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## ANALYZABILITY IN COGNITIVE GRAMMAR: A REAPPRAISAL

## ROZKŁADALNOŚĆ ZNACZEŃ W GRAMATYCE KOGNITYWNEJ

**ABSTRACT:** This paper examines the notion of *analyzability*, initially discussed in Langacker (1987), in the framework of the latest refinement of Ronald Langacker's model of Cognitive Grammar (2016), which we will call, for the purpose of this paper, the *Cognitive Grammar Structure and Function* model (CGSF model). Based on Langacker's (2016, p. 24) claim that "(...) structure and function (...) are indissociable, like the two sides of a coin" and that "a structure is never independent of its functions," we will argue for an *extended* version of analyzability, which we will call, in want of a better term, *analyst analyzability*. We will look at the latter through the prism of the *External Symbolic System*, a theory of *collective memory* proposed by Merlin Donald (cf. Donald 1991).

**KEYWORDS:** analyzability, linguistic sign, cognitive grammar, structure, function, external symbolic system

**SŁOWA KLUCZOWE:** rozkładalność znaczeń, znak językowy, gramatyka kognitywna, struktura, funkcja, zewnętrzny system symboliczny

### 1. Introduction

The importance of the notion of *analyzability* in linguistic research and, related to it, the notions of *motivation* and *compositionality*, can hardly be minimized:

a wide body of research on morphology, syntax and semantics, especially related to the studies on idiomaticity, has shown the usefulness of these conceptions in linguistic analysis.<sup>1</sup> This is how Ferdinand de Saussure (2009 [1916], p. 130) explains the idea of motivation:

The fundamental principle of the arbitrary nature of the linguistic sign does not prevent us from distinguishing in any language between what is intrinsically arbitrary – that is unmotivated – and what is only relatively arbitrary. (...) In some cases, there are factors which allow us to recognise different degrees of arbitrariness (...). *The sign may be motivated to a certain extent*. (italics original)<sup>2</sup>

An example of a motivated sign is the French word *dix-neuf* 'nineteen', which, in contrast to the arbitrary word *vingt* 'twenty', evokes, as Saussure notes (2009 [1916], p. 13),

(...) the words of which it is composed , *dix* ('ten') and *neuf* ('nine'), and those of the numerical series: *dix* ('ten'), *neuf* ('nine'), *vingt-neuf* ('twenty nine'), *dix-hu-it* ('eighteen'), *soixante-dix* ('seventy'), etc. Taken individually, *dix* and *neuf* are on the same footing as *vingt*, but *dix-huit* is an example of relative motivation.

Saussure continues (2009 [1916], p. 13):

The same is true of *poirier* ('pear tree'), which evokes the simple form *poire* ('pear'), and has a suffix *-ier* which recalls that of *cerissier* ('cherry-tree'), *pommier* ('apple-tree'), etc. (But words like *frêne* ('ash-tree') and *chêne* ('oak') offer no parallel.) Again, a word like *berger* ('shepherd') is completely unmotivated, whereas *vacher* ('cowman') is relatively motivated.

For Daniela Marzo (2015, p. 984), motivation is closely related to the notion of compositionality so that these two notions "are sometimes used as synonyms." Equally closely related to compositionality is the notion of analyzability, as the following quotation from Langacker (1987, p. 448) documents:

In considering the compositional aspects of grammatical constructions, it is important that we distinguish clearly between the closely associated notions of analyzability and compositionality. Analyzability pertains to the ability of speakers to recognize the contribution that each component structure makes to the composite whole; the question of analyzability thus arises primarily at the level of individual composite

<sup>&</sup>lt;sup>1</sup> It is worth mentioning that a promising avenue of research on analyzability, which for lack of space will not be discussed here, is also offered by recent multimodal studies of cartoons (cf. Forceville 2014; Abdel-Raheem 2019; Górska 2020), advertisements (Pérez-Sobrino 2017) or musical compositions (Pérez-Sobrino 2014).

<sup>&</sup>lt;sup>2</sup> As observed by Professor William Sullivan (personal communication), Roman Jakobson, when discussing Saussure's theory of sign in class, noted that while individual signs may be unmotivated, "the further you look into the system of sign relations, the more motivated things become."

expressions. Compositionality, on the other hand, pertains to the regularity of compositional relationships, i.e. the degree to which the value of the whole is predictable from the values of its parts. It therefore concerns the relationship between a constructional schema and its instantiation (...).

The relations between compositionality and analyzability obtaining in a composite structure can be captured by the following diagram (cf. Langacker 1987, p. 450):

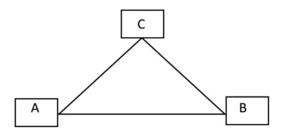


Fig. 1. The compositionality of a composite structure

[A] and [B] are component structures, and [C] is the composite structure. Two types of relations hold between these three structures: the horizontal relationship of *integration* between [A] and [B] and the vertical correspondences of *composition* between [A]–[C] and [B]–[C]. In this configuration, [C] functions as the so-called *constructional schema* which *sanctions* the use of [A] and [B]; [A] and [B], are said to *motivate* the various elements of the meaning of [C]. Analyzability, in turn, just like compositionality, also presupposes directionality, yet, as observed by Langlotz (2006, pp. 89–90), whereas compositionality "describes the bottom up perspective on composition," analyzability "captures the composition process top-down" (quoted in Zhang 2016, p. 49).

Applying the Langackerian compositionality – analyzability distinction to the French examples discussed by Saussure, we will say that, whereas the meaning of the derivative *poirier* is (almost) fully compositional since it can be predicted on the basis of the constructional schema [POIR(E)–[IER]]/[poir(e)–[ier]], the expression *berger* is non-compositional because the segment [er] here is not a morpheme, hence no constructional schema of the type \*[BERG–[ER]]/[berg– [er]] sanctions its use. Still, native speakers of French could come to the conclusion that [er] in *berger* or [ier] in, say, *gabier* 'topman' might be analyzed as consisting of elements that have some influence on the overall meaning of these expressions, pointing, for instance, to the type of profession exercised (as is the case with the regular compositional form *boulanger* 'baker' [*boulange* + *er*]). Equally so, native speakers of English might conclude that the segment [er] in the monomorphemic and non-compositional expression *father* is analyzable in that [er] *might* be understood to indicate, say, the category membership of kinship, which comprises expressions such as *brother*, *mother* or *sister*.

Now, because as Langacker (1987, p.11) asserts, Cognitive Grammar "(...) embrace[s] the spirit of classic Saussurean diagrams (...), with the understanding that explicit, substantive characterization is required for the elements they depict," the conception of analyzability (as well as motivation and compositionality) must be seen through the prism of the Saussurean theory, which involves the two "halves" of the sign: the *signifier* (sound pattern) and the *signified* (concept). Thus (2a) represents the traditional Saussurean linguistic sign (cf. Saussure (2009 [1916], p.67), while the figures in (2b) and (2c) – which are based on (2a) – represent the relationships between the semantic and the phonological poles of the bipolar linguistic units, *talker* and *father*, respectively (based on Langacker 1988, p. 24).

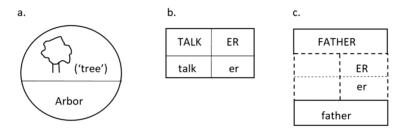


Fig. 2. The linguistic sign and bipolar linguistic units

This paper addresses two interrelated questions: given (2b) and (2c), (i) how should analyzability be understood in the light of the CGSF model, which stresses the "indissociability of structure and function" and (ii) who exactly is the speaker that is expected to decide about the analyzability of linguistic units?<sup>3</sup> The general layout of the paper is as follows. In Section 2 we present the CGSF model. Section 3 introduces the notion of what we wish to call *analyst analyzability* – a theoretical notion intimately linked to a theory espoused by a linguist-researcher (in this case, the CGSF model). Finally, in Section 4 we delineate a broader research context – the co-called *External Symbolic System* (ESS), proposed by Donald (1991), on the grounds of which the notion of analyst analyzability can be further examined and explored.

<sup>&</sup>lt;sup>3</sup> Generally, the identity of the speaker is not easy to establish. It has been brought to my attention by Professor William Sullivan (personal communication) that the so-called neurocognitive relational network (RNT), for instance, explicitly recognizes that one speaker may have one network and another speaker may have another connecting the same meaning and form. For the time being, let us assume, subject to substantial revision, that, for analytical convenience, we may pick one but we always recognize the possibility that another may be equally valid.

## 2. Structure and function in cognitive grammar

This is how, in his book *Nominal Structure in Cognitive Grammar. The Lublin Lectures* (Langacker 2016, p.16), Ronald Langacker describes the structure – function relations holding in language:<sup>4</sup>

[s]tructure is often identified with grammar, and function with meaning. Or structure with lexicon, morphology, syntax, and phonology, and function with things like semantics, pragmatics and discourse functions. This is really a kind of disguised metaphor. It's a manifestation of the substance/activity distinction which I think is ultimately wrong.

The substance-activity distinction is "wrong," because, as Langacker further notes (p. 17),

the "formal" elements are substantive only metaphorically [and because] [p]honological, lexical, and grammatical structures consist in patterns of processing activity, just as meanings do.

Moreover, as Langacker asserts (p. 17), "a structure of any size consists in organized activity," where the structure-function relation is "really just a matter of perspective," it is precisely the organization of this activity that ensures some measure of stability. Langacker comments (p. 17):

A pattern of activity can be *stable* in the sense of being "entrenched" and able to recur: an *established processing routine* (a *unit*, in CG terms) [which] to some extent (...) decomposes into subpatterns – parts within the whole.

The above-mentioned subpatterns "are connected in various ways [by] association, temporal sequencing, partial overlap" (p. 17), giving rise to the structure's configuration. In an attempt to describe structures at all levels of conceptual organization, we thus:

are implicitly describing [their] functions: we are describing lower-level structures, and we're describing how they map onto aspects of higher-level structures, and this amounts to characterizing the functions.<sup>2</sup> (p. 17)

But what *is* structure? Structure, says Langacker, is a configuration in which the elements from which it is composed are linked to each other by means of the following three types of connections (p. 20):

- (i) overlap in the activity comprising the connected elements;
- (ii) association, such that one structure tends to activate another;

<sup>&</sup>lt;sup>4</sup> All quotations and figures from Langacker (2016), presented in Section 2, have also been cited in Kardela (2019a).

(iii) operations (e.g. comparison, categorization, assessment of relative position in some field).

It is important to note that the same elements can be connected in many different ways, yielding different structures that can be further *augmented* (Langacker's term) by other elements and/or connections. Connection creates a new higher-order structure, where (p. 21)

- (i) the higher-level entity has emergent properties, minimally including the nature of the connections and any adjustments the component elements undergo;
- (ii) a component of a higher-level entity may participate individually in further connections;
- (iii) a higher level entity (being a structure in its own right) can also participate as a whole in further connections. This is so when the connections depend on emergent properties;'
- (iv) when this happens at successive levels, the result is hierarchy.

When the potential of a higher-order entity created by connected elements to function in some other higher-level structure is realized, a *grouping* emerges. In it "the elements are grouped into what counts as one entity for this higher-level purpose" (p. 23). The process of grouping can be presented as follows (cf. Langacker 2016, p. 23):

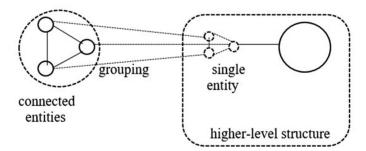


Fig. 3. Grouping

We have already quoted Langacker as saying that "structure vs. function is (...) a matter of perspective." Functions, Langacker notes, "require structures for their implementation," which are "a vast assembly of semantic and phonological structures connected by relations of symbolization, categorization, and composition" (p. 25). Structure vs. function, Langacker adds (p. 27), is "a shorthand for symbolic structure/function vs. semantic structure/function," where the *semantic pole* of an assembly (i.e. its semantic structure/function) is part of symbolic structure/function. Seen in this light, an assembly of semantic and phonological structures such as stem-affix combinations can be given a fresh look.

Consider, for instance, three [er]-derivatives: the [er]-agentive derivative worker, the [er]-instrumental form tranquilizer and the [er]-purpose locative form *container*. We can distinguish between the three [er]-suffixes by appealing to the notion of system, defined by Langacker (p. 28) as "a set of elements that fulfill a certain function (...)." This set of elements, called by him exponents or members of the system, are mutually exclusive; they are, as Langacker puts it, "in opposition to one another in neural terms [and being] connected by *inhibitory* (rather than *excitatory*) links" (p. 28). Drawing on Ferdinand de Saussure's practice of defining a sign in negative terms, the exponents of a system, Langacker notes, "are partially defined by what they are *not* – their place in a system of opposition. [Thus] in the system [i a u], [i] is partly defined by not being [a] or [u]." In short, seen in cognitive grammar terms, exponents of a system are "contrasting instantiations of the same schema." Viewed from this angle, the agentive, instrumental and purpose locative [er]-suffixes should be treated as "contrasting instantiations" of the more general [er]-suffix schema, with the links between them forming a relationship of categorization. The function/schema-related categorizing relationship - let us call it: an FSCR schema - between the three senses of the [er]-suffix can be presented as follows ([er]-AG = worker; [er]-INS = tranquilizer; [er]-LOC = container; based on Langacker's diagrams, p. 29):

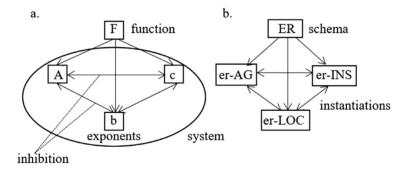


Fig. 4. The function/schema-related categorizing relationship (FSCR)

It should be stressed that no matter which [er]-suffixal form is *excited*, be it [er]-AG, [er]-INST or [er]-LOC, the entire FSCR schema will be evoked. Viewed in "non-neural" terms, in turn – in terms of the figure-ground organization – we will say that the choice of a particular meaning of the [er]-suffix depends on which of its meanings becomes *salient*, or *profiled* from the *base*. Thus, in the case of *worker*, the [er]-AG suffix is profiled, yielding, together with the verbal stem, the agentive form; in the case of *tranquilizer*, [er]-INST is profiled to derive the instrumental form, while in the case of *container*, the combination of the stem and [er]-LOC yields the locative derivative. In what follows we take a closer look

at the polysemic nature of the [er]-suffix, which is associated with the so-called *semasiological* approach to linguistic meaning, to subsequently extend our analysis to the *onomasiological* perspective on the suffix's meaning.

## 3. The [er]-suffix in English in a semasio-onomasiological perspective

Consider the *network model of interrelated senses* involving the suffix [er], discussed in Panther and Thornburg (2003, p. 297 – henceforth PT; see also discussion in Kardela 2019a):

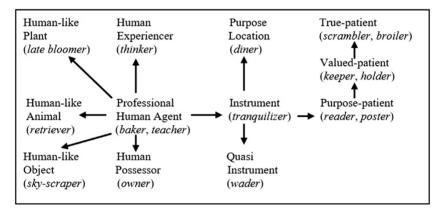


Fig. 5. The network of the interrelated senses of the [er]-suffix

According to PT, the most prototypical meaning of the [er]-suffix is its agentive meaning; less prototypical is the instrumental meaning and the least prototypical, a patientive meaning. If so, an obvious question to ask is: What exactly is the theoretical basis for this claim? One way to answer this question would be to appeal to the Langackerian notion of the *energy chain*, a cognitive model of the *event structure* coded by a clause.

According to Langacker (1991a), the *energy chain* governs, *inter alia*, the choice of grammatical categories such as subject and object in a sentence. Under the so-called *force dynamics construal*, an event is held to involve the flow of energy which is transmitted from one participant to another (Langacker 1991b, p. 283):

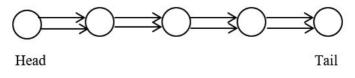
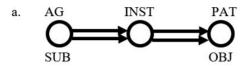


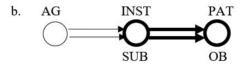
Fig. 6. The energy chain

The initial element of the chain, the *head*, passes energy to the second element in the chain, the second element imparts energy to the third element until the *tail* of the chain is reached.

Now, depending on which part of the chain is profiled, the subject is said to code either an *archetypal role* of agent, a patient or an archetypal role of instrument, as shown in the following diagrams (Langacker 1991b, p. 333; for discussion cf. also Ungerer, Schmid 2006, p. 181):



John easily melted the ice with a burner.



The burner melted the ice easily.

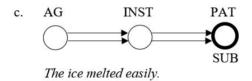


Fig. 7. The energy chain and the categories of subject and object

When the whole chain is profiled (figures in bold), then the archetypal role of agent becomes a subject and the archetypal role of patient is coded by the object, as in (a). When the instrument and patient and the flow of energy between them are profiled, then the archetypal instrument is a subject, while the patient becomes the object (cf. (b)). Finally, when the archetypal patient is profiled, then the patient becomes the subject, as in (c).

Let us assume now that exactly the same mechanism applies to the [er]derivatives discussed by PT. In particular, when AG is profiled, then the suffix [er], combined with the verbal stem, form agentive derivatives such as *teacher* or *baker*; when the INST is profiled, then [er], together with the verbal stem, yield derivatives such as *tranquilizer* or *diner*; finally, when PAT is profiled, then we have patientive derivatives such as *holder*, *poster* or *broiler*. In order to incorporate these observations into a CGSF model, we have to introduce now two notions: *baseline* and *elaboration*. As Langacker (2016, p. 36) notes,

- (i) The notions *baseline* and *elaboration* pertain to asymmetries observable in any facet of language structure or its conceptual and phonological basis.
- (ii) The baseline (B) is already established, in place, or under control. Its elaboration
  (E) by augmentation, adaptation, or further processing produces a structure that may itself function as B at another stage or level of organization.
- (iii) B/E organization has thus a temporal aspect, B in some sense being prior to E.
- (iv) However, this happens on very different time scales and may just be a matter of inherent organization (or 'logical necessity')<sup>5</sup>.

The B/E organization involves what Langacker calls the *core* and *periphery layering of strata*,<sup>6</sup> a conceptual arrangement in which "each stratum (Si) is a *substrate* for the next (Si+1). providing the basis for its emergence" and where "Si+1 elaborates Si by invoking additional resources allowing a wider array of alternative" (p. 41). The layering of strata via the elaboration process can be presented as follows (Langacker 2016, p. 45):

5

B/E organization involves a variety of phenomena, including:

<sup>(</sup>i) the conception of *norm*, in which case, as Langacker (2016, p. 37) notes, "any kind of norm is a baseline [and] departures from it are elaborations;"

<sup>(</sup>ii) linguistic change, where "the current state of a language is a baseline [and] change constitutes elaboration;"

<sup>(</sup>iii) categorization, in which case "the categorizing unit is a baseline used to apprehend the target, which departs from it in terms of greater specificity or a conflict in specification;"

<sup>(</sup>iv) the conception of prototype involving a complex category, where "prototype is the baseline from which other variants develop by extension, specialization, or schematization;"

<sup>(</sup>v) a number of asymmetries including concrete/abstract, or physical/mental, where "the first element provid[es] the basis for apprehending the second." (Langacker 2016, p. 37; discussed in Kardela 2019a)

<sup>&</sup>lt;sup>6</sup> According to Langacker (2016, p. 40): "When we talk about B/E organization, there are always three elements involved: there is B, the baseline; there is E, the elaborating structure; and there's BE, the combination or the result of that elaboration. These exhibit certain asymmetries: B is prior to E, B is typically more substantive than E, and BE is more complex than B. Thus in the B/E relationship:

 $<sup>\</sup>begin{array}{c} y & l & z \\ [a] \rightarrow [ay] \rightarrow [ayl] \rightarrow [aylz] \end{array}$ 

the vowel [a] is the initial baseline; its more substantive (sonorous) than the elaborating structure, [y], which is a glide. The result of the elaboration, [ay], is more complex than either of these taken individually" (cf. Langacker 2016: 40; adapted; also discussed in Kardela 2019a).

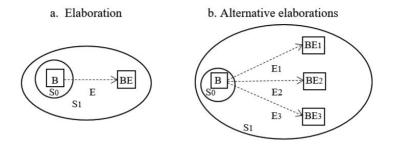


Fig. 8. Strata layering, baseline and elaboration

Let us pause for a moment and take another look at the linguistic sign in Fig. 2a.

When discussing the polysemy (or the interrelated senses) of the [er]-suffix, we were essentially dealing with the *semasiological* aspect of meaning involving: the *signifier*  $\rightarrow$  *signified* relation, asking what meanings a particular expression has (in this case, the [er]-suffix). We established, following PT, that the prototypical meaning of [er] is its agentive sense that emerges in agentive forms such as *teacher*, *baker*, *thinker*, etc. We said nothing, however, about the reverse relation holding in the linguistic sign, namely the *signified*  $\rightarrow$  *signifier* relation, linked with the *onomasiological* aspect of *signification*, associated with synonymy. In this case, seen from an onomasiological perspective, we will not be asking what meanings the [er]-suffix has, but rather *what suffixes, apart from the* [er]-*suffix, derive agentive formations*.

In order to incorporate the onomasiological aspect of the signification of the sign into our analysis, we have to draw a distinction between the *deriva-tional category* and *derivational type*. Thus, as noted by Szymanek (1988), a given functionally established derivational category can subsume one or more derivational types, depending on how many *co-functional formatives* are used to derive this category. For instance, an agentive formation in English can be derived by the following co-functional formatives (Szymanek 1988, p. 60; adapted; also discussed in Kardela 2019a):

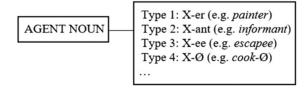


Fig. 9. The agent noun and its derivational types

With this in mind, we can now return to Fig. 8 and propose a unified B/E based account of the combined *semasio-onomasiological* perspective on the [er]-suffix. Consider the following diagram.

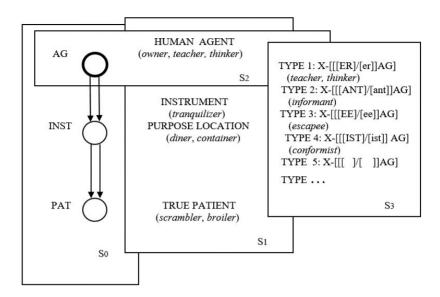


Fig. 10. A SFCG-based semasio-onomasiological approach to the -er suffix

Fig. 10 shows a CGSF-based semasio-onomasiological approach to the [er]suffix. The stratum S0 (the baseline), involving the energy chain, is elaborated by the network of the interrelated senses of the [er]-suffix, contained in S1. The meaning of [HUMAN AGENT], which appears in the S2 stratum, is a result of the elaboration – via the profiling process – of the archetypal AGrole of the energy chain. Ultimately, the AG stratum, S2, containing the agentive noun category, is elaborated by the derivational types of this category in S3.

With the structure-function-based analysis of the [er]-suffix in mind, we can now return to our question: How should analyzability be understood in the light of the CGSF model?

# 4. The Extended Analyzability Principle (EAP) and the External Symbolic System (ESS)

We have defined analyzability, following Langacker, as a top-down categorization process which "pertains to the ability of speakers to recognize the contribution that each component structure makes to the composite whole [where] the question of analyzability (...) arises primarily at the level of individual composite expressions" (Langacker 1987, p. 448). With this definition of analyzability at hand, we can now ask: What exactly is the contribution of the [er]-suffix to the composite [er]-derivatives? Unsurprisingly, an answer can be found in Fig. 10:

the analyzability of the [er]-suffix consists in uncovering the mechanisms which underlie the [er] – stem combinations, including:

- (i) the profiling of a particular role-archetype in the energy chain;
- (ii) linking the role archetype to the successive B/E-based strata-layering processes involving the suffix in question;
- (iii) evoking the network of interrelated [er]-senses (semasiological perspective), and
- (iv) bringing to the fore the network of [er]-related derivational types, coded (in this case) by agentive suffixes such as [er], [ant], [ee], [ist], [zero] (onomasiological perspective).

Notice that there is nothing in the Langackerian formulation of analyzability that could preclude us from adopting this *extended theory-related* definition of analysability, as the "old" definition says nothing about the *scope* of analysability or the degrees of analyzability a particular composite structure exhibits; nor does it specify *who* the speaker actually is.

It is clear that this "theoretically-laden" principle of analyzability – let us call it, the *Extended Analyzability Principle* (EAP) – can hardly be expected to be performed by a (native) speaker of English, the man/woman in the street; rather this understanding of analyzability should be seen to fall into the domain of the linguistic endeavor carried out by a *linguist-analyst*. If so, the question to be asked now is: What exactly is the status of the EAP? To answer this question we will have to bring in the idea of *External Symbolic System* (ESS), a theory of *collective memory*, proposed by Merlin Donald (cf. Kardela 2019b).

In his Origins of Mind: Three Stages in the Evolution of Culture and Cognition (1991) and A Mind So Rare: The Evolution of Human Consciousness (2001), Merlin Donald develops a theory of human cognitive evolution, noting that humanity has undergone three major cognitive transitions, each of which has equipped the human mind with a new mode of representing reality via a new form of culture. In particular, four types of culture have been distinguished by Donald: episodic, mimetic, mythic, and theoretic culture. The transitions took place (i) from episodic culture to mimetic culture, (ii) from mimetic to mythic culture, and (iii) from mythic to theoretical culture. Following Sonneson (2012), we can represent the three cognitive-cultural transitions of humankind, envisioned by Donald, in terms of the so-called *sign function* (or *semiotic function*), as shown in Fig. 11. below.

Imitation Type/token			Sign function			Enduring artefacts	
E		М		М		Т	
Р		Ι	>	Y		Н	
I	>	М	Toolmaking	Т	>	Е	Pictures
S		Е	Imitation	Η	Language	0	Writing
0	>	Т	Gesture	Ι	>	R	Theory
D		Ι	>	С		Е	
Ι		С				Т	
С						Ι	
						С	

Fig. 11. Merlin Donald's evolutionary scale (Sonneson 2012, p. 82; cf. Kardela 2019b, p. 116)

The arrow marks the development of the sign function, i.e. "the ability to represent reality by means of a signifier, which is distinct from the signified."<sup>7</sup> The first transition (from episodic to mimetic culture) is associated with abilities such as using tools by humans, miming and imitation. The second transition brings about language and the symbolic qualities of the linguistic sign, whereby the signifier becomes distinct from the signified. This kind of memory, called semantic memory, makes it possible to create narratives, or myths which represent reality. Finally, the third transition, which is associated with *external storage memory*, brings about theoretic culture with its visuosymbolic invention (pictures), writing and scientific inquiry. Whereas episodic, mimetic and mythic types of culture were intimately connected with the biological aspect of the development of human cognitive capacities, the theoretic culture is, according to Donald, a result of the technological, not biological development; it is associated with the creation of new storage, information retrieval and processing possibilities. The visible

<sup>&</sup>lt;sup>7</sup> As noted by Sonneson (2007, pp. 93–94), sign function (or semiotic function), initially defined by Jean Piaget as "a capacity acquired by the child at an age of around 18 to 24 months, which enables him or her to imitate something or somebody outside the direct presence of the model, to use language, make drawings, play "symbolically", and have access to mental imagery and memory," means that "the common factor underlying all these phenomena (...) is the ability to represent reality by means of a signifier, which is distinct from the signified" (after Sonneson 2007, pp. 93–94; also mentioned in Kardela 2019b). It will be observed that the evolutionary scale presented in Fig. 11., which depicts the development of the cultural mind, resembles the liberation of the child's signifier from the thing represented by the signified. Both the child's signifier and a scientific theory attain a complete autonomy: the child's signifier detaches itself – via the symbolization and signification process – from the thing perceived by the child and the theory proposed by a linguist-analyst starts living "its own life" in that the theory not only explains "hidden facts" but also creates new facts. For a discussion of so-called *Progressive Research Programs*, which create new theory-laden facts, see Lakatos (1978); also Kardela (1991).

manifestation of the theoretic culture is the so-called *External Symbolic System* (ESS), a "collective memory", which, according to Donald, underlies modern scientific theorizing (monads stand here for scientists or teams of scientists who pursue their scientific endeavor):

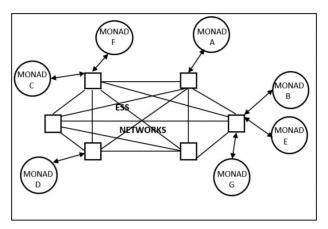


Fig. 12. The External Symbolic System – ESS (Donald 1991, p. 314)

The External Symbolic System with monads linked to it is, according to Donald, part of a larger picture – of the cognitive-cultural complex (or sphere) of the human mind's *representational architecture linked to global electronic information environment* (Donald 1991, p. 359):

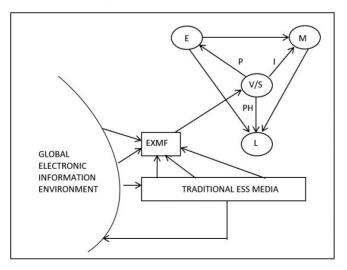


Fig. 13. The representational architecture of the hybrid human mind connected with global electronic information environment

Fig. 13 shows the global representational architecture of the hybrid human mind connected with global electronic information environment. E stands for "episodic memory", M symbolizes "mimetic memory" and L stands for the so-called "linguistic controller", i.e. an *integrating language system*, which, according to Donald's theory, constructs *narrative models*, indispensable for the development of mythic memory (and culture). P ("pictorial path") and I ("ideographic path") yield, in the evolutionary development of mind and culture, the so-called *visuosymbolic* (V/S) *codes*, i.e. interpretive strategies for processing visual images. An important element of the development of the linguistic system falls to the formation of the *phonological* (PH) *path*, which has led to the development of the *external memory field* (EXMF) – an external working memory, indispensable for processing and refining visual symbols. The invention of the alphabet, the development of traditional media such as lectures, textbooks and scientific papers – all this has contributed to the development of the external memory field and – the *external storage system* (ESS; cf. Fig. 12).

Returning to the notion of analyzability, seen from an ESS perspective, analyzability is an outcome of a *collective effort of linguists-analysts* who are willing and ready to endorse Ronald Langacker's Program of Cognitive Grammar (in this case), of which the CGSF model is just a version, and who, by applying analytic procedures, attempt to uncover the mechanisms underlying a particular linguistic phenomenon. In light of the above, the question of the speaker's identity is straightforward: it is a collective consisting of individual monads-linguists linked to the ESS, seeking to explain a particular linguistic phenomenon (such as analyzability, for instance).

#### 5. Conclusion

The current paper offers a fresh look at the conception of analyzability as originally defined in Langacker (1987), proposing to look at it from the point of view of the External Symbolic System in the sense of Donald (1991). Seen in metatheoretical terms, our proposal partly represents a shift from the cognitively-based explanation of linguistic phenomena taking place in one's head to the social sphere of language interaction and linguistic theory, of which systems such as ESS are part. To some extent, we thus share Daniel Dor's view of language as "a social communication technology," which in Dor's own words represents:

a long tradition of thought – a tradition that was expelled from the linguistic sciences by the *cognitive revolution*, fifty years ago, and is now being locally re-considered in certain quarters of the field: the human condition is deeply social, and language is a social entity. It is a property of the community, of the social network, the product of a collective process of invention and development. It resides *between* speakers, not *in* them, at a level of organization and complexity that transcends the individual mind – and cannot be reduced to it. The place to look for the essence of language is not the mind-brain. It is social life. (Dor 2015, p.1; italics original)

Analyzability, or *analyst analyzability*, as we understand it, then, is part of social life: it is a theoretical construct that "transcends the individual mind." It resides between speakers-analysts, linked to the ESS system, who share views on it, collectively enriching the construct with new meaningful content.

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#### Streszczenie

Artykuł poddaje analizie pojęcie *rozkładalności znaczeń* (*analyzability*) w świetle najnowszego modelu gramatyki kognitywnej Ronalda Langackera z 2016 r. Przyjmując za Langackerem, że funkcja (znaczenie) i struktura (forma) są – jak to ujmuje Langacker – "nierozłączne jak dwie strony monety", przy czym "struktura jest zawsze zależna od pełnionej przez nią funkcji", autor proponuje wersję rozkładalności zwaną przez nas *rozkładalnością analityczną* (*analyst analizability*) – utrwaloną i zakotwiczoną w tzw. *zewnętrznym systemie symbolicznym* (ESS) praktykę językoznawczą opartą na gruncie przyjętej przez badaczy teorii lingwistycznej.

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