Metaphor in theory and research *

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1. INTRODUCTION

1.1. Important theories and models of metaphor selected from a cognitive viewpoint

Metaphors have been analytically studied since antiquity. The substitution or comparative theory (Aristoteles, Cicero) was based on the substitution of one word by another (shift of nomenclature) according to their analogical attributes. Later various theories have proposed versatile models and explanations of this trope. In general it can be said that its basic features are imagery and some degree of similarity in the process of the reversal projection of the domains of a target (also a topic or tenor) and a source (vehicle).

Modern literary studies have highlighted metaphor, and criticism still appreciates metaphorical novelty in a writer's literary style. In modern literature, emphasis is placed on novel, original metaphors. So-called conventional metaphors ("the swan's neck of that woman"), that were acceptable in the past, are now understood as commonplace clichés. Another category is lexicalized, conceptual or faded metaphors whose metaphorical potential we no longer realize, for example "life is a way", "the foot of the table".

In the 20th century, the substitution theory (the metaphor as a shortened comparison: "the library is a well of knowledge") was replaced by the interaction theory of Ivor A. Richards (1936). According to him, a metaphor is a manifestation/image of thinking that is generally based on comparison and categorization. In interaction, conditioned by context, a tenor and vehicle work together. I. A. Richards's interaction theory was developed by Max Black (1962). He introduced the concepts of focus and frame which represent two co-acting systems of associations of common phenomena; from their co-occurrence a metaphorical meaning is formed. Roman Jakobson (1991) wrote about combination as the principle of metaphoricity (in connection with selection as the principle of metonymity). Jakobson's ideas have expanded the approaches of structural linguistics, which reveals a metaphor as a speech phenome-

non. From its viewpoint, in metaphor a diversion is prominent; it occurs when words with incompatible semantic attributes are related to each other whilst the literal, conventional meaning of the expression is unfit with respect to the context.

On the known principles of comparison, interaction and combination, cognitive linguistics (Lakoff – Johnson 1980) and cognitive psychology (Ortony 1993) has taken up again. In addition to describing, analyzing the structure and decoding the meaning of a metaphor, cognitive linguistics and later cognitive literary studies turned their attention to the fundamental question: why and how do we create metaphors and how do we understand them? (Turner 2005)

It was already known that the similarity of metaphorical features, attributes and structures must be established through interpretation strategies running on implications systems (culturally shared associations) for the topic and the vehicle. Metaphoric, intended meaning must be derived, deduced, and inferred. From the point of view of classical comparative theory, the amount of common attributes/features of a topic and vehicle should compile the metaphoric meaning.

On the other hand, cognitive science proposed that in the metaphor only the salient features and properties are transferred (Ortony 1993), and later research has explained that relational commonalities (structure mappings) of metaphoric systems are processed (Bowdle – Gentner 2005). Between the topic and the vehicle new connections on higher levels of abstraction arise. The new emergent structure creates a new metaphorical meaning. These processes are described by various domain-interaction-models; Gilles Fauconnier (2006), for example has elaborated their principles. His theoretical bases are the domains of a source and a target, their constructed parallels as well as selected relevant correspondences. The important role in reception and interpretation belongs to prototypical characterics of the concerned domains of a metaphor.

The ideas of prototypical and interactive effects in metaphoric processes are also used in Slovak literary studies (Krupa 1990). Bohunická's (2013) recent book about metaphor explains the cognitive turn in metaphorology and stresses metaphor in discourse.

Empirical findings acknowledge some correct aspects in most metaphoric models and theories: substitutive (Aristoteles), comparative (partly Richards), divergent (Structuralist), pragmatic (Searle, Davidson), conceptual (Turner, Lakoff, Johnson), interactive (Black), relational (Kittay), etc.[1] Although these theories emphasize particular metaphorical processes, they seem to be mutually complementing each other. The cognitive approach realizes this convergence. One of its deductions from convergent findings and data is that all the metaphorical parts, elements, and structures are dynamic and variable, and their configurations must always be newly determined as to the social, cultural, and psychological contexts.

1.2. Mental space and domains

One apprehends reality only through representations of reality, through texts, discourses, and images, as well as through mental representations. Mental spaces are contact spaces in the human mind that connect two systems, the individual and

the world. They contain domains constructed in discourses for the purpose of providing a cognitive basis for understanding and reasoning. Mental space is defined as a domain in a discourse. A domain, such as *a landscape*, is internally structured by frames (e. g., walking in or painting a natural landscape) and cognitive models (e. g., the elegant contours of hills, a person working in a field, a moving image, etc.). Idealized cognitive models are created from idealized features of categorized objects. Objects which are related, similar, interconnected, and have a similar function belong to one category and are relatively closed towards other categories. Prototypes are defined on the basis of significant features of categorized objects (Lakoff 2006).

2. CONCEPTUAL AND CONVENTIONAL METAPHOR

Literary texts are useful material for demonstrating the creation, functioning and mixing of new mental spaces in thinking, especially if they are created on the basis of the associative principle. Modernist avant-garde literature often relied on the associative principle, counting on the reader's perceptiveness and immersion in reading. A typical work in this sense is the novella *Laco and Bratislava* (*Laco a Bratislava*, 1926) by the Slovak modernist innovator Ivan Horváth. The text is overflowing with impressions, based on the narrator's associative approach to the world. For instance, the relatively short text contains over 110 allusions to and citations from world authors such as Descartes, Schopenhauer, Nietzsche, Dante, Apollinaire, Conan Doyle, and Wilde, as well as distinguished Slovak personalities like the writers Ľudovít Štúr, Laco Novomeský, Ján Smrek, the painter Martin Benka, and various composers and jazzmen. In contrast to the broad contextual authorial gesture, the narrative of the protagonist Laco is relatively simple: it narrates the story of his first serious love affair during his university studies in Bratislava.

The opening paragraph of Horváth's novella *Laco and Bratislava* is notable:

> The land was like a *painting,* the hills spread wide, with elegant contours – as if posing for Benka's paintings. Using a thick brush, autumn painted read and dark-brown stains on the hillsides, the shrubs were completely black like the eyes of an evil fairy. People were bending down, picking something out of the earth, bending, for otherwise they would not fit into the frame of the painting. […] It was an image that always made an impression on Laco. He was standing on a rock over the river and in his blood felt the voices of his ancestors that during the reign of Rudolf chopped off the heads of the Turks and in appreciation received a coat of arms with a star and a crescent. His ancestors were squires who once guarded the Váh river, had crooked swords and brave hearts. Laco had no sword, but had a heart full of desire for the unknown; he would also guard the Váh, but there was nothing to guard it against (Horváth 2010, 102; translation and emphasis J. K.).

The author introduces his narrative through the imagination of a landscape as a painting delimited by a frame. The protagonist Laco is moved by the perceived painting, feels awe in facing his native land, but simultaneously longs to leave it, cross its boundaries and walk towards the unknown: "Laco felt overpowered by the road, that he must move on from the place where he had lived since his birth" (103). The new segment in the the young hero's life journey begins not long after the creation of

the Czechoslovak Republic (1918), when he starts his university studies in Bratislava. He gets to know the urban life, absorbs modern Slovak and world cultures, and falls in love for the first time.

The partly autobiographical story emerges from the metaphorically framed Váh landscape, with which the narrator is intimately bound: it moves him. By stepping across the "frame" of the image, he metaphorically continues his life journey fuelled by a curious desire for the new and the unknown. According to Fauconnier's theory of mapping, we can structurally describe the imaginative schemes of both domains: the framed landscape and the road which begins there. A prominent element in both frames is the young hero Laco, although in relation to the landscape he is its active agent (he mediates and conceptualizes the image) and in the case of the road he is a passive recipient (he is overpowered by the road):

| Laco *in* his native land | | Laco *on* the road |
| native land | $\rightarrow$ | road ----- > |

The image of the native (familiar) land as a framed painting (an example of a basic/root imaginary scheme of a container) and the road (an example of a basic imaginary scheme of a trajectory) as a transition between an old and a new world are the conceptual (from the poetological point of view, faded) metaphors, whose creative potential we no longer notice, since such conventional textual strategies decrease the interpretive activity of the reader. However, that does not mean that they are not continuously present in our thinking and formulation of ideas, with inferences from the real world. From the point of view of understanding the semantic structure, i. e. with reference to the ongoing communication and discourse, the social and cultural context is also significant. It is related to the emotional elements integrated in domains, their frames and roles: reading the cited excerpt, we note not only the visual image of the Váh landscape, but also that Laco's *love* for his native land and the new phase in his life is initiated by *feelings* of desire and curiosity, an impulsive setting off towards unknown, mysterious horizons. Thus, what is important in a discourse is what is so to speak in the centre of the action: during the ongoing mental spaces, these are areas that are in the focus of complex cognitive configurations (which consist of interconnected domains, or mental spaces). I will illustrate the structure of metaphorical processes with an original metaphor by Horváth.

3. NOVEL METAPHOR

3.1. Source, target, blend
Metaphorical processes can be well analyzed through an innovative metaphor:

From every shop the street was flooded by the sounds of children's crying and an accordion, they made the streets slippery (Horváth 2010, 125; translation J. K.).

We could start with a traditional description, that in the reception of this metaphor we see a *source/s*: children's crying and an accordion and a *target*: the street. But how can the streets be slippery from the sounds of children's crying and an accordion? How can the reader understand this metaphor?

Crying, music and slipperiness, i. e., the partial characteristics and elements of a metaphorical structure, do not explain, by their simple association or substitution, why a street should be slippery from these sounds. It can be explained only by their projection mappings onto the emergent structure of a blend. It will take place in the mental space of blending, which comes into being through partial associations, by covering up source domains from the so-called inputs.

The structure of this metaphor is as follows:

Input 1 (source 1): *children's crying* – sound

Input 2 (source 2): *accordion* – sound

Input 3 (target): *street* – slippery (touch)

According to inputs we can, by referring to background knowledge (in the form of frameworks, cognitive models, cultural models, folk wisdom, etc.) define the frames:

Frame of input 1: *child, crying – sound, tears*

Frame of input 2: *musician, accordion – sound, compressing and expanding of the bellows*

Frame of input 3: *street, slippery – touch, wet*

These three inputs bring into the integrated structure of the mental space of blending partial structures from source domains:

From Frame of input 1, which belongs to the domain of crying**,** we can infer *the insistent or lingering sound of crying and tears*, their *wetness*. From Frame of input 2, which belongs to the domain of musical play – accordion, we bring into the structure of a new mental space the *lingering or dragging sound of the accordion* and its production – *the sliding movement of the bellows*. From Frame of input 3 in the domain of the street we blend in the *slipperiness of the street*.

3.2. Basic formation of a blend

The slipperiness of the street in the blend is a centripetal component of *an emergent structure*, which consists of the elements from three inputs:

wetness (1.) + sliding/gliding movement (1., 2.) <–> slippery street (3., 2., 1.)

The slippery street, in the synesthetic blend and under the effect of the previous background knowledge means insecurity of walking and direction, diverting from the original direction. Slipperiness *retrospectively* evokes the unfulfilled desires of the children, who probably did not get in the shops what they wanted and are crying, as well as the lingering, plaintive accordion music. The reception of the given metaphor as a coherent scene is supported and guided by the interior, mental representation of a past experience of the recipient, who in the meaning of the new emergent structure recognizes the negative emotions of insecurity, falling, defeat.

4. THE COGNITIVE ASPECT OF METAPHORICAL PROCESSES

If a novel metaphor makes us feel the intensity of expression in comparison to the unconscious use of conceptual (lexicalized, "dead") metaphors, in principle there is no difference between the structural processes of these two types of metaphor. The special, original character of a metaphor is created from generally applied cognitive principles, meaning that innovative metaphors are often created by extending con-

ventional, trivial metaphors (Gáliková 2014, 40). For example, the analyzed metaphor of "a slippery street" is conditioned by the conceptual metaphor *life is a journey*. The structure of the metaphor *life is a journey* includes also the meaning of the insecure, meandering road (walking), for example through the qualitative evaluation "he often slipped and fell in his life". A parallel meaning and example of a more abstract image of a journey, i. e., a trajectory (an elementary imaginative scheme) is the street. The metaphor of "a slippery street" can in the first moment be incomprehensible, seemingly ostentative, but its initial opacity or equivocality is based on idiomatic structures of more conventional, conceptually and grammatically rooted metaphors: *life is a journey*, *sliding/gliding melody*, *lingering crying*. The physical attributes of the sound, its lingering and gliding (undulating) and the physical attribute of the street (wetness) are integrated into one synesthetic image, which contains all three emphasized attributes from three inputs, but, thanks to metaphorical processes, simultaneously exceeds them in the sense of life insecurity, unfulfilled desires, grief, etc. Thanks to unconscious, stabilized metaphorical processes, mapping between domains (not just between similar elements of souce and target) and with the contribution of background knowledge we can comprehend and create new inferences, concepts and emergent structures as cognitive tools for further knowledge production (32). New knowledge is synchronically produced on the principle of blending, based on schemes, frames and models.

The commonsense idea that a linguistic expression has the *universal*, uniform meaning that we all perceive largely in the same way in mutual understanding, is an illusion. The construction of blends and creation of configurations has its fixed rules (Fauconnier 2006, 186), but meaning is not contained within grammatical linguistic structures. In reality, linguistic expressions of various users, nations, and cultures reflect diverse and different cognitive configurations. This concerns not just metaphors but communication in general. Meaning is on a primary basis supported and guided by not just specific linguistic, but also general cognitive operations. The reason is the fact that the mixed mental spaces that we continuously create through cognitive processes are not detailed and perfectly specified, but on the contrary are loosely defined and flexible. For the most part we do not realize this, because our consciousness accommodates only words, emergent meanings, and the related feelings.

The variety of the possible mappings in the reception of a metaphor is thus not only a function of structural and grammatical relations between exposed expressions. The added value is that the constructed structure of a blend is dynamic, emergent and substantiated by diverse past experiences in different people. The context of the discourse includes the social and cultural dimension, pragmatic conditions and the current situation, events in real life. Readers might create a similarly structurally mixed metaphor of a "slippery street", but each will draw from own experience in a different situation, so that specific mental space of the metaphor will be ultimately filled by different data and images. At the same time, we can say that what enters the mixed mental space is usually only what belongs there. This can be metaphorically described by a sentence from the above-cited opening paragraph of Horváth's novella: „People were bending down, picking something

out of the earth, bending, for otherwise they would not fit into the frame of the painting" (emphasis J. K.).

What, then, is the cognitive composition of the metaphor "slippery street"?

5. COGNITIVE CONFIGURATION

5.1. Mapping of counterparts

Mapping domains from sources towards a target is a structural projection on the principles of comparison and categorization. Similarity (partly an analogy) maps the partial structures of the source domain onto the partial structures of the target domain:

Source domain of crying + Source domain of accordion play → Target domain of slippery street

As a consequence of the partial mapping of counterparts between inputs (2 sources, 1 target), associations, salient properties are created:

lingering/dragging (of cry) <–> sliding (melody) <–> *slipperiness* (of the street)
                                          sliding movement (of the hand) <–> *slipperiness* (of the street)
wetness (of tears)   <–> *wetness* (of the street)

5.2. The abstract scheme

The partial structures from domains (inputs) are mutually mappable as they are parts or examples of a more general abstract scheme. Its functioning is noticeable on a few levels:

A scheme is a frame with roles that are filled by elements from individual domains. The frames and roles mutually create a rich inferential structure, created and made dynamic by the reader's background knowledge. The explicit inference is slipperiness, which is related to the lingering/dragging cry, tears, gliding/sliding music and the sliding movement of the musician. Progressively, the specific partial structures of individual domains overlap and correspond in the abstract scheme:

Filling the street (as a container) with wet and slippery material makes the street (like a road, a trajectory) slippery.

5.3. Expansion of mapping

On the basis of a mapped (extracted) abstract scheme, it is possible to expand the mapping of a metaphor by the flexible addition of other domains: e. g., the sounds of the accordion evoke not just a lingering/dragging, but also sad music in a "weeping" street; the slipperiness of the street as a road evokes the stumbles of an individual during the life journey, the idea that life is a swing, and perhaps even someone falling on purpose like a sad-funny clown does, etc. The preference of some mappings over others, i. e., what can enter the "container", reflects contexts and general heuristics.

5.4. Continual discourse and new components in metaphorical processes

However, it is also important to note that configurations are "capable of" breaking down information into bits that can relate to diverse domains. For the sake of con-

tinual discourse (developing cognitive configurations and inferences), it is important to know which mental space is a basis, a departure point, which is a viewpoint, and which is focus, the space in which an interior structuring of meaning currently takes place. In processing the metaphor "slippery street":

in the first stage of reception, it is the basis + viewpoint "from every shop the street was flooded by the sounds of children's crying and accordion" and the focus "they made the streets slippery";

in the second stage of mapping, the initial focus becomes the viewpoint "they made the streets slippery" and a new focus with an emergent structure is projected *slippery street <-> wetness + dragging slippage*;

in the third stage of mapping, the meaning of the innovative metaphor emerges thanks to the created cognitive configuration with a focus with a new structure. The mobilized focus is simultaneously a blend, which develops as follows (Fauconnier 2006, 149–150):

After mapping across mental spaces and after the creation of a generic space (the street contains dragging slippage and wetness), a new blend and a new emergent structure are created, when from a generic space and three inputs their domains are partially projected into the space of blending. A new composite structure is created, which was not fully contained by either of the inputs and at the same time there are completely new components:

a/ the role *the street* contains dragging, wetness, slipperiness, and the emergent relational, completized scheme *Filling the street (as a container) with wet and slippery material makes the street (like a road) slippery*;

b/ a new, transforming element is added – *slipping (falling)* as an emergent development of the sliding *movement* (of the bellows and the hand of the accordionist);

c/ additional new components join the abstract scheme from background knowledge in the process of reworking of the abstract structure according to new implications (tragic and comical falls during life journey, related emotions, etc.).

6. SIMILARITY SPACE

In metaphorical processes, it is not crucial to primarily associate individual mental spaces, inputs, or a source and target (crying, music, slipperiness), but in order to understand a metaphor, it is important to categorize information and associations according to a code which contains a basis, a viewpoint and a focus. The number of interpretations of a metaphor is given by the number of various combinations in the configurations of mental spaces (the projected operations are not just uni-directional, but go both ways, and could also be parallel) and also by the number of mental spaces, possible and feasible in related contexts. That is why there are so many different aspects from which a metaphor can be viewed.

Though some thinkers considered the metaphor to be worthless for communication, other researchers, on the contrary, emphasized that it is a prominent means of communication, an instrument of language and cognition, a mental operation, and a conceptualization implement. Thus metaphors are approached in many ways, for example, rhetorical, semantic, communicative, epistemological, psychological,

pragmatic and cognitive. Any of these approaches highlights specific features, properties, relationships, structures, or contexts that play some role in certain phases of metaphoric-analytical processes. As mentioned in the introduction, basic features of the metaphor are imagery and some degree or type of similarity and diversity in the process of the reversal projection of the domains of a target (also a topic or tenor) and a source (vehicle). For the analysis of analogical thinking processes (especially analogy), the cognitive psychologists Gentner and Smith (2013) proposed a similarity space diagram. In the square diagram, the vertical axis indicates the degree of shared relations and the horizontal axis the degree of shared attributes. The least amount of common relations and properties is displayed in anomalies; the highest degree of relational and object-attribute similarity builds up overall similarity or literal similarity. In addition, the analogy and the mere appearance complete the area of similarity. Gentner and Smith argue that these dimensions are continuous rather than categorical:
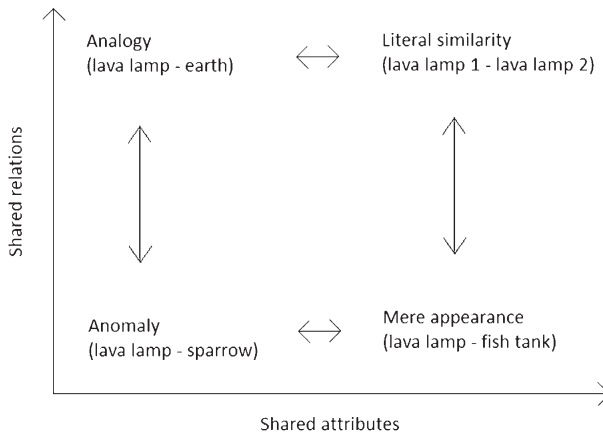

Figure 1. Gentner – Smith: Similarity space

6.1. Metaphorical similarity space

In the cognitive literary approach, I will modify the cognitive psychological similarity space of Gentner and Smith for a cognitive metaphor space diagram.

An analysis of the "slippery" metaphor proves that the reception of a metaphor contains numerous cognitive and semantic principles. However, according to common typologies of the modern metaphor used in literary studies, Horváth's avant-garde "slippery" metaphor could be denominated as a daring metaphor, despite the fact that those processes and principles which are from a literary point of view considered to function in other types of modern metaphors (symbolistic, paradoxical, synesthetic etc.) also participate in its reception, as well as production. That is why from the cognitive viewpoint, the literary typologies of the modern metaphor are not sufficiently precise.

It is evident that during the mapping of the domains of a target (a topic or tenor) and a source (a vehicle), the leading principles are finding some similarities, salient

properties and carrying out their comparison, categorization and evaluation. This effort arises out of the fundamental, evolutionarily conditioned intention of our mind in creating coherent images of the world. If we did not find any similarities (and differences) in domains, we could not understand and clarify a metaphor (of course, such a game with the reader may be the goal of some literary works, but certainly not of literature in general).

Regarding the analyzed "slippery" metaphor, similarity space can be adapted as follows:
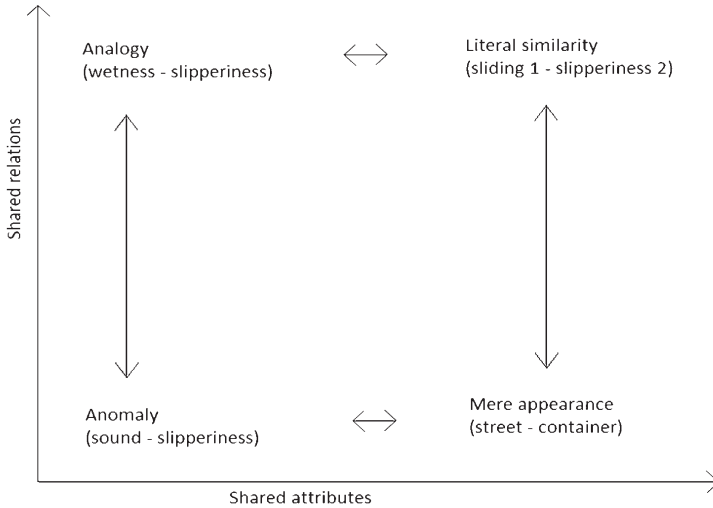

Figure 2. Representative similarity space of the "slippery" metaphor

The representative (not objectively ideal) model indicates, that in continuous similarity space there is an ample extent of interconnected relations, features and attributes. A paradox arises from an anomaly, but it is only one salient property of so called paradoxical metaphor. Likewise, synesthetic elements are common in metaphorical projections in general. The picking up of certain features and structures in poetological typologies of metaphors (eg. paradoxical or synesthetic metaphor),[2] points to some specific features or metaphorical meanings, but reduces the systematic mixture of metaphorical processes. The metaphorical processes always apply in their complexity, which in different degrees and combinations give prerequisites for metaphorical variations in individual reception. That is why individual interpretations of a particular metaphor can acquire different contents and meanings.

7. THE EMPIRICAL RESEARCH

To better clarify the metaphorical processes, I prepared an empirical research, in which 15 (female) teachers of Slovak language and literature at primary and secondary schools participated (mean age 45.07, SD = 11.871). At the beginning of the research, they answered ordinary questions (their age, the type of school and its location) plus a question whether they considered themselves more intuitive or more

rational personalities. Then they filled out the standard psychological Rational-Experiential Inventory-40 (REI, Pacini – Epstein 1999) Questionnaire, which determines the degree of rationality and intuitiveness of a person.

Thereafter the teachers read two metaphors, A and B, both of which were chosen from František Švantner's novel *Life without End* (*Život bez konca*, 1956). After reading the metaphors, the participants answered nine questions: seven derived from the metaphorical similarity space (the teachers did not receive the diagrams of these metaphors) and two regarding their emotions.

Metaphor A:

Yes, open up, eyes, ears to the light and voices, open and guide the soul through the right paths around the world. […] After them [nights – J. K.], the sun always comes out from the lap of the mountains, it ruffles the atmosphere through the rays, and burns the heavens with a *great fire.* Open up to it so that *the soul* you are guiding *will always burn with a clear sun* (Švantner 1974, 59; translation and emphasis J. K.).

Domain 1 *fire*: great → glowing
Domain 2 *soul*: shining → clear
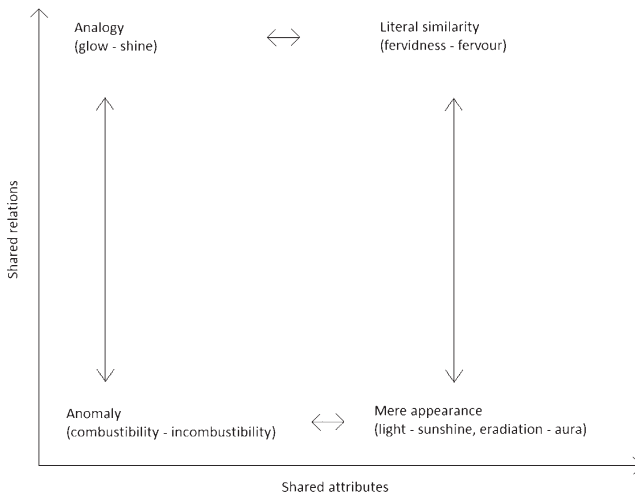
Similarity space A:

Figure 3. The representative diagram of similarity space of the metaphor A

Metaphor B:

Also the *sun* shall stand in the middle of its route at the highest point of the sky to look deep, deep down, into the lap of the *earth* (Švantner 1974, 77; translation and emphasis J. K.).

Domain 1 *the sun*: looks deep →
Domain 2 *the earth*: deep lap →
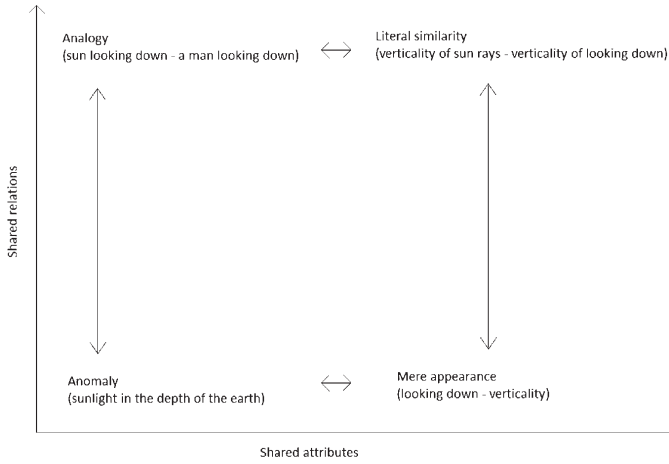
Similarity space B:

Figure 4. The representative diagram of similarity space of the metaphor B

The list of nine questions dealt with anomaly, analogy, and overall similarity, as well as mere appearance. It also included questions about the domains in the metaphor, the key (inference) concept thanks to which the recipient understands the referred-to metaphor and its abstract scheme. The last two questions asked about the teachers' emotions while reading and during analysing the metaphor.

7.1. Statistical results[3]

The variables used in my empirical research are:

Considering I – R – the teacher considers herself to be an intutive or rational personality.

Each teacher should rate herself on a four-point scale, where 1 means the most intuitive and 4 the most rational.

Rational type – a rational personality according to REI.

Success in A – how teachers succeeded in analyzing or understanding metaphor A (i. e. how many of the analytical questions they answered correctly).

Success in B – how teachers succeeded in analyzing or understanding metaphor B (i. e. how many of the analytical questions they answered correctly).

In Table 1 is the description of the variables:

	α	n		Mean	Median	Std. Deviation (SD)	Skewness	Kurtosis	Min.	Max.
		Valid	Missing							
Age		15	0	45.07	46	11.871	-0.325	-1.114	26	61
Considering I – R		15	0	2.4667	2	0.5164	0.149	2.308	2	3
Rational type	0.82	15	0	67.333	66	9.969	0.559	-0.062	53	89
Success in A	0.614	15	0	4.6667	5	1.75933	-0.32	-0.331	1	7
Success in B	0.685	12	3	3.9167	3.5	1.88092	0.143	-1.109	1	7

Table 1. Descriptive statistics of the variables

Given that the data are not normally distributed (kurtosis of the variable Considering I − R = 2.308; kurtosis of the variable Success in B = -1.109) and also due to the lower number of participants in the sample (n =15), we have decided to keep track of the relationships among the variables by using the nonparametric test the Spearman's correlation.

We looked for relationships among the self-rating (whether a respondent rates herself as more intuitive or rational), rationality according to the REI questionnaire, and the success rate in solving/understanding metaphor A and metaphor B. Due to the lower number of participants in the sample we used the Spearman's correlation analysis (Table 2).

	Considering I - R			Rational type		
	r_s	Sig.	N	r_s	Sig.	N
Success in A	.597*	.019	15	.455	.088	15
Success in B	.694*	.012	12	.581*	.048	12

Table 2. Correlations among self-rating, rationality, and success in solving/understanding metaphors A and B (Spearman's correlation)

The more the teachers considered themselves to be rational personalities, the better they were in solving/understanding metaphor A (r_s = .597; p = .019; n = 15). The correlation between the rational type according to the REI questionnaire and the success rate in metaphor A has not been confirmed, but a correlation trend indicates the positive relation between the variables (r_s = .455; p = .088; n = 15).

The more the teachers considered themselves to be rational personalities, the better they were in solving/understanding metaphor B (r_s = .694; p = .012; n = 12). The more the teachers were rational according to the REI questionnaire, the more successful they were in solving/understanding the metaphor B (r_s = .581; p = .048; n = 12).

8. METAPHOR AND EMOTIONS

The variety of meanings emerging from reading one sentence or one metaphor does not reflect the basic structural or logical multiplicity of signification or meanings of a given linguistic form, but reflects its potential for building mental spaces. However, if we were unable to strategically relate relevant domains to grasp a metaphorical meaning, the undertaken mental procedure would be in vain. Strategies for choosing from alternative mental spaces include grammatical, logical and pragmatic factors, but it is unclear how these strategies work. From experience and according to the research data, we can hypothesize that emotions play a role here.

Innovative metaphors are for the most part a pragmatic anomaly. Their bizarreness is reflected in the reader's feelings, mapped domains, and their frames. The more unrelated and seemingly non-analogical domains are mapped, the more specific (non-convergent, mixed) feelings arise in the reader. In mental spaces, emotions, as well as mapping processes flow in various directions. They can incite or block cognitive operations and the coherence of cognitive configurations (note that background knowledge mediates inferences also in relation to the real world). In my previous

article "Understanding Literature" ("Porozumenie literatúre", 2016*)* I discussed the use of feelings during the reading process, and demonstrated how during reception feelings cross structural textual and conceptual domains. Thanks to these processes, original meanings and schemes are given latent, subconscious, or complementary new emotional aspects.

In this contribution I would like to foreshadow some other findings. They result from my empirical research outlined in Section 7. They were not confirmed by statistics, because in statistics we analyzed the answers of all 15 participants.

However, if not all of the 15 participants are taken into account, but only those who correctly answered more than half of the questions about metaphors A and B (this level indicates the active interest of a teacher to fulfill the test), the data do show some trends regarding emotions. With the exception of the three most successful teachers, who claimed themselves to be rational personalities and were excellent in both the analytical and emotional areas, the most important ratio is that the teachers who considered themselves to be more rational personalities were less aware of emotions associated with metaphors A and B and were less able to describe their emotional experiences. On the other hand, the teachers who reflected themselves as more intuitive personalities were better to detect emotions in metaphorical processes. However, there is a general research output that more rational people are more accurate in understanding metaphors.

I must emphasize that the qualitative findings of my first empirical survey of metaphor reception should be statistically confirmed or dismissed in further research.

8.1. Metaphor and empathy

From a qualitative viewpoint, I am also interested in another specific problem: what is the relationship between the undertaken empathy[4] of the reader and his/her cognitive processes? How does this relationship influence the entire reception of a text?

I have already noted that reader's emotions enter the schemes of individual domains of the analyzed metaphor. Emotional responses of the reader to Ivan Horváth's "slippery" metaphor can be diverse. They can be negative (sadness of an emotionally emphatic reader), tragicomical, humorous (in a discursive reader, who realizes the hero's lack of experience and even naivete) or irrelevant (a literary scholar who analyzes the metaphor structurally, may not even notice the associated emotions).

As outlined in Section 5.4. "Continual discourse and new components in metaphorical processes", what is key in reception is mental focusing, the "centre of activity". In processing the metaphor of the "slippery street", a focus with the already familiar emergent scheme is projected: *Filling the street (as a container) with wet and slippery material makes the street (like a road) slippery.* The feelings associated with this scheme are a function of the continuing focusing of the reader's cognitive processes. In the inferential processes, a role is played by the type of the reader, but also the type and degree of invested empathy. These two are mutually conditional, but not completely.

8.2. Emotional and cognitive empathy

In general we recognize two types of readers, or ways of reading: sentimental and discursive (Kuzmíková 2015). They are characterized also by a different type and degree of invested empathy. The reader's empathy can either be more emotional or more cognitive.[5] We speak about cognitive empathy when an individual can define or attribute a certain mental state to oneself or others, but does not necessarily share it. In contrast, we speak about emotional empathy when an individual identifies emotionally with another person or a literary character. Emotional empathy inspires sentimental reading of literature, while cognitive empathy leads to discursive or close reading.

In perceiving the metaphor of the "slippery street", the reader either empathizes with the narrator or not. If he or she identifies with Laco's emotions (emotional empathy), then he or she will automatically also tune into the melancholic evocations of the cited metaphor and the associated negative meanings of a fall, such as failings in life. If another reader perceives Laco's story more discursively (cognitive empathy), he or she might understand the basic emotion of sadness in the "slippery" metaphor, but does not necessarily have the need to share it with Laco. Initial negative feelings could, for instance, be complementarily developed into a tragicomic scene of a slippery street with comically falling people (as part of a tragicomic view of life). Cognitive empathy may also enable malicious feelings, or even joy from negative emotions, mediated by the narrator Laco.[6]

The most emotionally detached possibility of reading the "slippery" metaphor would be its literal reading by a reader who is incapable of spontaneously interconnecting the metaphorical domains or finding the code of the metaphor, and instead perceives only the individual words or categories. The emotional aspects remain hidden, even though they may emerge to a degree. Non-empathic, detached reading is typical also for the abstract structuralist analysis of a metaphor. Non-empathic reading, however, cannot be simply called unemotional, since it can also be carried by certain feelings (the desire to expose the mental principles of the functioning of a metaphor, etc.).

The last, specific example of a mental and emotional focus in reading is when a reader is reading intersubjectively, but focuses on oneself. Such a reader does not empathize with Laco, but grieves over oneself, one's own experience. In this way, empathy enables bringing literary fiction into the real world and releases catharsis, allowing the reader to liberate himself or herself from own negative emotions.

9. DISCUSSION AND CONCLUSION

The above analysis of one metaphor from the novella *Laco and Bratislava* by Ivan Horváth has shown (despite minimal contextualization) what different reactions, meanings and feelings a metaphor can produce in readers who bring into the communication process their own personality with certain background knowledge and motivations in a certain situation.

My first empirical research revealed a trend that rational people (schoolteachers) are more successful in solving/understanding metaphors. It seems, on the other hand, that they are less aware of emotions associated with metaphors. Because of the

low number of participants in the research (n = 15), all empirical findings must be statistically confirmed or dismissed in more extensive and specifically set-up experiments. Nevertheless, my survey implies that the hypothesis about the creative relation between metaphorical processes, the reader's personality, and the reception of a text could be plausible.

NOTES

1 For more details, see in Christman – Scheele 2001.
2 For literary typology of modern metaphor see e. g. Zajac 2014, Zambor 2010.
3 The statistical expertise was made by the experimental psychologist Mária Kénesy Túnyiová.
4 Empathy is a spontaneous sharing of feelings, which can be inspired when an individual witnesses the emotional state of another person, learns about the emotional state of another person, or reads about such emotional state and emotions or views them in art.
5 The given general division of reader types and readerly empathy can be further specified according to broader psychological, textual and cultural contexts.
6 For more details, see Triebel 2016, 128.

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Metaphor in theory and research

Theories of metaphor. Conceptual and novel metaphor. Similarity space of metaphor. Cognitive analysis of metaphor. Emotions in metaphorical processes. Metaphor in empirical research.

The aim of the study is to describe the metaphor in literature as a blend, mixture, and a new mental space created on the basis of the domains of a source and a target. Creating such blends in the individual reader's mind has a significant effect on the construction of textual meanings and overall reception of the literary text. In the introduction, I mention several significant metaphor theories from classical, rhetoric substitution theory to current interdisciplinary cognitive modeling of metaphoric processes. Theoretical models (especially by Fauconnier and Gentner – Smith) can be fittingly illustrated on the basis of modernist texts by the Slovak writers Ivan Horváth and František Švantner. Illustrative examples and also data from my research propose a hypothesis about creative interlinkings among the metaphorical processes, the reader's personality, and the reception of a text. From the point of view of cognitive psychology, in similarity space (of a metaphor) relational similarity and object-attribute similarity create a continuum, not a categorical dichotomy. In other words, the analysis of formal structure between a metaphorical source and a target is not enough to understand metaphorical processes. My research indicates that *the domains* of a source and target and their mutual relations are decisive there, thanks to their suitability to situational updates, occasional insights and possible functioning in specific discourses (individual, cultural, historical, social, political, moral, etc.).

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