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# On the merits and shortcomings of semantic primes and natural semantic metalanguage in cross-cultural translation

### Summary

The purpose of this paper is to review some basic postulates of the theory of semantic primitives (semantic primes) and to evaluate the applicability of the natural semantic metalanguage in cross-cultural translation. The theory of semantic primes, formulated by Anna Wierzbicka and her colleagues, posits a universal set of cognitive primitives, lexicalized in all natural languages, which, combined into canonical sentences of basic syntactic patterns, constitute a natural semantic metalanguage (NSM). NSM is put forward as an alternative to traditional lexicographic definitions of words, to componential and prototypical semantic analysis, and, as *tertium comparationis*, presented as a more effective tool in translating culture-specific words and ethnosyntactic features.

**Key words:** semantic prime, canonical sentence, natural semantic metalanguage, cognitive syntax, ethnosyntax cross-cultural translation

# Prednosti in pomanjkljivosti uporabe naravnega pomenskega metajezika v medkulturnem prevajanju

### Povzetek

Namen pričujočega sestavka je predstaviti osnovne postulate teorije o pomenskih primitivih (prapomenih) in oceniti uporabnost naravnega pomenskega metajezika v medkulturnem prevodoslovju. Teorija, kot jo je oblikovala Anna Wierzbicka s svojimi sodelavci, predpostavlja obstoj univerzalnega seznama kognitivnih primitivov, ki so ubesedeni v vseh naravnih jezikih in ki, združeni v kanonične stavke osnovnih skladenjskih vzorcev, tvorijo t. i. naravni pomenski metajezik (NPM). Ta naj bi predstavljal boljšo izbiro, kot so tradicionalne slovarske definicije besed, oznake formalne in prototipske pomenske razčlembe, kot *tertium comparationis* pa naj bi ponujal tudi bolj učinkovito orodje pri prevajanju kulturno-specifičnih besed in etnoskladenjskih pojavov.

**Ključne besede:** prapomen, kanonični stavek, naravni pomenski metajezik, kognitivna skladnja, medkulturni prevod

# On the merits and shortcomings of semantic primes and natural semantic metalanguage in cross-cultural translation

## 1. Introduction: formalist and functionalist views on the semantic component of language

1.1 One of the central arguments of contemporary linguistics – the question of the autonomy of linguistic systems – still causes a relatively sharp divide between formalists and functionalists, despite the internal heterogeneity of both groups (Newmeyer 1998, 7-19). Formalists perceive their mission as the unveiling of the relations between structural elements (grammar), independently from semantic (and pragmatic) content. Most of them recognize Noam Chomsky's leading role in the field, which he assumed with the *transformational-generative grammar* (1955; 1957; 1965), and consolidated with the *government and binding theory* and *principles and parameters grammar* (1981; 1995). According to Chomsky, the autonomy of the formal structure of the language is best manifested in the set of phrase structure rules:

There is (...) no way to show that semantic considerations play a role in the choice of the syntactic or phonological component of grammar or that semantic features (in any significant sense of this term) play a role in the functioning of the syntactic or phonological rules (Chomsky 1965, 226).

Functionalists reject the idea of the autonomy of syntax. Both the generative and the interpretative aspects of language are dictated by the communicative function of the language: the formal properties of the language depend on the categorization of the extra-linguistic reality and the principles of effective communication. The primary function of language is *to serve* “as a vehicle for rational thought” (Newmeyer 1998, 1-2) or “to establish, reinforce, maintain, and express social relationships rather than convey information” (Van Valin 1981, 59). The main reproach directed at formalists is that their theory is not explanatory:

There is one thing, however, that a formal model can never do: it cannot explain a single thing. (...) The history of transformational-generative linguistics boils down to nothing but a blatant attempt to represent the formalism as theory, to assert that it ‘predicts a range of facts’, that it ‘makes empirical claims’ and that is somehow ‘explains’ (Givón 1979, 5-6).

Despite occasional animosity, the two approaches are mutually exclusive only in their extremes. At least one group of functionalists, cognitive linguists such as Langacker, Lakoff, Givón, Haiman, Fillmore, Croft and Wierzbicka, come from a formalist (generative) background. While refuting the autonomy of syntax, they accept the independence of linguistic competence from linguistic performance, and even the autonomy of grammar as a cognitive system, the principles of which are independent from the extra-linguistic factors.<sup>1</sup>

The core of the contention between the formalists and functionalist is the understanding of the assignment of meaning to the chain of sounds. Bloomfield (1933, 27), who believed

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<sup>1</sup> On the possibility and necessity to reconcile the formalist and the functionalist views, see Newmeyer 1991, 1992 and 1998.

linguistics to be a taxonomic and descriptive discipline, conceded that “in human speech, different sounds have certain meanings. To study this coordination of certain sounds with certain meanings is to study language”. Nevertheless, a systematic study of semantics is pointless to Bloomfield, since it is impossible to discern the linguistic from the extra-linguistic components of the meaning, which are determined, at all times, by the pragmatic circumstances and practical experience of those involved in communication. The meaning of a linguistic expression can be defined only with regards to “the situation in which the speaker utters it. In order to give a scientifically accurate definition of meaning for every form of language, we should have to have a scientifically accurate knowledge of everything in the speaker’s world” (1933, 139–140).

The generative grammar of the second half of the 20<sup>th</sup> century could not ignore the semantic component of language either. In his *Syntactic Structures*, Chomsky admits to correlation between syntax and meaning, but he “defers” the study of it to some other, more general theory of language:

Nevertheless, we do find many important correlations, quite naturally, between syntactic structure and meaning... These correlations could form part of the subject matter for a more general theory of language concerned with syntax and semantics and their points of connection (1957, 108).

The distinction between the semantic and pragmatic analysis, between linguistic and cognitive categories, remains a tough problem even in contemporary linguistics. According to Anna Wierzbicka (1996), these problems should nevertheless provide no excuse for neglecting the semantic component of language. The exclusion of meaning from the study of language is as ridiculous as the study of traffic signs from the point of view of their physical properties, such as paint or weight, without making reference to their content (1996, 3).

## 2. Conceptual universals and semantic primes

2.1 One definition of the meaning of a word is “a scientific hypothesis about the concept encoded in a given word” (Robinson 1950, 41). Most concepts encoded in human language are “complex” in the sense that they can be decomposed into simpler components. To state the meaning of the word is to reveal the configuration of relatively simple concepts encoded in it. As Aristotle puts it, “the right way to define [the meaning] is (...) through what is absolutely more intelligible” (cited in Wierzbicka 1996, 3). The meaning of some words, however, cannot be decomposed. Pascal (1667), Descartes (1701) and Leibniz (1765) understood that human languages have words for concepts that could not be broken down into simpler concepts. To begin with Pascal,

It is clear that there are words that cannot be defined; and if nature hadn’t provided for this by giving all people the same idea, all our expressions would be obscure: but in fact we can use those words with the same confidence and certainty as if they had been explained in the clearest possible way: because nature itself has given us, without additional words, an understanding of them better than what our art could give through our explanation (Pascal 1667/1954, 580).

Likewise, Descartes:

Further I declare that there are certain things which we render more obscure by trying to define them, because, since they are very simple and clear, we cannot know and perceive them better than by themselves (Descartes 1701/1931, 324).

and Leibniz:

If nothing could be comprehended in itself nothing at all could ever be comprehended. (...) accordingly, we can say that we have understood something only when we have broken it down into parts which can be understood in themselves (translated and cited in Wierzbicka 1996, 11).

Words that, according to Pascal, cannot (need not) be defined and “things” that, according to Descartes and Leibniz, can be understood only through themselves are concepts which are so basic that they are common to all people, innate and “pre-linguistic”. Centuries later, Chomsky reiterates this view:

Barring miracles, this means that the concepts must be essentially available prior to experience, in something like their full intricacy. Children must be basically acquiring labels for concepts they already have (1991, 29).

2.2 While there seems to be no contention with the existence of basic conceptual primitives, the question of their identity on the semantic level of language remains open. Lyons (1977, 331–332) questions “radical semantic universalism”, as well as the thesis of “fixed set of semantic components, which are universal in that they are lexicalized in all languages”. This is exactly what Goddard and Wierzbicka propose in their *Semantic and Lexical Universals* (1994): conceptual primitives are not only common to all humans, they are also encoded in all natural languages, in lexemes and morphemes which are indefinable and cannot be broken down into smaller semantic components. The list of such semantic primes can be acquired through tenacious analysis of as many and as different natural languages as possible. If the concepts such as SOMEONE, SOMETHING, WANT represent semantic primes in English, QUELQU’UN, QUELQUE CHOSE, VOULOIR must be semantic primes in French, and NEKDO, NEKAJ, HOTETI in Slovene.

2.3 The list of languages analysed by Wierzbicka and her co-researchers in the attempt to validate semantic primes remains open, just as the list of semantic primes is constantly exposed to revision and supplementation. Of the original ten semantic primes, proposed in 1972, nine have “survived” meticulous inspection: I, YOU, SOMEONE, SOMETHING, THINK, WANT, FEEL, SAY, THIS.

In 1994, twenty-eight new primes were added to the list:

- PEOPLE
- THE SAME, OTHER
- ONE, TWO, MANY/MUCH, ALL
- KNOW

- DO, HAPPEN
- GOOD, BAD
- BIG, SMALL
- WHEN, BEFORE, AFTER
- WHERE, UNDER, ABOVE
- PART OF, KIND OF,
- NOT, CAN, VERY
- IF, BECAUSE, LIKE

In 1996, the list of semantic primes was further extended to:

- SOME, MORE
- SEE, HEAR
- MOVE, THERE IS, BE ALIVE
- AR, NEAR, SIDE, INSIDE, HERE
- A LONG TIME, A SHORT TIME, NOW
- IF...WOULD, MAYBE
- WORD

According to Wierzbicka, the final number of semantic primes will probably amount to around one hundred, but those identified in recent years have yet to be tested before final validation (Wierzbicka 1996, 110).

2.4 Semantic primes make sense only when put in a syntactic frame of meaningful combinations:

The indefinable word ‘want’ makes sense only if it is put in a certain syntactic frame, such as ‘I want to do this’. In positing the elements ‘I’, ‘want’, ‘do’ and ‘this’ as innate and universal rules of syntax – I am also positing certain innate and universal rules of syntax – not in the sense of some intuitively unverifiable formal syntax à la Chomsky, but in the sense of intuitively verifiable patterns determining possible combinations of primitive concepts (Wierzbicka 1996, 19).

The products of conceptual syntax are canonical sentences, such as ‘I want something’, ‘someone thinks something about something/someone’, ‘you did something bad’, ‘I know when something happened’, ‘I want to see this’, ‘someone cannot move’ etc. They provide an insight into “the language of human mind”, *lingua mentalis*, which is the real origin of syntactic and semantic structures in natural languages: “The syntax and semantics of natural languages are not just special cases of formal syntax and semantics; (...) symbolic structures are meaningful to begin with” (Endelman 1992, 239).

The identification of semantic primes and their combination within the frame of conceptual syntax is the essence of the natural semantic metalanguage (NSM), the absence of which has been, according to Wierzbicka, the main reason for the neglect of semantics in linguistics.



### 3. NSM in cross-cultural translation

3.1 The need to form a culturally independent metalanguage was expressed not only by linguists, but also by anthropologists (Rosaldo 1980; Lutz 1988; Kondo 1990; Needham 1972), who openly deplored the lack of awareness of the “cultural burden” of natural languages when describing culture-specific phenomena and concepts.

The question of the relation between language and conceptual/perceptual patterns of their speakers has been discussed by philologists and linguists ever since the 18<sup>th</sup> century. The romantic notion of the indissociability of language and culture coincided with the discovery of unfamiliar languages (like Sanskrit) and a revival of nationalism in Europe (Kramsch 1998, 11). In the introduction to his work on the ancient Kawi language of Java, which was published in 1836 as *The Heterogeneity of Language and its Influence on the Intellectual Development of Mankind*, Wilhelm von Humboldt wrote:

The character and structure of a language expresses the inner life and knowledge of its speakers, and that languages must differ from one another in the same way and to the same degree as those who use them. Sounds do not become words until a meaning has been put into them, and this meaning embodies the thought of a community. (1911 Encyclopedia Britannica).

The idea that different people speak differently because they think differently, and that they think differently because their language offers them different ways of expressing the world around them, was later picked up by Boas (1911), Sapir (1949) and Whorf (1956). The view has been modified to some extent in contemporary linguistics:

The almost universal outcome of the psychological study of culture and cognition has been the demonstration of large differences among cultural groups on a large variety of psychological tests and experiments. This has led to the widespread belief that different cultures produce different psychological (in the present case, cognitive) processes, (...) but cultural differences in cognition reside more in the situation to which particular cognitive processes are applied than in the existence of a process in one cultural group and in absence of another (Cole, Gay, Glick and Sharp 1971, 215).

3.2 According to Wierzbicka, words are a society’s most basic cultural artefacts and provide the first and best key to a culture’s values and assumptions (1996, 137). If we want to understand other cultures, we need to define these words properly. Lexicographic definitions are often inaccurate, and dictionaries provide just more or less random lists of circular quasi-synonyms, when the only measure of what a good definition is that it shows the meaning of one word by several other not synonymous words (Locke 1690/1959, 33–4). The decomposition of meaning into invariable contrastive semantic components, on the other hand, is based on Aristotelian understanding of categories, to which entities belong if they possess those distinctive features which determine the adherence to individual categories. But the distinction between essential and extraneous semantic components is much more complex than the categorization of entities. While the component [+animal] is easily recognized as essential in the definition of

the word ‘cow’, and the component [+brown] is not, the same cannot be done for many other words. Langacker finds the absolute predictability of the model questionable and prefers the prototype approach, which Rosch (1973) and Wittgenstein (1977) propose when the classical decomposition of meaning into contrastive semantic components fails.

The standard criterial-attribute model of categorization also exemplifies an expectation of absolute predictability. (...) The prototype model offers a more realistic account in many instances, but adopting it implies that class membership is not predictable in absolute terms: it is a matter of degree, decreasing as an entity deviates from the prototype, with no specific cut-off point beyond which speakers abruptly become incapable of perceiving a similarity and thus assimilating an entity to the category (Langacker 1987, 49).

According to Wierzbicka, the prototype approach, too, should be applied “with caution and with care, and, above all, (...) combined with verbal definitions, instead of being treated as an excuse for not ever defining anything” (1996, 160).<sup>2</sup> As an alternative to componential and prototype analysis of the meaning of words, especially of culture-specific words, she advocates the use of NSM, which combines the best of both approaches, but has the advantage over them since:

- Unlike other, artificial intermediary languages, NSM is universally accessible and intelligible;
- NSM is a proper *tertium comparationis* in cross-cultural and cross-linguistic research;
- NSM is an effective tool for the identification of ethnosyntactic phenomena.

3.3 Breaking down the meaning of “untranslatable” culture-specific words into semantic primes, and combining these into meaningful, universally intelligible canonical sentences, relieves their translation of any “residual” or “deficit”. So, for example, the Japanese word *amae*, a specific emotion deeply rooted in the Japanese culture (Doi 1981, 169), and crucial for the understanding of the differences between Japanese and Western society, can be defined in the following manner (Wierzbicka 1996, 239):

*amae*<sup>3</sup>

- X thinks something like this:
- when Y thinks about me, Y feels something good
- Y wants to do good things for me
- Y can do good things for me
- when I am near Y nothing bad can happen to me
- I don’t have to do anything because of this
- I want to be near Y
- X feels something good because of this.

<sup>2</sup> If the word *boat* is defined as ‘man-made object used for travelling on water’, this definition could hardly be applied to a boat with a hole in it. Restricting definitions to a prototypical boat is not necessary, since a simple change of ‘used for travelling on water’ to ‘made/ designed for travelling on water’ resolves the problem (Wierzbicka, 1996, 149).

<sup>3</sup> One Japanese-English dictionary (available at <http://www.englishjapaneseonlinedictionary.com>) defines the adjective *amai* as ‘sweet’. Doi derives the noun *amae* from the ntransitive verb *amaeru* ‘to depend and presume upon another’s benevolence’ (Doi 1974, 307).

Among other words, which can be accurately defined only in NSM, Wierzbicka points to semantically similar words, in which the essential contrastive component is elusive (e. g. *sad, unhappy, distressed, upset* or *petrified, terrified, horrified*). When she compares the English word *happy* (A) with its Polish translation equivalent *szczęśliwy* (B) (1996, 215), she believes that the additional semantic components of (B) ‘everything is good now’, ‘very good’ (instead of ‘good’) and ‘I can’t want anything more now’ (instead of ‘I don’t want anything more now’) make it clear why the meaning of the word *szczęśliwy*, ‘a rare state of profound bliss or total satisfaction’, stands in contrast to the less intense and more pragmatic character of *happy*:

- (A) X feels *happy*
  - (a) X feels something
  - (b) sometimes a person thinks something like this:
  - (c) I wanted this
  - (d) I don’t want anything more now
  - (e) because of this, this person feels something good
  - (f) X feels this
  
- (B) X feels *szczęśliwy* (*glücklich, heureux, srečen*)<sup>4</sup>
  - (a) X feels something
  - (b) sometimes a person feels something like this:
  - (c) something very good happened to me
  - (d) I wanted this
  - (e) everything is good now
  - (f) I can’t want anything more now
  - (g) because of this, this person feels something very good
  - (h) X feels like this

3.3 Words do not only reflect a society’s culture. If Boas (1911) and Sapir (1949) still saw the influence of culture on language as being mostly in the lexicon, Whorf (1956, 221) suggested that “users of markedly different grammars are pointed by the grammars toward different types of observation”. The evidence of how culture permeates the grammatical structure of language, and not just the lexicon, is ample and presented in studies such as the ones on honorific inflection and agreement in Japanese (Prideaux 1990; Shibatani 1990), noun classes and categorization of nouns (Craig 1986), extensive differences in grammar of men’s and women’s speech (Dunn 2000), to mention but a few.

In 1979, Anna Wierzbicka coined the term *ethnosyntax*, which is today used in two senses. In its broader sense, it denotes all relations between the entire cultural system (knowledge, values, customs) of a community and the morphosyntactic tools of their language.<sup>5</sup> In its narrower sense, the term *ethnosyntax* refers to the direct encoding of culture-specific semantic

<sup>4</sup> The meaning of *szczęśliwy* is, according to Wierzbicka, identical with the meaning of German *glücklich* and French *heureux*, and also with the meaning of translation equivalents in other Slavic languages.

<sup>5</sup> Goddard (2002, 53) prefers the term *ethnopragmatics* for this broader use of the word.



content in the morphosyntax of a particular language (Enfield 2002, 5). Again, Wierzbicka is convinced that the study of this field can be effective only within the framework of semantic primes, and if the description of semantic (conceptual) differences is based on the application of NSM as *tertium comparationis*:

The grammatical constructions of any natural language encode certain meanings. These meanings can be ‘deciphered’ and stated in precise and yet intuitively comprehensible semantic formulae. To the extent to which the semantic metalanguage in which such formulae are worded is language independent and ‘culture-free’, the meanings encoded in the grammar of different languages can be compared and the differences between them can be shown explicitly (1988, 12).

A typical example of an ethnosyntactic phenomenon is the encodement of Russian fatalistic acceptance of destiny in the morphosyntactic construction *impersonal dative-cum-infinitive* constructions, which have the following forms (all examples from Wierzbicka 1992, 108–16, 413–28):

- a) existential: negative<sup>6</sup> - Person X<sup>7</sup>:dative - Noun Y:genitive  
*Ne bude tebe nikakogo moroženmogo* ‘there will be no ice-cream for you’
- b) negation – infinitive verb – person X:dative – noun Y:genitive  
*Ne vidat’ tebe etix podarkov* ‘you will never see these presents’
- c) person X:dative – Mental verb:3SGRefl.  
*Emu xotelos’ slyšat’ zvuk ee golosa*  
‘he (felt he) wanted to hear the sound of her’

The common denominator of the above sentences is the connotation that the person referred to by the noun phrase in the dative case, the passive participant, cannot achieve the desired goal. The reason for that is not very clear, but it seems as if it comes from someone ‘above’, from destiny or God. This semantic content can be expressed in NSM in the following manner:

- (a) Person X wants to do something;
- (b) I know: X cannot do it;
- (c) If someone wanted to say why X cannot do it, this person could say:
- (d) It is like someone above people doesn’t want this to happen.

The direct encodement of a particular semantic component on the level of morphosyntax, is to Wierzbicka a direct proof of an ethnosyntactic phenomenon. Other frequently quoted examples of ethnosyntax discussed by Wierzbicka include the use of diminutives in Russian, adversative passive in Japanese (1988), Italian syntactic reduplication (1991) and English causal constructions (1998).

<sup>6</sup> ‘there isn’t’

<sup>7</sup> X is the potential recipient of the noun Y, who cannot obtain Y in real life.

## 4. Conclusion: the merits and shortcomings of NSM

4.1 Linguists have had mixed feelings about the work of Anna Wierzbicka. They acknowledge her precise and in-depth descriptions of grammar and cultural specifics of different nations, but at the same time reject most her persistence on the theory of directly indefinable semantic primes and the use of natural semantic metalanguage.

Wierzbicka's work is conspicuously absent from the otherwise excellent recent reviews of linguistic anthropology (...) Many scholars are put off by a simple universalist claim at the heart of her approach – namely, that all languages have a directly translatable primitive semantic core, and it is at this level that linguistic and cultural analysis is to be done (Endfield 2002, 5).

4.2 Critics of the theory that semantic primes – i. e. the meanings of lexemes which cannot be broken down into smaller semantic components, are directly related to conceptual primitives, with which we categorize the world around us – are unnecessarily harsh. The truth is that this theory can neither be empirically verified nor disproved, since the pre-linguistic conceptual universe is inaccessible to human cognition. Nevertheless, both the indivisibility of semantic primes and their lexicalization in all natural languages can be tested, the list revised, extended or reduced, something that Wierzbicka herself admits and feels compelled to do (1996, 3–34). Even if semantic primes are not a direct expression of (innate) conceptual primitives, their universal character and indivisibility make them appropriate culture-free semantic building blocks of lexicographic definitions, much less controversial than the circularity of synonyms or quasi-synonyms.

Where Wierzbicka cannot be followed without reservation is in the application of canonical sentences (NSM) in the definition of words. The analyses which she proposes for culture-specific or semantically similar words are awkward and impractical, and may require additional clarification, which Wierzbicka herself occasionally provides, e. g. in the definition of the word *game* (1996, 159).<sup>8</sup> Furthermore, these analyses remain arbitrary. When the essential contrastive component is expressed in a canonical sentence, the decision about its inclusion in the definition formula is, at best, based on the verbal ruling of native speakers, since their conceptual perception is not directly accessible. The application of NSM does not reduce the vagueness and subjectivity of the connotative meaning of words any more than the classical

<sup>8</sup> *Games* (brackets contain Wierzbicka's commentary)

- (a) many kinds of things that people do (games are human activities and there are many kinds of them)
- (b) for some time (games are not instantaneous, but have duration)
- (c) because they want to feel something good (games are undertaken for pleasure)
- (d) when people do this things, one can say these things about these people: (games have some constant characteristics)
- (e) they want some things to happen (games have goals)
- (f) if they were not doing these things, they wouldn't want these things to happen (goals have no meaning outside of the game)
- (g) they don't know what will happen (the course of a game is unpredictable)
- (h) they know what they can do (games have rules)
- (i) they know what they cannot do.

decomposition of meaning does. The decoded meaning still depends on the experience of the speaker and the hearer, on what they both know and think about the world, on the tradition and common culture of their language (discourse) community (communities). In cross-cultural translation, at least the one with general public as the target audience, corpora analyses seem a more reliable source of information when determining how “specific concepts expressed by individual lexical items in specific languages interact with large-scale conceptual mappings found in many different languages” (Stefanowitsch 2004,139).<sup>9</sup>

Regardless of the above and other reservations, the identification of semantic primes in the lexical component of languages is a major contribution to contemporary linguistics. Wierzbicka’s insistence that grammatical categories and structures are as indicative of the society’s culture as the lexicon is, and that the meanings encoded in them can also be broken down into canonical sentences of semantic primes, is particularly ground-breaking. The application of NSM to definitions of words and grammatical structures, especially when verified through tenacious corpora analyses, where available, can by no means replace but it certainly can improve the classical compositional and prototype semantics, as well as cognitive linguistic and cultural studies in general.

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<sup>9</sup> In 2004, Anatol Stefanowitsch described a corpus-based method of a contrastive analysis of metaphors associated with English *happiness* and German *Glück*. Since Goddard (1998), like Wierzbicka, suggests that “Glück and bonheur fill a person to overflowing, leaving no room for any further desire or wishes” (1998, 93), Stefanowitsch extracted all metaphorical patterns EMOTION-AS-LIQUID and EXPERIENCE-AS-CONTAINER featuring with *happiness* and *Glück* in the web archives of ten American and ten German newspapers. He found no significant evidence of cross-linguistic difference in the intensity of the emotion (which he did find, however, in the intralinguistic metaphorical mapping of HAPPINESS vs JOY and GLUCK vs FREUDE) (Stefanowitsch 2004, 137–50).

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