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DIALETHEISM AND METAPHOR

Abstract. In the paper two seemingly distinct areas of philosophical investigations are brought together: metaphor and dialetheism. They both turn out to be deeply related, which becomes visible against a background, i.e. the hybrid structure of metaphor delineated in the first part. This network elicits three variations of dissonance subsequently called: (1) phantom-contradiction, which is combined with unconventionality of metaphors; (2) indexed-bound contradiction, bearing some cognitive tension but no real truth value gluts and; (3) logical contradiction “spread” between the two layers of metaphorical structure. Finally, the analysis allows for approaching a theoretically pending question concerning the influence of dialetheic aspects of metaphor upon human cognition and thinking in general.

Keywords: contradiction, fuzziness, dialetheism, metaphor, cognition, metaphorical reasoning.

1. Introduction

“Inconsistency is the paradigmatic kind of conceptual conflict open to a metaphoric interaction, and metaphor is the most valorizing outcome of conceptual inconsistency” (Prandi, 2004, p. 270). Metaphor has made a spectacular career, “from pariah to panacea” (Aubusson et al., p. 1). The recent research on cognition has pointed to the persistence, significance, and pervasiveness of metaphors in language and thought. What used to be merely a feature of poetic language has converted into a tool of mental activity. The expanding view that metaphor is the main hinge of thinking stems partly from the embodied cognition thesis (Gibbs, 2006a, 2006b; Lakoff & Johnson, 1980, 1999) and, partly, from the cognitive studies devoted to analogy (Hofstadter & Sandler, 2013). In this context the following questions arise: if thinking and cognition are substantially linked with metaphors, does the dissonance inherent for metaphors pervade our intellectual faculties?

But, if dissonance sometimes means *dialetheia*, could the human mind be so susceptible to it?

The term *dialetheism* was introduced by Priest & Routley (1981) to refer to the view that inconsistent information can be true, i.e., that some contradictions can be true. One of the examples of *dialetheia* provided by Priest (1987) is:

- (1) I am inside and I am outside the room at the same time.

Dialetheism evoked much controversy in logic and philosophy (e.g., Beall, 2009; Priest, 1987, 1995; Priest et al., 2004; Priest & Routley, 1989) and this paper somehow runs into it, approaching the inconsistency that metaphors and metaphorical cognition demonstrate. The harmless-seeming metaphoric imagery is prone to destabilize because metaphoric statements, even the greatest quotes like:

- (2a) Juliet is the sun;

- (2b) The world is mine oyster,

inevitably give rise to the thought:

- (*) It is and it is not (so).

And to claim that a statement and its negation can be both true is to espouse strong *dialetheism*. In the sequel (*) is referred to as dissonance.

If from a glance language users know that metaphor induces (*), the question arises why it is rarely (if ever) associated with *dialetheia*. One possible answer is that the apparent affinity between *dialetheia* and metaphor may be often neglected because of a bias each party has towards the other: a *dialetheist* may think, like Plato, that metaphors deceive and thus should be avoided; whilst those who investigate metaphors follow the long intellectual tradition according to which contradiction is where we could locate fallacy. Therefore, it is justly shunned. In result, both parties seem to be barred from noticing the ties.

1.1. Hybrid structure of metaphor

Any metaphor-contradiction connection can be made more conspicuous only when the concept of metaphor is clearly delineated. Here we adopt a definition which is purposefully detached from any particular theory to

stave off any terminological or conceptual confusion. The underlying assumption is that metaphor is both a semiotic and cognitive phenomenon and for this reason it is called hybrid. This approach is close to Gentner et al. (2001), Haglund (2013), Rybarkiewicz (1998) but exceeds Lakoff's understanding. According to hybrid conception, metaphor is a two-tier construct consisting of the input (semiotic) and output (cognitive) layers.

The input layer rests on what can be called a *co-occurrence*¹ of items and as here only verbal metaphors are considered, it can be referred to as a *nonstandard concatenation* of words or phrases (*NC-relation*, in brief).

- (3a) Her smile is a boat on the stormy sea.
(her smile) *NC* (boat on the stormy sea)

- (3b) Fingernails of time.
(fingernails) *NC* (time)

Every nonstandard concatenation obeys the syntactic rules of a given language but breaks the semantic ones. Naturally, the input layer, being a sign, is manifest to speakers and, therefore, it best plays the role of a regular reference to the output layer of metaphoric structure which is not directly accessible. The output layer is the result of some mental process called *reconciliation* (*REC-relation*). To reconcile is to compare neighboring items in the quest of their sense. Reconciliation is said to be quite a natural activity of every human mind. Following the Lakoffian nomenclature at this point, the members of REC-relation will be referred to as target and source domains²:

- (4a) (her smile) – target domain; (boat on the stormy sea) – source domain

- (4b) (fingernails) – source domain; (time) – target domain

Thus, the hybrid concept of metaphor adds to its semiotic aspect some mental framework. Let us notice that what one reconciles in metaphor can be interpreted as belonging to a variety of ontological categories including meanings, ideas, concepts, objects, associations, contents, schemes, and also chunks of memory somehow activated by words. But the ontological status of domains shall not be determined here as this would not add much to the metaphor-dialetheia interplay at this stage of investigation. On the other hand, the output layer of metaphorical structure is strictly connected with the process of metaphor understanding, and in a broader sense, with knowledge acquisition. What is interesting, the REC layer is sometimes fogbound

as the domains of the REC-relation may be at first unknown and their components undetermined, like in (1B) where the pending point of reference of “*fingernails of time*” makes the target domain unspecified³.

Incidentally, let us remark that REC-relation is, in some respects, relevant to the interaction view originating with Richards’ tenor-vehicle model of metaphor (Richards, 1936) or Black’s frame-focus model (1962). There are also various parallel models that figure largely in the current approach to metaphor, to mention at least some: model of analogy (Rumelhart & Abrahamson, 1973), salience imbalance model (Ortony, 1993), semantic field theory (Kittay & Lehrer, 1981), property attribution model (Glucksberg & Keysar, 1990), conceptual mapping view (Lakoff & Johnson, 1980), conceptual integration network emerging from blending (Fauconnier & Turner, 1998), or high-dimensional semantic space model where meaning is represented by vectors and which has two basic components: a model of human knowledge structure provided by Latent Semantic Analysis (LSA), and a model of text comprehension, the construction integration (CI) model (Kintsch, 2000).

The whole hybrid metaphoric structure (see Rybarkiewicz, 1998; 2015, for more details) may be thus described as:

INPUT LAYER: $NC(a, b)$, a, b – expressions; *what is perceived*;
the source of (*) dissonance;

OUTPUT LAYER: $REC(x, z)$, x, z – domains; *what is reconciled*;
the source of positive solution of (*) dissonance.

The entire structure has two variations depending on the character of the input layer and the resulting correspondence between the layers:

- (i) the elements of semiotic relation of concatenation (a, b) correspond to the elements of REC-relation (x, z) (comp. 1A) – one-to-one structure.
- (ii) one domain of the REC-relation remains undetermined (target domain) so the hearer must figure it out (comp. 1B)⁴.

As it seems, (ii) case is often tantamount to *catathresis* understood in Max Black’s sense as the use of metaphor for filling up a semantic gap when the domain referred to has not been dubbed in a given language, and a metaphor plays the role of a novel term. In the context of science, the (ii) structure is applied to denote some observed phenomenon (e.g., certain behavior of light) or to serve as a *model* of investigation (e.g., a wave), thus opening the gate for a novel scientific theory.

The presented account of metaphor does two things. First, it allows for detecting the dissonance caused by metaphor and its links with *dialetheia*

(Part 2). Second, it helps to look into the vertex of metaphorically induced dialetheia and the way we tend to think in general (Part 3).

2. Metaphor – dialetheia?

One of the advantages of the two-layered structure of metaphor is that it helps to locate inconsistency, and to tell contradiction from other types of (*) dissonance which, in the sequel, are called *phantom contradiction* and *indexed-bound contradiction*, respectively.

2.1. Phantom contradiction: Pragmatization of dissonance

Rudimentary grasp of inconsistency quickly acquired by metaphor users is a fact. No wonder that various theories of metaphor has been long permeated with terms somehow referring to dissonance, for instance, *strangeness* (Aristotle), *anomaly*, e.g., (Campbell, 1975; Katz, 1964; Ziff, 1964), *deviance* (Butters, 1970; Weinreich, 1981), conceptual *conflict* and *sortal incorrectness* (Lappin, 1981), category *mistake* (Ryle, 1949), domain *incongruence* (Ortony, 1993), distinct and *incongruent* semantic fields (Kittay, 1991). But as it is believed that any shade of contradiction should be avoided, the development of the majority of metaphor theories aims at bypassing it. And so (*) dissonance, when noticed, is deactivated in the network of various rules, like pragmatic and conversational ones, becoming a mere sign of the secondary level of meaning (Grice, 1975; Vanderveken, 1990), or an inducer of the intended attitude at the receiver (Bernsten & Kennedy, 1996). If there is any contradiction in metaphors, it is to play a solely pragmatic role without any semantic implications. So the question, how can a statement be meaningful and contradictory at the same time, has been often resolved in pragmatic terms: “The contradiction implied at the surface level of the trope is removed in the receiver’s interpretation of the trope” (Bernsten & Kennedy, 1996, p. 13).

One of the theories – exceptional in the sense that it openly applies the word *contradiction* – is Beardsley’s *attribution theory*. For him, metaphors are kind of self-controverting discourse which is absurd at the primary layer of meaning, being at the same time not absurd at the secondary layer. “Metaphor is a meaningful self-contradiction and it usually contains a self-contradictory attribution” (Beardsley, 1981, p. 138). A self-contradictory attribution is one in which the modifier designates some characteristics incompatible with the characteristics designated by the subject, for example, *four-legged bicycle*. But when a modifier connotes some features which

can be stated about the subject, the reader may leapfrog over this evident self-contradiction to create meaning directly. What makes the hearer do this is his conviction that the author of metaphor is aware of the contradiction and has the intention to say something with sense (Beardsley, 1981, pp. 140–1). Beardsley, employing the term in question, seems to be the closest to admit its significance for the theory of metaphor. However, he also deals with it within a typically pragmatic frame seeing in it only a message purposefully passed.

The language users evidently see certain incongruence in the first layer of metaphor but the very notion of dissonance remains intuitive and vague. That is why, at this stage, one cannot speak about dissonance as a logical relation of contradiction. Instead, let us call it phantom contradiction. In most cases, phantom contradiction plays the pragmatic role of a message purposefully conveyed in order to lift the hearer at the level of meta-meaning. This role is inherent for the input layer of the metaphorical structure, and at the same time characteristic for each vehicle of a Peircean sign which, by definition, is connected with perception.

2.2. Index-bound Contradiction

There also exists some other aspect connected with metaphoric dissonance. So far, the considerations have tacitly implied the denotational theory of meaning. It is worth noticing, however, that (*) dissonance exceeds it: only the *it is not so*-part (appertaining to the input) takes into account denotation, whereas the *it is so*-part (yielding the output) departs from it. In the literature the latter is referred to by a range of concepts like: Black's (1962; 1980) *associated commonplaces*, Beardsley's (1962) *range of connotations*, Johnson & Lakoff's (1980) *domains matching*, or Fauconnier & Turner's *mental spaces blending*, to name but a few. In order to grasp this metaphorical *shift*⁵ occurring between the *it is not so* and *it is so* stages, let us apply an intuitive and sufficiently general Fregean concept of meaning which, besides denotation, encompasses sense and color (see Margalit & Goldblum⁶, 1995). According to Gotlob Frege, sense is both the information conveyed and what the speaker understands. Moreover, the role of sense is to decide about the speaker's ability to identify things denoted by expressions, and about the way and the context in which things can be presented in language. Thus, sense is intersubjective. On the other hand, color connected with imagery and feelings is highly subjective. In fact, Frege, postulating that thinking should be an objective logical process, expelled color from it. Alas, no theory of metaphor can adhere to such a claim because the input layer of metaphor makes "a scrunch" on denotation, yet the output

layer ensures the supply of “lubricants” found in sense and color. Finally, they constitute the reservoir of REC-relation. And so, the source domain indicated by the input goes through the reorganization at the output stage where sense and color gain the speaker’s attention, and denotation is just put aside. Of course, in reality the process seems to be much more intricate. Various aspects of its complexity are rendered by a number of theories (see, e.g., Fauconnier & Turner, 2008).

Now, let us observe that *it is so* and *it is not so* together could be treated as a constitutive feature of REC-relation which is founded upon oppositions: positive and negative solutions, inclusion and exclusion of the components, something in common and not in common. Briefly, REC-relation implies a difference⁷ just as “likeness always implies a difference” (Kelly, 2002, p. 21). So, by definition, metaphor states that it is so (under one respect), and it is not so (under another). This seems to be apparent even in such examples as:

(4) Today, Einstein is not Einstein.

where at least one characteristic feature (in this case brilliance is the most apparent candidate) must be excluded to turn (4) into a metaphor. Taken alone the denotation-based identification of (*) dissonance, it does not explain how the putative result of REC, that lies outside such an order, is realized. Hence, sense and color become indispensable.

To deal with this ambivalence, or duality, of REC-relation one should enrich (*) with indices, analogous to the contextual or temporal ones:

(**) It¹ is and it² is not so.

where ^{1,...,n} – refer to different aspects of the domains of REC-relation.

Without indices, various constituents of domains considered in REC-relation fall into the same category and remain indiscernible. In result, they cannot be treated as separate. The inability to locate indices adequately may be the source of paradox. It seems, however, that in the very structure of metaphor there is encoded a presumption of the effectiveness of communication by their means, and thus, the presence of indices must be surmised. On the other hand, bare dialetheia (without indices) is unison at both sides of the above (**) conjunction, so, in its case, (**) is tantamount to (*). Therefore, a dialetheist accepts at least some true contradictions and truth value gluts, while a successful metaphor user need not do this. At this point, it seems that even if language and human thought is dialetheic, metaphors remain uninvolved.

2.3. Contradiction and meta-truth-maker

Metaphor as a whole might instantiate a dialetheic relation occurring between the layers under the general proviso that the input and the output are truth-bearers. Truth-bearers generate a few special problems of their own but here it suffices to assume that both layers can be somehow coupled with them, leaving aside the question of their status, and whether they are explicitly given or generated.

Metaphorical statement (the input) is trivially false under the proviso that it is not negated; since negated metaphors become trivially true, as Cohen (1976, p. 253) has rightly pointed out in the example:

(5) No man is an island.

The valuation of the output depends on whether the metaphor considered is dead or fresh. Dead metaphors can take on both values since they function as literary expressions, for example, the output of

(6) John's wife is an angel.

can evoke both a nod of agreement if John's wife is, for example, kind, helpful, patient, and beautiful, or a shake of "no" if she is rude, quarrelsome, and disagreeable. Whereas in fresh metaphors the hearer seems to assume that the output is always true as for some psychological reasons this assumption triggers an impulse to muse about the possible meaning of a nonsense which every fresh metaphor is at the very beginning, e.g., on hearing:

(7) John's job is an empty cup of coffee.

no false statement, i.e. no non-fact corresponding to it, is taken into consideration. On the contrary, the only possible justification for searching the meaning of an evident absurd lies in the discovery of some actual truth behind it. Without this, a strange combination of words falls into the category of incomprehensible nonsense not worthy of intellectual effort. The crucial moment of finding meaning, i.e., comprehension of a fresh metaphor, shows that the division line between (semantic) nonsense and a metaphor is drawn by the human ability to understand.

So, in the case of fresh metaphors, at the input layer, both values (Truth for assertive statements, Falsity for negated ones) may appear while, at the output, Truth is the only option left. In result, fresh metaphors feed into the obtaining of the contradiction-making relation but only when we get usually evident falsehood at the primary layer, as the secondary layer is

always true, however, with the exception of catachresis which cannot be valuated just as naming cannot be true or false.

This gives rise to the presumption of the existence, within these types of metaphor, of a truth functional operator that produces only one possible value for any connected terms, namely, Truth⁸. In other words, it is an operator that collapses to a special kind of a trivial truth-maker. The truth-maker relation claims that x is a truth-maker for y iff it is necessary that if x exists, y is true (Rodríguez-Pereyra, 2005, p. 17). Once the output of metaphor is formed, i.e., reconciling is successful, then there exists some true output. Therefore, we can view metaphor as a kind of truth-maker that can be called *meta-truth-maker*. It is worth noticing that the meta-truth-maker also fits the following definitions of ‘truth-maker’: “a truth-maker is that in virtue of which something is true” (Bigelow, p. 1988, p. 125) or “a truth-maker is a thing the very existence of which entails that something is true” (Fox, 1987, 189). Having adopted now standard angled brackets to designate a truth-bearer and square brackets to designate a truth-maker, the fresh metaphor looks like: $\langle$ metaphorical input $\rangle$, $($ metaphorical output $)$.

For us it is important that whenever the input is false, contradiction between the layers occurs. And this is the case of the vast majority of (i.e. not negated) fresh metaphors.

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Put briefly, the leading idea of this part is that metaphoric (*) dissonance is palpable in a threefold way: one is combined with unconventionality (nonstandard concatenation, semantic nonsense) at the input layer and may be called phantom-contradiction; next, characteristic of the second layer, it takes the form of an indexed-bound contradiction bearing some cognitive tension but no real gluts; and the third one spread between the two layers resembles logical contradiction. The question arises: if our thinking patterns are metaphoric, can any of the described manifestations of (*) dissonance undermine its results?

3. Dialetheia in metaphorical thinking?

If the mind works with metaphors and it is the case that metaphors engender dissonance, the question about contradiction in cognition becomes burning. Possibly, the possible answers lay dormant in the everyday cognitive strategies of metaphor processing. I shall investigate this topic realizing,

however, that at this stage it can hardly be determined how much purport can be really given to it.

To think means to conceptualize and to infer (Marciszewski, 1994, p. 3). Metaphorical thinking is used in both processes. Here we shall focus on inference connected with solving problems within some metaphorical framework given. Such inference is called *metaphorical reasoning* (Thibodeau & Boroditsky, 2011).

3.1. Metaphorical Reasoning

A striking case of metaphorical reasoning has been provided by Thibodeau & Boroditsky (2011) who compare two contrasting metaphorical frames used implicitly by the police:

(6a) Crime is a virus.

(6b) Crime is a beast.

They focus on how metaphor shifting alters the policy carried out and treat the conclusions the police draw from the adopted metaphors as the result of metaphorical reasoning. They quote a criminal justice scholar, Kelling (1991), according to whom a bad metaphor chosen may end in a failure in crime prevention⁹. In metaphorical reasoning, metaphors are often settled much deeper and constitute the hypocenter of argumentation, in this respect they resemble conceptual metaphors. They lead to different conclusions (and solutions) depending on the context and the actual need, for example,

- | | |
|-------------------------------------|---|
| (8) If | then (missing premises are left unexpressed) |
| (a) Society is an organism | it is better to scarify a man than society; |
| (b) The body is a machine | parts of the body are replaceable; |
| (c) A nation is a plague | this nation should be eradicated; |
| (d) Marriage is a very long journey | married people should have breaks; |
| (e) Marriage is a tango | one should never stop training. ¹⁰ |

One may say that the output, i.e., conceptual layer of metaphor has the force to determine the problem (Schön, 1993). In fact, most metaphors do achieve the assertive illocutionary point, while metaphorical conclusions indicate concrete steps that should be taken to have the problem solved. In some sense, metaphorical reasoning provides a recipe for success but what exactly is taken for success depends on the metaphor adopted.

Metaphorical reasoning reflects the difference between what metaphor states and what it creates, between “I use this metaphor because of the existing parallels” and “I use this metaphor to transfer some characteristic from the source to the target domain” – sometimes despite the lack of similarities – in order to meet some needs (Rybarkiewicz, 2015). This is visible in novel fresh metaphors, while the dead ones have already made us so accustomed to transferences made that we are not even able to recognize them.

In the above examples, the character of formulated corollaries sheds some light on the nature of metaphoric dissonance. Even if there are some solutions found in result of metaphorical reasoning, there is no guarantee of any genuine matching of the domains. The main impression is that the conclusions are quite arbitrarily drawn as, essentially, no pre-existing affinities so typical for REC-relation are at sight. As a result, troubles in marriage (target domain) can be differently handled depending on the source domain (examples 8d and 8e) or left without any idea of potential measures if no metaphor is accessible. In this sense, metaphors create similarity and not merely reflect it. Notwithstanding the randomness of the match, the word ‘is’ in premises seems to be treated literally so that the link with a given issue is addressed as really-existing and the solution provided by metaphor is also treated as veritable, i.e., implementable. On this basis, one may conclude that the influence of the meta-truth-maker goes far beyond the scope of verbal metaphor reaching the metaphorical conclusions. As if Truth once proclaimed at the output layer were hard to abandon at the consecutive stages of thinking. It looks like being so puissant that it is capable of transferring the elements of the source not connected with the target. The effects of such a move belong to the most serious repercussions of metaphor in our lives where we are seldom aware of contingency of our choices and actions in accepting such apparently “obvious” solutions. Yet, we all can attest that the results of metaphorical concluding are sometimes beneficial. Think, for instance, about patients who owe their lives to transplantations – the idea stemming from the mechanistic metaphor of a man (an amazing trust in metaphor, by the way).

One possible explanation of this transfer proneness is the lack of alternative. What seems to be straightforward within the source domain creeps into the gap existing within the target domain – the *solution gap* – and appears there as a viable consequence and attractive guidelines. But it cannot be otherwise, taking into consideration the fact that the gap in solution resembles the semantic gap, and filling it is like a *praxeo-catachresis*.

Obviously, transference within the metaphorical concluding is of limited compatibility. One can take care of one's marriage and one's car but cannot replace broken parts in the former. What guarantees the final revision, correction, and adjustment of transfer is the reality. In the end, the world decides about the effects of metaphorical concluding as the mold shaping the poured substance. Filling the knowledge- or solution- gaps is fraught with constant danger of running against the existing determinants. It results in achieving certain objectives, or not. All the same, metaphorical reasoning may suggest doing something disastrous, against the interest, the well-being, against the reason, in contradiction with some well-grounded beliefs or even the evidence itself. At this stage, the duality connected with index-bound contradiction undergoes a significant change since the index starts to be considered in terms of realizability. Thus, a remarkable turn is made concerning duality, the final metaphorical conclusions are either implementable or not, the world as the last resort decides about their classification possibly leaving no penumbra nor room for paradox.

Dialetheia that might arise before this decisive confrontation, may be of an epistemic or alethic character and could be approached by means of some pragmatic theory of truth connected with perlocution, wherein contradiction has the form: It can/cannot and should/should not be done. This pragmatic disposition alters mind frame: from similarity to solution seeking; from mere aptness to efficacy.

Metaphorical inference surely is not a deductively valid reasoning. Neither is it, I am afraid, "a venerable form of inductive inference recognized millennia ago" (Norton, 2011, p. 1). Despite this, it is not sure if it is at all defeasible, providing us with the most desired power: the chance for problem solving. This switch seems to be as commonly accepted as the reasoning gap neglected.

Metaphorical inference is comparable to analogical argument (comp. Bartha, 2019), since both presume similarity between the domains so that the following line of reasoning is adopted: if both domains have some similar feature(s), therefore, they also have another feature in common. But metaphorical conclusion need not follow this pattern. Of course, this claim is fragile in view of similarity always shared by any two entities. Nevertheless, from a cognitive angle the matter looks different. It is noteworthy that the greatest solutions are often provided by quite bizarre metaphors – let us think about Kekule's snake biting its tail solving the question of the benzene ring – which leaves us, ultimately, with another version of the question of metaphors creating similarities. John McCarthy, one of the founders of AI, argued that a solution to a problem is creative if it employs a concept that is

not explicitly mentioned in the specification of the problem¹¹. Moreover, in metaphorical concluding the transfer may also occur without any anterior common ground; Sometimes this dearth of links having been unveiled in a precise way still offers the chance for creative metaphorical thinking. For example, Steven Pinker's statement can be an illustration of this: "obviously, the human mind is not like a computer: the brain is parallel, computers are serial, computers are very fast, brains are comparatively slow, computers need screens", yet, ...despite the list of differences, he urges that "part of the answer to the question of what makes a computer smart can be applied to understanding of what makes a brain smart" (Pinker, 1997). This is a sample of metaphorical reasoning.

The maneuvers near the edge of dialetheism on the field of metaphor, finally, turned out to proceed within specific safety cords. The initial appearance of (*) dissonance, is altered once the metaphoric meaning is grasped: phantom contradiction becomes irrelevant, but there is no practical refuge from the appeal to index bound contradiction and meta-truth-maker function because both can strike anywhere along the chain of metaphorical thinking leaving us with doxastic¹² skepticism about the nature of reality. Despite this intellectual uncertainty, metaphorical reasoning shows that perhaps the greatest effort of mind-work on metaphor consists in the attempts, one way or another, to save something akin to the classical logic image of validity. Although merging any adjacent entities is a common mind practice – wherein we testify the results without noticing the process – the same mind challenged by initial dissonance tends to tame it by turning it into something more univocal and adjusted to reality. Having suspended denotation at the beginning, it clashes against reality in the end where it has to deal with the final determinant of choices concerning the most remote metaphoric conclusions. In this confrontation even the meta-truth-maker influence decreases. In sum, things have come full circle now that the interplay between language and reality seems to be constant:

We need to give prominence to the fact that because language arises out of the practical life of a people and has in its turn a practical effect on that life, it is wrong headed to try to assign a priority among what we are calling 'language', 'life', and 'world' (Robinson, 2000, p. 282).

Finally, it seems that the only peril of paradox and dialetheia comes from the fuzziness of index indeterminacy.

NOTES

¹ For *co-occurrence* and *reconciliation*, (see Rybarkiewicz, 2015).

² The nomenclature of the conceptual theory of metaphor is adopted but without any further commitment to it.

³ Although “*fingerails of time*” resembles “*a hair of sun*” (the example, discussed by J. Pelc), only the latter has the target domain determined referring to the rays.

⁴ Called *vertical* and *horizontal* in Rybarkiewicz (1998).

⁵ Beardsley’s term.

⁶ Margalit & Goldblum (1995) spoke about metaphors applying Fregean tripartite definition of meaning.

⁷ Tversky (1977) characterized similarity in terms of a feature-matching process of common and distinctive features.

⁸ An obvious exception is catachresis. In fact, catachresis is not always recognized as a legitimate metaphor.

⁹ He describes the case of the police acting in accordance with “Crime is a beast” metaphor and not sharing with the community the information about a rapist: the secret was kept in order to set traps, hunt down, and catch the criminal. Whereas informing the community and thus changing metaphor to “Crime is a virus” could have prevented some of the attacks and could have saved lives of victims.

¹⁰ First two metaphors represent (scientific) models, the second two belong to the conceptual metaphors, the fifth is an example of persuasive language of some historical political leader, the next two are just verbal metaphors (one dead and the other fresh), and the last three represent metaphors that could be the part of any psychotherapeutic repertoire.

¹¹ This cognitive process, which Arthur Koestler (1964) called *bisociacion*, was later elaborated by Fauconnier & Turner (2008) in their conceptual blending model.

¹² In Platonic sense *doxa* means cognition of the ever-changing world.

REFERENCES

- Aubusson, P. J., Harrison, A. G. and Ritchie, S. M. (2006). Metaphor and Analogy: Serious Thought in Science Education. In P. J. Aubusson, A. G. Harrison and S. M. Ritchie (Eds.), *Analogy in Science* (pp. 1–10). Dordrecht: Springer. http://doi.org/10.1007/1-4020-3830-5_1
- Bartha, P. (2019). *Analogy and Analogical Reasoning*. Stanford Encyclopedia of Philosophy. Retrieved December 29, 2019 from: <http://plato.stanford.edu/entries/reasoning-analogy/>
- Beall, J. C. (2009). *Spandrels of truth*. Oxford: Oxford University Press.
- Beardsley, M. C. (1962). The Metaphorical Twist. *Philosophy and Phenomenological Research*, 22(3), 293–307. <http://doi.org/10.2307/2104415>
- Beardsley, M. C. (1981). *Aesthetics, Problems in the Philosophy of Criticism*, (2nd edition). Hackett Publishing.
- Bernsten, D. & Kennedy, J. M. (1996). Unresolved Contradictions Specifying Attitudes in Metaphor, Irony, Understatement and Tautology. *Poetics*, 24, 13–29.
- Bigelow, J. (1988). *The Reality of Numbers: A Physicalist’s Philosophy of Mathematics*. Oxford: Oxford University Press.

- Black, M. (1962). Metaphor. In M. Black (Ed.), *Models and Metaphors* (pp. 25–47). Ithaca, NY: Cornell University Press.
- Butters, R. R. (1970). On the Interpretation of Deviant Utterances. *Journal of Linguistics*, 6, 105–110.
- Campbell, P. (1975). Metaphor and Linguistic Theory. *Quarterly Journal of Speech*, 61, 1–12.
- Cohen, T. (1976). Notes on Metaphor. *Journal of Aesthetics and Art Criticism*, 34, 249–259.
- Fauconnier, G. & Turner, M. (1998). Conceptual integration network. *Cognitive Science*, 22(2), 133–187. Retrieved December 29, 2019 from: <http://www.cogsci.ucsd.edu/~faucon/BEIJING/CIN.pdf>
- Fauconnier, G. & Turner, M. (2008). Rethinking metaphor. In R. Gibbs (Ed.), *Cambridge Handbook of Metaphor and Thought* (pp. 53–67). Cambridge: Cambridge University Press.
- Fox, J. F. (1987). Truth-maker. *Australasian Journal of Philosophy*, 65, 188–207.
- Frege, G. (1977). *Pisma semantyczne*. Warszawa: PWN.
- Gentner D., Bowdle B., Wolff P. & Borobab C. (2001). Metaphor Is Like Analogy. In D. Gentner, K. J. Holyoak & B. K. Kokinov (Eds.), *Perspectives from Cognitive Science* (pp. 199–254). Cambridge, MA: MIT Press.
- Gibbs, R. W. Jr. (2006). *Embodiment in Cognitive Science*. New York: Cambridge University Press.
- Gibbs, R. W. Jr. (2006). Metaphor Interpretation as Embodied Simulation. *Mind & Language*, 21(3), 434–458. <http://doi.org/10.1111/j.1468-0017.2006.00285.x>
- Gibbs, R. W. Jr. & Matlock, T. (2008). Metaphor, Imagination and Simulation: Psycholinguistic Evidence. In R. W. Gibbs Jr. (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 247–261). Cambridge: Cambridge University Press. <http://doi.org/10.1017/CBO9780511816802.011>
- Grice, H. P. (1975). Logic and Conversation. In P. Cole & J. Morgan (Eds.) *Syntax and Semantics*, 3 (pp. 22–40). Academic Press. Reprinted as ch. 2 of Grice. *Studies in the way of words*. Harvard University Press, 1989. Retrieved December 29, 2019 from: <http://www.ucl.ac.uk/lis/studypacks/Grice-Logic.pdf>
- Haglund J. (2013). Collaborative and Self-generated Analogies in Science Education. *Studies in Science Education*. 49(1) 35–68. <http://www.diva-portal.org/smash/get/diva2:621708/FULLTEXT01.pdf>
- Hobbes, T. (1996). *Leviathan*. R. Tuck (Ed.). Cambridge: Cambridge University Press.
- Hofstadter, D., Sandler, E. (2013). *Surfaces and Essences: Analogy as the Fuel and Fire of Thinking*. New York: Basic Books.
- Katz, J. J. (1964). Semi-sentences. In J. Fodor & J. Katz (Eds.), *The Structure of Language* (pp. 400–416). Englewood Cliffs, NJ: Prentice-Hall.

- Kelling, G. L. (1991). Crime and Metaphor: Toward a New Concept of Policing. *City Journal*, 1 Autumn. Retrieved December 29, 2019 from: <http://www.city-journal.org/story.php?id=1577>
- Kelly, G. (2002). *The Psychology of Personal Constructs: Volume One: Theory and Personality*. London: Routledge.
- Kintsch, W. (2000). Metaphor Comprehension: A Computational Theory. *Psychonomic Bulletin & Review*, 7, 257–266.
- Kittay, E. F. (1991). Metaphor: Its Cognitive Force and Linguistic Structure. *Philosophical Review*, 100(1), 112–115.
- Kittay, E. F. & Lehrer, A. (1981). Semantic Fields and the Structure of Metaphor. *Studies in Language*, 5, 31–63. <http://doi.org/10.1075/sl.5.1.03kit>
- Koestler, A. (1964). *The Act of Creation*. London: Hutchinson & Co.
- Lakoff, G. & Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press.
- Lakoff, G. & Johnson, M. (1980). Conceptual Metaphor in Everyday Language. *The Journal of Philosophy*, 377(8), 453–486. <http://dx.doi.org/10.2307/2025464>
- Lakoff, G. & Johnson, M. (1999). *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- Lappin, S. (1981). Sorts, Ontology, and Metaphor: The Semantics Sortal Structure. *Journal of Philosophical Logic*, 36(5), 571–598.
- Marciszewski, W. (1994). *Sztuka rozumowania w świetle logiki*. (p. 3). Warszawa: Aleph.
- Margalit, A. & Goldblum, N. (1995). A Metaphor Game. *Synthese*, 104(2), 299–323.
- Norton, J. D. (2011). *Analogy*. <http://www.pitt.edu/~jdnorton/papers/Analogy.pdf>
- Ortony, A. (1993). Metaphor, language and thought. In A. Ortony (Ed.), *Metaphor and thought* (pp. 1–16). Cambridge University Press, (second edition). <http://dx.doi.org/10.1017/CBO9781139173865.003>
- Pinker, S. (1997). *How the Mind Works*. [lecture]. <https://www.youtube.com/watch?v=WfGJGXJ2xtI>
- Prandi, M. (2004). *The Building Blocks of Meaning: Ideas for a Philosophical Grammar*. John Benjamins Publishing. <http://dx.doi.org/10.1075/hcp.13>
- Priest, G., Beall, J. C. & Armour-Garb, B. (2004). (Eds.) *The Law of Non-Contradiction*. Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780199265176.001.0001>
- Priest, G. (1987). *In Contradiction*. Dordrecht: Martinus Nijhoff, (2nd expanded edition). Oxford: Oxford University Press, 2006. <http://dx.doi.org/10.1093/acprof:oso/9780199263301.001.0001>
- Priest, G. (1995). *Beyond the Limits of Thought*. Cambridge: Cambridge University Press (2nd expanded edition, 2002). Oxford: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780199254057.001.0001>

- Priest, G. & Routley, R. (1989). The History of Paraconsistent Logic. Chapter 1. In G. Priest, R. Routley & J. Norman (Eds.), *Paraconsistent Logics: Essays on the Inconsistent*. Munich: Philosophia Verlag.
- Richards, I. A. (1936). *The Philosophy of Rhetoric*. Oxford: Oxford University Press.
- Robinson, G. (2000). What Lies Outside Language. *Philosophical Investigations*, 23(4), 279–291. <http://dx.doi.org/10.1111/1467-9205.00127>
- Rodriguez-Pereyra, G. (2005). Why Truthmakers. In H. Beebe & J. Dodd (Eds.), *Truthmakers: The Contemporary Debate* (pp. 17–31). Oxford: Oxford University Press. Reprinted in E. J. Lowe & A. Rami (Eds.), *Truth and Truth-making* (pp. 227–241). Stockfield: Acumen, 2009. <http://dx.doi.org/10.1093/acprof:oso/9780199283569.003.0002>
- Rumelhart, D. E. & Abrahamson, A. A. (1973). A Model for Analogical Reasoning. *Cognitive Psychology*, 5, 1–28.
- Rybarkiewicz, D. (1998). The Structure of Metaphor: Towards a Pragmatic Approach. *Logica Trianguli*. 2, 103–115.
- Rybarkiewicz, D. (2015). Out of the Box Thinking. In P. Łukowski, A. Gemel & B. Żukowski (Eds.), *Cognition, Meaning, and Action: Lodz – Lund Studies in Cognitive Science* (pp. 152–167). Łódź & Kraków: Wydawnictwo Uniwersytetu Łódzkiego.
- Ryle, G. (1949). *The Concept of Mind*. Chicago: The University of Chicago Press.
- Sadock, J. (1974). *Towards a Linguistic Theory of Speech Acts*. New York: Academic Press.
- Schön, D. A. (1993). Generative Metaphor: A Perspective on Problem-setting in Social Policy. In A. Ortony (Ed.), *Metaphor and Thought* (pp. 137–163). Cambridge: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9781139173865.011>
- Thibodeau, P. H. & Boroditsky, L. (2011). *Metaphors we Think with: The Role of Metaphor in Reasoning*. PLoS ONE 6(2), Article e16782. <http://doi:10.1371/journal.pone.0016782>. Retrieved December 29, 2019 from: <http://lera.ucsd.edu/papers/crime-metaphors.pdf>
- Tversky, A. (1977). Features of Similarity. *Psychological Review*, 84, 327–352.
- Vanderveken, D. (1990). *Meaning and Speech Acts*. Cambridge: Cambridge University Press.
- Weinreich, H. (1981). Ogólna semantyka metafory [General Semantics of Metaphor]. *Teksty: teoria literatury, krytyka, interpretacja*, 57, 61–75.
- Wittgenstein, L. (1914). *Notes Dictated to G.E. Moore in Norway, Appendix II of Notebooks 1914–1916*, 2nd ed. G.H. von Wright & G.E.M. Anscombe (Eds.). Oxford: Basil Blackwell (1979).
- Ziff, P. (1964). On Understanding ‘Understanding Utterances’. In J. Fodor & J. Katz (Eds.), *The Structure of Language* (pp. 390–399). Englewood Cliffs, NJ: Prentice-Hall.