**Bringing metaphors back to the streets**

A corpus-based study for the identification and interpretation of rhetorical figures in street art

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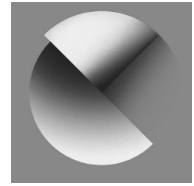
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# Bringing metaphors back to the streets: a corpus-based study for the identification and interpretation of rhetorical figures in street art

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ABSTRACT

Research on (verbo-)pictorial metaphors and other rhetorical figures is primarily focused on the genre of advertising, leaving other genres under-investigated. In this study, the authors focus on street art, a visually perceived cross-cultural medium used to address sociopolitical issues. This genre typically combines two interacting semiotic systems – language and depiction – and is thus a form of *polysemiotic communication*. Their analysis is based on a corpus of 50 street artworks addressing the financial, socio-political and migrant/refugee crisis in the city of Athens (2015–2017). They present a data-driven procedure for the identification and interpretation of metaphors and other rhetorical figures in street art, informed by cognitive linguistic and semiotic models.

Quantitative analyses show that their models can be reliably applied to street art and can enable them to distinguish metaphors from other rhetorical figures within these images. At the same time, qualitative analyses show that this genre usually requires the integration of conceptual, contextual, socio-cultural and linguistic knowledge in order to achieve successful interpretation of these images. The authors discuss their findings within the theoretical framework of cognitive semiotics.

KEYWORDS

cognitive semiotics • metaphor identification • metaphor interpretation • rhetorical figures • street art • (verbo-)pictorial metaphor

Ⓢ SAGE

## 1. INTRODUCTION

Cognitive linguistic and semiotic accounts of metaphor have often discussed this complex phenomenon in various ways, often addressing factors such as universality and conventionality, context-sensitivity, cross-cultural variation and creativity, deliberateness and multimodality. However, for the most part, such factors are investigated in isolation, since cognitive linguistics and semiotics have been poor bedfellows and interactions between them have resulted in much cross-talk (Stampoulidis et al., 2019).

The purpose of this article is to investigate how metaphors and other rhetorical figures are expressed and conceptualized in a contemporary polysemiotic artistic genre, commonly used to convey sociopolitical messages of protest: street art.[1] To achieve this goal, we propose a theoretical approach, as well as a set of methods and procedures, that can be applied to analyze (verbo-)pictorial metaphors and other rhetorical figures in street art from the perspective of cognitive semiotics. We argue that this theoretical approach allows us to grasp in greater detail the structure and peculiarities of (verbo-) pictorial metaphors in street art, compared to other approaches, namely the cognitive approach and the strictly semiotic approach.

Cognitive semiotics integrates methods, models and theories from three research fields: cognitive linguistics, cognitive science and semiotics informed by phenomenology, the systematic study of experience (Sonesson, 2014; Zlatev, 2015). This framework, we argue, serves our analytical aims more adequately than Conceptual Metaphor Theory (CMT) (Kövecses, 2005; Lakoff and Johnson, 1999, 2003[1980]), for the following reasons. Firstly, CMT focuses on the conceptual nature of the cross-domain mappings, often independently from language and context variability (see criticisms of this point by Kövecses, 2015; Musolff, 2004; Yu, 2015; Zinken, 2007; Zlatev, 2011). Secondly, cross-domain mappings are static rather than creative and dynamic processes (Müller, 2008; Sonesson, 2015). In our investigation, we focus on the street art genre as an optimal candidate to exemplify the importance of a multifaceted approach encompassing both embodied experiences and socio-cultural and context-specific knowledge (for the significance of genre-attribution, see Forceville, 2016: 252–253).

Cognitive linguistic approaches to the study of (verbo-)pictorial metaphors stemming from CMT (Lakoff and Johnson, 2003[1980]) and *Blending Theory* (Fauconnier and Turner, 2002) have analyzed metaphor (and metonymy) in various visual genres. These include (but are not limited to) *advertising* (e.g. Forceville, 2017), *film* (e.g. Fahlenbrach, 2016), *political cartoons* (e.g. Dominguez, 2015), *comics and manga* (e.g. Cornevin and Forceville, 2017) and *artistic paintings* (e.g. Poppi and Kravanja, 2017, 2019).

Studies employing semiotic approaches in another visual genre, namely advertising, instead typically focus on the taxonomies of *rhetorical figures* only one of which is metaphor (e.g. McQuarrie and Mick, 1996, 2003). Sonesson (2014, 2015) has developed the model proposed by Groupe μ (1976, 1992), by

relating it to the psychology and phenomenology of perception, according to which all our experiences are based on expectancies, which may be confirmed or disappointed.

In this study, we refer to *semiotic systems* rather than to *modalities or (semiotic) modes*, as in the classic cognitive linguistic and social semiotic traditions, respectively. The term *modality* is often used in cognitive science and cognitive linguistic research to refer to the recruitment of different sensory modalities (senses), such as *vision, hearing, smell, touch* and *taste* through which we perceive both the world and signs. This view has been criticized by some scholars (e.g. Bateman, 2011, 2014; Stöckl, 2004), but remains nonetheless the most commonly used terminology in the above-mentioned disciplines to refer to sensory modalities. To avoid confusion, we therefore adopt the terminology used in cognitive semiotics, thus referring to semiotic systems in which metaphors and other rhetorical figures can be expressed (Stampoulidis et al., 2019). For example, a street artwork consisting of linguistic and pictorial signs is a form of *polysemiotic communication*, instantiated in the particular sociocultural medium of street art.

The following explanation might help the reader to grasp the differences between the notions of modality, semiotic mode and semiotic system in various disciplines (based on Devylder, 2019). *Multimodality* is indeed a polysemous word (see Adami, 2016, and Green, 2014: 7–12, for an extended review), which is tightly related to the notions of *modality* and *(semiotic) mode* (for a discussion on this topic, see also Forceville, 2016: 243–246). Moreover, the term multimodality is used in conceptually different ways across disciplines.

In the cognitive linguistic tradition, the term *modality* is used to designate the different ways a metaphor can be expressed in language, depiction and gesture. However, because metaphors are assumed to be grounded in sensory perception, this terminological choice is mainly due to the strong link to the recruitment of different sensory modalities, such as vision, hearing, smell, touch and taste through which human beings perceive the world and attempts to ground metaphor in embodiment (Zlatev, 2009). On the other hand, within the social semiotic tradition, the form by which a metaphor is expressed is often referred to an exhaustive list of semiotic modes in broad terms (Bateman, 2011, 2014; Kress, 2009; Stöckl, 2004), such as language, image, colour, music, typography, design and other modes stressing the communicative functions of the form through which the metaphor is expressed, rather than its impact on the perceiver's senses. As Stöckl (2004: 9) writes 'multimodal refers to communicative artefacts and processes which combine various sign systems (modes) and whose production and perception call upon the communicators to semantically and formally interrelate all sign repertoires present.' The term *mode* in this case is used to refer both to what we mean by semiotic system and sensory modality. However, as Forceville (2016: 257) rightly puts it 'if *mode* is used for any variable that contributes meaningful information in discourse instead of a technical term, the catalogue of modes will prove endless, meaning that the concept loses

all discriminatory force.' As a result, both traditions of cognitive linguistics and social semiotics refer to the popularly known and diverse notion of multimodality that has recently obtained excessive attention in order to explain the synergy of (a) modalities, (b) semiotic modes or (c) both (Zlatev, 2019).

However, in line with the cognitive semiotics paradigm, and in order to avoid terminological ambiguity and conceptual polysemy, we refer instead to semiotic systems in which metaphors (and other rhetorical figures) can be expressed. These semiotic systems include language, depiction and gesture, which can in general be defined as *signs with in-system specific affordances and their inter-sign relations* (Zlatev, 2019). In other words, we propose to use *multimodality* in the sense of the synergy of two or more distinct but interacting sensory modalities (vision, hearing, smell, touch, and taste) in the *act of perception* and *polysemiotic communication* in the sense of the synergy of two or more semiotic systems (language, gesture and depiction) (Stampoulidis et al., 2019; Zlatev, 2019).

In our study on street art, marking a terminological distinction between semiotic systems and sensory modalities helps us toward a synthetic analysis of the interaction between language and depiction, and that of language, depiction, vision and (potentially) smelling, touching or even hearing, into a whole communicative situation. Our terminological distinction between sensory modalities (multimodality) and semiotic systems (polysemiotic communication) may lead to adequate hypotheses that in turn are workable in empirical research. For example, a work of street art, consisting of verbal text (language) and pictorial elements (depiction) is clearly a form of polysemiotic communication,[2] instantiated in the particular socio-cultural medium of street art, which may be either unimodal, if perceived only visually, or multimodal, if perceived through at least two of our sensory modalities (*vision* – if it is perceived through our eyes, *touch* – if we touch it while walking down the streets), as displayed in Figures 1(a) and 1(b).[3]

In most cases examined in this article, metaphors are not found alone in any semiotic system – language and depiction – but in the integration of such systems. In addition, very often, indexicality in the shape of metonymies (signs based on *contiguous relations*) and synecdoches (signs based on *part–whole relations*) and symbolicity (signs based on *conventional relations*) are used to motivate metaphors (signs based on *similarity relations*).[4] In other words, (verbo-)pictorial metaphors in street art may be based on other rhetorical figures, which are supported by strong associations by contiguity (metonymies) and part–whole relations (synecdoches) and can be found at the same figurative continuum, but in various levels and degrees. In particular, (verbo-) pictorial metaphors due to their presence on the pictorial surface sometimes are more dependent on metonymies. This could be explained by the fact that, in the case of metaphors, the property of iconicity is prioritized; but some indexical and symbolic nuances always survive. On the contrary, in the case of metonymies or synecdoches, the property of indexicality is predominant, but some iconic and/or symbolic traces can also be present.

**Figures 1(a) and (b).** (a) A unisemiotic and (potentially) multimodal street artwork since it may trigger multiple senses in the viewer, such as sight and touch (image on the left). © Bleeps.gr. Photograph: courtesy of the artist.
(b) A polysemiotic monomodal street artwork since it triggers (arguably) the sense of sight in the viewer, but includes multiple semiotic systems (image on the right). Creator: Unknown. © Photograph: Georgios Stampoulidis, August 2017.

Additionally, Peircean theory has influenced the study of (verbo-)pictorial metaphors in semiotics. Interpreted from the perspective of cognitive semiotics, the *sign* can be understood as a kind of meaning-making semiotic process that requires the experiencing subject to both associate and differentiate *expression* and *content* (Daddesio, 1995; Sonesson, 2014, 2015; Zlatev, 2009). In the Peircean sense, three *semiotic grounds* underlie and constrain the link between the expression and content, namely *iconicity, indexicality* and *symbolicity*. Depending on which one is predominant (Jakobson, 1965), we have *iconic signs* (icons), *indexical signs* (indices) and *symbolic signs* (symbols). The first two cases – icons and indices – are motivated, while symbolic signs are conventional although not arbitrary as they almost always involve the other two grounds as well. According to Deacon (2012: 13), as cited in Zlatev (2015: 1050):

> One must also understand these social conventions, because nothing intrinsic to the form or its physical creation supplies this information [note: the symbol]. The symbolic reference is dependent on already knowing something beyond any features embodied in this sign vehicle. (emphasis added)

Thus, symbols are not considered arbitrary themselves, but instead conventional, based on culturally shared sedimented knowledge among sign users. Street artworks, for example, construct meanings by means of similarity and/or dissimilarity, indexicality and conventionality, while violating the norms with respect to the common-sense world of perception (Sonesson, 2014).

By illustrating the complexities around metaphor and iconicity, it may be assumed that the semiotic account of iconicity provides a framework, which

should be integrated into the study of (verbo-)pictorial metaphors in street art. Here, we pinpoint that the question of similarity is a variety of iconicity in the sense of Peirce's definition of iconic reasoning. Generally speaking, Peircean theory (1974[1931]) has influenced the study of metaphors in semiotics and its interrelations to Aristotelian approaches of metaphor back to classical antiquity, even though Peirce had no explicit theory of metaphor apart from some remarks about the topic (Hausman C et al., 1996). For Peirce, metaphor is a representation of a similarity relation (Lance, 1996). In other words, the basis for metaphor is iconicity (similarity) in opposition to CMT, where metaphors are understood simply as static cross-domain mappings without involving a similarity-based comparison.

In this direction, the semiotic notion of iconicity is essential for the study of (verbo-)pictorial metaphors in street art. According to Peirce (1974[1931]), there are three types of iconic signs, the so-called *hypoicons*, including *imagistic, diagrammatic* and *metaphoric* iconic signs, all drawing in a relation of similarity, which in this sense relates to the definition provided by Jappy (2013). *Imagistic iconicity* could be referred to perceptual similarity, *diagrammatic iconicity* could be defined as an analogical relationship between expression (form) and content (meaning) in semiotic terms (Devylder, 2018),[5] and *metaphorical iconicity* could be defined as a relationship between two different kinds of contents. These contents correspond to the *metaphor terms* belonging to different domains, in cognitive linguistic terms. Metaphor terms can be recognized as the compared *elements* or *entities* that bear different kinds of contents.

To the best of our knowledge, there are no previous corpus studies on (verbo-)pictorial metaphors in the genre of street art.[6] Therefore, the originality of this article lies in: (1) the visual genre used for the analyses (street art); (2) the transdisciplinary approach embedded within the cognitive semiotics framework; and (3) the quantitative and qualitative analyses based on a corpus of 50 street artworks collected in Athens periodically between 2015 and 2017.

The present article addresses two main research questions that can be summarized as follows:

- To what extent is it possible to identify the metaphorical constructions involved in street art and distinguish them from other types of rhetorical figures? In other words: to what extent can we, as independent analysts with different linguistic and sociocultural backgrounds, *agree in distinguishing metaphorical from broadly rhetorical images* (the latter category encompassing figurative potential other than metaphor)?
- To what extent are the metaphorical constructions involved in street art analyzed and interpreted in similar ways? In other words: to what extent can we, as independent analysts with different linguistic and sociocultural backgrounds, *agree on the analysis and interpretation of metaphors* in street art, provided with the same methodological protocols to be applied to selected images?

The structure of this article is as follows. Section 2 describes the research design and empirical material used for our analyses. Section 3 reports qualitative and quantitative analyses of a corpus of 50 street artworks that are discussed in terms of metaphorical and/or other rhetorical figures. In section 4, we discuss our results and answer our research questions.

## 2. METHODS

### 2.1 Research design

Two crucial cognitive semiotic principles are the *conceptual–empirical loop* and the *methodological triangulation*.

The conceptual–empirical loop revolves around a virtuous alternation of conceptual analyses and empirical testing. We hereby apply this approach to data collected by Stampoulidis in Athens between 2015 and 2017. We applied the conceptual–empirical loop to our study in the following way: the artworks that constitute our corpus of data were analyzed in batches and, after each set of analyses, the analysts met, improved and elaborated their theoretical understanding of the figurative construction in this genre before applying the newly constructed knowledge to the next batch of data. This principle implies methodological plurality, including intuition, empathy and quantification. Schematically, this may be illustrated as in Figure 2.

The methodological triangulation (Sonesson, 2014; Zlatev, 2009, 2015; Zlatev et al, 2016) suggests that three kinds of methods need to be integrated in the study of specific semiotic phenomena based on the perspective of the researcher: first-person methods (1PM) such as phenomenological and intuition-based analysis; second-person methods (2PM) such as intersubjective
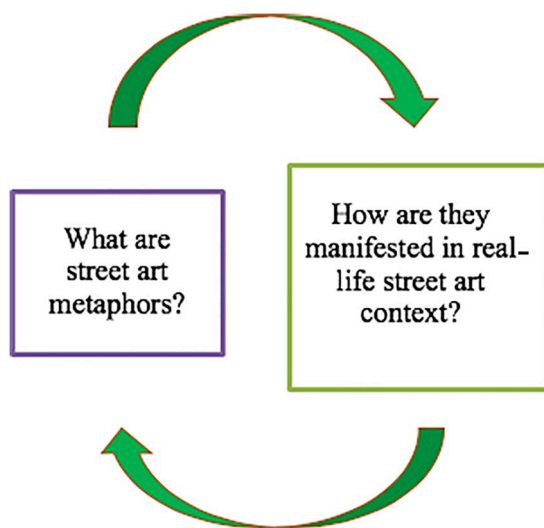


**Figure 2.** The conceptual–empirical loop applied to street art metaphors (adapted from Zlatev, 2015: 1058).

analysis and empathy (interpersonal communication between analysts, and analysts and external evaluators); and third-person methods (3PM) such as quantitative analysis of well-defined variables. In this empirical study, we applied this principle as follows:

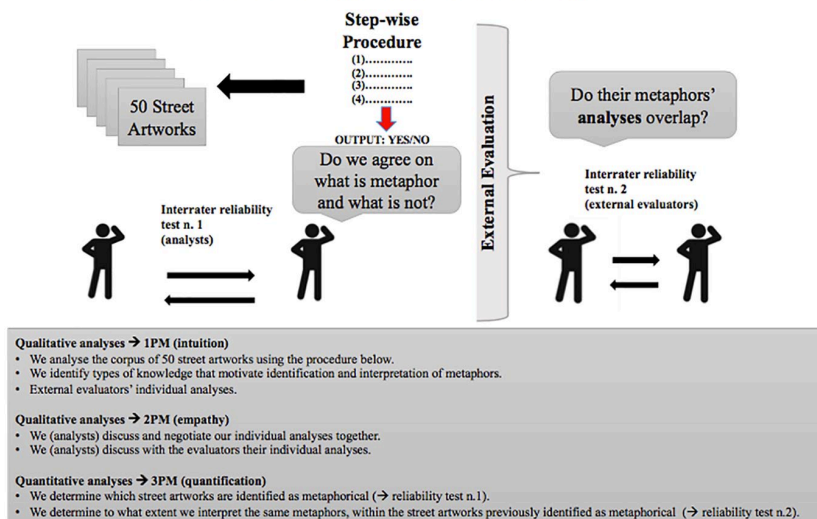1.  As authors and independent analysts, we analyzed the corpus of street artworks using our own intuition, knowledge and expertise. Similarly, the external evaluators who analyzed our analyses were making judgements using their own intuition (1PM).
2.  Based on our analyses, we discussed and identified the types of knowledge that might have influenced our insight and, most crucially, our disagreements in order to establish criteria, to instruct the evaluators and interpret instructions using 'social interaction' (2PM). In other words, we involved two external evaluators, who were asked to consider the original data (the street artworks) as well as our independent analyses of the figurative constructions and determine whether the analyses were comparable or not.
3.  We ran interrater reliability tests (the quantitative analyses are explained in section 2.4) in order to evaluate (a) the degree of our agreement as independent analysts on whether a street artwork is metaphorical or broadly rhetorical; and (b) the degree of the external evaluators' agreement on whether our independent analyses of the street artworks matched (based on the analyses we reported in written form on dedicated protocols, see step 1). The reliability tests were conducted within a formal content analysis framework (3PM) (see section 3.3).

Finally, the methodological triangulation is described in Table 1 and its application to our research design is illustrated in Figure 3.

**Table 1.** Methodological triangulation for the study of particular semiotic phenomena – here street art (adapted from Stampoulidis et al., 2019).

| Perspectives | Methods | Applicable on the study of metaphors in street art |
| --- | --- | --- |
| 1PM | Intuition | Analysts' interpretation of metaphors based on personal experiences and intuitions. External evaluators' individual judgements using their own intuition. |
| 2PM | Empathy | Interpersonal communication and negotiation between two analysts (the authors of this article) and second-order social interaction between two analysts and two external evaluators. |
| 3PM | Quantification | Quantitative analysis of both analysts' interpretations and external evaluators' judgements with interrater reliability tests. |

## Case Study: research design

**Step-wise Procedure**
(1)..............
(2)..............
(3)..............
(4)..............

50 Street Artworks

OUTPUT: YES/NO

Do we agree on what is metaphor and what is not?

Interrater reliability test n. 1 (analysts)

External Evaluation

Do their metaphors' analyses overlap?

Interrater reliability test n. 2 (external evaluators)

**Qualitative analyses → 1PM (intuition)**
- We analyse the corpus of 50 street artworks using the procedure below.
- We identify types of knowledge that motivate identification and interpretation of metaphors.
- External evaluators' individual analyses.

**Qualitative analyses → 2PM (empathy)**
- We (analysts) discuss and negotiate our individual analyses together.
- We (analysts) discuss with the evaluators their individual analyses.

**Quantitative analyses → 3PM (quantification)**
- We determine which street artworks are identified as metaphorical (→ reliability test n.1).
- We determine to what extent we interpret the same metaphors, within the street artworks previously identified as metaphorical (→ reliability test n.2).

**Figure 3.** The research design, summarizing the steps of our empirical investigation.

## 2.2 Materials

We analyzed street artworks related to the sociopolitical, financial and austerity crisis within Greece and the EU since 2008 and the migrant/refugee crisis since 2015 in the city of Athens. Here, street art is understood as a predominantly visually perceived (un)sanctioned cross-cultural medium addressing sociopolitical issues (Stampoulidis, 2016). Street art is to a large extent spatiotemporally oriented and cross-cultural, but also a socioculturally conventionalized phenomenon. The Athenian walls with the encrypted messages of street artworks and interventions, as an urban representation of intense sociopolitical upheavals, constitute a rich source for polysemiotic rhetorical figuration.

The materials were collected by Stampoulidis during the period of extensive ethnographic research undertaken in Athens at different periods between 2015 and 2017, and archival research. On this basis, we built up a corpus of 50 street artworks.

## 2.3 A step-wise procedure

We first analyzed the sample of 50 street artworks by applying a step-wise procedure to each image. Such a procedure relies on Steen's (2008, 2011) three-dimensional model of metaphor, according to which metaphors are phenomena that involve the dimensions of *expression, conceptualization* and *communication*. Applied to the semiotic system of depiction, this model predicts that metaphors express a *denotative* meaning within the pictorial representation (what objects are depicted in the image), a *connotative* meaning in which abstract concepts and comparisons between elements' contents belonging to different domains

emerge (what are the associations the image creates) and a *pragmatic* meaning within the communicative dimension, in which our interpretation of the standpoint of the artist emerges in relation to the topic treated in the artwork (what is implied by the image in the specific context).[7] This three-dimensional model has inspired the development of the VisMip procedure, specifically for the *identification* of visual metaphors in images (Šorm and Steen, 2018).

VisMip has been derived from the sister-procedure MipVU for the identification of linguistic metaphors (Steen et al., 2010). In MipVU, words are marked for metaphoricity in the context in which they are used. The metaphoricity is determined by a procedure in which the contextual meaning of a word (derived from dictionary entries) is in contrast to the more basic and concrete meaning of that word (also derived from dictionary entries).[8] In VisMip, images are marked as metaphorical if they display incongruous elements that need to be mentally replaced with other elements to restore the expected visual, in our case (verbo-)pictorial, scenario. If the incongruous elements and their replacement belong to different domains and the context suggests that they need to be compared, then the image is marked as metaphorical. However, both MipVU and VisMip are developed as *identification* procedures, rather than as procedures that can be used to *analyze* and *interpret* metaphors in language and images. That is, the output of these procedures is a YES/NO verdict on whether a given word in a certain context, or a given image, is to be regarded as metaphorical or not. The scope of our analysis is to analyze and interpret (verbo-)pictorial metaphors and other rhetorical figures in street art and, for this reason, we opted for developing our own *data-driven* procedure. The procedure presented is therefore only informed by VisMip, but it incorporates theoretical and methodological aspects of the cognitive semiotics framework.

The procedure that we developed revolves around two critical initial points. First, for each image it is possible to identify a core topic, about which the image predicates a standpoint. Second, any rhetorical image displays incongruities, i.e. creative divergences as apprehended from the point of view of the sociocultural *lifeworld*, which trigger the viewers' attention and stimulate them to stop in their track and start working on the disentanglement of such incongruities, which eventually leads to the analysis and interpretation of the intended message.[9]

Our step-wise procedure is structured as follows:

**1. Topic.** Determine the topic treated by the image, taking into account genre-related knowledge. This is an important first step, which is based on our cross-cultural world knowledge-based expectancy but constrained by genre information (e.g. the sociopolitical issues addressed by the artworks).

**2. Dimension: expression**
(a) Identify the element or entity that is incongruous when contrasted to the topic outlined in step 1 by pointing to the (diagrammatic) iconic ground (see note 5, a pan-human experiential process of analogy-making).

(b) Retrieve the replacing element(s) that would restore the expected (verbo-)pictorial scenario. The replacement has to be explicit – for instance X replaces Y (and vice versa).

(c) Formalize the denotative meaning of the comparison(s) at the dimension of expression by aligning the outputs of (a) and (b) (there is no directionality yet). If contents listed in (a) and contents listed in (b) belong to different domains, the image has a chance of being metaphorical at the dimension of conceptualization (*candidate metaphors* – see step 3).

3. **Dimension: conceptualization.** Determine whether the contents of the elements identified in steps 2(a) and (b) stand for more abstract concepts and reformulate the metaphor(s) in order for abstract concepts and sociocultural knowledge to be activated. At this level, indexicality and symbolicity usually motivate the constructions of metaphors, even though the semiotic ground of iconicity is always predominant (see section 1). If the comparison is across different elements or entities then the rhetorical figure can be identified as a metaphor.

4. **Dimension: communication.** Formulate the pragmatic message that unravels the overall interpretation of the street artwork in the particular context and summarizes the interpretation of the metaphor.

Figure 4 displays a rather simple metaphorical street artwork that we may use to exemplify the procedure outlined above.

Our procedure applied to the street artwork in Figure 4 works as follows (see Figure 5).

In Figure 4, the diagrammatic iconicity between the toilet paper and Greek flag, as two categorically distinct elements or entities, is the primary motivating factor for the metaphor construction. Both (the Greek flag and toilet paper) share a flat surface (dimension of expression). The iconic relation between the two entities triggers more abstract concepts related to the two entities, such as the Greek nation, evoked by the flag. At this level, conceptual mappings (aka analogies) such as *dirtiness* (of the toilet paper) which becomes *corruption* (in relation to Greece) emerge. In other words, the concrete dirtiness involved in this operation is metaphorically compared to the moral dirtiness (i.e. corruption) that characterizes the Greek government, represented by the Greek flag. Thus, the communicative dimension of this pictorial metaphor suggests that Greece is a corrupted nation and both analysts agreed, working independently, on this interpretation.

The output of this procedure has to be interpreted as follows: in order to be classified as metaphorical, an image needs to invite the viewer to construct metaphors at the dimension of conceptualization (step 3). This is where the identification and analysis of the compared metaphor terms takes place. Images may still display (verbo-)pictorial incongruities involving several indexical and symbolic elements that stimulate the viewer to construct rhetorical meanings, based on the analysis of the dimension of expression

**Figure 4.** Greek flag and toilet paper. Creator: Unknown. © Photograph: Georgios Stampoulidis, July 2015.

1. Topic:

Greek flag (analyst 1)

Greece (analyst 2)

2. Expression:

a)  Incongruity: Identify element or entity that is incongruous when contrasted to the topic outlined in step 1

Toilet paper (incongruous element)

a)  Replacement: Greek flag on a flag stand or a normal toilet paper without Greek flag, X replaces Y (and vice versa)

b)  Toilet paper is Greek flag (no directionality)

3. Conceptualization:

Greek flag stands for Greece (a corrupt country relying on indexical world knowledge). Toilet paper may stand for the more inclusive category of 'crap' and 'dirtiness'. Metaphor: Greece is crap.

4. Communication:

Greece in general, and its political situation and socioeconomic issues in particular, is in a very negative, dirty, and informally speaking 'crappy' condition.

**Figure 5.** Exemplification of our procedure.

(step 2), but not necessarily metaphorical as far as step 3 (Conceptualization) is concerned. Finally, the interpretation of the metaphor is then elaborated at the dimension of communication (step 4).

## 2.4 Empirical procedure

We analyzed independently the 50 street artworks included in the corpus, divided into batches of 12–15 items, using the procedure outlined above on the spreadsheets displayed in Figure 6. After each batch, we met and discussed the analyses before proceeding further.

Sections 3.1 and 3.2 report our qualitative observations, and section 4 summarizes the classification of the types of knowledge that contribute to the construction of metaphors in street art, based on a qualitative analysis of the application of the procedure to our empirical data.

Once the 50 images were analyzed a first interrater agreement test was performed to measure the degree of agreement between us on which street artworks were metaphorical and which were not (see section 3.3.1).[10] Interrater reliability tests are statistical tests used to measure the degree of agreement among independent raters. Typically, when dealing with corpus data, and therefore with linguistic (or pictorial) texts, the data needs to be analyzed in relation to its semantic content, classified and put into categories by analysts, in procedures that are usually called (semantic) content analyses (e.g. Bolognesi et al., 2017). Such analyses require the analysts to share beforehand a common procedure, as well as a detailed coding scheme, which they can then apply to the data independently from one another, in order to avoid biasing each other. The degree of agreement between independent analysts is then measured with statistical tests that generate scores ranging from 0 to 1 (usually called Kappa scores, referring to the specific measure named Cohen's Kappa, indicated with κ). The higher the score, the more the analyses are deemed to be reliable, and therefore replicable. By convention, scores above 0.7 indicate strong agreement, while scores between 0.5 and 0.7 indicate moderate agreement. For a detailed explanation of this measure and related measures used in content analysis, please refer to Bolognesi (2017).

Following this, our interpretations of the images were compared. In order to measure to what extent we agreed on the interpretation of the metaphorical structures of the street artworks, two external evaluators were recruited for this study: a native speaker of English and a native speaker of Greek. Both evaluators, without having any contact with each other, could be assumed to share at least some cross-cultural experiences living in Europe. The protocols with the analyses were administered to both evaluators. They could access the corpus of street artworks, and they were informed about the procedure that we used to analyze the images. They were asked to indicate, for each variable (i.e. for each cell in the spreadsheet reported in Figure 6) whether we provided the same type of information or not. For example, with respect to the street artwork displayed in Figure 4, one of us indicated that the

| Picture ID | Step 1:<br>Topic | Step 2:<br>Expression | Step 3:<br>Conceptualization | Step 4:<br>Communication |
|---|---|---|---|---|
| | What the picture is about | What objects are depicted in the picture – incongruous when contrasted to the Topic (Step 1) | What are the associations the picture creates (Metaphors) | What is implied by the picture in the specific context |
| Picture 1 | | | | |
| Picture 2 | | | | |
| Picture 3 | | | | |

**Figure 6.** Protocols used to report the analyses based on the procedure, performed by us (as independent analysts).

Topic is 'Greek flag', while the other indicated that the Topic is 'Greece'. This innovative procedure was performed because, from a methodological point of view, it is not possible to use these strings as variables to calculate directly our interrater agreement. Reliability tests function on matching strings. Yet, human judgements in this type of analysis are inevitably subject to interpersonal variation in the way these issues are verbalized, lexically and grammatically. We therefore opted for the additional step outlined above: collecting binary judgments ('YES' or 'NO') on the type of information we identified during our analyses and interpretations of the street artworks (Figure 7). We then calculated the interrater agreement on the binary judgments provided by the external evaluators. Therefore, the second quantitative analysis and the related kappa scores are informative about the degree to which we provided the same (or highly comparable) information, in relation to each variable

| Picture ID – Consultants' responses | Analysts, External consultants | Topic<br>(what is the picture about) | Expression<br>(what looks strange and what we expect to see instead as replacement) | Conceptualization<br>(what is the metaphor) | Communication<br>(message of the street artwork) |
|---|---|---|---|---|---|
| Picture 12 | Analyst 1 | Greek flag | toilet paper roll as Greek flag, Replacement: just Greek flag | Greece is crap | Greece (probably politics, or economics) is crap, dirty, etc. |
| Picture 12 | Analyst 2 | Greece | Greek flag is incongruous with the toilet paper, Replacement: no toilet paper | Greek flag stands for Greece / toilet paper stands for dirtiness, perhaps corruption, Greece is dirty | Greek politics is corrupt |
| Your response | External evaluator 1 | YES | YES | YES | NO |
| Your response | External evaluator 2 | YES | YES | YES | NO |

**Figure 7.** Protocols used to collect binary data from external evaluators.

involved in the procedure, for each of the images that were interpreted as metaphorical by both of us. Section 3.3.2. reports this part of the analysis.

## 3. ANALYSIS

## 3.1 Non-metaphorical rhetorical images

In this section, we provide a qualitative analysis of those images in which we observed the presence of rhetorical figures *other than* metaphor. This means that the 'candidate metaphors' given by step 2 (Expression) did not evolve to 'metaphors' in step 3 (Conceptualization).

**3.1.1 Metonymy and synecdoche.** Figure 8 displays a classic Greek statue with a Molotov cocktail in one hand (with the conventional symbol of a heart on the bottle) and a red flag on which the word *Revolution* is written. This image was interpreted as a primarily indexical image, where a series of metonymies come into play to construct the message, because the indexical semiotic ground is the most predominant one, according to the following line of reasoning. The topic of this image is broadly speaking the 'Greek rebellion'. Within this topic, the Greek statue representing a rebel is incongruous because we would rather expect to see a human rebel holding a bomb and a flag in this manner. The incongruous element (the Greek statue) and its replacement (the Greek rebel), however, share a number of features of what defines a human being: body, expressive posture, etc. This is a relation based on diagrammatic iconicity (the shape of the two elements) and can thus motivate us to analyze the image as a 'candidate metaphor' in which the statue represents a rebel. However, after deeper scrutiny, we agreed that, at the dimension of conceptualization, the relationship between these two elements (the human rebel and the statue) may be explained by means of a form of concept metonymy (Radden and Kövecses, 1999) regarding our indexical world knowledge, where the statue is a representation of the actual rebel.

Moreover, the classic Greek statue may stand for Greek culture and heritage, at a higher and more abstract level, and the Greek rebel that we would expect to see, in place of the statue, could stand for the whole Greek population. In this sense, Greek culture and heritage are aligned to the Greek population. These two entities do not belong to different domains, but to the same one.[11] Therefore, we concurred that the image is indeed rhetorical, and it contains various indexical elements, but not necessarily metaphorical as far as step 3 (Conceptualization) is concerned. Finally, our previous expectation that semiotic grounds can be co-extensional is clearly affirmed here: we used this image to exemplify metonymy, where indexical ground is not the only one but the predominant one, which serves to categorize a given sign as such, since this artwork encompasses also both iconic relations and conventional symbolic signs, such as the heart depicted on the bottle and the flag.

Metonymies and synecdoches are indexically motivated signs based on contiguity (spatial or temporal) and part–whole relations, respectively, based on our experience of the world as social and cultural human beings (see

**Figure 8.** Revolution. Creator: Bleeps.gr. © Photograph: Georgios Stampoulidis, January 2015.

Devylder, 2016; Sonesson, 1989, for reviews). Given that they have the same kind of semiotic ground, synecdoche figures can be regarded as specific subtypes of metonymies. Still, from the point of view of rhetorical taxonomies, different kinds of synecdoches in our street art corpus deserve special attention, as in the following example.

Figure 9(a) exemplifies in a clear way our theoretical claim about the rhetorical figure of synecdoche. This artwork displays two hands in a praying gesture, where only the part 'hands' is present, instead of the whole 'human figure' or 'divine entity', as we would have expected based on our embodied understanding of the lifeworld. As for the procedure for identifying and analyzing the rhetorical structure of this street artwork, we first agreed on its general topic, 'Praying'. At the dimension of expression, the incongruity within this street artwork is represented by the direction of the praying hands, which are pointing down instead of up. Based on our lifeworld experience, we would indeed expect these hands to be pointing upward as in Figure 9(b). At the dimension of conceptualization, based on shared socio-cultural knowledge, the praying hands may stand for the whole praying entity, which in this case could be a divine entity. Thus, even if we can agree about the iconic representation of hands in this street artwork, there seem to be no comparisons

between contents belonging to different domains. In other words, the indexical ground is the predominant one, which serves the interpretation of this artwork as a unisemiotic pictorial synecdoche.

'Praying for Us' (Figure 9a) is a sanctioned piece of urban art, which was created as a part of a creative project during a collaboration between the Greek Ministry of Environment Energy and Climate Change, and the Athens School of Fine Arts.[12] The artists were clearly inspired by the artwork 'The Praying Hands' (Figure 9b). As in this case, the figurative lexicon for the crisis often employs intertextual references, which may play an important role in the street artwork's interpretation (see also Stampoulidis, 2016). In terms of the broader communicative aims at the final step of our procedure, this street artwork (Figure 9a) may provide several possible interpretations, one of these being that the divine entity is praying to save Greece and its inhabitants.

In terms of intertextuality, street artists as political activists often employ popular figures of Greek history, allusions to historical events and widespread narratives (e.g. classical antiquity ideals and values), and revolutionary slogans and symbols (e.g. the euro sign, Molotov cocktail, rebellious calls) by connecting them to present-day Greece. In a nutshell, a number of wall paintings have occupied a large part of Athens nowadays, reflecting the problematic tensions of the last 10 years by giving additional sociopolitical weight through their intertextual references to not only widespread and persistent stories in the



(a)                                (b)
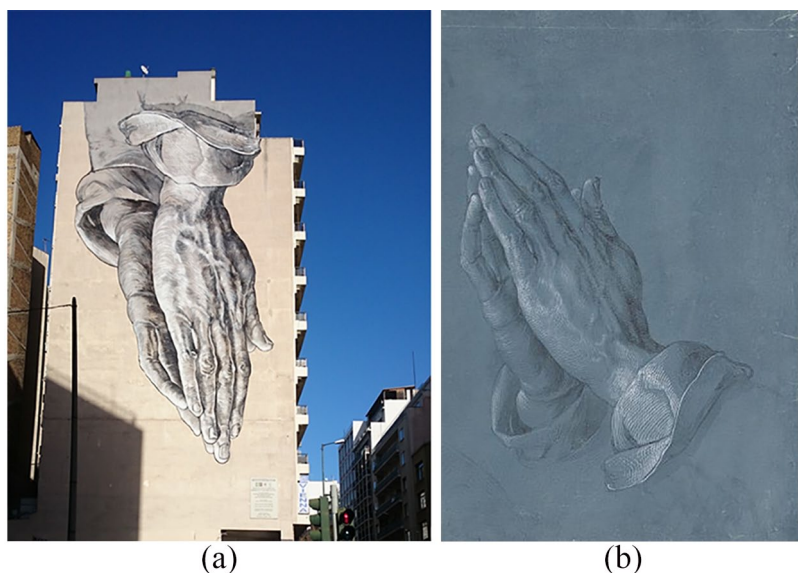
**Figures 9(a) and (b).** (a) 'Praying for Us', street artwork, 21st century. Creators: Kretsis crew, Manolis Anastasakos and Pavlos Tsakonas. © Photograph: Georgios Stampoulidis, December 2017.
(b) 'The Praying Hands' (c. 1508). Creator: Albrecht Dürer. © The Albertina (Vienna). Reproduced with permission. Available at: https://www.albertina.at/en/exhibitions/albrecht-duerer/ (accessed 27 February 2019).

street art world (see Figure 13 inspired by Banksy's most recognizable girl with a heart-shaped red balloon) but also to quite popular TV shows such as Next Top Model (see Figure 12, Greece Next Economic Model), as we will explain later in greater detail.

**3.1.2  Hyperbole.** Figure 10 displays a foetus and a wording intertext that reads *Welcome . . . You owe to TROIKA €36730!!!*.

We agreed that this street artwork can hardly be interpreted as metaphorical, but rather involves other rhetorical figures. In particular, the core topic of this image, given that the foetus is not yet ready to be born, is broadly speaking a 'premature birth'. Within this topic, the incongruous element seems to be the cross-culturally unexpected linguistic slogan.[13] This can be seen as a sign based on indexical relations, where the representation of the foetus may stand for the new generation, whereas the wording about troika and money apparently stands for the Greek debt and financial crisis. Again, it is crucial to bear in mind that the three semiotic grounds – iconicity, indexicality and symbolicity – are not reciprocally exclusive, and usually coincide in a given sign, but with the predominance of one over the other two (Jakobson, 1965).

Therefore, a possible interpretation of this street artwork, by taking into account the context-specific information about the crisis era, is that the future Greek generation is not 'free', but instead is charged with all the loans that previous generations have accumulated. Considering this analysis, this image has been interpreted as an example of verbo-pictorial hyperbole anticipating rhetorical effects in which the exaggeration leads to a literally impossible condition.



**Figure 10.**  Welcome . . . You owe to Troika €36730!!! Creator: Fl1P. © Photograph: Georgios Stampoulidis, July 2015.

**3.1.3   Oxymoron.** Figure 11 displays two African children who are being 'welcomed' to one of Europe's refugee camps. Children are 'a vehicle often used by street artists to deliver a message about the inherent inhumanity of deprivation, subjugation and violence' (Hansen and Flynn, 2016). The core topic of this street artwork is the recent 'migrant/refugee crisis' with its complex consequences for Greece. Since 2015, a number of refugees (including 100,000 unaccompanied children) have reached Europe by sea or land in search of asylum or a viable future. This constitutes Europe's largest wave of mass immigration since the end of the Second World War.

Based on our lifeworld knowledge, we might not expect to see a barbed wire fence in the context of migrants and refugees, and this wire can be indexically associated to (Nazi) concentration camps, and thus to xenophobia and racism. In terms of the rhetorical effects that the linguistic and pictorial elements imply, we both agreed (as analysts and authors) that this street artwork cannot be categorized as metaphorical because there is no comparison across different domains here. Even if the pictorial representation of two refugee children is inevitable in this street artwork, it is not possible to point out a similarity relation between this element and some other categorically distinct element, as was the case with the Greek flag and toilet paper in Figure 4, for example. However, this image still creates strong rhetorical effects because the 'welcoming' expressed by the semiotic system of language contradicts the pictorial representation of a barbed wire fence. In general terms, what we would expect based on our sociocultural and background knowledge might be a pictorial setting that would complement in some way the wording intertext 'Welcome to Europe camp'.[14] In this case, the two African children and the barbed wire determinate in juxtaposition the sociopolitical reality, which is indeed the shameful source of the artwork's power. In other words, the incongruity according to our lifeworld expectations can be found between the



**Figure 11.** 'Welcome to Europe camp'. Creator: Mapet - Political Stencil. © Photograph: Georgios Stampoulidis, March 2015.

two semiotic systems: the pictorial part is sad, tragic, etc. The linguistic part expresses a happy slogan that we would rather expect to see in relation to a summer camp for kids, for example.

The communicative message of this quite complex street artwork could be summarized as follows: refugee children are being held in bad conditions in European camps for extended periods of time, after travelling (unaccompanied) in hard and degrading conditions across several countries, including Greece. Thus, this image has been interpreted as an example of an oxymoron (Teng and Sun, 2002), where a contradiction such as 'welcome is not welcome' achieves socio-cultural rhetorical effects. In this case, the incompatibility between the interaction of the semiotic systems of language and images is apt for expressing a verbo-pictorial oxymoron.

## 3.2.  Metaphorical images

Following the procedure described in section 2.3, we observed that most of the images in the corpus encompass metaphors in combination with other figures. In this section, we illustrate three examples of interaction between metaphors and other rhetorical figures (often with *personification*). Our interest in personification in street art is triggered by the fact that it serves as an artistic device in order to personify the country (in many cases, Greece) as the main protagonist and not just a background actor of the urban stories (Avramidis and Tsilimpounidi, 2017).

Figure 12 displays a female figure with a wooden leg and the message *Greece Next Economic Model*. The image represents the topic of 'Fashion models' by means of the interaction between the pictorial and linguistic semiotic systems, where the polysemy of the word 'model' as either economic or fashion model is hinted at. At the dimension of expression, a wooden 'leg' has diagrammatically replaced the female model's leg. This is quite unexpected and incongruous within the general topic of modelling, which is typically populated by human beings without prosthetic limbs.

This wooden leg apparently represents Greece's broken economy, austerity and lack of safety in terms of iconic and indexical relations at the dimension of conceptualization. The street artist, Bleeps.gr, intertextually combines the Greek reality TV show 'Next Top Model' with Greece's broken financial and political system and personifies Greece as a model with a wooden leg.

At the dimension of communication, the standpoint of the artist emerges, where a sociopolitical comment about contemporary issues, including the poor condition of the Greek economy and politics in general as well as the melancholy of living in a country suffering in the crisis, being represented as a differently able country compared to other countries.

The second example, Figure 13, displays a little girl wearing a skirt in the colours and pattern of the Greek flag losing her balloon in the shape of a euro.

**Figure 12.** Greece Next Economic Model. Creator: Bleeps.gr. © Photograph: courtesy of the artist.



**Figure 13.** Greek girl losing balloon/euro. Creator: Absent. © Photograph: courtesy of the artist.

We both agreed that the topic of this street artwork is a 'Girl losing a balloon'. Within this topic, several incongruities can be identified: (a) the balloon is diagrammatically substituted for the euro sign, which has replaced a normal balloon; (b) the skirt in the Greek flag colours has diagrammatically replaced a normal skirt; and (c) the traditional Greek shoes, typically worn by the Greek guards known as Evzones in front of the Greek parliament (the so-called *Tsarouhi*, in Greek τσαρούχι) have diagrammatically replaced normal shoes.

At this level the similarity between the two terms of the (potential) metaphor is realized by means of pictorial meaning-making devices, such as forms, shapes, colours and silhouettes (dimension of expression). However, this diagrammatic iconicity stimulates the viewer to look for iconic relations between their different contents and reformulate the two compared entities at the dimension of conceptualization.

At the dimension of conceptualization, abstract concepts through indexical relations can be evoked: the euro sign (€) may stand for the Eurozone, or even for the European Union, the Greek flag may stand for Greece, and the traditional Greek shoes may stand also for Greece (or Greek nationalism). It is important to stress that, at this level of analysis, we used our lifeworld cross-cultural knowledge to connect these pictorial elements with our experiences. However, for one of us, it was not possible to connect the pictorial representation of the traditional type of footwear with corresponding lifeworld experiences due to the lack of Greek sociocultural knowledge. On the other hand, as both of us share the cross-cultural European sociocultural lifeworld, it was a fairly easy task to connect the euro and Greek flag symbols with our shared knowledge. This points to the fact that the interpretation of the given street artwork (and this may apply to the whole genre of street art) requires adequate sociocultural and historical knowledge. Finally, at the dimension of communication, the idea of expelling Greece from the Eurozone (Grexit) after the longstanding negotiations and dialogues between Greek and other European politicians is metaphorically visualized as the relation between a little girl and her balloon. This leaves us with the (open) question: is the girl (Greece) releasing the balloon (EU identity) or is she trying to catch it?

Another important step in the analysis of this specific street artwork is one of the main characteristics of the visual genre of street art: the employment of intertextual references as visual citations or, in other words, the opportunity for an emergent and lively visual dialogue. The Greek street artwork is inspired by Banksy's most famous and recognizable girl with a heart-shaped red balloon. According to the German art historian Blanché (2015), a 'Banksy-expert' in British post-war art, the first and original artwork in question (girl with a heart-shaped red balloon) has most famously been a symbol of political protest and thus, arguably, it could be related to the current sociopolitical situation between Greece and the Eurozone.[15]

The last example, Figure 14, displays an overweight woman with conventional symbolic euro (€) and dollar ($) signs on her breasts.

The topic of this street artwork is an 'overweight woman'. Within this topic we would not expect to see the conventional symbols of a euro (€) and dollar ($), which represent money. These symbols here have diagrammatically replaced the normal nipples on step 2 of the analysis (expression), without any directionality (euro [€] and dollar [$] are nipples, or vice versa). At the dimension of conceptualization, taking into account our background knowledge, we agreed that the euro (€) and dollar ($) symbolic signs could stand for the (capitalist) EU and the USA, respectively. In other words, the abstract concepts of capitalism and country can be mapped onto the more concrete concept of an overweight human person. The presence of the semiotic system of language with the wording *Always Hungry* is compatible with the pictorial representation of an overweight woman. In terms of iconicity, a similarity-based comparison between elements' contents belonging to different domains, such as the overweight woman and the capitalist and consumer Western society could invoke the metaphor: consumerism and capitalism are overweight persons. At the dimension of communication, the standpoint of the artist emerges as a sociopolitical comment about obesity vs austerity in Greece and generally in the Western world.

Through personification, Western society is hereby represented as an overweight and always hungry human being. Thus, this image has been



**Figure 14.** Always hungry. Creator: Unknown. © Photograph: Georgios Stampoulidis, September 2015.

interpreted as metaphorical, with symbolic signs achieving rhetorical effects by using personification. This conclusion may take us again to our previous statement that metaphorical structures are predominantly iconic because of their similarity and dissimilarity based on our lifeworld expectations, but indexical and symbolic relations help us to motivate the interpretation of these metaphors.

## 3.3. Quantitative analyses

**3.3.1 First reliability test.** This section displays the results of the first interrater agreement test, which provide quantitative data on the degree to which we, as two independent analysts, agreed on the identification of what is a metaphorical street artwork, as opposed to a broadly rhetorical one. The first reliability test was run on the outputs of the procedure for identifying metaphors in street art, outlined in section 2.3. The outputs are summarized into a binary distinction: 'YES, the image is metaphorical', or 'NO, the image is not metaphorical', even though it contains rhetorical meaning. We achieved a substantial agreement on this part of the analysis (Cohen's kappa = .865). As Table 2 shows, on 3 street artworks out of 50 we disagreed on whether these images were metaphorical or broadly rhetorical.

**Table 2.** First reliability test between the authors of this article (independent analysts).

| Number of pictures | Agreement between two analysts |
|---|---|
| 32 out of 50 | Metaphorical |
| 15 out of 50 | Non–metaphorical (but with rhetorical potential) |
| 3 out of 50 | No agreement reached between the two analysts |

***3.3.1.2 Diverse metaphor construction and interpretation (an example).*** As a final point for this analysis, let us now show an image that exemplifies one of the cases in which the two main analysts *clearly interpreted the metaphorical structures in different ways*, as indicated by the meta-analyses provided by the two external evaluators.

Figure 15 displays a street artwork that both analysts identified as metaphorical but that, according to the external evaluators, the two analysts interpreted in very different ways, on all the levels of the analysis: different topic, different expression, different conceptual structure and different communicative message.

In particular, one analyst suggested that this street artwork addresses the topic of Christmas, by displaying an undressed woman (possibly a prostitute). Given the topic 'Christmas' the viewer may rather expect to see

**Figure 15.** XMASS in the EU EMPIR€. Creator: Bleeps.gr. © Photograph: courtesy of the artist.

representations of holy or sacred entities and scenes. The naked woman, who appears to be posing in a sexy fashion, may stand for the abstract concept of prostitution, which is compared to Christmas (in the EU empire, as the star displays). In this sense, the first analyst constructed a message in which the religious nature of Christmas is intended to be degraded into consumerism.

The other analyst, instead, suggested that this artwork addresses the topic of the EU empire, represented as a female model. Regarding the pictorial representation of the posture of the female body, one possible interpretation may be that the female figure stands for activist and/or feminist movements within the EU. In this case, it could be a voice for the women's activist movement against the EU. Regarding the synergy between the semiotic systems of language and depiction, an ironic comment may appear on the label in terms of both the linguistic pun (Xmass coincides with Christmas, X instead of Christ, mass instead of mas). Consequently, Xmass may be an ironic commentary for Christmas but also a term we often see regularly. The final '€' in the word 'empir€', in the form of the euro sign, may refer to the interregnum era, as approached by thinkers such as Michael Hardt and Antonio Negri in the homonymous book 'Empire' (2000). This possible interpretation could invoke the metaphor EU is EMPIRE.

Therefore, based on the analyses of the sample of street artworks illustrated, we discussed and identified a number of different types of knowledge that contributed to our metaphor interpretations, diverse or not. A description of the required knowledge is provided in section 4.

**3.3.2 Second reliability test.** As described in section 2.4, the detailed analyses performed by both of us on the 32 images that were identified and interpreted as metaphorical were then administered to two external evaluators, who were asked to determine whether the content analyzed for each of the dimensions (topic, expression, conceptualization and communication) was the same for both evaluators.

As expected, our interpretations of the images and therefore the text that each of us inserted in the coding book was formulated in different ways. Therefore, as described in section 2.4, measuring directly our agreement on the basis of the *words* would have been problematic from both a theoretical and a methodological perspective.

As displayed in Table 3, the evaluators displayed a high level of agreement on whether we provided the same or different interpretations of the images, on each dimension. Interestingly, the data shows that our interpretations were comparable in relation to the first two dimensions of topic and expression (we agreed on 23 images and disagreed on 6, according to the external evaluators). However, our interpretations tended to become more and more different on the other two dimensions. The last dimension of meaning (communication) shows the least degree of agreement between the two analysts (authors): the external evaluators agreed on saying that we provided the same interpretation of 14 images, and different interpretation of 15 images.

**Table 3.** The evaluators' agreement on whether our interpretations on each of the variables were the same or different.

| Variables | Cohen's kappa scores between two external evaluators | Number of pictures on which external evaluators agreed that the analyses provided by both of us were the same | Number of pictures on which external evaluators agreed that the analyses provided by both of us were NOT the same | Number of pictures on which external evaluators did NOT agree on whether the analyses provided by both of us where the same | TOT |
|---|---|---|---|---|---|
| Topic | 0.742 | 23 | 6 | 3 | 32 |
| Expression | 0.742 | 23 | 6 | 3 | 32 |
| Conceptualization | 0.738 | 18 | 10 | 4 | 32 |
| Communication | 0.814 | 14 | 15 | 3 | 32 |

## 4. DISCUSSION AND CONCLUSIONS

As stated in the introduction, the purpose of this article was to investigate how metaphors and other rhetorical figures are expressed and conceptualized in a contemporary polysemiotic artistic genre, commonly used to convey socio-political messages of protest: street art. To achieve this goal, we framed our analyses with the help of cognitive semiotics, which may serve as a synthetic

theoretical and methodological bridge between the disciplines of cognitive linguistics, semiotics and cognitive science. The transdisciplinary nature of cognitive semiotics with the central feature of methodological triangulation helped us to deal with the complexity of (verbo-)pictorial metaphors and other rhetorical figures in street art.

The main contribution of our analysis is an intersubjectively reliable procedure for identifying and interpreting (verbo-)pictorial metaphors and other rhetorical figures in street art, combined with a series of qualitative and quantitative analyses.

Our first research question asked whether metaphors in street art can be reliably identified and distinguished from broadly rhetorical images. As our analyses (see sections 3.1 and 3.2) showed, a distinction between meta-phorical and non-metaphorical (though still rhetorical) street artworks can be reliably applied, provided that we used the same step-wise procedure.

Our second research question asked to what extent analysts with dif-ferent linguistic and sociocultural backgrounds may agree in analyzing and interpreting the same artworks, when provided with the same methodological protocols. In order to do this, we involved two external evaluators, who evalu-ated our analyses of the metaphorical images. The evaluations provided by the external evaluators reached a substantial degree of agreement with respect to which interpretations were similar and which interpretations differed. They indicated that, while we seemed to agree on what the image is about (topic), and what are the incongruities and their replacements (expression), the iden-tification of metaphor (conceptualization) and its pragmatic interpretation (communication) remained subject to variability, as the result of differences in the types of knowledge that we applied. These results suggest that topic and expression are more general aspects, based on universal features of human perception and widely shared knowledge, while the dimensions of conceptu-alization and communication are more socioculturally and contextually influ-enced. In other words, our sociocultural knowledge and contextual informa-tion affected the way we conceptualized these metaphors and how we made sense of their pragmatic message.

Based on our discussions and negotiations (2PM), which were in turn based on our individual analyses (1PM), we identified the following types of knowledge that came into play and possibly determined our agreements as well as our disagreements in analyzing the images. More concretely, it has been shown that broader socio-cultural lifeworld knowledge-expectancy is important in interpreting metaphors in street art, as the examples displayed in Figure 12 (Greece as an economic model) and Figure 13 (Greek girl losing bal-loon/euro) demonstrated, respectively. Consequently, pragmatic knowledge is also required, as illustrated in nearly all of our qualitative analyses of the sample of street artworks (e.g. Greece's debt crisis and sociopolitical instability, harsh austerity measures, Europe's migrant/refugee crisis, and consumerism and obesity in the Western world).

However, the interpretation of metaphors depends not only on pan-human world-knowledge and shared sociocultural conventions but also on local contextual knowledge and purely personal experiences, such as political discourse at the time, knowledge of the time-and-site-specificity of the artwork itself, sociopolitical context and emergent situated realities. These results support the claim that, even when provided with the same model and procedure to analyze an image, we construct metaphors relying on our personal knowledge, which varies across interpreters, as clearly displayed in Table 3. In general, our analyses support the claim that street art metaphors are neither completely universal nor completely culture and context-specific, but they embrace aspects of both. Therefore, it is crucial to approach them in a more encompassing model, which acknowledges that world knowledge and cross-cultural experiences, shared sociocultural conventionality, contextual knowledge and highly personal (intersubjective) experiences co-exist in different levels and degrees without excluding one another. The theoretical implications of our empirical analyses are illustrated in a dedicated article, in which we have developed a detailed account for the study of metaphors in street art under the umbrella of cognitive semiotics (Stampoulidis et al., 2019).

A potential limitation of our current investigation is that, being based on manual, extensive and time-consuming analyses that involve several analysts and various rounds of analyses, the empirical investigations reported here are based on a relatively small corpus of 50 street artworks. Further analyses may embrace the methods described and apply them to new materials in order to test the replicability of our methods, as well as to enlarge the amount of data analyzed within this framework.

In sum, Athenian walls are 'witness surfaces' of the crisis that hit Greece almost a decade ago (Chmielewska, 2008: 199). Our qualitative and quantitative analyses of a sample of street artworks have demonstrated that metaphors and other rhetorical figures, such as metonymies, synecdoches, hyperboles and oxymora, emerge at the crossroads of several types of knowledge. Our results lead to the conclusion that the rhetorical understanding of street artworks cannot be explained exclusively based on universal (embodied) experiences and static cross-domain mappings without the help of sociocultural and context-specific components, including sociocultural conventions and contextual knowledge. We anticipate future research on (verbo-)pictorial metaphors adopting the framework, as well as the methodological tools presented, to tackle issues related to metaphors and other rhetorical figures in this form of polysemiotic communication.

and (b) Albertina museum for granting the appropriate permission to use the image, as displayed in Figure 9b. We wish to thank Simon Devylder, Elena Faur, Jordan Zlatev and all members of the division for cognitive semiotics at Lund University for providing helpful feedback on earlier versions of this text. Special thanks are also due to two anonymous reviewers. The collaboration between the two authors has been made possible by a travel grant obtained by Georgios Stampoulidis to invite Marianna Bolognesi to Lund in November 2017. The authors are therefore grateful to the Centre for Languages and Literature at Lund University for sponsoring this collaboration.

## NOTES

1. The field of street art studies has seen a rapidly inter-multidisciplinary academic interest globally during the past decade (for a review of recent research into street art, see Ross et al., 2017).

2. It is important to note that the terminological distinction and conceptual dichotomy between the semiotic systems of language and depiction, especially in the case of street art, are not always clear-cut, as has been argued in certain literature. Therefore, we would like to stress that street art is typically a form of polysemiotic communication and thus we restrict the term unisemiotic either to the case of primarily *depiction-led* or primarily *language-led* graphic representations (see Stampoulidis et al., 2019, for an extensive discussion on these matters).

3. Figure 1(a) is a piece by Bleeps.gr, one of the most prolific Athens-based street artists. His work often reflects current sociopolitical and economic issues, such as merchandise and consumer society, resistance and mass protest as the anti-asphyxiating mask on the top may imply, or even social and power relations. The artwork in question, which is part of the artist's *Window* series, invites its viewers to actively explore the potential interpretations (for a thorough analysis of Bleeps.gr work, see Drakopoulou, 2014, 2015: 332–333).

4. The relationship between metonymy and synecdoche (distinct experiential phenomena) is indeed a complex and highly debated topic in the academic literature on cognitive linguistics and semiotics (see Devylder, 2016; Pérez-Sobrino, 2017; Sonesson, 1989, for reviews).

5.  Diagrammatic iconicity (= iconic ground) is a non-linguistic, cognitive and experiential process (Devylder, 2018; Itkonen, 2005; Jacobson, 1965; Zlatev, 2016) of analogy-making (Gentner and Markman, 1997). As capacities, these processes are universal, part of our human nature, although they can be shaped into culture and context-specific manifestations.

6.  An exemption may constitute the recent study on metaphor and antithesis in a selection of 17 of Banksy's artworks (Poppi and Kravanja, 2019).

7.  We discuss and develop this model in greater detail, addressing new terminology incorporating cognitive semiotic theory in a dedicated theoretical paper (Stampoulidis et al., 2019) and the fact that terms such as 'denotation', 'connotation' and 'pragmatic meaning' are heavily ambiguous (e.g. Sonesson, 1989; Sperber and Wilson, 1995).

8.  For example, in the sentence 'the claims are supported by several arguments', the word *supported* has a contextual meaning (e.g. corroborated, argued, etc.) which differs from the basic meaning of the verb *support* (e.g. to physically hold a concrete entity). Therefore, in that sentence, *supported* is marked for metaphoricity.

9.  Lifeworld is the English translation of the German term *Lebenswelt*, first introduced by the phenomenologist Husserl as an encompassing expression for the world of our experiences (Sonesson, 2014, 2015).

10. The raw data, including the corpus of 50 images, the protocols with the analyses and the data-analytical procedures used for the reliability tests reported in this article are publicly accessible on the Open Science Framework (OSF) at: https://osf.io/jrv5k/ (accessed 27 February 2019).

11. Readers may nonetheless argue that, in this case, there is a sort of personification, discussed in section 3.2, thanks to which a human-like entity (the statue) is used to represent a nation. This alternative interpretation shows how multiple interpretations are possible.

12. In the strict definition of street art (e.g. Bengtsen, 2014; Hoppe, 2014; Ross et al., 2017; Stampoulidis, 2019), sanctioned pieces of art in urban space, such as Figure 9a, are not supposed to be taken under the general term of street art, but rather urban art. However, here we decided to include this piece in our analysis because it is a rather representative example of unisemiotic pictorial synecdoche and is also widely recognizable.

13. To remind the reader, 'Troika' (a Russian word!), consisted of the International Monetary Fund (IMF), the European Union (EU) and the European Central Bank (ECB), who agreed on bailout packages for Greece. Afterwards, the reduction of incomes was unexpectedly announced, and thousands of Greek citizens came out on the streets in order to share their collective frustration (Goutsos and Polymeneas, 2014; Matsaganis, 2013).

14. Our interpretation does not exclude other interpretations that may construct a metaphor, such as Greece/Europe is a concentration camp. However, here we want to emphasize the interaction and incompatibility between the semiotic systems of language with the 'welcoming' passage and the depiction in order to express a verbo-pictorial oxymoron.

15. Banksy's artwork was first created in early 2004, in relation to the Iraq war. The widely circulated date (2002) that one can find on the internet is mistakenly attributed to Banksy's artwork, an issue which would deserve a detailed discussion that, however, would fall outside the scope of this article.

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