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TYPOLOGIZATION OF CONTRASTED MULTIWORD ENGLISH-BULGARIAN TERM PAIRS

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Abstract. A terminological contrastive analysis based on the systematic character of the term is used to contrast multiword construction terms with their Bulgarian translation equivalents. Four major types of equivalents are identified depending on the degree of structural and semantic correspondence or non-correspondence. A conclusion is drawn that the specified patterns of contrasted term pairs can be successfully used in the ESP classroom as mixed-type translation tasks.

Keywords: terminological contrastive analysis, multiword terms, lexical systematicity, terminological systematicity, ESP teaching

The aim of the present paper is to study multiword terms, i.e. terms consisting of at least two lexemes/lexical elements, in a contrastive perspective using the results in teaching ESP (English for Specific Purposes). The topic of terminological contrastive analysis (henceforth CA) has been widely investigated. Most studies on the issue are practically oriented having implications either for the technical translation practice or ESP teaching. Lado (1957), who laid the theoretical foundations of CA, supported the conviction that "if learners of a foreign language (L2) were made aware of the ways in which their mother tongue (L1) and L2 differed, this would facilitate foreign language learning".

He went even further by claiming that "the elements of L2 that are similar to the learners' L1 will prove simple to learn, with those that are different being difficult". Lado was the first to suggest a systematic set of technical procedures for the contrastive study of languages; this included descriptions of languages and their comparisons as well as predictions of L2 learning difficulties. The practical bias in contrastive analyses of specialized lexis can be exemplified by mentioning some publications. Božinovski (2009) in her CA of the language of the stock exchange in Slovene and English reveals different conceptualizations, terminological gaps and false friends. It is worth noting that she interprets the nominal phrases as collocations and even talks about "collocation-related problems" when transposing such items from L1 to L2. Ishchuk (2011) contrasts military terms in English and Ukrainian considering structural schemes of military

terms translation and giving statistical correlation between different structural groups and subgroups. Stergar (2008) performs a contrastive functional analysis on English and Slovene culinary terms concluding that each language offers different semantic contents to refer to the same referents. The study is based on terminological systematicity which is a type of lexical systematicity.

1. Lexical systematicity

In principle, general language items belong to different semantic fields. Words can be grouped according to their semantics. Some name objects, others properties, activities, functions.

These are paradigmatic relations between words. Semantic relations also designate similarity (synonymy) or difference (antonymy). "The building units of a language are parts of a mosaic: if one element is removed or its place changed the whole picture changes" (Alexiev, 2011). Baker (1992:18) states explicitly that languages make "only those distinctions in meaning which are relevant to their particular environment, be it physical, historical, political, religious, cultural, economic, legal, technological, social, or otherwise".

To sum it up, if a translator understands the semantic field to which a lexical set belongs, he/she can make use of this knowledge in assessing the value of a word in a given system of words and he/she can use his/her general or special vocabulary in a more precise way.

2. Terminological systematicity

Terminological systematicity is a type of lexical systematicity. Contrastive studies based on terminological systematicity can contribute to the effort of terminologists to design multilingual terminological databases as well as help in creating translation tasks for ESP purposes.

When discussing terminological systematicity terminologists generally agree that there are two major types according to the two basic levels of terminological analysis, i.e. conceptual and lexical. Alexiev (2011) terms these *conceptual systematicity* and *linguistic systematicity.*

The former type of terminological systematicity involves the systematic conceptual relations within a special domain and within each conceptual group in that domain. *Linguistic systematicity*, on the other hand, involves the systematic lexico-structural patterns within a term set representing the lexical realization of each conceptual group.

For the purposes of this study Božinovski's methodology for contrasting specialized lexis is used which involves juxtaposition of pairs of contrasted terms establishing their structural and semantic differences. The classification is based on structural and semantic transparency and parallelism.

3. Lexico-structural typology of contrasted multiword term pairs

3.1 Structurally and lexically transparent equivalents

English complex NP	**Bulgarian complex NP**
High speed Portland cement	бързовтвърдяващ се портланд цимент
Limit/boundary value	гранична стойност
Desired/preset value	зададена стойност
Measured value	измерена стойност
Square beam	квадратна греда
Timber/wooden beam	дървена греда

In the English term *high speed Portland cement* the correlation, i.e. structural pattern is Adj+N+N. In the Bulgarian equivalent *бързовтвърдяващ се портланд цимент* we register the same correlation, viz. Adj+N+N, assuming that the first lexeme (lexical element) is a participial adjective, i.e. a participle functioning as an adjective. In both cases the international term *Portland* is involved as a lexical element which shows the international character of a large number of Civil Engineering terms. We also notice parallel semantics in each pair. The individual lexical elements of the source and target language have a one-to-one semantic correspondence. In other words, the translation equivalents in the above examples exhibit both structural and lexical transparency.

3.2. Structurally parallel, lexically unpredictable equivalents

Hinged girder	Adj+N	герберова греда	Adj+N
Cellular girder	Adj+N	куха греда/форма	Adj+N
Raw aggregate	Adj+N	изходен материал	Adj+N
Deep beam	Adj+N	висока греда	Adj+N

In all these examples there is an NP (nominal phrase) of a uniform structure (Adj+N) on both sides. The lexical choices of pre-modifiers and heads make the difference. In the term *hinged girder*, for example, the Adj+N structure is a classical one, a common English word combination used in both general and specialised discourse. In the Bulgarian equivalent *герберова греда* we have the same structural pattern Adj+N but the adjective *герберов* comes from the name of the German engineer Heinrich Gottfried Gerber who first introduced such girders in his bridges. In fact, here we have the same referents expressed by different semantic means. This makes the adjective *герберов* lexically unpredictable. The English term uses the word *hinge* which implies function while the Bulgarian term underlines the origin of the lexeme. The expected translation of *hinged girder* for a Bulgarian user of technology would be either *греда на панти* or maybe *пантова греда*? A translator might be tempted to apply the general rule of the classical structure Adj+N or N+Prep+N which would be seemingly unproblematic. The important thing here

is that a professional engineer would not recognize in either *гредa на панти* or *пантова гредa* the component of a specific structure known to him as *гербероваа гредa*, the latter being an established technical term in the Civil Engineering discourse community.

In the other examples the (*cellular girder*, *raw aggregate*, *deep beam*) words like *cellular, raw, deep* if looked in isolation, would all get translations quite different from those participating as lexical elements in the multiword terms which have been established in the Bulgarian terminology. All these pairs illustrate the different conceptualization in the two languages; the logic of choice is sometimes even opposite to the generally expected one.

3.3. Structurally divergent, lexically parallel equivalent

3.3.1. Structurally different pre-modifiers

Oil asphalt	N+N	нефтен битум	Adj+N
Asphalt course	N+N	асфалтов пласт	Adj+N
Road construction	N+N	пътно строителство	Adj+N
Highway project	N+N	автомагистрален обект	Adj+N
Girder bridge	N+N	гредов мост	Adj+N
Combined sewer system	Adj+N+N	смесена канализационна система	Adj+Adj+N

The two terms *oil asphalt* (N+N) and *asphalt course* (N+N) are rendered into Bulgarian as *нефтен битум* and *асфалтов пласт*, i.e. they have a different structural pattern (Adj+N) compared with their English counterparts. The structurally different pre-modifiers can be explained by what I could term collocational typicality, viz. the frequently encountered N+N collocation (also known as word combination or compound) in English and the preferred Bulgarian structural correlation Adj+N in both general and special discourse. In the first example the noun *asphalt* is translated as *битум*; in the second example the noun *asphalt* is directly borrowed as an international word and transformed into the adjective *асфалтов* to suit the typical Bulgarian correlation Adj+N. In the second example the term *course* which is often translated as a direct borrowing (*курс*), has acquired a specialized meaning in the special domain and hence, a special translation into Bulgarian as *пласт*.

3.3.2. Structurally different post-modifiers

Line of sight	N+Prep+N	линия на визирното разстояние	N+Prep+Adj+N
Drainage of lining	N+Prep+N	дренаж под настилката на канал	N+Prep+N+Prep+N
Distribution of sizes	N+Prep+N	гранулометричен състав	Adj+N
Displacement of track	N+Prep+N	надлъжно изместване	Adj+N

In the first example (*line of sight*) the pattern is N+Prep+N in the English term whereas the Bulgarian term (*линия на визирното разстояние*) it is N+Prep+Adj+N.

In the second example (*drainage of lining*) we have the same structural pattern corresponding to a longer Bulgarian construction, namely, N+Prep+N+Prep+N (*дренаж под настилката на канал*). In the third example (*distribution of sizes – гранулометричен състав*) the pattern is N+Prep+N in the English term and Adj+N in the Bulgarian term. We have the same patterns in the fourth example (*displacement of track-надлъжно изместване*).

3.3.3. Opposite order of lexemes or different parts of speech

Routine maintenance	N+N	ремонт по график	N+Prep+N
Uniform beam	N+N	греда с постоянно сечение	N+Prep+N
Subdivision plan	N+N	план за земеразделяне	N+Prep+N
Nutrient flow	N+N	поток на хранителни вещества	N+Prep+Adj+N
Junior beam	Adj+N	греда на лек профил	N+Prep+Adj+N

The structurally divergent correlations involve different part-of-speech choices. For example, *routine maintenance* (N+N) is translated into Bulgarian as *ремонт по график* (N+Prep+N). Another example is *uniform beam* (N+N) which corresponds to the Bulgarian term *греда с постоянно сечение* (N+Prep+Adj+N), etc. The examples of such correlations demonstrate the preference of the pattern N+N in the English terminological systems most often translated into Bulgarian by the more explicit prepositional phrase.

3.4. Structurally and lexically divergent equivalents (non-transparent equivalents)

Fish-bellied beam Adj+N греда с равни съпротивления N+Prep+Adj+N
Whole beam Adj+N дървен материал за тавански покрития Adj+N+Prep+Adj+N
Collar beam N+N ригел N
Flanged beam Adj+N двойно Т-образна греда Adv+Adj+N
Reinforced concretePP+N стоманобетон N (composite)
Junior beam Adj+N греда на лек профил N+Prep+Adj+N
Box girder N+N греда с четвъртито сечение N+Prep+Adj+N
Emergency bridge N+N временен мост Adj+N

Terms like *fish-bellied beam* (Adj+N) and the corresponding Bulgarian equivalent *греда с равни съпротивления* (N+Prep+Adj+N), *whole beam* (Adj+N) and the Bulgarian translation equivalent *дървен материал за тавански покрития* exemplify the predominant structural preferences in the two languages. The Bulgarian translations again demonstrate volubility which makes the terms rather descriptive. Those descriptive Bulgarian translation equivalents, although lacking in economy of expression, compensate for the lack of transparency in the English terms. Therefore, we can conclude as a general rule that English terms are less transparent than Bulgarian ones. However, there are two examples

of conciseness, i.e. observance of the principle of language economy, in the Bulgarian equivalents: *collar beam* (N+N) and its Bulgarian term counterpart *ригел* and *reinforced concrete* (Adj+N) and its Bulgarian translation equivalent *стоманобетон* (a composite noun). These examples seem to contradict the rule mentioned.

4. Implications for ESP teaching

Below is an example of how the methodology described above can be used to design tasks for the ESP classroom. Structural patterns of English multiword terms and their possible Bulgarian counterparts are first presented and then a matching task is set asking students to refer each translation pair to the respective pattern.

1. Multiword terms consist of two or more words. The most common multiword structural patterns are:

Pattern 1: Noun+Noun;

E.g. (a) land management; (b) production landscape; (c) soil survey;

Translation patterns: (a) земеустройство (сложна дума); (b) производствен ландшафт (прил.+същ.; (c) проучване на почвата (същ.+предлог+същ.);

Pattern 2: Adjective/Participle+Noun;

E.g. (a) cadastral survey; (b) enhanced productivity; (c) environmental management;

Translation patterns: (a) кадастрална снимка (прил.+същ.); (b) повишена продуктивност (прич.+същ.); (c) управление на околната среда (същ.+предлог+прил.+същ.);

Pattern 3: Adjective+Noun+Noun;

E.g. sustainable land management

Translation pattern: (a) устойчиво управление на земите (прил.+същ.+предлог+същ.)

Pattern 4: Noun+Noun+Noun;

E.g. land use plan

Translation pattern: план за земеползване/план за използване на земята (същ.+предлог+сложна дума /същ.+предлог+същ.+предлог+същ.)

Principle of translating long multiword terms: Start from the rightmost word (genus term) and move backwards.

2. Match the multiword terms in the left-hand column with their Bulgarian equivalents in the right-hand one. Refer each pair to the patterns described above:

Multiword term	Bulgarian equivalent
1. land tenure	a. водно огледало, ниво на подпочвени води
2. land degradation	b. дребнозърнеста почва
3. water uptake	c. грунтознание; почвознание
4. surface runoff	d. земевладеене
5. water table	e. праховидна глинеста почва
6. groundwater outflow	f. повърхностен отток
7. nutrient flow	g. план за земеразделяне
8. soil science	h. деградация на почвата/земята
9. coarse-grained soil	i. глинеста пръст
10. fine-grained soil	j. грубозърнеста почва
11. clay loam	k. изтичане на подземни води
12. silt loam	l. комасационен план
13. subdivision plat/plan	m. водовземане; поглъщане на почвена вода
14. consolidation plat/plan	n. поток на хранителни вещества

5. Conclusion

In conclusion we can say that English and Bulgarian technical terms in some cases may coincide in structure whereas in others they follow the typical structure of the native language. For example, English expresses the content of a technical concept most often through N+N multiword terms which in Bulgarian are preferably translated by Adj+N or N+Prep+N structural patterns. In certain English technical terms we notice idiomaticity or even abbreviations with highly specialized meanings while in Bulgarian a lengthy descriptive expression is used. Thus, generally speaking, Bulgarian terminology is more explicit in terms of linguistic expression as compared with English terminology. The reason for making use of different structural patterns in the terminologies of the two languages is the different syntagmatic organization of the lexical items, i.e. the different horizontal ordering of those items in the typical collocational patterns of those languages.

By contrasting terminological items in two languages terminologists can contribute to the efforts for unifying terminology by applying similar structural and semantic criteria in the terminological contrastive analyses. ESP teaching can definitely benefit from the results of such analyses which can also be used in compiling specialized dictionaries.

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