

Anna Kozłowska & Agnieszka Świątek, red. *Znaczenie-Tekst-Kultura. Prace ofiarowane prof. Elżbiecie Janus*. Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, Warszawa 2014. Prace Językoznawcze Instytutu Filologii Polskiej UKSW tom 5  
Igor Mel'čuk- Translation in the Meaning-Text Approach, s. 97-110.

## Translation in the Meaning-Text Approach

Igor Mel'čuk

Observatoire de Linguistique Sens-Texte, Université de Montréal

Дорогая Эля! Я **дик** обрадовался [Горький; Janus 1981: 167], когда был приглашен в сборник в твою честь. Мне **зверски** повезло [Куприн; Janus 1981: 172]; своей заметкой я поведаю Urbi et Orbi, как я **страшно** благоговею перед тобой [Достоевский; Janus 1981: 180]. Хотя всё и все этому мешают **дьявольски** [Чехов; Janus 1981: 169], **бешено** гоняйся за жизнью [Белинский; Janus 1981: 166] – ad meah ve'esrim 'до 120'!

This note has two modest goals.

- On the one hand, I would like to illustrate once again—with concrete examples—how the problem of lexical-syntactic mismatches between languages during translation, in particular, during automatic translation, can be solved within the Meaning-Text framework. Among many other works, the paper Mel'čuk & Wanner 2006 was dedicated specifically to this task; it sketches the problem and offers a set of means for its solution. Yet the phenomena in this domain are so variegated that additional data, presented in a formal enough way, can be useful.

The approach I preach is based on two “pillars”:

- The Explanatory Combinatorial Dictionary [= ECD]—a sophisticated monolingual dictionary, semantically-based and cooccurrence-centered (see, for instance, Mel'čuk 2006). Given the character of the present text, it is impossible to introduce here the underlying Meaning-Text theory, as well as corresponding specific principles and notions of the ECD. I have to resign myself to the fact that only readers well acquainted with Meaning-Text linguistics will fully enjoy this note. Especially important in my context is phraseology: phrases constrained in one way or another; it is phraseology that is mostly responsible for discrepancies and mismatches in translation. More specifically, at the center of this note are two formal tools designed for the description of constrained phrases: Government Pattern [= GP] and Lexical Functions [= LFs].

– A Paraphrasing System—a set of tree-transformation rules designed to automatically establish correspondences between semantically equivalent Deep-Syntactic Structures [= DSyntSs] of the same language or of different languages (Žolkovskij & Mel’čuk 1967, Mel’čuk 1974: 149-161, 1992, Milićević 2007: 245-333). Once again, I am not in a position to dwell here on this system; the reader’s (at least, relative) familiarity with it is presupposed.

• On the other hand, by this little contribution, I would like to demonstrate my long-standing affection for Elzbieta Janus, a friend from youth to old age. Years ago, she tried her hand at Lexical Functions (“Robiła Magn-y”: Janus 1981). This is my pretext for the choice of this note’s topic.

I will present and analyze three examples of difficult translations—things always come in threes! (By the way, the expression *All things come in threes* is a phraseme, namely a cliché: completely compositional but fixed with respect to its conceptual content, which is If there are two similar things or events, it is likely to have a third one of the same kind. The corresponding French cliché is *Jamais deux sans trois* ‘Never two without three’ and the Russian one—*Bog Troicu ljubit* ‘God loves Trinity’. These clichés have different linguistic meanings, but the same “deep meaning”: the conceptual structure. For an exhaustive typology and definitions of major types of phrasemes, see Mel’čuk 2011.)

### Example 1

Consider the Korean sentence (1a) and its English and Russian equivalents (1b)–(1c):

- (1) a. Korean ( $c = /ć/$ ; **SUB stands for the subjective case, which marks the subject**, and NON.FIN is a verbal grammeme marking a non-finite form, something like a verbal adverb)

*Keci+ka*            *el +e*            *cwuk+ess+ta*  
 beggar **SUB**        freeze NON.FIN        die        PAST DECLARATIVE  
 lit. ‘Beggar freezing died’.

b. *The beggar froze to death.*

c. Russian

*Niščij zamėrz* lit. ‘Beggar dead.froze’.

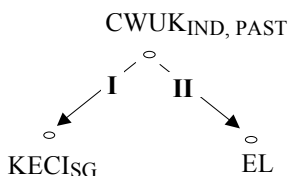
The correspondences between the lexemes of the three languages are straightforward:

Korean	English	Russian
KECI	BEGGAR	NIŠČIJ
EL	FREEZE	MĚRZNUT’
CWUK	DIE	UMERET’

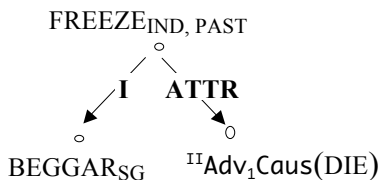
Let me show how the Deep-Syntactic Structures and ECD-type dictionaries can be used to formally establish equivalences between sentences in (1). This operation requires three types of data.

First, Deep-Syntactic structures of the three sentences.

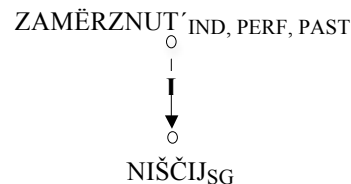
(2) a. DSyntS of (1a)



b. DSyntS of (1b)



c. DSyntS of (1c)



### Comments

1. In (2a), the verb EL ‘freeze’ appears as DSynt-actant II of the verb CWUK ‘die’ (‘X dies of Y’).
2. In (2b), the phrase *to death* is encoded by the complex LF <sup>II</sup>Adv<sub>1</sub>Caus, i.e. ‘[this] causing death’, which is a modifier of the verb FREEZE.

The three languages make use of all three logically possible lexical expressions for the combinations of the meanings ‘die’ and ‘freeze’:

in (2a), ‘die→by.freezing’;

in (2b), ‘freeze→to.death’;

in (2c), ‘freeze.die’ (realized by a derived verb ZA+MËRZNUT’).

There are no other possibilities! Thus, French says *mourir de froid* lit. ‘die from cold’—that is, the Korean way, while German does it the Russian way, with the derived verb *erfrieren* ‘freeze.die’ (from *frieren* ‘freeze’).

Second, the relevant fragments of the lexical entries for the verb ‘X dies from Y’ in the three languages (the semantic actants X and Y being the same in all three).

Korean

CWUK ‘die’

X ↔ I	Y ↔ II
1. N <sub>NOM</sub>	1. V- <i>e</i>

English

DIE

<sup>II</sup>Adv<sub>1</sub>Caus : *to death*

Russian

UMERET’ ‘die’

Y = ‘freeze’ : //*zamërznut’*  
‘freeze to death’

### Comment

The lexical entry for UMERET’ in a Russian dictionary includes several indications of this type:

Y = ‘external physical agent’ : //*pogibnut’* ‘die a violent death’

Y = ‘submerging in liquid’ : //*utonut’* ‘be drowned’

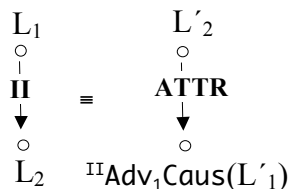
Y = ‘lack of oxygen’ : //*zadoxnut’ sja* ‘suffocate’

Y = ‘brutal fall’ : //*razbit’ sja* ‘be killed in a fall’

And third, the paraphrasing rules necessary for the transition between the DSyntSs of (2).

**NB:** In order to make the rules understandable, I drastically simplified them, preserving, however, their essence (if not the form).

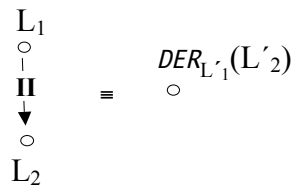
**R1: Causative Head-switching**



**Condition:** ‘L<sub>1</sub>’ ⊃ ‘caused1-2 → L<sub>2</sub>’

*die*<sub>L<sub>1</sub></sub> *from being stabbed*<sub>L<sub>2</sub></sub> ~  
*be stabbed*<sub>L<sub>2</sub></sub> *to death*<sup>H</sup><sub>Adv<sub>1</sub>Caus(L<sub>1</sub>)</sub>

**R2: Lexical Fusion**



**Condition:** ‘L<sub>1</sub>’ = ‘DER<sub>L<sub>1</sub></sub>’

*die*<sub>L<sub>1</sub></sub> *from freezing*<sub>L<sub>2</sub></sub> ~ *za*<sub>DER<sub>L<sub>1</sub></sub></sub> + *mërznut'*<sub>L<sub>2</sub></sub>

**Comments**

1. All paraphrasing rules are valid both intra-lingually and inter-lingually—that is, while translating from one language into another one. For instance, Rule **R2** is illustrated for English-to-Russian paraphrasing. For this reason, symbols in the right-hand side of a paraphrasing rule are supplied with primes: L' means either L itself or the translation of L in the language involved.
2. In **R1**, **Condition** requires that within the meaning, or semantic decomposition, of L<sub>1</sub> (in our example, ‘die’) the semantic actant 2 (= Y, in our case, ‘freeze’) be linked to the rest of this meaning via the predicat ‘be.caused1.by’; put differently, ‘L<sub>2</sub>’ must be the cause of ‘L<sub>1</sub>’. (‘To cause1’ designates involuntary causation.)
3. In **R2**, the symbol DER<sub>L<sub>1</sub></sub> stands for ‘derivational means corresponding to L<sub>1</sub>’, in this case—the Russian prefix ZA-, expressing the semanteme ‘die’ in the derived verb ZAMËRZNUT’.

By applying to (2a) the Causative Head-Switching rule, we obtain (2b), and by applying the Lexical Fusion rule—(2c), and vice versa. The link between (2b) and (2c) is ensured by the application first of the Head-Switching rule from right to left, and then of the Fusion rule.

**Example 2**

English sentence (3a) can be translated into Russian as (3b) or (3c):

- (3) **a.** *This fact came to his knowledge by chance.*
- b.** *Ob ètom fakte on uznal slučajno* lit. ‘About this fact he learnt by chance’.
- c.** *Ètot fakt stal emu izvesten slučajno* lit. ‘This fact became known to him by chance’.

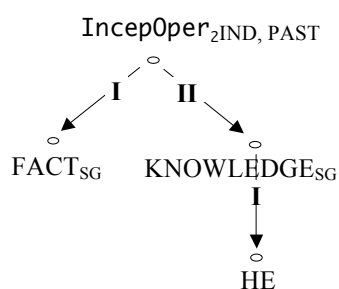
The correspondences between the lexical units involved are as follows:

English	Russian
FACT	FAKT
KNOWLEDGE = $S_0(\text{ZNAT}')$	$\text{ZNAT}' = V_0(\text{KNOWLEDGE})$
HE	ON
'BY CHANCE'	SLUČAJNO

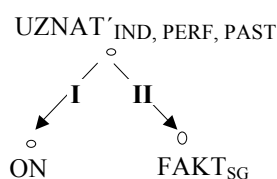
To show how the correspondences between the sentences in (3) can be established, let us take the same three steps as in the previous example.

First, here are the (partial) DSyntSs of the English and both Russian sentences (the adverbial BY CHANCE is not shown).

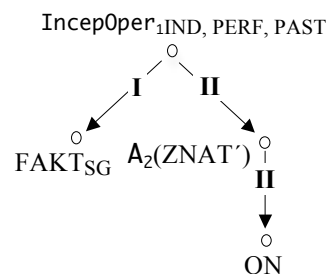
(4) a. DSyntS of (3a)



b. DSyntS of (3b)



c. DSyntS of (3c)



Second, the relevant parts of the relevant lexical entries: for the verb 'know' ('X knows about Y') in English and Russian and for the adjective 'known' ('[Y] known to X') in Russian.

English

1) KNOW

$S_0$  : *knowledge*  
Incep : *//learn*

2) KNOWLEDGE

IncepOper<sub>2</sub> : come [*to A<sub>(poss)-X</sub> ~*]

Russian

1) ZNAT' 'know'

$A_2$  : *izvestnyj* 'known'  
Incep : *//uznat'* 'learn'

2) IZVESTNYJ 'known'

IncepOper<sub>1</sub> : *stanovit'sja* 'become'

Third, the paraphrasing rules (simplified as above):

**R3**:  $L_2 \leftarrow \text{I-Oper}_2(S_0(V)) \text{-II} \rightarrow S_0(V) \text{-I} \rightarrow L_1 \equiv L'_1 \leftarrow \text{I-V-II} \rightarrow L'_2$

*This fact<sub>L2</sub> came to his<sub>L1</sub> knowledge. He<sub>L1</sub> learnt about this fact<sub>L2</sub>.*

**R4**:  $L_2 \leftarrow \text{I-Oper}_1(A_2(V)) \text{-II} \rightarrow A_2(V) \text{-I} \rightarrow L_1 \equiv L'_1 \leftarrow \text{I-V-II} \rightarrow L'_2$

*This fact<sub>L2</sub> became known to him<sub>L1</sub>. He<sub>L1</sub> learnt about this fact<sub>L2</sub>.*

These two rules are formulated in a general form; for them to be applicable to the DSyntSs of (4), we need to add Incep 'begin' to both their parts, so they will have IncepOper<sub>1</sub> and Incep(V).

Rule **R3** takes us from (3a) to (3b) and vice versa, and Rule **R4**, from (3c) to (3b) and vice versa. The transition between (3a) and (3c) is performed in two steps.

**Example 3**

Consider the Spanish sentence (5a) and its Russian equivalents (5b)–(5c):

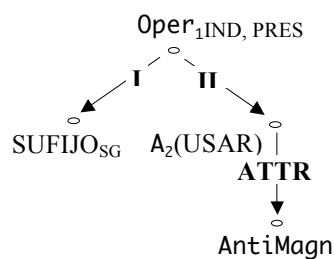
(5) a. *Este sufijo es de escaso uso* lit. ‘This suffix is of scant use’.

b. *Ètot suffiks maloupotrebitelen* lit. ‘This suffix is little.used’.

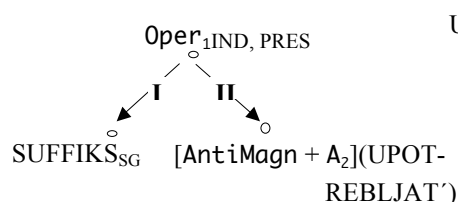
c. *Ètot suffiks upotrebljaetsja redko* lit. ‘This suffix is.used rarely’.

In (6) are cited their (partial) DSyntSs:

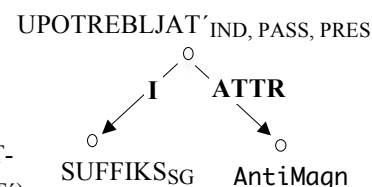
(6) a. DSyntS of (5a)



b. DSyntS of (5b)



c. DSyntS of (5c)



The only interlingual lexical correspondence necessary in this case is Sp.  $USAR \equiv$  Rus.  $UPOTREBLJAT'$ ; correspondingly, here are (partial) lexical entries involved:

Spanish	Russian
1) $USAR$ ‘use <sub>V</sub> ’	$UPOTREBLJAT'$ ‘use <sub>V</sub> ’
$S_0$ : <i>uso</i> ‘use <sub>N</sub> ’	$[AntiMagn + A_2]$ : // <i>maloupotrebitel'nyj</i> ‘little.used’
$A_2$ : <i>de uso</i> ‘of use’	$AntiMagn$ : <i>redko</i> ‘rarely’
2) $USO$ ‘use <sub>N</sub> ’	
$AntiMagn$ : <i>escaso</i> ‘scant’	

The paraphrasing rules needed here are the following ones:

**R5:**  $Oper_1(A_2(L)) - II \rightarrow A_2(L) \equiv Conv_{21}(L')$   
*ser de uso* ‘be of use’  $\equiv$  *upotrebljat'sja* ‘be.used’

**R6:**  $A_i(L) - ATTR \rightarrow (Anti)Magn(A_i(L)) \equiv [(Anti)Magn + A_i](L')$   
*de escaso uso* ‘of scant use’  $\equiv$  *malouptrbitel'nyj* ‘little.used’

**Comments**

1. In (6a), the Spanish verb SER ‘be’ is encoded as  $Oper_1(A_2(USAR))$ : *ser de uso* ‘be of use’. Since any  $A_1$  can have ‘be’ as its  $Oper_1$ , there is no need to indicate SER in the lexical entry of USAR or in that of DE USO.

2. In (6b), the Russian verb BYT’ ‘be’ is also encoded as  $Oper_1$ ; note, however, that in the present tense BYT’ has a zero form, so that it is not seen in sentence (5b).

3.  $\text{Conv}_{21}(\text{V}_{(\text{transitive})})$  can be  $\text{V}_{\text{PASS}}$ : the passive voice is a regular grammatical conversive. It is in this way that the passive form *upotrebljaetsja* is obtained in (5c).

## Acknowledgments

The first version of the text was read and criticized by L. Iordanskaja and J. Milićević, and the final version—by L. Iomdin and L. Wanner; they indicated to me several incongruities and obscure formulations. Thanks a lot!

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