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Metaphorical Change in Cognition: On The Verge of Rationality

Metaforyczne Zmiany Poznawcze: Na Krawędzi Racjonalności

Summary

Some changes in the environment, when attended to, result in cognitive response which may be called thinking with change. Thinking with change is similar to the "algorithm of sense detection" of metaphors. In fact, the interpretation of any kind of metaphor is framed by the general human mechanism of dealing with a change. Therefore, an interpreted (meaningful) change is here called metaphorical. The first part clarifies the concepts of change and metaphor. The second part provides the characteristics of metaphorical changes. Finally, we try to answer the question if metaphorical thinking with change is rational.

Keywords: change, metaphor, metaphorical thinking, rationality, intentionality.

Streszczenie

Rozważania podjęte w niniejszym artykule wyrastają ze spostrzeżenia, że: (1) niektóre zmiany w otoczeniu, kiedy zostały zauważone, wzbudzają pewną odpowiedź kognitywną, którą nazwać można myśleniem zmianą i (2) owo myślenie zmianą odbywa się na wzór myślenia metaforycznego. Zatem znalezienie sensu zmiany przebiega podobnie jak znalezienie sensu nowej, świeżej metafory. W rzeczywistości jednak to interpretowanie metafory odbywa się zgodnie z kanonem myślenia inicjowanego zmianą. Najpierw przedstawiona zostanie bardzo skrótowo pewna teoria metafory. Zmiana, która uzyskała sens nazywana będzie dalej zmianą metaforyczną. Pierw-

sza część zawiera wyjaśnienia sposobu rozumienia obu kluczowych terminów: zmiany oraz metafory. Druga ma na celu ukazanie, jakie zmiany w otoczeniu są metaforyczne oraz zarysowanie koncepcji, w ramach której można opisać zmiany metaforyczne jako proces poznawczy. W końcu, postaram się odpowiedzieć na pytanie, czy myślenie zmianą jest racjonalne.

Słowa kluczowe: zmiana, metafora, myślenie metaforyczne, racjonalność, intencjonalność.

Part 1

It seems obvious that there is a line which sharply divides the matters called change from the matters called metaphor. Normally, change is not considered to be a means of communication, metaphor undoubtedly is. Thus, before carving out the key notion of *metaphorical change*, we need to consider both phenomena separately.

1.1. Change

On the broader view change is understood as difference or nonidentity in the features of thing (Mortensen, 2015). However, the change considered here is not merely this because it coincides with relativity, which means that it is:

(1) *significant*, i.e. it catches attention of a cognitive agent;

(2) *meaningful* in the sense that it results in his or her cognitive response or belief revision.

In other words, it is always an individual who is exposed to a change, i.e. who becomes aware of it, reacts to it with some mental or emotional state like curiosity, surprise, interest, amusement, pleasure, fear, etc., and who, finally, thinks about its sense and consequences, for example, in terms of gains/losses or safety/danger, and acts accordingly.

1.2. Metaphor

Usually metaphors are instantly recognized by an average language user:

1. Advertising is the *rattling of a stick inside a swill bucket*[1];
2. He was eager to help but his legs were *rubber*"[2];
3. Adidas is a *chameleon*;
4. He sometimes failed because of the *whirls* of his ego;
5. The *shadow* of God.

For metaphor there are parameters which continue to function today as they did 2,300 years ago when Aristotle was doing battle:

> Metaphor consists in giving the thing a name that belongs to something else; the transference being either from genus to species, or from species to genus, or from species to species, on the grounds of analogy (*The Poetics*, 1457b).

With two fundamental points, transference and analogy, Aristotle anticipated the main features of metaphorical thinking as it is conceived nowadays. Namely, Aristotelian transference may correspond to a more general notion of *non-standard co-occurrence*, *NC*, (primarily of words, but also of images, objects, sounds), and analogy can be expanded into the act of *reconciliation*, *R*, (of conceptual domains, parcels of mental content, etc.)

NC is conspicuous just like are words put beyond their normal context of use. *NC* has been itself a subject of controversy in the sense that the correct explanation of patent absurdity of certain metaphors has been disputed. Clearly, *NC* alone, i.e. without *R*, remains a (semantic) nonsense; the above sentences interpreted literally would be intelligible. The question aris-

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[1] George Orwell's metaphor.
[2] Raymond Chandler's metaphor.

es how to know what such NC-ed sentences are to mean if they do not mean what they say.

To resolve this problem many theories of metaphor have been concerned with the explanation of how relation R can be settled (to mention a few first[3]: Beardsley, 1962; Black, 1962; Gentner, 1988; Lakoff and Johnson, 1980; Richards, 1936). In cognitive terms, R ensures that a novel co-occurrence gets assimilated in the most sensible manner with what is already known and already imprinted in mind structures. What is true for knowledge acquisition is thus true for relation R. Since there are many parcels of mental content that may participate in sense formation, the entire process is complicated and the projection relation within R is one-to-many rather than one-to-one. In result, there may arise many equally good interpretations for a fresh metaphor. The very process of reconciliation interwoven in the cognitive meaning inference is rather obscure and hidden. Obviously, for R, the distinction between fresh and dead metaphors is prerequisite because only the former involve some actual mind work; the latter have their meanings already fixed and resemble, in this respect, literal language.

NC and R allude to the two facets of any sign: its material realization and its interpretation. For this reason, the relations they form may be called *material* and *cognitive*, respectively[4]. Naturally, each has its own distinctive quality which decides about the metaphoricity of the whole; the material layer is an area of aberrancy; the cognitive one is largely prompted by the need to accommodate the intuition that metaphors dwell on matching what is otherwise unmatched. In practice, both are

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[3] Obviously each author describes the process of reconciliation in different terms.

[4] Cognitive layer of metaphorical structure is the main focus of Conceptual Metaphor and Blending Theories that treat metaphor as a conceptual rather than a purely linguistic phenomenon. On the contrary, semantic approaches lie to a greater degree upon its material layer.

relative; the material relation needs to be perceived and hinges on personal standards of what is usual (unusual), normal (abnormal), while the cognitive one depends on individual capability of finding connections (analogies, associations, mappings) in the act of reconciliation[5].

The structure of metaphor is dynamic in the sense that it requires a shift from one layer into another, which implies taking two steps: (1) noticing an anomaly in the way expressions concatenate, and (2) deciphering the meaning of a new whole. It is worth noticing that taking the latter step is accompanied by a change of rules of interpretation which, among others, allow for the suspension of denotation, for example in *Eve is a gun*, the very object of reference of "a gun" would not be taken into consideration. Also the underlying similarities are not read symmetrically being affected by the order implied – since, evidently, *adidas is a chameleon* draws on other features than *chameleon is an adidas*. The pragmatic theories of metaphor deal with those pivotal features focusing mainly on the principles warranting the success of metaphorical communication (e.g., Davidson, 1978; Grice, 1975; Searle, 1980; Carston and Wilson, 2006, 2019).

Thus, formally, metaphoric structure is composed of two relations[6]: $(x_1)NC(x_2)$ and $(y_1)R(y_2)$, which may interconnect in twofold ways depending on whether: (1) there is one-to-one correspondence between their members, i.e., $x_1 = y_1$ and $x_2 = y_2$ (examples, a, b, c above) forming a *transparent structure*, or (2) x_1 and x_2 together bring forth y_1 (examples d and e) yielding an *opaque structure*.

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[5] The term „reconciliation" is to embrace analogy, associations, mapping, blending.

[6] The approach to metaphor adopted here is hybrid one, comp. Tendahl, 2009.

1.3. Visual and multimodal metaphors

Metaphor is visual when *NC*-relation links objects or their (visual) representations. In terms of Noel Carroll (1994), it is the case of "homospatiality of physically noncomposible elements" (p.203), for example,

> f) a tree with different pieces of furniture instead of fruits ripening in the sun.

In the process of reconciliation visual images allude to other images but, also, they are capable of "mobilizing knowledge" connected with them. Consequently, it is not true that visual metaphors are based exclusively upon similarity between objects. The resulting interpretations, as dependent on many factors lying behind the very image, depart from the bare comparison of the presented items and consist in some richer process of cognitive reconciliation. This explains why visual metaphors may be partially incomprehensible. Such an effect is even greater in multimodality (comp. Forceville, 2008, 2009), like television ads, where an image is combined with sound and text, and different senses are engaged. Certain advertisements clearly show that the origins of associations triggered cannot be directly traced, e.g.:

> g) a bicycle made of transparent glass through which one can see: a handsome man kissing a beauty at a lake surrounded by the mountains in autumn blur and all this with the accompaniment of the quiet piano music, and a text saying: *Just try*!

Multimodal metaphors are akin to some changes occurring in the real life – changes that could be called metaphorical.

Part 2

2.1. Metaphorical change

The basic claim here is that the interpretation of any kind of metaphor – no matter if it is a nonstandard co-occurrence of words, pictures or objects – is framed by the general human mechanism of dealing with a change. In fact, the process of deciphering the meaning of a metaphor belongs to the wider reaction to change, the essence of which seems to be the survival-oriented strategy designed to reduce the possibility of risk. From the cognitive perspective, an expression inserted in a text, for example, "yawned" in "the car *yawned*", plays exactly the same role as any nonstandard co-presence or composition of items, as pieces of furniture on a tree. Once its significance is anticipated, the process of reconciliation starts. Any change consisting in nonstandard co-occurrence and triggering reconciliation is by definition metaphoric. Therefore, strictly speaking, the term "metaphorical change" refers to verbal, visual, multimodal metaphors, and to some mundane changes, as well. In this paper, however, it refers only to the latter, i.e. some examples of mundane changes. The following events, improbable as they seem, could become metaphorical changes in some circumstances:

h) On entering the kitchen in the morning the owner of the house sees an alligator whose huge body barely fits in.
i) An oak branch left in one's favorite armchair.

The described scenes go beyond of what is considered to be natural or normal; in each there is "an item which does not fit" and which seems to be an intruder into the well-known world. Certainly, the intrusion may be treated as a nonstandard co-occurrence. But what exactly is reconciled in a metaphoric change? Now, to find the answer, some illustrative perspective should be found.

2.2. Fluxes and glitches

Many times a day people look out of the window and see the same view. Obviously, the well-known sight changes with seasons, weather, and also in result of man's activity: a bench may appear or disappear, buildings are erected or knocked down, plants flourish or wither. Such changes are quite normal and even if they are unexpected as, for example, a storm is, they can be classified as probable. The window view undergoing more or less standard transformations is the source of *flux of percepts*. "Flux of percepts" stands here for what is considered to be normal, standard, usual, or practised. The concept of flux of percepts corresponds to the standard concatenation of words. Or, more precisely, standard concatenation of words may be considered as a kind of flux of percepts.

In fact, the flux of percepts consists of two types of percepts: one is of historical origin like all window views seen so far. This type may be thought of as Robert Abelson's (1986) *testable* beliefs, i.e., beliefs subject to sensory or tangible feedback. The other type may be identified with a set of plausible beliefs or Abelson's *distal* ones, i.e., those being experienced remotely. These are the beliefs we hold that have not resulted from any real experience, yet we cling to them, e.g., we may believe that an extraterrestrial alien is little and green although we have never seen such.

For instance, the flux of percepts connected with a packet of butter would consist of variations of paper design, size, the smell and consistency of butter, etc. For someone who is thoroughly acquainted with a piece of music, its flawless performance would be an example of a flux of percepts; all that is heard is normal and recognizable. However, a sight of a whale in front of the window perturbs the flux and so does a piece of carrot found in the packet of butter. The novelty they introduce – associated with something inappropriate, strange, disturbing, deviant – may be referred to as a *glitch*. The ap-

pearance of a whale or a carrot perturbs the standard, i.e. normal, expected sequence of views, sounds, tastes – just like an *NC* perturbs the sequence of words. Glitch causes a system to become altered from a normal state[7].

On the one hand, each glitch is a turn from normality to abnormality and as such it bears some negative connotation referring to a state of affairs that has been somehow distorted. Thereby it is connected with a failure in finding a proper feedback within the set of beliefs[8]. Having perceived a novel element in the familiar context, the agent witnesses an unexpected alteration of flux, i.e. faces a glitch, and in result, what seemed to be certain turns into dubious and calls for the decision whether to ignore it or to process it (which is not a comfortable situation, by the way). Nonetheless, glitch should not be treated as spurious because it sometimes affects the belief set. In this way, it offers an opportunity that secures a reorganization of thought framework. In sum, a *glitched flux* may become a positively challenging means of inspiration and lead to knowledge adjustment.

2.3. Matrices of MC

On the ground of fluxes and glitches, metaphorical change (*MC*) can be approached as a superset (of permutations, combinations, variations) of co-occurring palpable elements and knowledge (about reality); the former built up (among others) upon what we perceive: objects, sounds, smells, tastes, etc., the latter consisting of apparently more homogenous sort of items, called percepts or engrams, depending on the theory. As both, real and mind pieces, are somehow correlated – on the assumption that human beings have their minds sufficiently adjusted

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[7] Obviously, normality is a relative notion but so is the cognition.
[8] One believes in something when he/she accepts it as true, real, or right.

to the world – it would be handy to treat them as a single category, simply as the Cartesian product of those two sets. Their indiscernibility on the ground of this approach is the result of the claim that a change must be noticed, which immediately turns a world fact into a mind fact.

Hence a change trivially is either an addition, a substitution, or a lack (subtraction) of an element in a cell as the following tables show:

No change   Table 1

STANDARD FLUX OF PERCEPTS

	1	2	3
A	1a	2a	3a
B	1b	2b	3b
C	1c	2c	3c

Change   Table 2   Table 3   Table 4

GLITCHED FLUX

	1	2	3	6
A	1a	2a	3a	6a
B	1b	2b	3b	6b
C	1c	2c	3c	6c

	1	8	3
A	1a	8a	3a
B	1b	8b	3b
C	1c	8c	3c

	1	2
A	1a	2a
B	1b	2b
C	1c	2c

Addition   Substitution   Subtraction

Tables 1-4. Metaphorical change is a glitch that occurs in the sensually grasped material layer and is represented by an alteration of numbers in columns[9].

The best illustration of a glitched flux are some visual metaphors[10]: if Table 1 stands for the standard concatenation amounting to a table (a piece of furniture), then Table 2 can

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[9] An analogue alteration within mind elements, in the tables represented by letters, is also plausible; but this version being too remote from the metaphoric template is not considered here.

[10] which can function as adverts.

represent a table with something like mouth in the middle, Table 3 could stand for a table having some original Picasso canvas as a top, and Table 4 for a table levitating without any legs. Obviously, the subtraction or addition of an element must go far enough to count as a glitch[11].

Practically, the content of Table 1 is to reflect past representations of tables registered in the memory and conceptualized. It is combined with history, standards and commonalities. On the other hand, the content of Tables 2,3,4 render what is new for the cognitive agent who fails to classify the input as already known; the input is not automatically matched to any existing standard entries being incompatible to the degree the cognitive agent cannot skip. On the reception of a novel, strange-looking object, mind activates the "closest" entry or conceptual category. The role of context is often decisive in finding the match[12]. This is often followed by the question about the sense of such a change. If any new ideas emerge at the sight of those "modified" tables – for example, that having meals devours time and money (Table 2) or that serving food can be an art (Table 3) – they are the result of reconciliation.

2.4. Reconciliation

Douglas Hofstadter (2001) said that "Analogy is the core of cognition". Here we may say that reconciliation is the core of cognition because, apparently, mind is prone to reconcile

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[11] If the nods (content) of each table cell were sentences (beliefs) they could simply correspond to AGM framework, i.e., to three types of belief change: contraction, expansion, and revision (see, Alchourrón *et al*., 1985).

[12] I.e. situational context, for example, verbal metaphor: "the storm is coming" acquires meaning only when uttered in a favorable situation, e.g., at the sight of a furious boss approaching the office (comp. Cohen, 1976) and a table top floating in the air will not be classified as a table without, for example, some plates on it.

things in the search for their sense, implications, consequences, especially in view of a glitch[13].

Verbal metaphor: "Susan's husband is an oak tree" would make us try to reconcile the husband with an oak tree[14]; so would a visual metaphor: a collage representing an oak "sitting" in the favorite armchair of Susan's husband; and finally, so could a metaphorical change in certain circumstances: a real oak tree branch left on the man's favorite armchair. The reaction to the change might be the same: in the attempt to produce some meaningful output, mind tries to adjust its content to the novelty and, to this aim, it selects potential candidates for the members of R-relation (a piece of wood and the husband in this case). If the whole process is successful, we may say that we deal with a metaphor. If not, the perceived phenomena is overpassed as meaningless.

At this moment, quite incidentally, two questions arise: (1) Can metaphorical thinking, based on R, do without a glitch preceding it? (2) Are there changes where metaphorical means are not engaged? To deal with the first question, it would be illuminating to refer to the research work of Nicolas Guéguen (2012) who noticed that anything perceived, no matter how insipid it may be in isolation, may contribute to shaping other beliefs. For example, it has been shown that an irrelevant factor like a dead plant in the room can strengthen the belief in global warming, although obviously, this concrete indoor plant could not have withered because of global warming and this lack of connection is clear to the participants of the experiment. Nevertheless, the flowers' mere presence in the lab has altered the commitment to the belief. Such and similar results are the evidence that reconciliation does take place regardless

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[13] Effective persuasion (changing people's attitudes and beliefs) draws on this feature of mind.

[14] "Susan husband" and "oak tree" are treated here simply as members of R relation. Various theories speak about, e.g. domains, mental spaces, conceptual networks, system of commonplaces.

of the status of what is reconciled. This amounts to the conclusion that reconciliation need not be preceded by a glitch.

The second question implies either admitting the possibility of changes that are not combined with glitches – and here the answer is positive: it suffices to think about the change of height or of age – or the existence of glitches without reconciliation ensuing – and here again there are many examples: a comet in the sky, a spider in the bathtub or a coin on the path[15]. Unless one is susceptible to magical or superstitious thinking, the above mentioned events are quite inert and cannot be considered in terms of sense (meaning). Probably, what protects mind from irrational over-interpretation is the reference to intentionality.

Part 3

3.1. Intentionality

The putative intentionality of all metaphors figures essentially at pragmatist's argument that people posit that in a conversation they are cooperative (see, Grice, 1975). It seems to be an obvious principle of communication that once a sentence (metaphoric or not) is uttered, it becomes both: "a conduit" and the intended content "carried" from the speaker to the hearer. So, what makes one search for the presumed meaning of *MC* is the conviction that someone has intentionally glitched the flux. And vice versa, *no intention – no meaning* seems to be the rule, as well. The margin of undetermined cases is rather narrow and people usually make clear distinctions between what is and what is not intentional. Every verbal, visual, or multimodal metaphor is deliberate and intentional – sort of an *artefact*. It is, therefore, all the more surprising that the process of

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[15] They all can become a metaphorical change in certain circumstances (see below).

metaphorical thinking, initiated by a glitch can also take place in the absence of any intention; On noticing bizarre things, people just happen to make sense of them. Does it always mean that they behave irrationally?

3.2. Unintetional metaphorical change (UMC) and rationality

So far, it has been stated that people, having encountered a glitch, sometimes switch on the reconciliation process which often ends with finding some "highly possible meaning". But is it rational to treat an alligator in the kitchen or a branch of oak "sitting" in the armchair as meaningful and thus worth reconciliating? Sometimes, despite the fact that intentionality is a prerequisite of rationality, those who get sense of an apparently incidental glitch seem to behave quite sensibly. In fact, there can be detected at least three reasons for which serious treatment and processing of unintentional *MC* is not tantamount to irrationality.

Normal metaphors not only convey the intended meaning relying on the propositional form of cognition, but they also broaden the concept of cognition to include its imaginal forms (Kopp, 1995: 133), and as such are used to explain or to solve problems[16]. On that score, even quite an incidental change, resulting in a novel combination of items, can be the source of a new idea, or an explanation. So, plausibly, like Kekulé's snake, which inspired the scientist to solve his (scientific) problem, the alligator in the kitchen can inspire someone to solve their problem (e.g. providing some idea of how to deal with a troublesome housemate). After all, the metaphorical approach to problems is a commonly practiced method employed in psychotherapy,

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[16] Metaphors function like scientific models: they allow to speak about abstract, provide insight and explanation, they are tools of scientific discoveries.

engineering, science, and ordinary life, as well. Sometimes it is deliberately initiated, sometimes it is the result of such an uncommon co-occurrence. People simply get new ideas on seeing inadvertent glitched fluxes. Surely, taking advantage of such a situation is a sign of intelligence and practical rationality.

Another aspect of an unintentional *MC*, which speaks for rationality, is combined with the fact that *UMC*, like all metaphors employs *abductive reasoning* (Cihua and Hengwei, 2011). Abduction is a type of *inference to the best explanation*. It yields the conclusion that best explains a given fact: the precondition *x* of "*x* entails *y*" is inferred from the consequence *y*. Obviously, from the logical perspective, the abductive reasoning is susceptible to the fallacy *Post hoc ergo propter hoc* because not always there is only one possible explanation for *y*. Notwithstanding, it remains irreplaceable where, for example, a medical diagnosis is to be reached. And it is inherent for metaphoric thinking, for instance in the attempt to explain why a nonsense, which every fresh metaphor is, has been at all uttered. Sometimes the similar urge to explain accompanies a totally accidental glitch, leading to reconciliation. For example, an oak tree branch on the armchair can be reconciled with a person who usually sits there. Once the bough and the person become confluent, some explanation of this person's behavior (e.g. the lack of resilience) can evolve (e.g. being cut off from the life-giving milieu). Although the input – a piece of oak and a man set together – looks like a road to nowhere, the reasoning scheme of reconciliation: *if x is where y used to be, then x and y must have something else in common*, produces an inspirational output. In effect, even completely incidental changes can become the source of relevantly valuable ideas and supply us with possible explanations and solutions.

Finally, there is still one more reason for which *UMC* cannot be objected as totally irrational. Consider, for example, a short conversation taken from Castaneda's fabulous story about don Juan:

> We stopped for a moment to rest by some large bushes.
> 'Plants are very peculiar things', he [don Juan] said without
> looking at me. 'They are alive and they feel.'
> At the very moment he made that statement a strong gust of
> wind shook the desert chaparral around us. The bushes made
> a rattling noise.
> 'Do you hear that?' he asked me, putting his right hand to his
> ear as if he were aiding his hearing. 'The leaves and the wind
> are agreeing with me.' (Castaneda, 1989, p.21).

Some people find meaning in glitched fluxes simply because they are convinced that the surrounding nature, being alive or personalized, tries to "talk" to them; or that God manifests himself speaking to them in this way. In result, what they perceive – like a gust of wind, which is quite a normal phenomenon – is treated as an intentionally procured glitch, and hence the attempt to understand it seems to be reasonable. The decision "to read" such signs is a logical consequence of the adopted surmises. Of course, the communication by means of metaphorical changes inherits the objection of irrationality involved in the assumptions. But the question whether or not we should be countenancing some ontological commitments cannot be easily solved.

As noted above, the fact is that an *UMC* occurs because mind succeeds in "deciphering meaning" of an accidentally glitched flux. Giving this process the status of fallacy is highly superficial for two reasons: 1) Taking advantage of a lucky coincidence in finding solution or explanation is an evidence of practical rationality; 2) Accepting the consequences of one's own beliefs is in accordance with the principles of logic. Therefore, it is not an option to dismiss the talk of unintentional metaphorical changes as outright deception. Still more important is the observation that the adherence to metaphorical thinking may be the manifestation of our drive to uphold the supremacy of reason.

3.3. Supremacy of reason?

It is striking that standard metaphors and *MC* have the same structure, the same way of processing, and similar effects. Compare, for example, c) and i):

Adidas is a chameleon.   *There is an alligator in my kitchen.*

They are approached in the same way starting from:

I believe that:
Adidas is not a chameleon.   There is no alligator in (my) kitchen.
But I hear/see that:
Adidas is a chameleon.   There is an alligator in (my) kitchen.

Note that (ii) and (iii) are inconsistent giving rise to logical contradiction and to cognitive dissonance at the psychological plane. According to Aristotle the law of non-contradiction is the firmest guarantee of the truth of what one knows. Moreover, psychologists observe that the extended exposure to a cognitive dissonance may result in mood-regulation disorders (Hull, 2002). Normally, people cannot function effectively and feel safe in an inconsistent world. For these reasons we rather do away with contradiction than accept it in a dialetheic manner. The strategies can differ; one of them is to make contradiction harmless by means of metaphoric reconciliation. In this process the rules are altered so that the very contradiction could be suspended:

For example by:
Cooperation Principle and   Facts, additional assumptions.
other pragmatic and semantic
rules;
consistent accounts of c) and j) are developed:
Adidas and chameleon have   A feasible candidate for the
features in common.   member of R-relation is found and
          then reconciled with the alligator.

So in view of contradiction lurking behind *UMC*, the supremacy of the Law of Non-contradiction is manifested by the recourse to metaphorical thinking and reconciliation. The question is if, in case of *UMC*, the urge to reconcile comes from our need to have consistent beliefs. If so, it would depend on the automatic logical mechanism which operates whenever inconsistence appears between what is old (already known) and the new. Any inspirational outcome of this process would be merely a byproduct of this logical mechanism.

But there is one more puzzling aspect of this phenomenon worth mentioning. Even if the reconciliation process takes place smoothly reaching its end, the true nature of *UMC* still remains unrecognized. The question arises: Why do we ordinarily fail to pinpoint a *UMC*?

3.4. UMC on the verge of rationality

Many *UMC* do not, in fact, count as metaphoric either because they are not normally treated as vehicles of meaning or because their corresponding interpretations have features that render them immune from understanding. The situation is still made worse by the fact that most metaphoric changes are like opaque metaphors. One member of the reconciliation relation has to be found in the context or in the process of association as an *ad hoc* construct of mind. The resulting match is hardly ever an airtight case that can be amended to be true. The requirements of rationality are not quite fulfilled. This explains why the resemblance of *UMC* to regular metaphors is not commonly acknowledged. Moreover, *UMC* like all metaphors have two inconveniences: (1) ambiguity since there is frequently an array of plausible interpretations that can shift from context[17] to context; (2) incorrect explanation in result

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[17] Context is understood as a Cartesian product of speaker, hearer, place and time

of abduction. They may lead to erroneous conclusions and in-effective actions. For example, suppose that the man in the armchair is forced to take part in the intensive social life by his caring partner who is convinced that this is the best remedy for being "cut off" but in reality, he is seriously ill.

In conclusion, applying metaphorical template to change is sometimes beneficial and is the evidence of intelligence although, even if we avail ourselves of it, we are on the verge of rationality and irrationality.

Bibliography

Abelson Robert P. 1986. "Beliefs are Like Possessions." *Journal for the Theory of Social Belief*, 16(3): 223-250. DOI: 10.1111/j.1468-5914.1986.tb00078.x

Alchourrón, Carlos E., Peter Gärdenfors, and David Makinson. 1985. "On the Logic of Theory Change: Partial Meet Contraction and Revision Functions." *Journal of Symbolic Logic*, 50: 510–530.

Aristotle. *The Poetics*, (translated by Ingram Bywater), Chapter 21, 1457b.

Beardsley, Monroe, C. 1962. "The metaphorical twist." *Philosophy and Phenomenological Research*, 22(3): 293-307.

Black, Max. 1962. "Metaphor." In Andrew Ortony, *Models and Metaphors*, 25–47. Ithaca, NY: Cornell University Press, Ithaca, New York.

Carroll, Noel. 1994. "Visual metaphor." In *Aspects of Metaphor.* edited byJaakko Hintikka, 189-218. Boston, MAL Kluver Academic Publications.

Carston Robyn and Deirdre Wilson. 2006. "Metaphor, relevance and the emergent property issue. *Mind and Language* 21(3): 404-433.

Carston, Robyn and DeirdreWilson. 2019. "Pragmatics and the Challenge of 'Non-Propositional' Effects." *Journal of Pragmatics* 10.1016/j.pragma.2019.01.005.

Castaneda, Carlos. 1989. *Journey to Ixtlan*. Ney York: Penguin, Arkana, p.21.

Cihua, Xu and Li Hengwei. 2011. "Abduction and metaphor: An inquiry into common cognitive mechanism." *Frontiers of Philosophy in China*, http://link.springer.com/article/10.1007/s11466-011-0151-5

Cohen, Ted. 1976. "Notes on metaphor". *Journal of Aesthetics and Art Criticism.* 34: 249-259.

Davidson, Donald. 1978. "What Metaphors Mean." *Critical Inquiry.* 5(1), Special Issue on Metaphor (Autumn, 1978): 31-47. Published by: The University of Chicago Press. https://www.jstor.org/stable/1342976

Forceville, Charles. 2008. "Metaphor in pictures and multimodal representations." In *The Cambridge Handbook of Metaphor and Thought*. edited by Raymond W. Gibbs Jr. 462-82. Cambridge: Cambridge University Press.

Forceville, Charles and Eduardo Urios-Aparisi. 2009. *Multimodal Metaphor*, Berlin: Walter de Gruyer.

Gentner, Dedre. 1988. "Viewing Metaphor as Analogy." In *Analogical Reasoning Perspectives of Artificial Intelligence, Cognitive Science, and Philosophy.* edited by David H. Helman, 171-177. Springer Dordrecht.

Gibbs Raymond. W. Jr. 2008. *The Cambridge Handbook of Metaphor and Thought*, Cambridge University Press.

Goodman, Nelson. 1976. *Languages of Art: An Approach to A theory of Symbols*. Indianopolis: Hackett Publishing Company.

Grice, Herbert, Paul. 1975, "Logic and conversation.", In *Syntax and semantics*. edited by P. Cole, J. L. Morgan. 41–58, V/3, New York: Academic Press; ("Logika i konwersacja." *Przegląd Humanistyczny*, 6, 1977, 85–99 and in *Język w świetle nauki.* edited by Barbara Stanosz. Czytelnik, Warszawa 1980, s. 91-114) http://www.ucl.ac.uk/ls/studypacks/Grice-Logic.pdf

Guéguen, Nicolas. 2012. "Dead indoor plants strengthen belief in global warming." *Journal of Environmental Psychology*, 32: 173-177.

Hofstadter, Douglas R. 2001. "Epilogue: Analogy as the Core of Cognition." In: *The Analogical Mind: Perspectives from Cognitive Science* edited by Dedre Gentner, Keith J Holyoak, and Boicho N Kokinov. 499 -539. Cambridge: MIT Press.

Hull, Alastair M. 2002. "Neuroimaging findings in post-traumatic stress disorder." *The British Journal of Psychiatry.* 181: 102-10.

Kopp, Richard. 1995. *Metaphor Therapy: Using client generated metaphors in psychotherapy*. Brunner, New York.

Lakoff, George and Mark Johnson. 1980. *Metaphors We Live By*. Chicago, University of Chicago Press; *Metafory w naszym życiu*, (tłum. T. Krzeszowski). Państwowy Instytut Wydawniczy, 1988.

Mortensten, Chris. 2015. "Change and Inconsistency.", *Stanford Encyclopedia*. https://plato.stanford.edu/entries/change/

Ortony, Andrew. 1980. "Metaphor: A Multidimensional Problem." In *Metaphor and Thought*, edited by Andrew Ortony, 1-19, Cambridge University Press, Cambridge.

Richards, Ivor A. 1936. *The Philosophy of Rhetoric*. Oxford University Press, London, New York.

Searle, John. R. 1980. "Metaphor." In *Metaphor and Thought*, edited by Andrew Ortony, 92-124, Cambridge University Press, Cambridge.

Siegelman, Ellen Y. 1990. *Metaphor and meaning in psychotherapy*. New York: Guilford.

Tendahl, Markus. 2009. *A hybrid theory of metaphor: Relevance theory and cognitive linguistics*. London, UK: Palgrave Macmillan.

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