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EMPATHY AS A SELF-ORGANIZED COGNITIVE MODEL: A LINGUISTIC SYNERGETIC PERSPECTIVE

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Abstract: This article encompasses a comprehensive consideration of the concept of EMPATHY (lexicalized by the word *empathy*) in modern English discourse. Therefore, the aim of the research is twofold: a) to gain an understanding of how EMPATHY (as a dynamic cognitive model) is used by speakers, i.e., its nature and scope; b) to introduce the idea of the self-organization of three conceptual dimensions of EMPATHY: logical, identifying, and structural.

Key words: cognitive model, concept, dimension, empathy, self-organization, synergetics.

1. Introduction

Despite the voluminous history of the research of empathy and emotivity (Cuff et al. 2016; McStay 2018; Morse et al. 2006; Nikonova & Boyko 2019), empathy is still an ambiguous notion. Since entering the discourse of psychology and philosophy, it has been generally agreed upon as the capacities to resonate with another person's emotions, understand his/her thoughts and feelings, separate our own thoughts and emotions from those of the

observed, and respond with the appropriate prosocial and helpful behaviour (Oliveira-Silva & Gonçalves 2011: 201).

The multidimensional aspect of empathy refers to its various components, which are labelled slightly different across studies. Morse et al. (1992: 274) provide a bright account of four components and define them in the following manner:

1) cognitive: "... intellectual ability to identify and understand another person's feelings and perspective from an objective stance"; 2) emotive: "the ability to subjectively experience and share in another's psychological state, emotions or intrinsic feelings"; 3) moral: "an internal altruistic force that motivates the practice of empathy"; 4) behavioral: "communicative response to convey understanding of another's perspective".

However, several questions relating to the nature of empathy are still to be discussed: whether it is more cognitive or more affective, congruent or incongruent, automatic or controlled. Furthermore, empathy needs to be clearly distinguished from other concepts, such as sympathy, compassion, emotional contagion, etc. There are as many points of view as there are authors in the field. As a result, empathy is considered to be a multidimensional phenomenon central not only to sociology, political science, and moral theory, but also to linguistics.

In the English language, empathy is a relative newcomer. According to the Oxford English Dictionary (*s.a.*), it emerged in 1912. Provocative is the fact that its original meaning was drastically different from the one, to which we have become accustomed. Its first documented English usage gives full quotation:

Lipps (1906) introduced the theory that the appreciation of a work of art depended upon the capacity of the spectator to project his own personality into the object of contemplation. One had to "feel oneself into it"... This cognitive process he called by the name of "Einfühlung", or, as it was translated, "empathy" (ibid.).

Empathy, described by Lipps (1906), is clearly revealed to essentially be a self-centered phenomenon: the subject projects his/her personality into the object to be understood, which therefore acts as a kind of mirror, reflecting aspects deriving from the subject. Webster's Third New International Dictionary of the English Language (1986: 2317) adds that the term is "frequently employed with reference to a nonhuman object". Thus, it possesses the least emotional content out of any of the synonyms for "sympathy". This should appear as a surprise, given its current meaning as "the ability to sense and understand someone else's feelings as if they were one's own" (CED 2008: 275-276). According to Garcia (1989: 29),

"this curious historical transformation of the meaning of empathy emphasizes a general and fundamental paradox posed by the human quest for knowledge: that human's understanding of his/her surroundings (which include their fellow men) is both predicated upon and limited by the narcissistic projection of personal characteristics, mental and emotional".

The interaction between empathy and language is still very attractive to linguists. In functional syntax, empathy is defined as "the point of view" in an anaphoric utterance, by which a participant is bound with the event or state that he/she describes in that sentence, or the participant in the reported event whose perspective is taken by the speaker (Kuno 1987). In this sense, the concept of empathy is applied by Kuno (ibid.) for the explanation of sentence structures.

In pragmatically oriented linguistics, empathy means that the speaker and the listener who are involved in the act of communication can detect and identify the immediate affective state of each other, eliciting an appropriate response (Chen 2013: 2269). The first part of this interpretation, "detect and identify the immediate affective state of each other", characterizes the process of discernment, which is basic in choosing applicable responses. It states that empathy requires people absorbed in communication to understand how others perceive the situation, and their current emotional state. Furthermore, empathy has

a "you" orientation that makes successful communication possible, rather than an "I" orientation that may hinder positive communication.

Little attention has been given to the cognitive and synergetic nature of the linguistic representation of empathy. The previous research on EMPATHY as a linguistic concept was done from the perspective of cognitive semantics (Tatsenko 2016; 2018). The **aim** of this study is to look at EMPATHY as a multidimensional cognitive model realized in modern English discourse. I treat this cognitive model as a dynamic, self-organized discourse formation, rather than a stable, cognitive representation stored in a speaker's mind.

I assume the article to be relevant for the advancement in the field of contemporary cognitive linguistics, since it aims at dealing with the way the human mind structures knowledge in cognitive models and makes use of them in discourse. Besides, the research advances linguistic synergetics as a new interdisciplinary approach to language and discourse studies. Dombrovan (2018: 29) divides linguistic synergetics into two branches: the synergetics of language and the synergetics of speech. The latter can be further subdivided into text synergetics, discourse synergetics, idiolect synergetics, etc. I hold the view that cognitive linguistic synergetics should be added to this list as a new interdisciplinary path of research, which describes how language interacts with cognition, its dynamics, and self-organizing properties.

The insights into the way the lexicalized concept EMPATHY functions in discourse participants' minds contribute to understanding the intricate intertwining of cognition and language, its dynamics, and synergy.

2. Material and methods

The theoretical framework of this analysis is situated within cognitive linguistics (Allwood 2006; Barsalou 2003; De Beaugrande 2004; Dirven 2005; The Cambridge

handbook of cognitive linguistics 2017), cognitive semantics, modelling, metaphor (НИКИТИН 1996; Davydyuk & Panasenko 2016; Kövecses 2017a; 2017b; 2018; Lemmens 2015; Morozova 2017; Ruiz de Mendoza & Galera Masegosa 2014; Sandra & Rise 1995; Tuggy 2007), neural theory of metaphor (Lakoff 2008), conceptual blending (Fauconnier 2007; Fauconnier & Turner 2002; Turner 2007), socio-cognitive approach to discourse (Dijk 2008), cognitive neurodynamics (Freeman 2008), and linguistic synergetics (Dombrovan 2018; Evans 2007; Köhler 1993).

Contemporary linguists hold the view that the process of discourse production, understanding, and recall is influenced not by natural situations as such, but by their abstractions formed in speakers' minds. Therefore, there is a mental mechanism, which filters through infinite lists of features of real-life events and situations in order to sort out those relevant for ongoing communication (Morozova 2017: 256). These consequential, functional, and variable versions of the world in the discourse participants' minds are referred to as cognitive models (Ruiz de Mendoza & Galera Masegosa 2014).

At present, the nature and functions of cognitive models stimulate a large amount of research among linguists of different persuasions. Interested readers may refer to some critical overviews of such varieties of cognitive models as idealized cognitive models, frames, domains, propositional models, image schemas, and their combinations (Cienki 2007; Kövecses 2017b). Ruiz de Mendoza & Galera Masegosa (2014) elaborate a distinction between situational and non-situational cognitive models at the propositional level of representation: the situational include frames like 'taking a taxi', 'ordering a meal', or 'going to the dentist', while non-situational cognitive models encompass objects ('mother'), events ('hurricane'), and relations ('hugging') in a more general fashion.

A timely detailed taxonomy of the issue is given by Morozova (2017). She draws a distinction between 'cultural cognitive models' and 'situational cognitive models'. In her

opinion, cultural cognitive models are static: they are stored in the long-term memory, organizing shared knowledge of things, events, or situations of a certain type. In contrast to cultural cognitive models, situational cognitive models are dynamic. They capture relevant properties of the situation under consideration and organize them systematically. The knowledge structured by a situational cognitive model is unique, defined in terms of subjective participant constructs. Situational cognitive models are instantiations of cultural cognitive models. Thus, they represent only a certain portion of respective cultural cognitive models, but they usually characterize it in more detail, evoking richer associations. Situational cognitive models are not 'prefabricated' mental entities stored in the memory, ready to be extracted: they are constructed only as the need for them arises (Morozova 2017: 256-257).

In East-European linguistics, cultural cognitive models are known as 'concepts' (Попова & Стернин 2007; Приходько 2017; Prihodko & Prykhodchenko 2018). A detailed review of the issue is given by Davydyuk & Panasenko (2016). Concepts are rather broad mental entities, which form the worldview image and have rational, abstract, emotional, personal, and other aspects, embracing cognitive models of all ranks (primary-, low-, and high-level). In this connection, I should remark that a concept can hardly be said to fit into the cultural cognitive model only. It embraces the features of both cultural and situational cognitive models, as we cannot fully differentiate socially shared knowledge from its instantiations in discourse production or personal mental models. As Dijk (2008: 163) rightfully claims, there are relationships between personal knowledge and opinions, and socially shared ones, that is, between representations in Social Memory and personal models in Episodic Memory.

In addition, agreeing with the fact that the notion of a concept is close to the notion of a 'mental space' (originally described by Fauconnier & Turner (2002) as a small conceptual packet constructed as we think and talk, for purposes of local understanding and action),

I see the proof of my point of view in Fauconnier's idea that "mental spaces are constructed and modified as thought and discourse unfolds and are connected to each other by various kinds of mappings, in particular, identity and analogy mappings" (Fauconnier 2007: 351). It has been hypothesized that at the neural level, mental spaces are sets of activated neuronal assemblies and the connections between elements correspond to coactivation-bindings. In this sense, mental spaces operate in working memory, but are built up partly by activating structures available from long-term memory (Fauconnier 2007). Thus, a concept is a dynamic cognitive model, which integrates both personal and socially shared knowledge.

According to Turner (2007: 378), conceptual integration conforms to a set of constitutive principles: 1) a partial cross-space mapping connects some counterparts in the input mental spaces; 2) there is a generic mental space, which maps onto each of the inputs and contains what the inputs have in common; 3) there is a fourth mental space, the blended space, often called "the blend"; 4) there is selective projection from the inputs to the blend. Turner emphasizes that not all elements and relations from the inputs are projected to the blend.

This perspective is congruent with synergetics as a special type of theoretical systems modelling, whose specific characteristic is the treatment of the spontaneous rise and development of structures (Köhler 1993: 41). In Köhler's (ibid.) view, language (like other self-organizing systems) is characterized by the presence of cooperative and competitive processes which, together with the external forces of biology, psychology, physics, the social system, and others, form the dynamics of the system.

As a result, *EMPATHY* can be defined, most generally, as a dynamic self-organizing mental space (lexicalized by the word *empathy*) that spontaneously functions in the individuals' cognitive and communicative activities. This concept is unleashed in discourse and is

described in the light of the complex interaction of external and internal factors. They are associated with the individuals' involvement in extralinguistic environment and socio-cultural interaction. This definition can be applied to any concept.

Nikitin (НИКИТИН 1996) defines the concept as a complex gestalt of interconnected operandi modi. Furthermore, every modus contains cognitive and pragmatic (emotional and evaluative) elements, which are the result of accumulated knowledge about the world (ibid., 188). Hence, interpretation of the term 'modus' leads us to think that it is a functional modification, a substructure of the concept, being also its means of existence in discourse participants' minds. Such an interpretation is rightful, taking into account the fact that the comprehension of reality exists in the reflection of any structure. Modi's arrangement of the concept entails the necessity to perform the functions of systematizing the world, identifying its entities, and structuring the classes of entities.

As Nikitin (ibid.) writes, a systematizing function is the identification of socially shared knowledge, being the least pragmatic, maximum objective, and far from instantaneous needs and assessments. It forms the logical modus of the concept. This modus does not have a probabilistic nature. Another function is identification, and it involves the correlation of things with their concepts, forming an operational recognition modus with its possible variants – an image, a symbol, a stereotype, a prototype, and a recognizable notion. Through this modus lies the path to an abstract, generalized concept of the object.

It appears that recognition (in a broad sense) does not end with a contemplative attitude to entities, but has an active continuation: an image controls, directs and corrects activities and intentions. Furthermore, purposeful activity compares its results with the image. Returning to the function of structuring classes of entities, suffice it to say that it forms the structural modus of the concept, which involves separating its 'intentional' and 'implicational' (in Nikitin's terminology) (ibid., 155-160; 183-199). The 'intentional' is a

logical concept. Because of the general connection of entities, the features presented in the 'intentional' of the concept make us think about other related features. Their totality forms the 'implicational' – a set of implications of intentional features.

This perspective has served as a foundation for the research of EMPATHY as a concept realized in English discourse using such **methods**: conceptual, semantic, functional, introspective, and rational analyses. In agreement with the objectives of the research, together with the idea of mental space as a multidimensional entity, the modus model of the concept was elaborated by introducing conceptual dimensions. I propose the idea that the concept EMPATHY has interconnected dimensions: *the logical*, *the identifying*, and *the structural*. The logical dimension is scrutinized by way of semantic analysis. It is gained through the methodology of componential analysis of the lexical and semantic field of the word *empathy* (a cognitive semantics vector). The functioning of the identifying and structural dimensions of the concept EMPATHY in discourse was analyzed through the functional method (a pragmatic vector). The dynamics and self-organization of the dimensions were analysed with the help of introspective and rational analyses used to explain the functions and purpose of cognitive processes and to discover the structure of the mind (a synergetic vector). It is proved that in their cooperation and coherent action in the brain, dimensions produce a concept, which functions in discourse. Moreover, every time the concept arises in discourse, the cooperation of dimensions in the brain is unique.

Therefore, the dimensions should be considered as *order parameters* of the conceptual system. In terms of synergetics, order parameters are certain constants of the system determining the coordinates and the configuration of states of the system at a given moment or period of time and providing the system's ability to function (Dombrovan 2018: 36). Order parameters lead the system to its *attractor* – another term of synergetics widely used in the description of dynamic systems.

"An attractor is denoted as a stable state toward which a developmental trajectory is inexorably drawn, established by the regulatory network architecture; that is, by the set of logical rules (positive and negative interactions) that regulate the development of information within a self-organizing system. In essence, an attractor is a final cause accessed by the regulatory network, which is, in turn, a formal cause established by the organization that developed via the selective agency of autocatalytic cycles" (Coffman 2011: 300).

The attractor of any linguistic concept is the set of values, to which the concept evolves resulting in its sustainable functioning in discourse.

The analysis is based on the **material** of 40 definitions of empathy in different dictionaries and scientific texts, which form the basis for its logical dimension. The identifying and structural dimensions are represented by a selected number of 269 discourse examples presenting the word *empathy* in British national corpus, which contains 100 million words of texts from a wide range of genres (spoken, fiction, magazines, newspapers, and academic). Besides, my sample consists of examples from political discourse and 150 quotations about empathy extracted from BrainyQuote – the world's largest quotation site. It provides quotations ranging from history's most prominent figures to today's newsmakers – famous athletes, politicians, authors, celebrities, etc. For reasons of space, the article is narrowed down to displaying only the brightest definitions (in the author's perspective) and discourse examples of the word *empathy*. The reason for this varied data collection is explained by the fact that EMPATHY is scrutinized as a multidimensional phenomenon.

3. Results and discussion

3.1 The logical dimension

The logical dimension of the concept EMPATHY has been thought to be the rational, logical conceptualization of empathy. It is realized in a certain logical form and belongs to the abstract and generalizing level of consciousness. The function of the logical dimension is to systematize the constitutive features of a recognizable entity. It is, therefore, possible

to hypothesize that the formation of the logical dimension, which is close to a scientific definition, is the result of the purposeful cognitive activity of an individual. On the linguistic level, the logical dimension is formed through the interpretation of semantic features of the concept in the abstract typical contexts, which reflect an individual's generalized socio-cultural experience and are fixed in dictionaries.

The insight into the logical dimension of the concept *EMPATHY* is gained through the methodology of componential analysis of its lexical and semantic field. It is used in the domain of structural semantics and is carried out based on vocabulary definitions through the differentiation of semes (the units of meaning). The componential analysis of a significative meaning of the word *empathy* allows analysing the semes in different vocabulary definitions of empathy and in the definitions of leading scientists (semes are underlined).

Empathy is:

- 1) "the power of projecting one's personality into, and so fully understanding the object of contemplation" (OED 1989: 30);
- 2) "the power to enter into the feeling or spirit of others" (NWDTEL 1993: 309);
- 3) "the ability to understand how someone feels because you can imagine what it is like to be them" (MD, *s.a.*);
- 4) "the ability to sense and understand someone else's feelings as if they were one's own" (CED 2008: 275-276);
- 5) a) "the ability to identify with or understand the perspective, experiences, or motivations of another individual and to comprehend and share another individual's emotional state"; b) "the projection of one's own feelings or thoughts onto something else, such as an object in a work of art or a character in a novel or film" (AHDEL, *s.a.*);

- 6) "the capacity to understand and enter into another person's feelings and emotions or to experience something from the other person's point of view" (Colman 2009: 248);
- 7) "an affective state, caused by sharing of the emotions or sensory states of another person" (Hein & Singer 2008: 154);
- 8) "sharing another's feelings by placing oneself psychologically in that person's circumstance" (Lazarus 1994: 287);
- 9) "a category of emotional responses that are felt on behalf of others" (Stocks 2011: 3).

According to the results of the definition analysis, I have singled out common and differential semes of the lexical meaning of the word *empathy*.

Common seme: "sharing another's feelings" / "sharing of the emotions" / "share another individual's emotional state". **Differential semes:** "way of sharing": "projecting", "fully understanding", "enter into", "sense", "understand", "imagine", "identify with", "comprehend", "experience", "placing oneself psychologically", "felt"; "object of contemplation": "others", "someone", "someone else", "another individual", "something else", "an object in a work of art", "character in a novel or film", "another person"; "specific feeling": "spirit", "perspective", "experiences", "motivations", "emotional state", "emotions", "sensory states", "feelings", "emotional responses".

The common seme in the definitions of *empathy* is indicative of different sub-fields for a common lexical and semantic field (LSF) (see Table 1):

Table 1. LSF of the word *empathy*

<p>1. Capacity of sharing another's feelings</p>	<p>1) "the power of <u>projecting one's personality into</u>, and so fully understanding the object of <u>contemplation</u>" (OED 1989: 30);</p> <p>2) "the power <u>to enter into the feeling or spirit of others</u>" (NWDTEL 1993: 309);</p> <p>3) "the <u>ability to understand how someone feels</u> because you can imagine what it is like to be them" (MD, <i>s.a.</i>);</p> <p>4) "the ability <u>to sense and understand someone else's feelings</u> as if they were one's own" (CED 2008: 275-276);</p> <p>5) "the ability <u>to identify with or understand the perspective, experiences, or motivations of another individual and to comprehend and share another individual's emotional state</u>" (AHDEL, <i>s.a.</i>);</p> <p>6) "the capacity <u>to understand and enter into another person's feelings and emotions or to experience something from the other person's point of view</u>" (Colman 2009: 248).</p>
<p>2. Act of sharing another's feelings</p>	<p>1) "<u>the projection of one's own feelings or thoughts onto something else</u>, such as an object in a work of art or a character in a novel or film" (AHDEL, <i>s.a.</i>);</p> <p>2) "<u>sharing another's feelings</u> by placing oneself psychologically in that person's circumstance" (Lazarus 1994: 287).</p>
<p>3. Result of sharing another's feelings</p>	<p>1) "an affective state, caused by <u>sharing of the emotions or sensory states of another person</u>" (Hein & Singer 2008: 154);</p> <p>2) "a category of <u>emotional responses that are felt on behalf of others</u>" (Stocks 2011: 3).</p>

Thus, the subfields for a common LSF of the word *empathy* are *the capacity of sharing another's feelings*, *the act of sharing another's feelings*, and *the result of sharing another's feelings*.

It should be mentioned that when the sub-field *capacity of sharing another's feelings* is active in discourse participants' minds, the concept EMPATHY is considered to be non-situational: e.g., (1) *"And he was incapable of empathy!"* (BNC, empathy, 32, s.a.). When the sub-field *act of sharing another's feelings* is active in discourse, the concept EMPATHY proves to be a situational cognitive model: e.g., (2) *"Rose said it with such empathy that all criticism was stopped"* (BNC, empathy, 13, s.a.). When the sub-field *result of sharing another's feelings* is active in discourse, the concept EMPATHY is also a situational cognitive model: e.g., (3) *"This, allied to the respect and admiration he had already gained here as captain of our 1977 promotion team and as a member of the full Welsh International side, established an empathy between Ian and the fans which made him part of the folk-lore of Crystal Palace Football Club"* (BNC, empathy, 70, s.a.).

The logical dimension is thought to be at the centre of attention of discourse participants' minds in contexts where there is a comparison of EMPATHY with other concepts, or putting it in a line with them. Let us consider the following examples.

(4) *"Perhaps the most frequent discussion with regards to this theme is the difference between empathy and sympathy"* (Cuff et al. 2016: 149). (5) *"We can include in this category empathy or intuition, and also telepathy"* (BNC, empathy, 20, s.a.). (6) *"They use extra-sensory communication in the forms of empathy, telepathy, and clairvoyance"* (BNC, empathy, 21, s.a.). (7) *"Empathy is a different form of communication from other forms such as verbal, or body language, or smell"* (BNC, empathy, 23, s.a.). (8) *"Not only is the destructiveness of addictive disease replaced by the creativity of recovery but the progressive return of spiritual values such as faith, hope, love, trust, honesty, forgiveness, empathy, gratitude and the return of child-like innocence in the appreciation of the beauty of the world, make recovery synonymous with the treasure of life itself"* (BNC, empathy, 190, s.a.). (9) *"The emphasis is on historical empathy and understanding, cultivating the appreciation and enjoyment of History as a relevant and meaningful learning experience"*

(BNC, empathy, 256, s.a.). (10) *"As the wide range of qualities and skills quoted above illustrate, relevant experience can be obtained from almost any background; personality is really of far more importance, together with a sense of empathy and the ability to be adaptable"* (BNC, empathy, 252, s.a.).

In the quotes presented, the concept EMPATHY is differentiated from the concepts SYMPATHY, INTUITION, TELEPATHY, CLAIRVOYANCE, VERBAL LANGUAGE, BODY LANGUAGE, SMELL, FAITH, HOPE, LOVE, TRUST, HONESTY, FORGIVENESS, GRATITUDE, INNOCENCE, UNDERSTANDING, and ABILITY TO BE ADAPTABLE. That is, a difference or similarity between the logical dimensions of the above-mentioned concepts is in the foreground of conceptualization. Consequently, the logical dimension is formed during mental operations of adjustment and arrangement of the world's entities.

3.2 The identifying dimension

The identifying dimension of the concept EMPATHY has been defined as a non-rational conceptualization, which is carried out through the formation of concrete and visual representations of EMPATHY. They are based on conceptual metaphor, which is a systematic set of correspondences, or mappings, between two domains of experience (Kövecses 2017a). Certain elements and the relations in a domain are mapped onto another domain. The domain, from which they are mapped, is called the "source domain" and the domain, onto which they are mapped, is called the "target domain" (Kövecses 2018: 125-126). Metaphors are helpful when discussing things, which are new and/or complicated since they allow speakers/writers to bring to light certain aspects of such entities by likening them to more common or less complicated ones (Gibbs 1994; Grady 2007; Kövecses 2017b; Lakoff & Johnson 1980; 1999).

The identifying dimension is based on the Access Principle (also called the Identification Principle). This principle states that an expression, which names or describes an element

in one mental space, can be used to access a counterpart of that element in another mental space (Fauconnier 2007: 353). Most often, a less tangible domain is conceptualized from the perspective of a more tangible image.

An image is considered to be like a picture formed in consciousness, which is associated with direct sensory knowledge of the world and is filled with specific sensory elements. In this case, I mean an image as a picture of an object itself or its properties: e.g., (11) "*The thin bridge of empathy between two professional people was abruptly dashed away*" (BNC, empathy, 86, *s.a.*). In this example, empathy is metaphorically embodied in a concrete picture of a bridge, which connects two people. This correspondence, or mapping, represents the conceptual metaphor EMPATHY IS BRIDGE. The mapping captures a coherent view of a bridge that is mapped onto empathy, bringing into correspondence the elements and their relations in the bridge domain with elements and their relations in the empathy domain. The mappings from the bridge domain bring about a particular conception of empathy relative to the view of a bridge. Furthermore, this image of a bridge controls and directs empathy as an activity: like a material formation, it can be "dashed away".

When we conceptualize an intangible or less tangible domain metaphorically as, and from the perspective of, a more tangible domain, we create a certain metaphorical reality (Kövecses 2018: 127). For example, we imagine empathy one way when we think of it as a bridge, and in another way when we think of it as a tool, as reflected in the following quotation: (12) "*Empathy is a tool for building people into groups, for allowing us to function as more than self-obsessed individuals*" (BQEQ, Neil Gaiman, *s.a.*). These two source domains (BRIDGE and TOOL) make us have different perspectives on empathy, creating quite dissimilar realities.

In the neural theory of metaphor, such conventional conceptual metaphorical mappings are explained by fixed brain circuitry (Lakoff 2008: 27-28):

"When you hear a metaphorical expression, the literal meanings of the words should activate the source domain circuitry and the context should activate the target domain circuitry, and together they should activate the mapping circuit. The result is an integrated circuit, with activation of both source and target domains and processing over both at once. Thus, understanding language that makes use of a conventional conceptual metaphor should take no longer than normal frame-based nonmetaphorical processing. ... Each neuron fires asymmetrically, with the flow of ions from the cell body down the axon, spreading out from there. Different neurons have different firing capacities, depending on the receptors at the synapses that regulate ion flow. Those neurons that fire more tend to develop greater firing capacities. And those involved in physical bodily functioning tend to fire more. For this reason, the metaphorical maps learned are asymmetric and tend to have physical source domains (though some have social source domains)".

Thus, the identifying dimension lies halfway between the entity and its generalized reflection in the conceptual system. Sensory perception of things or concrete images of individual things are thought to correlate with the image of class as its standard on the integral, pre-analytical level of consciousness, that is, on the level of integral perception and concentration of what is given in sensations and memory.

This idea coincides with Hardy's (1997) theory of semantic constellations. It views the psyche as organized in semantic constellations (or constellations of meanings). These constellations bind together specific images, sensations, words, ideas, memories, experiences, etc., which are correlated to a focal-meaning. They are instantiated through extensive mental, neurological and organic processes, ranging from the most abstract knowledge levels to basic functional and physiological levels (ibid., 162-163).

Let us consider several examples.

(13) *"When you sing with a group of people, you learn how to subsume yourself into a group consciousness because a capella singing is all about the immersion of the self into the community. That's one of the great feelings – to stop being me for a little while and to*

become us. That way lies empathy, the great social virtue" (BQEQ, Brian Eno, *s.a.*). Brian Eno, a British composer specializing in electronic music of non-academic genres and styles, connects EMPATHY with singing within a group of people. The image of the immersion of the self into the others is caused in his mind by a rooted pattern of behaviour associated with a capella singing (which is understandable because of his professional activity).

For the famous TV star Oprah Winfrey, EMPATHY is activated in the cognition by struggle, pain, lack of love, and memories that she was once abandoned: e.g., (14) *"The struggle of my life created empathy – I could relate to pain, being abandoned, having people not love me"* (BQEQ, Oprah Winfrey, *s.a.*).

In Hardy's (1997) terminology, such processes are explained by the fact that the psyche can be apprehended as a lattice of major semantic constellations containing sub-constellations, intertwined in very complex ways, mostly interacting and evolving, but sometimes frozen into a closed ensemble:

"Insofar as this semantic lattice of the individual houses his whole knowledge, sensoriality, and behavior patterns – as memory clusters, and as a living, growing, experience – it acts as a basic interpretational framework in all cognitive processes. It functions not as an indistinct background, but on the contrary, in very selective ways, in the sense that only the semantic constellations, which are activated in a given period, and in a given state of consciousness, constitute the endo-context for the interpretation of external events" (ibid., 163).

It should be noted that the image plays a special role in the identifying dimension of the concept EMPATHY because it is an intermediary between its logical dimension and everyday representations. By linking everyday representations to the sensually perceived visibility of the world, the image simultaneously transforms the specific parameters of the senses into a generalized mental form on the path to the abstract form of the logical dimension. Moreover, the identifying dimension not only reflects the essence that exists in reality, but

also creates this essence in consciousness, combining the features of real observation and thinking.

For instance, for the TV host of a popular show "Dr. Oz show", it is important that ANGER is a concept opposite to EMPATHY: e.g., (15) "*The opposite of anger is not calmness, it's empathy*" (BQEQ, Mehmet Oz, *s.a.*). In Mehmet Oz's imagination, the opposition of ANGER and EMPATHY creates a reference image of the concept EMPATHY, which he relates precisely to the absence of anger in the nature of man. The given example also proves the fact that the characteristics associated with an emotional and evaluative perception of EMPATHY are included in the identifying dimension (negative semantics of the word *anger* as opposed to the positive semantics of the word *empathy*). These characteristics as a whole constitute a special 'emotional image' of the concept, which is closely connected with its 'cognitive image'. The former and the latter are intertwined in a complex way and comprise the identifying dimension.

Thus, each conceptualizer defines EMPATHY through the prism of his/her principles, values, interests, life experience, level of knowledge, specific images, sensations, etc. As a certain axiological standard, people use the logical dimension. The conformity of the identifying dimension to the logical dimension is characterized by the fact that discourse participants use such axiological concepts as 'good-bad' or 'better-worse', which are indispensable structural components of any cognitive model. Paintings, diagrams, drawings, gestures, facial expressions, comparisons, figures of speech (metaphor, metonymy), etc. in their contentive aspect can be ideal images, which constitute the identifying dimension of the concept EMPATHY.

3.3 The structural dimension

The structural dimension of the concept EMPATHY entails that the latter is organized according to the informative addition of various meaningful features differentiating the

idea of the norm and its associative extension. The norm is considered to be represented by the logical dimension of the concept, and its extension – by implications from it. The implications are characterized by the semantic features habitually associated with the norm. Variable versions of the concept EMPATHY in discourse participants' minds are accompanied by an internal transfer from the level of the norm to the level of the implications from it and vice versa.

To tackle the aspect of differentiating between conceptual dimensions, I must admit that the structural dimension of the concept differs from the logical dimension by the fact that in the former, the cognitive operation of conceptual features adjustment is complicated due to the consideration of characteristics that are not constitutive of a certain concept. Besides, these features are differentiated according to their degree of typicality/atypicality. As a result, a mental structure is organized under the principle of 'core-periphery', which can be modelled according to the prototype basis.

It should also be noted that the structural dimension of the concept provides a transition from mere contemplation, a purely intellectual comprehension of an entity, to its usage and application. Moreover, it is based on practical interest. For example: (16) *"It celebrates a 'feminine' culture of pacifism, art, empathy, and spirituality, in which all women can potentially share"* (BNC, empathy, 145, s.a.). (17) *"If you list the qualities that we consider feminine, they are patience, understanding, empathy, supportiveness, a desire to nurture"* (BQEQ, Sydney Pollack, s.a.).

'Femininity' is not an indispensable feature of the logical dimension of the concept EMPATHY (although it is implicated with high probability) since EMPATHY is the ability of a person regardless of his/her sex. However, one of the implications of a dictionary meaning of empathy is femininity. This mapping represents the conceptual metaphor EMPATHY IS FEMININITY, capturing a coherent view of femininity that is mapped onto empathy.

Furthermore, logical dimensions of the concepts of PATIENCE, UNDERSTANDING, EMPATHY, SUPPORTIVENESS, and DESIRE TO NURTURE are "put in a line" and are claimed to have femininity at the periphery of their semantic structures.

The following examples show that EMPATHY is endowed with power, activism, and even romanticism: e.g., (18) *"There's a power in empathy"* (BQEQ, Tarana Burke, *s.a.*). (19) *"I think, at the end of the day, acting and activism are both about empathy. You're trying to get people to see other people as real and human. And to care"* (BQEQ, Sara Ramirez, *s.a.*). (20) *"I think empathy is romantic. I think humor is romantic. Kindness is romantic. I think those kind of gestures of caring and love are romantic"* (BQEQ, Michael Buble, *s.a.*). Thus, in the structural dimension of the concept, there is a structuring of core and peripheral features of EMPATHY, their formation on the axis of 'obligatory' – 'optional'. The obligatory features of EMPATHY are given in the logical dimension, while the optional features depend on each person's worldview.

The implications of conceptual features can be divided into positive and negative. The positive implications of EMPATHY describe a set of causative-consecutive probable features that are implicated from the logical dimension and are compliant with it (illustrated above). Accordingly, the negative implications outline the features that are not compliant with the logical dimension, being its negative information potential. It can be illustrated by the following example: (21) *"Humankind seems to have an enormous capacity for savagery, for brutality, for lack of empathy, for lack of compassion"* (BQEQ, Annie Lennox, *s.a.*).

The logical dimensions of the concepts SAVAGERY and BRUTALITY, taken together with the statement of the absence of EMPATHY and COMPASSION, can be attributed to the negative implications of the concept EMPATHY. In the following sentence, the absence of EMPATHY is associated with DESTRUCTION: e.g., (22) *"This is a wonderful planet, and it is being*

completely destroyed by people who have too much money and power and no empathy" (BQEQ, Alice Walker, s.a.).

Furthermore, positive and negative implications are formed according to the features extracted from people's knowledge of the world (at any given moment or accumulated from the past), from the knowledge of axiology, and personal insights: e.g., (23) *"It was used by American therapists, before being banned in 1985, for marital problems as it encourages empathy and dispels hostility; it is often called the 'hug' or 'love' drug"* (BNC, empathy, 249, s.a.). Here, the negative implication of EMPATHY is HOSTILITY and it is based on the author's accumulated knowledge of life.

The aforementioned examples confirm the synergy of the dictionary meaning and its implications, namely: in discourse, the logical dimension of one concept can simultaneously act as the implication of another concept, reflecting the probabilistic nature of any structure. Besides, the presence of the positive and negative implications of EMPATHY proves the obligatory axiological marking of the structural dimension.

3.4 Self-organization of the dimensions

Our cognitive system stores many patterns of the dimensions of the concept EMPATHY. Fauconnier & Turner (2002: v) have called this process *conceptual blending*, which operates largely behind the scenes:

"We are not consciously aware of its hidden complexities, any more than we are consciously aware of the complexities of perception involved in, for example, seeing a blue cup. Almost invisibly to consciousness, conceptual blending choreographs vast networks of conceptual meaning, yielding cognitive products that, at the conscious level, appear simple" (ibid.).

Mental spaces operate in working memory but are built up partly by activating structures available from long-term memory (Fauconnier 2007: 351).

The restoration of dimensions from the initial state in the brain appears simultaneously, depending on the initial conditions, and is completed in a unique fashion. This process can be called *pattern formation*. As order parameters, the dimensions may cooperate or compete in the brain. If they compete, one of them dominates. For example, as mentioned above, in the contexts where there is a comparison of EMPATHY with other concepts or putting it in a line with them, we can talk about the domination of the logical dimension. In such a case, the concept EMPATHY is rather simply visualized in the cognitive system and easily described in discourse. This process can be called *pattern recognition*. If the dimensions cooperate, the conceptual system runs through a hierarchy of their different patterns. The following example with a picture from The Washington Post (Fig. 1) explicitly shows this process: (24) "*This photo of Trump's notes captures his empathy deficit better than anything*" (The Washington Post, February 21, 2018).

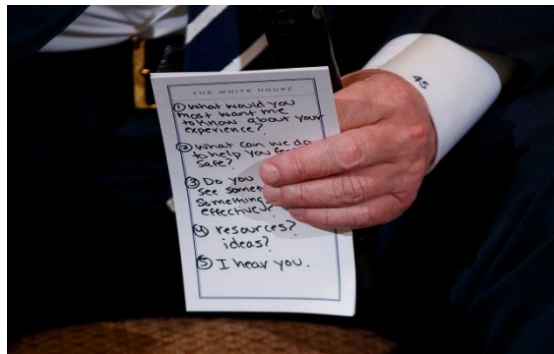


Figure 1. President Trump on Feb. 21 met at the White House with students who survived the Feb. 14 shooting at Marjory Stoneman Douglas High School in Parkland, Florida. (Photo: Ricky Carioti/The Washington Post)

The Washington Post photographer Ricky Carioti captured this image, which shows that Trump holds a card with talking points during a listening session: 1) *What would you most want me to know about your experience?* 2) *What can we do to help you feel safe?* 3) *Do you see someone or something effective?* 4) *Resources? Ideas?* 5) *I hear you.* Since the President noted them as a reminder that he should empathize, the author of the article

(Aaron Blake) assumed that Trump was not able to respond to people's suffering naturally, without reminders, and was therefore unable to feel empathy. Aaron Blake made a connection between the different mental spaces – EMPATHY and REMINDING.

As Turner (2007) rightfully claims, running multiple mental spaces, or, more generally, multiple constellated networks of mental spaces, when we should be absorbed by only one, and blending them when they should be kept apart, is at the root of what makes us human (ibid., 378). Blending is creative, especially in its advanced forms. It works almost completely below the scope of consciousness. The products of blending intermittently become rooted as units in conceptual structure, ready to be activated by a person who has learned or developed them. The fact of being below the horizon of consciousness enables me to claim that this process can be called the self-organization of pattern formation and pattern recognition.

In the example above, we can see the work of the structural dimension, in which one of the implications of the dictionary meaning of empathy is the absence of reminders to express it. Accordingly, this photo forms a negative implication of the concept EMPATHY, which is not compliant with the logical dimension. Simultaneously, the identifying dimension is also at work here. This concrete sensorily perceived image derived from the photo does not correlate with behaviour patterns connected with the concept EMPATHY on the integral level of consciousness given in memory and sensations.

In Aaron Blake's imagination, the absence of reminders to express empathy naturally creates a reference image of this concept, which he relates precisely to the presence of sincere emotions in the nature of man. This characteristic constitutes a special emergent 'emotional image' of the concept EMPATHY closely connected with its 'cognitive image'. As an axiological standard, the author of the article uses the logical dimension of the concept EMPATHY, to which the photo does not correspond.

Circular causality is present in this process, where the dimensions as order parameters prescribe the 'behaviour' of the concept *EMPATHY* as a system in people's minds and in discourse, which in turn determines the functioning of the dimensions. In other words, the recognition of the concept in discourse can generate the corresponding dimension, which in turn forces the rest of the conceptual system into the total state that represents the concept *EMPATHY* in the sense of associative memory. This process of self-organization of order parameters leads the conceptual system to its attractor – the set of values, to which the concept *EMPATHY* evolves resulting in its sustainability in modern English discourse.

4. Conclusions

Within the framework of *EMPATHY* as a self-organizing conceptual structure that arises in consciousness as a reflection of the probabilistic nature of the world, being realized in English discourse, several auxiliary, secondary substructures are formed: logical, identifying, and structural dimensions of the concept. They are the order parameters of the concept, which fix certain aspects of its functioning, some typical essential moments of its instantiations in the course of solving people's thinking and practical issues connected with *EMPATHY*. In other words, their intrinsic complexity is of a dynamic operational nature, binding together specific images, sensations, ideas, memories, and experiences of discourse participants by way of conceptual blending.

Every time the concept *EMPATHY* appears in discourse, its dimensions are revealed with a different degree of brightness. As order parameters, they may cooperate or compete in the brain. The logical dimension most generally works in contexts where there is a comparison of *EMPATHY* with other concepts or in scientific discourse. It is entrenched in long-term memory and is analysed on the basis of vocabulary definitions of the word *empathy* through the differentiation of semes. The research shows that in the logical dimension, empathy is conceptualized as the capacity of sharing another's feelings, the act of sharing another's feelings, and the result of sharing another's feelings.

The identifying dimension is considered as metaphoric conceptualization, which is carried out through the formation of concrete images of empathy. It is also considered to be like a picture formed in the consciousness, which is associated with direct sensory knowledge of the world and is filled with specific sensory elements. The identifying dimension is based on the identification principle stating that an expression, which names or describes an element in one mental space, can be used to access a counterpart of that element in another mental space.

The structural dimension entails that the concept EMPATHY is organised in people's consciousness according to the informative addition of meaningful features differentiating the idea of the norm and its associative extension. The norm is considered to be represented by the logical dimension of the concept, and its extension – by implications from it. The implications are characterized by the semantic features habitually associated with the norm. Variable versions of the concept EMPATHY in discourse participants' minds are accompanied by an internal transfer from the level of the norm to the level of the implications from it.

The restoration of dimensions from the initial state in the brain appears simultaneously, depending on the initial conditions, and is completed in a unique fashion. As order parameters, the dimensions may cooperate or compete in the brain. If they compete, one of them dominates. If the dimensions cooperate, the conceptual system runs through a hierarchy of their different patterns. The considered substructures of the concept EMPATHY are universal in the sense that they are discovered with some measure of unfolding in any concept. The recognition of the concept in discourse can generate the corresponding dimension, which in turn forces the rest of the conceptual system into the total state that represents the concept EMPATHY in the sense of associative memory.

This process of self-organization of order parameters leads the conceptual system to its attractor – the set of values, to which the concept EMPATHY evolves resulting in its sustainability in modern English discourse. The idea of EMPATHY as a multidimensional dynamic concept is proved by the necessity of discourse participants' minds to perform the functions of systematizing the world, identifying its entities, and structuring the classes of entities. These functions tend to be self-organizing: interdependent, interconnected, and presuppose each other, being at the same time fundamentally different and finding embodiment in their own dimension of the concept.

List of abbreviations

AHDEL – The American heritage dictionary of the English language

BNC – British national corpus

BQEQ – Brainyquote. Empathy quotes

CED – Collins English dictionary

LSF – lexical and semantic field

MD – Macmillan dictionary

NWDTEL – New Webster's dictionary and thesaurus of the English language

OED – Oxford English dictionary

WTNIDEL – Webster's third new international dictionary of the English language

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Résumé

Belonging to a recent intellectual heritage, the notion of empathy has become considerably attractive to linguists. Following current theoretical interpretations of cognitive models, this article encompasses a comprehensive consideration of the concept EMPATHY (lexicalized by the word *empathy*) in modern English discourse. Therefore, the aim of the research is twofold: a) to gain an understanding of how EMPATHY (as a dynamic cognitive model) is used by speakers, i.e., its nature and scope; b) to introduce the idea of the self-organization of three conceptual dimensions of EMPATHY: logical, identifying, and structural. Their intrinsic complexity is of a dynamic operational nature, binding together specific images, sensations, ideas, memories, and experiences of discourse participants by way of conceptual blending. The restoration of dimensions from the initial state in the brain appears simultaneously and is completed in a unique fashion. The perspective of EMPATHY as a multidimensional concept is linked to the necessity of discourse participants' minds to perform the functions of systematizing the world, identifying its entities, and structuring the classes of entities. Moreover, these functions are thought to be

interdependent, interconnected, and preconditioned, being at the same time fundamentally different and finding embodiment in their own dimension of the concept EMPATHY. The dimensions are order parameters of the concept, which fix certain aspects of its functioning, some typical essential moments of its instantiations in the course of solving people's thinking and practical issues connected with EMPATHY. Order parameters lead EMPATHY to its attractor – the set of values to which the concept evolves resulting in its sustainability in modern English discourse.

Key words: cognitive model, concept, dimension, empathy, self-organization, synergetics.

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