foreign term.

Contrastive analysis of national terminologies is based on the priority of the content plane. We cannot confine ourselves to just names without taking note of the subject itself - its basic concepts and notions. This interest in the 'facts' and 'ideas' urges us to undertake the cognitive approach with its emphasis on encyclopeadic knowledge.

We begin with 'the thing', 'the concept' because we believe that by identifying the concept (the subject-matter) we can solve at least part of the problem: to offer the learner a clear definition of what is being talked about, i.e. the notion under consideration.

Another problem is how we talk about this notion.There can be more than one term for a single concept. Contrastive analysis across metadialects has enabled us to get an idea of how writers use terms and how they think of their own subject.

On the metataxonomic level what we are primarily concerned with is the heuristics of our subject – the methodology of dealing with terms and terminological systems for the purpose of their further standardisation and optimisation: the "international dimension" of using terms constitutes the core of present-day research in the field.

The heuristic approach to terminology is inseparable from the ontological one: if the former takes care of the structure and composition of terms (the plane of expression) the latter is responsible for their content. It follows that in our discussion of terms and concepts we proceed from the unity of the mutually opposed parts of the following three dichotomies:

> taxonomy vs. metataxonomy
> ontology vs. heuristics
> the plane of content vs- the plane of expression

The onomasiological logic suggests that first an inventory of concepts should be set up from which we pass on to names or terms that designate them. The whole thing is based on the equality of the referent - the primary object, concept or idea. This principle enables us to avoid the shortcomings of rigorous standardising tendencies and develop awareness of the established institutionalised terminological usage as well as of the new vocabulary items which have been introduced in the most important publications in the field or in specialized dictionaries.

Finding terminological equivalents or analogues across different languages presupposes one's awareness of peculiarities of terminological systems as based on different national languages as well as of a host of various directions, theories and schools of thought which have been described as metadialects.

To achieve better understanding of the content-plane of terms translation – an exercise in meaning equivalence across languages – should be coupled with confrontation – an exercise in meaning equivalence across metadialects. Both approaches are to be applied simultaneously to ensure the most reliable results in the course of contrastive studies of terminologies. Not only metadialects reflect the peculiarities of the given national epression, but they also mirror the development of theoretical thought, the process of accumulation of knowledge.

How should the work on a multilingual encyclopeadic dictionary as part of contrastive analysis of terminologies proceed?

One thing to be taken into account is that such a dictionary cannot be a very strict version of a terminological 'legislative organ' since it is bound to be polyglossic, i.e. to include not only different languages but also different approaches as worked out by repective schools of thought. From this point-of-view our main concern is no longer the division into different national languages, what might be described as 'the idiom of the country and the people', but a variety of metadialects (also within one and the same national tradition) from which we are to choose the most prominent ones.

On the other hand a terminological dictionary to serve its purpose should present an orderly picture of items; i.e. provide a systematic and readily usable description of the material.

What, then, is a handy way of listing a number of terms which are assumed to be multilingual equivalents referring to one and the same concept?

The problem we are primarily concerned with here can be formulated as a quest for the theoretical scheme of representation for what the lexicographer knows about items to be included in the terminological dictionary.

The subject field under investigation being linguistic terminology we begin with simpler cases, i.e. terms and concepts whose 'universal' value is borne out by the fact that they remain the same in different languages:

English	French	German	Russian
euphemism	euphémisme	Euphemimus	èvfemizm
metaphor	métaphore	Metapher	metafora
paraphrase	périphrase	Periphrase	parafraza
alliteration	alliteration	Alliteration	alliteracija

The international word (of Latin and Greek origin) which go back to ancient rhetoric do not merely ensure direct transmission of information but also make for the fullest possible formal correspondence between the original and the translated metalinguistic expressions (Akhmanova 1977, 91-92).

However absolute terminological equivalence is by no means a general rule: one cannot expect every unit of a given national terminological system to fit into 'the international dimension'. The peculiarities of national metalanguages come to the fore when the sequence of international terms is broken by an original nationally-based term, for example:

English	French	Russian	German
timbre	timbre	tembr	**Klangfarbe**
phonetics	phonétique	fonetika	**Phonetik/Lautlehre**
intonation	intonation	intonacija	**Intonation/Betonung**

No national metalanguage is ever uniform even within the bounds of a given national usage. The lexicographer then has a choice of either registering the synonymously related expressions (etymological or metadialectal variants) providing them with proper references or if his task is a systematic description of a given terminology – bringing them together under one **descriptor.**

Descriptor analysis enables the lexicographer to get a deeper insight into the national metalanguages which are being contrasted. For example, a Russian-English dictionary of linguistic terms will have different decriptors registered for the source and the target languages in cases like 'morfologija' (morphology) /'accidence'; 'časti reči' (parts of speech) /'form-classes', 'syntactic word'/'function word'; 'lexicologist' /'semanticist', 'autosemantic word' /'open-class word' – the first part of each dichotomy being characteristic of the Russian terminological tradition, while the second – of the English one. If properly looked into national terminologies can tell us a lot about how the given names came to be generally recognised as terms of this particular branch of knowledge.

Descriptors are often chosen with reference to the etymological type of terms. The lexicographer's task is therefore to decide whether the international variant should always be preferred to the nationally-based one.

In lexicographic terminology we have a choice between native words and borrowed ones (mostly of Latin-Greek origin):

English	*German*
etymology/word history	Etymologie/Herkunft/
	Ursprungsbezeichnung
tilde/swung dash	Tilde/Silbentrennpunkt

Whether etymological variants should be included in a multilingual dictionary depends on the purpose as well as scope of the dictionary. In the present case however it is advisable that the multiplicity of terms is reduced to the two descriptors 'etymology' /'Etymologie' and 'tilde/'Tilde' which are best-qualified to stand for a series of words since they are international terms being part of both English and German national usage.

The lexicographic realia being rather 'tangible' and often presentable in a graphical form are referred to in many different ways by professional lexicographers, e.g.:

a) the semantic part of a lexical entry acquires the names of –

English	*German*
Definition	Definition
Sense	Bedeutung
Meaning	Paraphrase
Phrase definition	

b) a lexical item which is being decribed in a given lexical entry –

English	*German*
Headword	Lexem
Entry word	Lemma
Vocable	Stichwort
Main entry	Hauptstichwort
	Stichmarke

c) information about the form of the word in terms of stems and affixes –

English	*German*
Comparative and superlative	Flexionhinweis
(forms)	
Inflected forms	Pluralangabe
Morphological information	Flexionsangabe
Grammatical information	Wortartangabe
Declensional/Conjugational	Wortart-Kennzeichnung
information	Grammatikangaben

d) information classifying the word in terms of usage area (as in dictionary entries, e.g. "Nautical") –

English	German
Field label	Fachgebiet
Subject label	Sachgebietsangabe
Referent	Label des Sachgebiets
Subject area label	Sachgebietskürzel

e) information classifying the word in terms of 'levels of usage' (as in dictionary entries, e.g. "slang") –

English	German
Style label	Kennzeichnung der Sprachebene
Register label	Sprachgebrauchsebene
Stylistic values	Stilebene
Level label	Stilangabe
Registers of usage	

f) example illustrating the word's phraseological potential –

English	German
Phrase	Kollokation
Idiom	Anwendungsbeispiel
Defined phrase	Wendung
Fixed phrase	
Idiomatic expression	

These are a few illustrations of what a lexicographer is confronted with in compiling a terminological dictionary. As can be seen some concepts are difficult to identify because the names referring to them are rather misleading: terms such as 'meaning' 'lemma', 'sense', 'field' can be used for more than one concept, thus being polysemous.

In simpler cases however this is a question of choosing name (a descriptor) to stand for the whole set. The general principles of the choice of the descriptor include among other things definability, lucidity of inner structure, derivational ability, frequency of occurrence.

Another important principle is to consider the overlappings of meanings which deprive the term of its precise technical meaning. The terms 'phrase' and 'idiom' as well as the above-mentioned polysemous terms display such a wide scatter of usage that they have ceased to be apprehended as special names denoting special objects.

The range of meaning the term 'idiom' has acquired stretches from contexts such as "the idiom of the language", "the idiomatic 'peculiar' properties of a given language" to its more narrow and concrete uses with reference to global ready-made units.

However ambiguous, the term 'idiom' is preferable to be chosen as a descriptor to denote "a multi-word lexical item a dictionary would list under a separate entry". This is an 'umbrella' term since in its broader meaning 'idiom' stands for both 'habitual collocation' and what in the Russian tradition has been described as 'phraseological unit'.

As far as the term 'phrase' is concerned it tends to be largely used with reference to grammatical analysis being opposed to the term 'clause'.

It follows that not all names brought together for one and the same concept in the onomasiological dictionary are reducible to one descriptor. Some of them prove to be alternative names which belong to different frames of reference. In this case the dictionary can be of great use to the reader by providing him with 'a reference tool' – all the necessary data concerning the current acceptations of terms with reference to the most important or highly relevant works within a given field of knowledge.

Intra-language terminological variants reflecting conceptual divergencies within metadialects as couched in one and the same national language are no less important in this kind of study than inter-language (multilingual) analogues. Alongside conceptually equated terms in different languages the dictionary entries will have to present unilingual alternatives designating important differences or preferences characteristic of most prominent schools of thought.

Thus, e.g., pairs such as 'lexical item' / 'free morpheme'; 'form classes' / 'grammatical categories' can serve to illustrate the difference between British and American terminological usage. Other instances of metadialectal divergencies include the following cases: 'lexical morpheme' / 'bound morpheme'; 'connotation' / 'attitudinal-affective-emotive-expressive meaning'; 'vocabulary' / 'lexis'. As Crystal (1985, 326) points out, "linguistics uses the term "vocabulary" in its everyday sense, reserving for its technical study the use of terms beginning with Lexi - (lexis, lexicon)".

The coordination of the equivalent terms in a dictionary is by no means 'plain sailing': "the scientific terminology has an 'unisomorphism' of its own, manifested not only when terminological sets of different languages are compared, but sometimes also when terminological acceptations of the single 'schools' or 'approaches' are analysed in contradistinction, though the respective texts are couched in the same language" (Zgusta 1971, 297-298).

The term/concept interaction is a real hindrance to contrastive analysis of terminologies. One of the problems is how all this information about the structure of particular frames of reference, the origin and development of terminologies with respect to other languages and national metalinguistic cultures should be presented.

It seems essential that compact multilingual entries featuring the conceptually equated terms should be supplemented by a glossary giving a commentary on what might be described as the outcome of previous contrastive analysis. By this we mean observations concerning the ambiguous nature of quite a number of terms.

The difficulty with the term 'connotation', for example, is that the Russian speaker is easily misled by its form being practically identical with how it sounds in Russian. Looked into more deeply, however, the term reveals some deviant features which do not allow us to equate it with the Russian 'konnotacija'. The English 'connotation' has a broader meaning; it refers to both the derived meaning of the word and the emotional-expressive overtones which accompany the realisation of the word's basic primary meaning.

A commentary is also required when we come across overlappings of terms being used in their everyday senses and in precise technical ones. Although there does exist a shared background understanding of the term 'word' as used for one of the basic concepts of language, its terminological status is marred by its regular uses for informal

everyday purposes. As a result, the multilingual entries for this item would appear different if we compared a general dictionary and a specialized (terminological) one:

1) general usage

English	*French*	*Russian*
word	mot	slovo

2) specialized (terminological) usage:

English	*French*	*Russian*
lexical item	monème	slovo
(Crystal	(Dubois 1974,	(Akhmanova 1966, 422)
1985, 166)	322-323)	

Only in Russian the intuitively understandable 'slovo' (word) with all its overtones and specific 'aura' still preserves its leading role as a linguistic term.

Not all terms are renderable into other languages since some concepts might be missing from respective metalinguistic cultures. Owing to varying methodologies certain fragments of national terminologies might prove to be untranslatable. Paradoxically the ease with which terms can be translated into other languages as 'words' seems to be lost the moment we turn to the content plane of terms within specialised frames of reference. The English terms describing types of lexical meaning as

Static	*&*	*Dynamic*
Found in dictionaries		Found in actual use
Isolated meanings		Meanings deriving from context
Conventionalised		Negotiated between users
Regulated by authority		
Base-meaning		Unpredictable
Predictable		Personal/particular
Impersonal/generalised		

are difficult to render into Russian where the conceptual frame of reference underlying this field of study is completely different. The primary distinction within the Russian tradition is drawn between 'meaning' and 'use'. The word's meaning is viewed upon as an integral part of its semantic content: irrespective of its use in the present context the word exists in our consciousness as a global entity in a variety of it meanings (Vinogradov 1947, 14).

This accounts for terminological differences: 'static' and 'dynamic' meanings are discussed in the Russian tradition in terms of the distinction between 'meaning' and 'use'. Here again a commentary is required to explain the individual nature of these terms due to the far-reaching divergencies in underlying methodologies.

The above contrastive analysis can serve as the basis for the onomasiological terminological dictionary proceeding from concepts to terms. This approach involves close analysis of different traditions or metalinguistic culture which gives the learner an idea of the

development of the subject as well as of its scope at the present stage. By its interest in the actual content of a given academic subject the onomasiological dictionary approaches the genre of a text-book.

Onomasiological dictionaries can be described as 'conceptual glossaries' (Riggs 1989, 94) or reference books comprising 'records' which begin with a descriptor (a 'preferred term') in the source-language tradition, then comes the explanation (definition) of the concept itself followed by terms used to refer to it in other schools of thought. All these terms are carefully listed in the dictionary entry as names of a single concept.

It follows that our approach combines the 'standardising' and 'descriptive' tendencies. On the one hand in our contrastive analysis we proceed from descriptor-terms, which taken together form a well-defined system as reflected in terminological dictionaries. On the other hand – we seek to present a number of different approaches so that we could get a broader view of the subject as well as develop the learner's awareness of varying terminologies as reflecting the difference between respective schools of thought.

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