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CONSTRAINING METAPHOR AND METONYMY IN LANGUAGE AND DEPICTION: A COGNITIVE SEMIOTICS APPROACH

Abstract. In cognitive semiotics, metaphor and metonymy are crucially treated as special forms of sign use. In contrast, researchers in cognitive linguistics have extended the scope of metaphor and metonymy far beyond the traditional understanding of these semiotic figures based on, respectively, iconicity and contiguity into purely mental processes. I argue that this has led to unbounded over-extension, and general confusion about what metaphor and metonymy actually are, and thus on how to be able to reliably identify them in language and other semiotic systems like gesture and depiction. There is therefore an urgent need to constrain the concepts of metaphor and metonymy to more reasonable proportions, and in this article I propose such a more constrained approach, using the Motivation & Sedimentation Model (MSM) of meaning-making. For the purpose, I spell out an integrated definition of metaphor and metonymy along traditional lines, but not limiting them to language. I illustrate the applicability of this definition by offering analyses of political cartoons, showing how the two semiotic figures interact in complex ways, sometimes allowing for different interpretations.

Keywords: Motivation & Sedimentation Model, iconicity, contiguity, Conceptual Metaphor Theory, political art, Roman Jakobson.

1. Introduction

The Motivation & Sedimentation Model (hence, MSM) was developed within the field of *cognitive semiotics* (e.g., Zlatev, 2015) for the purpose of formulating novel analyses of controversial phenomena such as language norms (Zlatev & Blomberg, 2019) and linguistic relativity (Blomberg & Zlatev, 2021). In short, MSM focuses on the interactions between, on the one hand, a non-linguistic, pre-conventional Embodied level of meaning, and on the other hand, a conventionalized Sedimented level, resulting in creative, expressive meaning-making on a third, Situated level of commu-

nication. It has only been natural to also apply the model to the thorny phenomenon of metaphor, with its various divisions (e.g., conventional vs. novel, non-deliberate vs. deliberate) and different degrees of metaphoricity (Devydler & Zlatev, 2020; Zlatev, Jacobsson & Paju 2021; Moskaluk, Zlatev & v.d. Weijer, 2022). In Section 2 I briefly summarize some of this work and thereby define my theoretical framework. To make it clear from the start, my overall theoretical frame is that of cognitive semiotics (Zlatev, Sonesson & Konderak, 2016), and not cognitive linguistics (e.g., Wen & Taylor, 2021), even if I discuss some research in the latter, mostly from a critical perspective.

What has so far been lacking within cognitive semiotic research, however, is a systematic analysis of the “little sister” of metaphor: *metonymy*, as well as of the interaction between the two semiotic figures. In Section 3, I propose parallel theoretical definitions of metaphor and metonymy in the tradition of Roman Jakobson, requiring (at least) two distinct meanings/interpretations of a given expression in both cases, but with resemblance between these in the case of metaphor, and contiguity/meronymy for metonymy. I argue that this allows to constrain the two phenomena to reasonable proportions, from the over-extensions of cognitive linguistics. In particular, I propose that the construct of *conceptual metaphors* according to Conceptual Metaphor Theory (Lakoff 1993; Lakoff & Johnson, 1980, 1999; Gibbs, 2017), and especially the so-called “primary metaphors” based on possibly universal correlations in experience, are not metaphors at all but only (possible) motivations for the figurative expressions such as (1), as well as the idiomatic, but arguably non-metaphorical (2). Why this is so will become clearer after I present the theoretical definitions of metaphor in Section 2.

- (1) She is a very warm person.
- (2) You are not far away from the truth.

Further, I argue that most of what has been proposed under the heading of *conceptual metonymy* does not fall under the present constrained definition of metonymy. One main reason for this conclusion is that MSM implies that there can be no purely mental metaphor nor metonymy, as sign use is primarily a public, communicative activity and requires *expression* in one semiotic system or another. Another reason is that for both metonymy and metaphor to exist, at least *two distinct meanings* of a linguistic (or otherwise) sign need to be active in the mind of the person interpreting at the same time, and while one can argue this to be so for *warm* in (1), this

does not seem to be the case for *far away from* in (2), as I explain in more detail below.

Finally, I argue that the cognitive-semiotic approach allows to systematically distinguish between metaphor and metonymy not only in language but also in images, and to study the interactions between the two figures. I illustrate this in Section 4 with a few pertinent examples. In Section 5 I end by summarizing the conclusions and suggest some directions for future research.

2. The MSM approach to metaphor

The Motivation & Sedimentation Model owes much to the tradition of *phenomenology*, in particular the philosophy of Merleau-Ponty (1962, 1968; see Hass 2008), and the *integral linguistics* of Coseriu (1985, 2000). Like the latter theory, MSM distinguishes between three fundamental layers of meaning-making. In contrast, however, it does not deal only with language but also with other semiotic systems, and furthermore understands the most fundamental kind of meaning as both pre-linguistic and, in a sense to be explained, as pre-cultural. Such meaning consists of bodily processes and capacities such as body schema and body image (Gallagher, 2005), cross-modal perception (Abram, 1996), bodily mimesis (Donald, 2001), and analogy making (Itkonen, 2005). All these are pan-human, i.e., essentially the same for all human beings. Of course, the way these processes become expressed in particular contexts and cultures and by particular individuals differs, but this is another matter. I designate this as the Embodied level of meaning, using capital letters here and below to distinguish these specific theoretical constructs from other uses of the respective polysemous terms. The claim is that it is the Embodied level of meaning-making that ultimately underlies all acts of sign use, and language use in particular, serving as a *Fundierung*, in the phenomenological sense of a non-reductive ground, for all meaning-making (Merleau-Ponty, 1962; Zlatev, 2018). This is also one of the main reasons why any kind of “Artificial Intelligence” systems (baring androids from science-fiction scenarios) are necessarily *meaningless*, given that they operate on the basis of mechanical computations over inherently senseless patterns of “data” (Zlatev, 2023).

At the other pole of the model and, metaphorically, “on the surface”, lies the Situated level of meaning. This is where all particular acts of signification and interpretation (i.e., communication) take place, carried out

by particular embodied subjects in particular social contexts, and where semiotic diversity and creativity manifest themselves. However, these activities on the Situated level would be impossible not only without an initial motivation from the Embodied level, but also without a secondary motivation from the Sedimented level of meaning, derived (only apparently paradoxically) from previous acts of meaning-making on the Situated level (Zlatev, 2023). Simply put, this is the level of historically derived, relatively stable linguistic and other social norms (Itkonen, 2008; Zlatev & Blomberg, 2019).

Level	Metaphorical meaning
Situated (activities)	Contextualized metaphor use
Sedimented (structures)	Conventionalized metaphors + other shared schemas
Embodied (processes)	Dynamic experiential processes: perception, empathy, analogy making



Figure 1. The Motivation & Sedimentation Model (MSM) with full arrows (motivation) and dashed (sedimentation), in a simplified version neglecting “horizontal” motivations and sedimentation relations within each layer (reprinted from Zlatev & Moskaluk 2022, Figure 2)

As mentioned in the introduction, MSM was not explicitly designed for the sake of accounting for metaphor, but it lends itself naturally for this purpose. It may even help to reconcile ideas from apparently contradictory theories, including those that derive from cognitive linguistics. Similar to *dynamic approaches to metaphor* (Cameron et al., 2009; Jensen, 2017; Müller, 2008; 2019), the model focuses on what happens when metaphors are used in actual communication. However, these approaches tend to underestimate the role of relatively stable conventional meaning structures. This is precisely the contribution of the Sedimented level, which emerges as communicatively successful expressions on the Situated level, undergoing psychological “entrenchment” and social conventionalization (cf., Schmid, 2020). Thus, metaphorical expressions will build up a repository of *metaphoremes* on the Sedimented level (Zlatev et al., 2021). In future uses of related

metaphors on the Situated level, these will be co-motivated by the Sedimented level along with the Embodied level. Thus, situated metaphor use will be *doubly motivated*: on the one hand by the visceral experiences and non-linguistic cognitive processes on the Embodied level and, on the other hand, by the norms of the Sedimented level, as shown in Figure 1. The Embodied level also allows the integration of some of the insights from Conceptual Metaphor Theory and related frameworks in cognitive linguistics, such as Conceptual Integration Theory (e.g., Brandt, 2013), but only as *motivations* for metaphor emergence and use rather as metaphors *per se*, as shown in the following section.

3. Constraining metaphor and metonymy

3.1. Towards an integrated definition

Recent work from the perspective of MSM (Devydler & Zlatev, 2020; Zlatev, Jacobsson & Paju 2021; Moskaluk, Zlatev & v.d. Weijer, 2022) has led to the following theoretical definition of metaphor:

The use of a (simple or complex) sign in a given semiotic system (or a combination of systems) with (a) at least two different potential interpretations, implying a degree of *tension*; (b) these stand in an *iconic relationship* with each other; (c) one interpretation is more relevant in the communicative context; (d) it can be understood through comparison with the less relevant interpretation, implying *directionality of meaning transfer*. (Zlatev & Moskaluk, 2022: 131)

Since metaphor is a matter of *sign use*, it implies the differentiation between expressions and their denoted objects by conscious sign users (Soneson, 2007; Zlatev, 2009). Apart from a few humanly enculturated apes, human beings are the only creatures on our planet who spontaneously create and use signs – understood as distinct from signals, which are prevalent in the animal kingdom (Zlatev et al., 2020) – thus implying that true metaphor is also a human-specific phenomenon.

Further, there can be no metaphor outside of sign *use*, which can only take place on the (socially) Situated level. This limits metaphor, at least primarily, to *human communication*, though not necessarily to language, as criteria (a) and (b) can also be realized in pictorial depiction or gestures (e.g., pointing backwards in Western cultures meaning either BEHIND or EARLIER), or to various combinations of these semiotic systems. The two different possible interpretations, e.g., does the woman referred to in (1) have a high temperature or is she kind, imply at least some degree of “tension”,

while the requirement for iconicity/resemblance between the meanings implies “overlap”. Thus, the definition integrates these two major traditional strands in approaching metaphor, as summarized by Sonesson (2019). Note also that the relevant iconicity in (b) is not of the kind usually understood in linguistics: between expressions (“forms”) and meanings (e.g., Dingemanse et al., 2020), but between two different meanings (interpretations), following the understanding of metaphor in Peircian semiotics as a particular kind of hypoicon, and the interpretation of this offered by Jakobson (see below).¹

Another positive feature of the definition, reflected in (c) and (d) is that it avoids dichotomizing between a “basic” and an extended “figurative” meaning, since given the dynamicity of meaning inherent in MSM, one cannot simply state that the meaning/sense that is either historically first attested, or the one that is more “concrete” is the literal one. Take, for example, the well-known case of *computer*. Prior to the inventions of Alan Turing, the term was used to denote a human profession: people dedicated to computing. So, extending the term to a “computing machine” was the first metaphor, with a human person as source and machine as target. Then, with the dawn of cognitive science in the 1960s and the influential (if misleading, cf. Varela, Thompson and Rosch, 1992), “mind as computer” metaphor, the source became machine, and (human) mind the target, as reflected in sentences like (3) and (4). It is currently hard to say, outside of specific contexts, which of the senses is to be taken as the most literal.

(3) You need to *process* the information I gave you.

(4) I cannot *retrieve* that from my memory.

Still, it appears that the theoretical definition of metaphor given above is unnecessarily complex. In each particular historical context, and even more so, in a specific socio-cultural situation, one of the meanings will be more established, and thus what could be called the *default* meaning. With this default as a trampoline, a (more or less) creative process in sign creation or interpretation can make a new sense/meaning/interpretation, based on (imagined) resemblance to the default.² It is such asymmetry and “transfer” between a default and extended meaning that is the necessary condition for there to be a metaphor, perhaps even with only minimal tension between the meanings. If, on the other hand, it does not exist, we may still have ambiguity/tension, and even some degree of iconicity/resemblance, but we are at most left with word play rather than metaphor, as in (5).

(5) He put all his money in the (river) *bank*.

However, the basis for extending from default to contextual meaning can also be contiguity (i.e., spatiotemporal closeness) or a part-whole relationship, as in (6), which is somewhat outdated given the disappearance of traditional telephones, now called “landlines”. Here, the sound emitted by the phone (and the whole act of “giving you”) is clearly associated with the whole conversation which it is meant to represent. In other words, this is a fairly uncontroversial case of *metonymy*.

(6) I will give you a *ring/buzz*.

Furthermore, by aligning the definitions of metaphor and metonymy, we may obtain an integrated definition that may be used for both constraining and interrelating the two semiotic figures. While motivating such an integration is a larger topic, I can be noted that the need for it has been implicit since the onset, when Aristotle (*Poetics*, Book 3, Part XXI) defined metaphor in a general way, including metonymy, synecdoche, metaphor and analogy. In semiotics, Group μ (1981) argued that the master trope is in fact synecdoche, on which metaphor and metonymy depend. Eco (1984) proposed viewing metaphor as a chain of semantic associations held together by metonymic chains. On the other hand, and perhaps most famously, Jakobson (1971) formulated a binary opposition of metaphor and metonymy, with the help of the Peircian concepts of iconicity (similarity) and indexicality (contiguity), and this is the tradition that I here follow:³

A hierarchy of two meanings – one primary, central, proper, context-free; and the other secondary, marginal, figurative, transferred, contextual – is a characteristic feature of such asymmetrical couples. The metaphor (or metonymy) is an assignment of a *signans* to a secondary *signatum* associated by similarity (or contiguity) with the primary *signatum*. (Jakobson, 1965: 33)

As this formulation is not fully transparent, using the currently unfamiliar Latin terms, I propose the following integrated definition of metaphor and metonymy which, as can be seen, simplifies and combines elements of the two definitions given previously.

DEF: An (a) act of sign use, (b) involving one or more semiotic systems (e.g., language, gesture, depiction), where (c) the intended meaning (d) is understood through another, more directly represented meaning, (e) which it resembles, albeit in a highly schematic manner in the case of *metaphor*, or (f) which it does not resemble but is related to through spatiotemporal contiguity or meronymy, in the case of *metonymy*.

This is a theoretical definition, or construct, that still needs operationalizations (Zlatev & Moskaluk, 2022), and work on this is currently underway. But even prior to such operationalizations, it is possible to demonstrate the value of this definition by showing how it reasonably constrains the application of the terms “metaphor” and “metonymy”. I proceed to do so in the rest of this section, while in the following one I illustrate how the definition is instrumental for analyzing the two figures in semiotic systems beyond language.

3.2. Constraining metaphor

There have been many formulations of Conceptual Metaphor Theory since Lakoff and Johnson (1980) first presented this novel approach to metaphor (and to some degree metonymy), but the lasting theoretical definition has been that of “a cross-domain mapping” (e.g., Johnson, 2010) on a purely mental (or neural) level. Even in the most recent developments of the theory, this key understanding of metaphor persists: “A conceptual metaphor is understanding one domain of experience (that is typically abstract) in terms of another (that is typically concrete) (see Lakoff and Johnson 1980)” (Kövecses, 2020:1).

Whatever problems and potentials such an approach can have, MSM and its definition(s) given above clearly imply that such “mappings” cannot constitute metaphor in themselves, since there is no expression involved, and hence no instance of sign use. At most, such cross-domain mappings (correspondences, correlations), designated by “labels” such as LIFE IS A DAY, would correspond in MSM to culturally sedimented *analogies*, serving to motivate expressions like (7) and (8) which contain the metaphorical use of the words/signs *dawn* and *twilight*.

- (7) From the *dawn* of life, existence on this planet has been precarious.
- (8) This is the *twilight* of our civilization.

What about the “primary metaphors” (Grady, 1997) that have been proposed to be universal, or at least cross-cultural? It is commonly stated that they consist of “associations in experience” (Grady, 1997: 99) designated by labels such as AFFECTION IS WARMTH, IMPORTANT IS BIG, HAPPY US UP, INTIMACY IS CLOSENESS. To the extent that such associations indeed correspond to pan-human experiences, they would be candidates for structures/processes on the Embodied level of MSM, serving to motivate expressions such as (1) and corresponding ones in many of the world’s languages. But once again, there is no way that they could constitute metaphors themselves, as also stated by Sonesson (2019):

... the human body is part of the whole world experienced, and what is up on the human body is simply part of what is up in the world. [...] The Lakoff and Johnson type of “metaphors” should be understood ... as diagrams, but not as just any diagrams: as diagrams founded on the invariants of the common human Lifeworld. (Sonesson, 2019, p.5,6)

What Sonesson means is that, for example, the label AFFECTION IS WARMTH denotes an implicit correspondence between various levels of affection and various degrees of warmth and thus a type of “diagram”, emerging from experiences derived from human bodies interacting in human environments. How these motivate actual metaphors across languages and cultures is, however, bound to differ. For example, (9) describes a positive emotion in Bulgarian, while (10) a negative one in Thai, while both have the same, or similar, default meaning HOT.

(9) Gorešto ti blagodarya
 Hotly you.dat thank.1p.sg
 ‘I thank you warmly.’

(10) yaà jay rœón
 no.imp heart/mind hot
 ‘Don’t be impatient.’

But not all expressions that could be said to be potentially motivated by any of these “invariants”, or the more variable cultural metaphors such as (the mapping denoted by the label) TIME IS MONEY, can be said to be metaphorical, since – in the original and in the revised definition of metaphor given in Section 3.1 – there must be two distinct senses of the expression in question. In (2), given in the introduction, the meaning of the English phrase *far away from the truth* could be analyzed as reflecting a universal tendency to think about non-spatial phenomena in spatial terms (e.g., Jackendoff, 2002). For example, it is hard to argue that the phrase *far away from* itself has meanings corresponding to say, SPACE and KNOWLEDGE. Evidence for this is the semantic anomaly of (11), using the $\langle X \text{ but not } X \rangle$ schema as a test to determine (or at least operationalize) semantic ambiguity (cf. Geeraerts, 1993; Zlatev & Moskaluk, 2022).

(11) ??You are far away (epistemically), but not far away (spatially) from the truth.

Rather, what underlies the seamless interpretation of (2) is more general (diagrammatic) understanding of epistemological concepts like truth, validity, etc. in spatial terms, which may or may not be cross-cultural. In

any case, it does not pass any of the MSM-derived definitions of metaphor provided above.

3.3. Constraining metonymy

A similar line of argumentation can be applied to metonymy. One of the commonly cited definitions of *conceptual metonymy* in the literature is that of Kövecses and Radden (1998: 39): “Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or idealized cognitive model”. Even disregarding for now the rather controversial question of how to define (and operationalize) the notion of “idealized cognitive model”, this definition is extremely broad, since it states nothing about the need for the vehicle to constitute an *expression*. This allows the “cognitive process” in question to be purely mental and could apply to cases like the famous association between a madeleine cake and childhood memories (Proust, 2013 [1907]) or where one (sub)concept is associated with another, e.g., mother and housewife mother (Lakoff, 1987). An even more far-fetched “metonymy” would be cases of spontaneous perceptual interpretations, for example of seeing someone crying as sad, without this involving any kind of inference (Scheler, 1954).

In a recent paper, Brdar-Szabó and Brdar (2022) comment on the need to constrain the concept of metonymy so that it does not apply to such purely mental associations:

It is true that metonymy is ubiquitous, probably more prevalent than metaphor, but we would not have zillions of metonymies around us, but the square or the cube of zillions of metonymies, if we take them at face value. In our attempt to define metonymy we mentioned that for something to count as metonymy it must be used as an element in a sign system, ultimately meaning that it must be intentional. (Brdar-Szabó & Brdar, 2022: 232)

In fact, an older definition of metonymy also stemming from cognitive linguistics would suffice to rule out the examples above as cases of metonymy, by precisely requesting the first “vehicle” to be expressed: “the entity that is normally designated by a metonymic *expression* serves as a reference point affording mental access to the desired target, i.e., the entity actually being referred to” (Langacker, 1987: 385–386). What is also ruled out implicitly by this are the “associations” between the expression and content within a given sign, e.g., between *cat* and *CAT*, which are unfortunately also sometimes included under the concept of metonymy (Lakoff & Turner, 1989; Kövecses & Radden, 1998). The definition in Section 3.1

excludes these as well, as it explicitly states that the contiguity relation needs to be between meanings/interpretations, and not between expression (often misleadingly called “form”) and meaning.

Some other examples of putative metonymies can be excluded for more subtle reasons. Consider examples (12–14), and their purported corresponding “conceptual metonymies”.

(12) The <i>milk</i> tipped over.	CONTENT FOR CONTAINER
(13) He drank the whole <i>bottle</i> .	CONTAINER FOR CONTENT
(14) I broke the <i>window</i> .	WHOLE FOR PART

The problem is that for each of these cases it is not clear that we have two *distinct* meanings, and not a semantically general meaning. This general (or “vague”) meaning becomes specified in the context, as suggested by (15–18), using an identity-of-sense-anaphora test, which should produce a zeugma effect if there were indeed two distinct senses (Geeraerts 1993; Saeed 2016), which is not the case.

- (15) The *milk* tipped over – and *it* spilled all over the table.
- (16) He drank the whole *bottle* – and then smashed *it* on the floor.
- (17) I broke the *window* (glass) – *that* was recently painted (window frame).

Finally, the definition of metonymy excludes examples like (18–20). Here, there are indeed different meanings, but they are not related in terms of contiguity or meronymy, which needs to be not just conceptual or semantic but in space-time, i.e., between objects and events in the (life)world, and not in “the mind”. In the latter case, claims of “closenesss” can only be metaphorical. For example, a superordinate and subordinate concept are only “close” in space when we represent them as such in a tree diagram.

- (18) She took the pill. > She took the birth control pill.
- (19) We had to leave. > He left.
- (20) I will be brief. > I promise to be brief.

In (18) the relation is rather that of *synecdoche*, understood as based on set-inclusion (Bierwiczonek, 2013). In (19), regarded as “predicational metonymy” (Panther & Thornburg, 2007) and in (20) as “illocutionary metonymy” by the same authors: “an attribute of a speech act can stand for the speech act itself” (Panther & Thornburg, 2007: 247) we have meaning relations that can be analyzed in terms of Gricean or relevance theoretic implicatures, but not as standing to one another in a relation of spatiotemporal

contiguity. Of course, this is not to say that true metonymies such as those in (21–26) below cannot trigger further pragmatic inferences. I would claim however, that analogously to the way metonymy and metaphor relate to and interact with one another but are distinct, the two phenomena need to be distinguished.

One may wonder if I have *over-constrained* metonymy, leaving very little left, at least within the semiotic system of language. However, “classical” metonymies such as those in (21–23), falling into the corresponding categories (with “>” indicating contiguity), easily meet the test: the italicized terms have a more “directly represented” meaning that is spatiotemporally associated with the intended meaning, both of which are clearly distinct, both from each other and from the corresponding expressions.

- (21) *Pyongyang* carried out a nuclear test. (CAPITAL > GOVERNMENT)
- (22) The museum has many *Monets*. (ARTIST > ARTWORK)
- (23) They were looking for some *hands*. (BODY-PART > PERSON)

Also, the examples in (24–26) contain metonymies, though in these cases the association can be said to have – or rather to have had the first time when they were coined by the respective authors, since by now these examples are quite familiar from the literature – a stronger Embodied level motivation than those in (21–23) where the patterns are strongly sedimented.

- (24) *The ham sandwich* wants his check. (Nunberg, 1978)
- (25) *The first violin* has the flu. (Panther & Radden, 1999)
- (26) *The ulcer in room 504* needs a special diet. (Panther & Thornburg, 2007)

In sum, I would maintain that the integrated definition of metaphor and metonymy presented in Section 3.1 cuts these figures down to size, to use a conventional metaphor. In response to someone who would argue that general definitions such as the one at the onset of this section would be able to capture generalizations, my response would be that this is a case of *over-generalization*, since all these cases, from the madeleine cake to examples based on pragmatic inferences like (18–20), to those involving genuine metonymies like (21–26) are fundamentally different.

Of course, some are liable to disagree and feel that I may be robbing the concepts of their power for cognitive and semiotic theorizing. To help alleviate this concern, in the following section I turn to metaphor and metonymy in images, and show the potential of the present approach for analyzing the two classical figures in a different semiotic system.

4. Interactions between metaphor and metonymy in political imagery

In a recent PhD dissertation Stampoulidis (2021) applied a very similar cognitive semiotic approach such as that endorsed above to the analysis of metaphor in Greek street art. Figure 2 shows one of the analyzed images, produced during the financial crisis of 2015, when the Greek economy struggled with both domestic and international pressures. Relying on two different analysts, and on two independent judges to determine if the analysts agreed, the metaphorical analysis proposed was one of “Greece (politics/economy) is corrupt”. However, the author and his colleagues did not spell out how they reached this interpretation, though they mention a combination of factors, including metonymy (Stampoulidis & Bolonessi, 2019).



Figure 2. Interaction between metonymy and metaphor in Greek street art. Reprinted from Stampoulidis, Bollonesi & Zlatev (2019), Figure 3. Photograph by Stampoulidis, July 2015

Based on the integrated definition of metonymy proposed in Section 3.1, this could elaborate this as follows. First, we can notice that the image elicits two interpretations: TOILET PAPER and GREEK FLAG. Given the socio-

political context, the latter can be considered to be the default one. Given that the dominant relation between the two is similarity, the depicted figure is a metaphor. But GREEK FLAG metonymically represents (in a highly sedimented way) GREECE, while TOILET PAPER is contiguous with excrement. The latter, based both on the Embodied and Sedimented level motivations, is easily understood as a metaphor for things of low value (e.g., the BAD IS STINK primary metaphor; Grady 1997). Thus, it is the combination of at least two distinct metonymies and two metaphorical processes that gives rise to the (most likely) contextual interpretation of the politically highly rhetorical image.

We can apply the model to an even more relevant, and tragic, topic: the ongoing Russo-Ukrainian war (Plokhy, 2003), and more specifically to satirical representations of it. As stated by Semotiuk (2023):

Modern wars differ from traditional forms of warfare in that they do not only involve the use of conventional arms and regular troops. In the 21st century, values, ideology, culture, symbols, media and humour are also weapons of war.



Figure 3. Image by Olexij Kustovsky. From Semotiuk (2023). <https://www.zois-berlin.de/en/publications/zois-spotlight/ukraine-humour-as-a-weapon-of-war>

Figure 3 shows one striking representation of the war, with the help of the Situated level interpreted as showing the aftermath of a rocket attack on a residential building in Ukraine. The miniature Ukrainian flag beneath the

window is once again a highly sedimented metonymy to help us “geolocalize” the place of the devastation. But the truly novel, and gripping, element is the non-conventional metaphor of a protecting shelter in the form of a gigantic beating human heart. From here, we have at least one more open-ended creative metonymy (based on the part-whole relations of a human body) and a conventional metaphor of “keeping dear ones in one’s heart”, given the minimalistic images of two people, likely a family: the “owner” of the heart could be the (fighting, protecting) Father, or possibly even a personified Fatherland.



Figure 4. Image by Valery Momot. From Rash (2022). “Ukrainian, Russian political cartoons draw upon antiwar sentiment” <https://www.startribune.com/ukrainian-russian-political-cartoons-draw-upon-antiwar-sentiment/600167208/>

A degree of indeterminacy in the interpretation of any work of art such as these is inevitable and possibly even a precondition for their expressive power. Another striking figurative representation of the Russian invasion of Ukraine is shown in Figure 4. The first metonymy that calls our attention is that of the cross and Jesus Christ, enhanced by the metaphor of the sunflower as “crucified”, and ultimately resurrected. Yet, more detailed socio-cultural knowledge, and hence the Sedimented level, is essential to be able to

realize the metonymy of the sunflower and Ukraine, given that the sunflower is Ukraine's official national flower. As pointed out by Rash (2022):

The sunflower has bloomed into a symbol of solidarity with Ukrainian resistance to the Russian invasion. Ukraine's national flower has been defiantly planted across from the Russian Embassy in Washington, D.C., been seen on the sleeve and face mask of First Lady Jill Biden, been held high in antiwar protests across Europe, and is often affixed to profile pictures on social media.

However, there is an even deeper layer of meaning, not easy to decode at first: the red(ish) bands at the bottom of the image holding the sunflower/Ukraine to the cross form the letter "Z", which became an infamous symbol for the Russian invasion in the first few months after February 24, 2022. At the same time, perhaps a somewhat more optimistic reading is possible as well:

Beyond the religious reference, Mark J. Meister, the museum's director and president, said it reminds him of the viral video of an elderly Ukrainian woman confronting Russian soldiers and intrepidly telling them to "Take these seeds so sunflowers will grow here when you die." (Rash, 2022)

The common feature of the three political images is that they all include objects that have several meanings, which in some cases (FLAG/TOILET-PAPER, HEART/SHELTER, FLOWER/JESUS) stand to one another in a relation of similarity, and thus qualify as pictorial metaphors. In other cases (FLAG/COUNTRY, HEART/PERSON) they do so based on contiguity – and are hence metonymies according to the adopted definition. Importantly, the two semiotic figures feed into one another in flexible ways, sometimes allowing for multiple interpretations. This complexity is not something to be regretted even if it represents an analytical challenge. It also testifies to the potentials of the adopted approach of constraining metaphor and metonymy without unduly limiting them to only "trivial" cases, or only to language.

5. Conclusions

In this paper I have extended the approach to metaphor emanating from the Motivation & Sedimentation Model (e.g., Stampoulidis, 2021) to metonymy, and proposed an integrated theoretical definition, based on Jakobson's classical proposal that metaphor transfers meaning based on the similarity of the meanings of a given expression, while metonymy is based

on a relation of contiguity or meronymy (part-whole relations) between the meanings. I have argued that this helps constrain the two semiotic figures to reasonable proportions, while other definitions in terms of “cross-domain mappings” for metaphor and “mental access to another conceptual entity” for metonymy are both vague and over-extended, in the sense that they conflate phenomena that need to be distinguished. While I have provided the argument from the perspective of cognitive semiotics, it seems that similar ideas are also being expressed by some scholars within cognitive linguistics such as Brdar-Szabó and Brdar (2022), as pointed out in Section 3.3. This suggesting possible future rapprochement. Another advantage of the present approach is that it provides a definition that lies close to corresponding operational definitions, while this is not the case for the constructs of Conceptual Metaphor Theory (Zlatev & Moskaluk, 2022).

The present cognitive-semiotic approach has some affinities with that of Deliberate Metaphor Theory (e.g., Steen 2011, 2017), which also attempts to distinguish figures with different degrees of potency (metaphoricity), based on criteria grounded in different forms of human consciousness (cf., Stam-poulidis et al., 2019), and in this respect returning to more traditional approaches. It may therefore likewise be criticized for “taking metaphor studies back to the Stone Age” (Gibbs & Chen, 2017). To preempt this critique, I illustrated the productivity of the cognitive semiotic approach by turning to metaphors and metonymies outside of language, and a genre where they are known to engage in complex interaction: political cartoons. I showed that several layers of metonymic and metaphorical meaning can be uncovered in such images with the help of the analysis. Like verbal metaphors and metonymies, pictorial ones differ with respect to conventionality, which in the model can be understood as a high degree of motivation from the Sedimented level (Zlatev & Moskaluk, 2022). Other figures are more innovative, and correspondingly at least somewhat indeterminate, which is a characteristic of artistic figurativity. The more conventionalized metonymies (represented by objects like national flags and flowers) often serve as a precondition for metaphorical interpretations. In the case of more creative metonymies, it appears to be the inverse.

In either case, a close interaction between the two figures seems to be the rule rather than the exception, raising the question concerning the need for introducing a notion such as *metaphonymy* (Goossens, 1990). Or possibly, this notion can be retained for inherently ambiguous cases that can be seen as either or both figures at the same time, given the presence of both iconicity and contiguity. For example, an image of a person in national dress can be seen both as personification metaphor and as metonymy.

But perhaps the greatest strength of the present approach, and of MSM in general, is that it does not aim to replace existing theories of figurativity, but to integrate many of their insights, and in a way to “triangulate” between them. Like many recent dynamic and enactive approaches, the focus is on “metaphoricity that emerges from the process of face-to-face interaction, or from the process of film viewing, not isolated static metaphoric expressions instantiated from conceptual metaphors or from image schemas” (Müller, 2019: 77). This is reflected by emphasizing the fact that fully fledged communicative meaning only appears on the Situated level, for particular interpreters and situations. The analysis is also consistent with many of the proponents of Conceptual Metaphor Theory and Conceptual Integration Theory when they stress the need for “underlying” cognitive processes of analogy-making or “blending”, and of bodily based experiential schemas. It differs however, by claiming that such pan-human processes of embodied (inter)subjectivity on the Embodied level motivate but do not constitute metaphors and metonymies *per se*. Finally, it can also incorporate notions such as “conventional metaphors” (Lakoff & Johnson, 1980) as culturally sedimented diagrams, and “metaphoremes” (Cameron & Deignan, 2006) as even more conventionalized constructions on the Sedimented level. Together with the pan-human structures and processes of the Embodied level, these co-motivate all acts of expression, including those of semiotic figures like metaphor and metonymy.

Acknowledgements

I wish to thank Todd Oakley, Elena Faur, Dee Wu and two anonymous reviewers for very helpful comments on an earlier version of this paper.

N O T E S

¹ Conceptual Metaphor Theorists tend to have a very narrow take on resemblance and iconicity in general, failing to realize that systematic correlations (“mappings”) between domains or meanings are nothing else but diagrammatic iconicity (e.g., Devylder, 2018). A recent exception to this tendency appears to be the work of Peña & Ruiz de Mendoza (2022), who propose a key role for high-level resemblance, including in the present sense of sense-to-sense relationships. We wish to thank an anonymous reviewer for pointing this out to us.

² This should not be taken as implying that in either (language) production or interpretation, the default interpretation needs first to be explicitly “accessed” and then rejected, which is controversial in the psycholinguistic literature (cf. Coulson & Matlock, 2001). The two interpretations can very well be held in mind simultaneously, or focal attention could even zero in on the metaphorical meaning “directly” depending on the context. All that is needed is for the default meaning to be at least *partially* in consciousness; otherwise the metaphor would be “dead” for all practical purposes.

³ The definitions and relations between the two figures is also debated in cognitive linguistics, with some arguing for a “figurative continuum” (Gibbs, 1984). Most common, it appears, is to distinguish their respective functions, with metaphor having the dominant role in reasoning, while metonymy is crucial for reference and perspective (e.g., Barcelona, 2000; Ruiz de Mendoza & Galera, 2011, 2014). I only mention this in passing, thanks to an anonymous reviewer, since it is a topic worthy of its own paper.

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