Original Article

Fabrizio Macagno*

How can metaphors communicate arguments?

Abstract: Metaphors are considered as instruments crucial for persuasion. However, while many studies and works have focused on their emotive, communicative, and persuasive effects, the argumentative dimension that represents the core of their "persuasiveness" is almost neglected. This paper addresses the problem of explaining how metaphors can communicate arguments, and how it is possible to reconstruct and justify them. To this purpose, a distinction is drawn between the arguments that are communicated metaphorically and interpreted based on relevance considerations, and the ones that are triggered implicitly by the use of a metaphorical expression. In both cases, metaphorical arguments are reconstructed through different patterns of argument, called argumentation schemes (Walton, Reed and Macagno 2008). However, while the purpose of a metaphorical sequence of discourse (called metaphorical move) can guide and justify the reconstruction of the argument that can sufficiently support the intended conclusion in a persuasive move, a more complex analysis is needed for analyzing the additional inferences that a metaphorical move can trigger. These inferences are claimed to represent part of the connotation of the metaphorical expression and can be captured through its most frequent collocations, determinable using some tools of the corpus linguistics.

Keywords: argumentation, dialogue moves, discourse analysis, interpretation, metaphors, persuasion

1 Introduction

Metaphors characterize every persuasive context (Sopory and Dillard 2002: 383), and their rhetorical (persuasive) effect can be considered as their most important manifestation in communication (Steen 2008: 228). Metaphors are commonly

*Corresponding author: Fabrizio Macagno**, Department of Philosophy and Communication, Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, Lisbon, Portugal, E-mail: fabriziomacagno@hotmail.com

considered as representing "an emotive function of language" (Ricoeur 1976: 49), and instruments for evoking emotions and interpersonal intimacy (Bowes and Katz 2015; Casarett et al. 2010; Gibbs 2006; Hopper et al. 1981). Their persuasive function has been analyzed from different cognitive and psychological perspectives (for a review, see Burgers et al. 2016; Sopory and Dillard 2002). Metaphors have been found to help the retrieval of information, increase the comprehension and perception of a text (Read et al. 1990), convey emotional information creating emotional stimuli (Barchard et al. 2013: 333), and result in both cognitive and epistemic effects (Oswald and Rihs 2014).

All these accounts have in common the analysis of persuasion as an effect, consisting in the modification of someone's attitude, mental state, or behavior (O'Keefe 2004) generated by the use of a conceptual structure or a linguistic form – the two dominant approaches to metaphor study. The cognitive and psychological views, however, do not exhaust the field of persuasion. Indeed, the classical study of persuasion started with the investigation of its essential communicative instrument, the enthymeme (the rhetorical argument) (Aristotle, 1991a, *Rhetoric* 1354a 14–16). However, while arguments are the essence of persuasion, and the use of metaphors results in important persuasive effects (Charteris-Black 2005: 15–20), the relationship between arguments and metaphors has been almost neglected. Only few studies have addressed the argumentative nature of metaphors, mostly focusing on their function as parts of arguments (Santibáñez 2010), the analogical argumentative reasoning triggered by them (Macagno and Zavatta 2014), and their use in communicative persuasive contexts (Ervas et al. 2016; Ervas et al. 2018; Oswald and Rihs 2014). However, also in these studies metaphorical arguments have been considered as mere analogies – a strategy for expressing different types of arguments more than an argument in itself (Macagno 2017; Macagno et al. 2017).

The relation between metaphor and arguments becomes extremely problematic and important when we consider metaphors as part of language use, namely when their communicative function becomes the object of study (Steen 2008: 221). At a communicative and pragmatic level, metaphors have a persuasive function or goal because through their use arguments (or components thereof) are conveyed. However, how can a metaphorical utterance communicate one or more specific arguments and, more importantly, what arguments do metaphorical utterances convey? The answer leads to a methodological issue, namely justifying the reconstruction of the arguments that represent the interpretation of metaphorical utterances.

This paper advances an attempt to address the reconstruction of the function of metaphors as triggers of argumentative inferences, presenting an analytical (methodological) proposal. The analytical process for reconstructing metaphorical inferences will be articulated in three steps: 1) the determination of the dialogical function of a metaphorical utterance, 2) the reconstruction of the argument

necessary for pursuing the presumable goal of the utterance, and 3) the reconstruction of the additional (side) arguments evoked by the so-called "connotation" of the vehicle.

2 Metaphors and their communicative effects

According to the Aristotelian account, metaphors are defined as a type of "transference" (Aristotle, 1991b, *Poetics* 1457b, 7–10), where the name of a concept (the vehicle) is used for referring to a different concept (the tenor or target) (Black 1955: 280–288). Metaphors are thus regarded as instruments that bring about a conceptual reorganization, extending the boundaries of a concept (Leech 1981: 37). The transference results in different types of effects, including the cognitive and the rhetorical ones. As Aristotle underscored in his *Rhetoric* when considering the crucial link between pleasure and learning (Moran 2017: 51), metaphors are instruments for making a concept at the same time easier to understand and interesting, due to their "strangeness" caused by their use outside their ordinary contexts (Aristotle, *Rhetoric* 1410b, 10–16). According to this view, strangeness generates marvel, and thus pleasure, which attracts attention and desire to understand new ideas. However, the rhetorical effect of pleasure in understanding can be achieved only when strangeness meets familiarity: metaphors need to be at the same time known by the interlocutor, but foreign and appropriate to the target. This balance, called *kairos* (aptness or opportunity to the specific context) (Kinneavy 2002: 67), involves the triggering of emotions (Aristotle, *Rhetoric* 1408a, 10).

In the literature in the fields of rhetoric and communication, metaphors have been associated with the communicative function of persuading. According to Ricoeur, metaphors are persuasive as they represent a purely emotive function of language, not providing any new information about reality (Ricoeur 1976: 49). The persuasive effects have been also accounted for as resulting from the "transference" that defines as metaphor, namely the "riddle" that is implied by it (Aristotle, *Rhetoric* 1415b, 9), which results in persuasive effects (Ottati and Renstrom 2010; Sopory and Dillard 2002: 385–387).

In pragmatics, the analysis of the communicative effects of metaphors has distinguished the interpretative dimension from the further pragmatic inferences that can be drawn from the use of a metaphorical utterance. Metaphorical utterances (defined as utterances that are either intended to be understood metaphorically or to which it is possible to attribute a metaphorical interpretation, Kittay 1989: 148), are considered as instances of the normal process of utterance interpretation, and more precisely an end of the "literal-loose-metaphorical" continuum (Carston and Wearing 2011; Gibbs 1992; Sperber and Wilson 2008;

Wilson and Carston 2006). This interpretative process concerns a specific circumstance in which the "literal meaning of a predicate is not what the speaker intends to communicate," and this discrepancy can be overcome either by loosening of predicate, or developing specific concepts from properties that are not drawn from the encyclopedic entry of the vehicle. The inferential process used for retrieving the properties that necessary for constructing the "ad hoc" concept (normally referred to as "metaphorical genus," or nameless category, Hesse 1965: 329; Glucksberg and Keysar 1990; Macagno 2017) are distinguished from the contextual effects of metaphor use (Carston 2002: 85–86; Sperber and Wilson 1995: 236). According to this perspective, metaphors trigger both implicatures that are strongly implicated (namely encouraged by the manifestness of the speaker's intention) and a broader or narrower range of weak ones, depending on whether they are more creative or conventional (Pilkington 2000: chap. 4). Weak implicatures are inferences that *can* be drawn from the use of the metaphor, but that are not determinate (the hearer can choose among a range of them), and are not the result of a strong encouragement by the speaker (Sperber and Wilson 1995: 199; Sperber and Wilson 2008).

The relationship between metaphor interpretation, pragmatic inferences, and persuasion is highlighted by the framing function of metaphors. Metaphors are instruments for constructing meaning, and this function is crucial for the understanding of new phenomena (Jaszczolt 2002: 358; Ortony 1975: 45). The transference of understanding implies the selection of the aspects of a phenomenon that are conveyed both directly and indirectly through a metaphor (Schiappa 2003: chap. 9; Semino, Demjén and Demmen 2016). For example, to explain why self-management is important in the context of diabetes care, the high levels of glycemia affecting people with diabetes can be described as pollutants into the blood that need to be kept under control (Rossi et al. submitted). By framing the conceptual domain of *diabetes* in terms of the more familiar conceptual domain of *pollution*, some characteristics related to what the interlocutor already knows about pollution are used to explain the aspect of glycemia that matters most to the patient, namely the dangers and risks resulting from it (Ervas et al. 2018). However, this framing, by highlighting some properties of the target, can hide others that can be relevant, and result in "emergent meanings not directly limited to speakers' or writers' communicative intentions" (Gibbs 1992: 587). For example, a patient can understand that glycemia is a substance that is *only* dangerous to the body, and that is external to it.

The aforementioned accounts underscore a relationship between the communicative effects of metaphorical utterances and the inferences that they trigger or that can be drawn from them. However, the relationship between metaphor use and inferences, and between metaphors, persuasion and understanding is accounted

for mostly in cognitive terms (Oswald and Rihs 2014). If we move from the cognitive level to the analysis of discourse (corresponding to the logical and communicative level), how can we explain how inferences are drawn from metaphorical utterances, and in particular the inferences intended to "persuade" the interlocutor or resulting in this effect?

The passage from the cognitive to the communicative level in the analysis of the persuasive effects of metaphor use hinges on the notion of argument, the essential instrument of persuasion. Arguments are not only logical structures; they are primarily pragmatic elements. An argument is instruments for addressing not only a doubt or a difference of opinions, but also a proposal, an offer, a doubtful piece of information, or a hypothesis (Walton 1990a). Similarly, an explanation is an act aimed at transferring understanding (Walton 2004), but this understanding can concern the content of different types of communicative acts, such as the sharing of information, a proposal, a premise in an argument, a hypothesis, etc. In this sense, the categories of persuasion and explanation (understanding) need to be framed within the bigger picture of the conversational goals of metaphors in order to explain what the latter are used for (Macagno and Rossi, forthcoming). On this perspective, the explanatory and persuasive effects of metaphors need to be analyzed in a dialogical perspective taking into account the conversational goals that they are intended to serve, namely their communicative relevance (Clark 1987; Goatly 2011; Macagno 2018).

3 The conversational functions of metaphors

As mentioned above, Aristotle highlighted how metaphors involve "riddles." From a pragmatic perspective, metaphors have been considered as the solution of an enigma, in which "a new pertinence, a new congruence, is established in such a way that the utterance 'makes sense' as a whole" (Ricoeur, 1976, p. 146). As explained above, the reconstruction of this looser or "ad hoc" meaning has been analyzed considering the "evidence that the communicator intends to convey" a meaning that is not encoded (Sperber and Wilson, 2008), building on assumptions that the speaker makes strongly or weakly manifest. However, this approach is rooted in a cognitive view to relevance, which leads to the problem of determining an objective and assessable way how a metaphor can be relevant, and more importantly to what. At a communicative level, the literature on metaphors has underscored the essential importance of determining the "joint action" (Kovecses 2015: 178–180; Goatly 2011: 292) and the "local context" (Kovecses 2015: 188) to which a metaphorical utterance contributes. To determine what a metaphorical utterance means, it becomes crucial to understand first the conversational goal that it is used to pursue.

3.1 Metaphorical moves

In the literature, the different possible conversational goals of metaphors have been widely acknowledged. Metaphors can be used differently for pursuing a wide range of goals including explaining, summarizing, supporting a viewpoint, illustrating, clarifying or persuading (Cameron 2003; Goatly 2011: 148–167; Semino 2008a). However, the analysis of such goals has never been addressed systematically, nor is the unit of analysis clearly established. The problems that can arise can be explained considering the following metaphorical utterance[1]:

Example 1

> Physician: *"If I know that my blood pressure is, let's say,* **dancing**, *I measure it."*

This excerpt was taken from a healthcare provider-patient interview in the context of diabetes care. The doctor is providing instructions to the patient, and she is using a metaphorical utterance to achieve her goal. However, what is the conversational goal of this excerpt? To capture how she intends to contribute to the conversational setting, we need to recognize that her utterance has a twofold function. On the one hand, it advances an implicit proposal of action ("you should measure your blood pressure"); on the other hand, it provides an explicit argument in support thereof ("you have a dancing blood pressure; if [someone] knows that [his or her] blood pressure is dancing, [s/he] should to measure it"). The utterance modifies the conversational setting in two distinct and interrelated ways: first, it suggests a course of action (which the patient can accept or reject); however, it also provides a reason therefor (which the patient can rebut through a counterargument).

From a dialogical point of view, metaphorical utterances can be regarded as specific instances of dialogue moves, namely sequences (Grosz and Sidner 1986: 177) (corresponding to utterances or aggregates or parts thereof) aimed at proposing a dialogue to the interlocutor (Macagno and Bigi 2017b). A move is the representation of a dialogical intention (corresponding to the general speaker's higher-order intentions), namely the interactional (or, more precisely, communicative) goal (or purpose) that a speaker pursues with his or her linguistic act (Bellack et al. 1966; Merin 1994: 238; Sinclair and Coulthard 1992; Stubbs 1983; Walton 2007; Widdowson 1979: 144). As the literature on moves pointed out since its beginning (Bellack et al. 1966; Labov and Fanshel 1977), moves can be defined more specifically or generally based on the type of interaction to be analyzed. However, while the literature on the analysis of practice-related disciplines has engaged in detailed classifications of moves, the general categories of dialogue

---

1 Example discussed in (Rossi et al. submitted).

moves has been unexplored. In (Macagno and Bigi 2017b; Macagno and Bigi 2020), the taxonomy of dialogue types developed in argumentation and formal models of dialogue (Walton 1989; Walton 1990a) were used to provide a classification of the most generic moves, which are represented as follows (Figure 1).
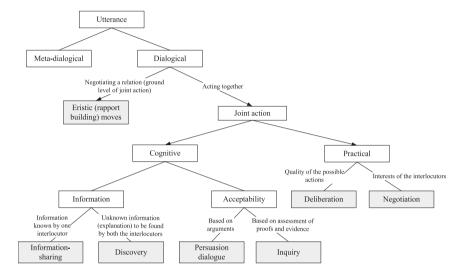

Figure 1: Classification of dialogical intentions.

On this perspective, metaphors are the result of the interpretation, not simply of an utterance (Ricoeur 1976: 49–50), but of a sequence of discourse that is produced to pursue a specific conversational goal, which can be reconstructed based on different types of clues, including the co-text, the conversational setting, and the context (Levinson 1992; Levinson 2012; Sanders 1987; Sanders 2013). Metaphors can be interpreted considering the goal they are used for.

3.2 Types of metaphorical moves

The aforementioned types of metaphorical moves can be illustrated through some illustrative examples, showing the strict interrelation between the conversational setting, the move, and the metaphorical meaning (Rossi et al. submitted). Some cases drawn from a specific corpus of diabetes care interviews will be discussed (Bigi 2014; Macagno and Bigi 2020), in order to reconstruct more easily the context needed for determining the speaker's conversational goal.

The first and most important rhetorical function of metaphors, persuasion, is defined in our aforementioned scheme as the support of the acceptability of a

potentially doubtful viewpoint (Walton 1990a). In Example 2, the dietician is justifying the advice (proposal) of keeping healthy habits also on vacation, as the diabetes can worsen. However, instead of showing how small variations in diet can affect health conditions, she uses a series of metaphors to represent the unreasonable patient's reasoning[2].

Example 2

> *Dietician: "When you go on vacation, you* **carry** *the diabetes with you, you don't* **lock it up** *in Milan when you leave. The diabetes* **stays** *with you."*

Here, metaphors convey the grounded denial of the patient's medical explanation of the functioning of diabetes. This apparent explanation presents a viewpoint (the patient's) with which the interlocutor cannot agree anymore, unless he accepts to be committed to a nonsense. Unlike Example 1, Example 2 expresses one communicative goal – attacking the (possible) view of the addressee – devoting a different turn (and utterance) to advancing the proposal of action.

As shown in Example 1, metaphorical moves can be used for making a proposal, namely suggesting a course of action. A clear example is the following, in which the nurse is indicating a specific course of action (monitoring in a specific way the glycemic values) to the patient[3]:

Example 3

> *Nurse: "For a person who works, I understand that it is more complex. However, we need to do it like I say, a bit* **more reasoned***, as I can* **start off** *with a good value, but what happens after I have eaten?"*

In this example, the second move ("we need to do it like I say, a bit more reasoned") is aimed at making a proposal, and it is followed by a justification (persuasion move).

The classical explanatory function of metaphors serves a specific communicative function in our corpus, namely sharing information and causal relations that can be used for further purposes. The most prototypical use of "explanatory" metaphors are metaphorical moves aimed at sharing knowledge concerning a medical concept. The following example (discussed in Rossi 2016, 42; Ervas et al. 2016, 106) shows the use of multiple metaphors for clarifying a technical concept that could be hardly understood by the patient. The physician uses the "river" and

---

2 Example discussed in (Macagno and Rossi, forthcoming). The original text of this and the further examples, in Italian, has been translated by the author.

3 Example discussed in (Rossi et al. submitted; Macagno and Rossi 2019).

"pollutants" metaphors to inform the interlocutor of the causal relationship between glucose and the human body, describing then two of the most important concepts to understand diabetes functioning and management (glycemia and glycated hemoglobin) through the metaphors of the "size" and the "model."

Example 4

> Physician: "The blood is like **a river with polluting substances**, which we need to keep under control. The glycaemia during the day tells me how I am doing at that specific moment. The glycated hemoglobin tells me the global trend of diabetes. If I go to buy a dress, the glycated hemoglobin is **the size**, and glycaemia is **the model**. The size tells me my condition; I can then customize the model."

In this case, the doctor's goal is to provide a description of the functioning of the diabetes and its indicators that can be accessible to the interlocutor.

The information-sharing goal can concern also other types of information. A frequent case is the use of metaphors for referring to symptoms that the patient needs to recognize, such as the following[4]:

Example 5

> Nurse: "Put your feet up, so that we can examine them. Have you got some annoying sensations such as **tingling**, **burnings**, spasms?"

> Nurse: "Sensations that **some pins are stinging you**?"

The metaphors are used here to request information, explaining it in a way that it is easier for the patient to access it.

Finally, explanatory metaphors are used in information-sharing moves for providing a general idea of the subject matter, which in the medical context considered is aimed at providing basic understanding to interlocutors with little knowledge of medical procedures or concepts. An illustrative example is the following[5]:

Example 6

> Nurse: "<this way of testing the values> gives us also a **more complete picture**, so that we know also how to intervene with the therapy."

The "more complete picture" refers to the combined trends of measurements taken at specific intervals. This metaphorical move shares the information necessary for the patient's assessment of the proposal made.

---

4 Example discussed in (Rossi et al. submitted).

5 Example discussed in (Rossi et al. submitted).

Metaphors are used also in other less frequent types of moves, namely negotiating and rapport building. In the first case, metaphors can be used, for example, for emphasizing the importance of an option or the insignificance of a specific effort, practice, etc. A frequent case is the use of "a little moment" (*un attimino*) (a temporal indication) to express a modal adverb (quickly, rapidly) and thus lead the interlocutor to performing an action that can be refused based on time consumption reasons. Rapport-building metaphorical moves are used to express intimacy or distance, or pointing out the characteristics of the relationship ("right now I have an *agreement* with you," see Macagno and Bigi 2017a)

These examples illustrate the most frequent and most prototypical uses of metaphorical moves in a specific corpus. However, this analysis appears to be incomplete. Metaphorical moves are used to pursue a communicative goal, which in several cases could have been achieved probably more clearly through non-metaphorical moves. Then, why are metaphorical moves used instead? The most evident characteristic of these moves is that their communicative purpose does not exhaust their communicative function. The hypothesis of this paper is that it is possible to explain a fundamental dimension of the additional communicative function of metaphorical moves in terms of arguments. To this purpose, it is useful to analyze first their use for supporting a viewpoint, reconstructing the intended and the side arguments that they trigger.

4 The argumentative uses of metaphors

The relationship between a metaphorical move and its "persuasive" effects can be described by developing the Relevance Theory distinction between strong and weak implicatures. The inferences necessary for supporting the intended conclusion of a metaphorical move (Kittay 1989: 158) need to be distinguished from the further inferences that can be drawn from the use of a metaphor. In this section we will focus on the first type of arguments communicated metaphorically, namely the ones reconstructed by taking into account only their "focus-interpretation" (Reinhart 1976: 391–392), or rather the properties that are relevant to the context (the intended conclusion to be defended) (Macagno 2018).

4.1 Metaphorical arguments: "Locking the diabetes up"

The process of reconstruction of the argumentative function of metaphors can be illustrated through the examples discussed above. In Example 2, the dietician is

providing a reason for the recommendation to continue monitoring the diabetes and complying with dietary instructions:

> Dietician: *"When you go on vacation, you* **carry** *the diabetes with you, you don't* **lock it up** *in Milan when you leave. The diabetes* **stays** *with you."*

This argument instantiates the combination of an argument from cause effect and an argument from consequences, where the latter represents the relation between an event considered as positive or negative and the action that is likely to bring it about or prevent it. In this case, the dietician is attacking the following two-step reasoning that she attributes to the patient. The first inferential step can be reconstructed as a complex argument from cause to effect (Walton et al. 2008: 168):

Argumentation scheme 1: Argument from cause to effect.

PREMISE 1	Generally, if a *person goes on vacation*, *the diabetes will not affect him or her*.
PREMISE 2	Generally, if *the diabetes is not affecting a person on vacation* occurs, then *its negative effects on health* will not occur.
PREMISE 2	The patient is going on vacation.
CONCLUSION	Therefore, *the negative effects of diabetes on his health* will not occur.

This alleged inference justifies the patient's intention not to comply with dietary instructions and other recommendation for controlling the diabetes. This last inferential step can be reconstructed as follows (Walton et al. 2008: 332):

Argumentation scheme 2: Argument from consequences.

PREMISE 1	If *the patient fails to take care of diabetes*, then *the effects of diabetes on his health conditions will worsen*.
NEGATIVE CONSEQUENCE PREMISE	*The worsening of health conditions* is a bad outcome (from the point of view of *the patient*'s goals), and bad outcomes should be *prevented* by not bringing about their causes.
EXCEPTION OF THE CONSEQUENT OF PREMISE 1	The *negative effects of diabetes on his health* will not occur when he is on vacation.
PREMISE 2	The patient is going on vacation.
CONCLUSION	Therefore, *the patient* does not need to *take care of diabetes* (as his health condition may not worsen anyhow).

The physician could have simply denied the first causal arguments without any need of a metaphorical move. The metaphorical expressions add an additional argument, which falls into the scheme of an argument from commitment. The metaphors provide a correspondence between deciding not to monitor the symptoms of diabetes (and complying with the diet) on vacation and deciding not to bring an object (trouble, etc.) in the suitcase. This analogy leads to an evaluation of the speaker's commitment, triggering a reasoning from commitment (Walton et al. 2008: 132):

Argumentation scheme 3: Argument from commitment.

COMMITMENT EVIDENCE PREMISE	In this case, it was shown that *the patient* is committed to *not monitoring the diabetes on vacation* (*A*), according to the evidence of what he said or did.
LINKAGE OF COMMITMENTS PREMISE	If the patient is committed to *A*, it can be inferred by analogy that he is also committed to *the fact that diabetes is an external entity, which can be locked up, abandoned, etc.*
CONCLUSION	In this case, *the patient* is committed to *the fact that diabetes is an external entity, which can be locked up, abandoned, etc.*

The linkage of commitments is achieved through the extended metaphor, which is, however, denied as absurd. The absurdity of the commitments attributed to the patient results in ridiculing his viewpoint, and thus his behavior. This rhetorical and argumentative effect leads the patient to denying his original alleged commitment.

4.2 Metaphorical arguments: "Dancing"

The reconstruction of the argumentative structure underlying the relationship between a metaphor and its purpose can be applied to other cases of persuasive moves. In the first excerpt above (Example 1), we described the persuasive move of a physician who is trying to lead the patient to monitoring his blood pressure:

> Physician: "If I know that my blood pressure is, let's say, **dancing**, I measure it."

Here, the physician is providing a reason for an action, i. e., measuring the blood pressure, expressing the inferential principle connecting a condition to a recommendation. This inference is commonly described as a type of practical argument (Macagno and Walton 2018; Walton 1990b), which can be reconstructed considering only the minimum role of the metaphor, namely indicating a condition of the organism that justifies the need of action.

The metaphor, describing a fluctuating (variable) trend of the patient's blood pressure, is advanced as a support of the recommendation. The metaphorical move thus presents a reason for action based on specific properties of a state of affairs, which – considering the definition(s) of the vehicle and the properties resulting from its dictionary meaning – are purely descriptive. For this reason, the only scheme that can represent the relationship between a state of affairs *not* assessed as positive or negative *nor* defined in terms of the interlocutor's interests and a practical recommendation is a rule-based argument (Macagno and Walton 2018).

Therefore, based on this interpretation, the argument follows from an inference from rules (Walton et al. 2008: 343):

Argumentation scheme 4: Argument from rules.

PREMISE 1	If carrying out types of actions including *measuring the blood pressure more frequently* is the established rule for situations in which *the blood pressure is variable*, then (unless the case is an exception), a patient with a variable blood pressure *must measure the blood pressure more frequently*.
PREMISE 2	Carrying out types of actions including carrying out types of actions including *measuring the blood pressure more frequently* is the established rule for situations in which *the blood pressure is variable*.
PREMISE 3	The patient has a *variable blood pressure*.
CONCLUSION	Therefore, the patient *must measure the blood pressure more frequently*.

According to this interpretation, the physician is providing her suggestion considering a rule of clinical practice, which recommends a certain behavior (measuring) when certain conditions (variable blood pressure) occur. Unlike the reconstruction of Example 2, this analysis, however, does not capture the communicative reason of using a metaphor instead of a similar and less ambiguous lexeme such as "variable" or "fluctuating."

4.3 Metaphorical arguments: "Journey together"

Excerpt 1 represents a limited portion of a long and complex interaction. The doctor continues the dialog by underscoring the importance of the commitment to develop a joint work, pointing out that the "journey together" is indeed a kind of agreement, a joint work.

The communicative goal of Example 1 is thus to provide reasons to the patient for complying with the physician's instructions (making all the necessary measurements and providing the necessary data). The argument that the "journey together" metaphor in this context expresses is thus a relation between an action to be performed by the patient (providing all the data) and a kind of agreement in which both agents are characterized by specific roles and duties. This inferential relation can be reconstructed as an argument from commitment, consisting in reminding the interlocutor of his past commitments (in this case, the acceptance of pursuing a common goal; the common engagement) from which a distinct commitment is normally inferred (complying with the physician's instructions; providing the necessary data). This reasoning can be reconstructed as follows (Argumentation scheme 3, argument from commitment):

COMMITMENT EVIDENCE PREMISE	In this case, it was shown that *the patient* is committed to *a journey together with the physician to treat patient's diabetes*, according to the evidence of what he said or did.
LINKAGE OF COMMITMENTS PREMISE	Generally, when an arguer is committed to *a journey together to treat the diabetes*, it can be inferred that he is also committed to *complying with the physician's instructions* (*and thus, providing all the necessary data*).
CONCLUSION	In this case, *the patient* is committed to *complying with the physician's instructions* (*and thus, providing all the necessary data*).

This type of argument reconstruction can account for the use of the metaphor "journey together," as it results in commitments that need to be complied with. However, also in this case we notice that this reconstruction mirrors only one dimension of the argument, namely the obligations. In this case, the physician could have opted for non-metaphorical expressions for persuading the patient ("We are pursuing a common goal" […] "I am discussing with you, to help you").

The reconstruction of a minimal relevance relation (Macagno 2018) between the vehicle and the purpose of the utterance (Gibbs et al. 2011) can explain the "strong implicatures" that metaphorical utterances license, but cannot explain fully the argumentative effects of some metaphors. The arguments that result from this level of understanding do not exhaust the argumentative effect of the metaphorical move: if the latter were only a strategy for expressing an argument that can be conveyed through non-metaphorical means, there wouldn't be much reason to use metaphor in the first place (Reinhart 1976: 392). In some cases, "focus interpretation" results in a reconstruction of the argument that the speaker intended to convey that is perceived as partial, or almost distorted. The metaphor is regarded to add an argumentative dimension that is "weakly" communicated, which needs to be retrieved by considering a fundamental aspect of metaphorical meaning, namely the "system of associated commonplaces" (Black 1955: 287).

5 Metaphors and connotation

Aristotle (Aristotle, *Rhetoric* 1406b, 6) pointed out how the rhetorical effectiveness of a metaphor corresponds to its capacity to convey an emotion or judgment, which in turn depends on its appropriateness to the context and the audience's background (Aristotle, *Rhetoric* 1408a, 10–15). The effective use of a metaphorical expression is thus constrained by the inferences that the interlocutors can draw

from it – it would be inappropriate to metaphorically transfer a word commonly used to indicate a despised state of affairs to refer to a praiseworthy event. The vehicle carries with it a previous context of use, a "connotation" that can explain the inferences that can be weakly drawn from its metaphorical use.

5.1 Metaphors, culture, and inferences

Black described the process of metaphor interpretation as based on the system of commonplaces that are commonly associated with the referent of the vehicle, which can vary across cultures (Black 1955: 287). The important aspect of metaphor effectiveness, observed the philosopher, "is not that the commonplaces shall be true, but that they should be readily and freely evoked." This theory can be regarded from two distinct perspectives. On the one hand, it is a theory of metaphor processing, aimed at explaining how metaphorical meaning is interpreted. On the other hand, it can be considered as a method for justifying a metaphorical interpretation, namely the result of metaphorical processing. On this perspective, the interpretation of the speaker's metaphorical meaning depends also (in addition to the intended purpose of the move that can be retrieved from the textual clues) on the common inferences that can be drawn from the use of the vehicle in a given culture (Deignan 2003; Gibbs and Cameron 2008: 67; Kövecses 2003), which can be more or less relevant or accessible in a specific context (Dobrzyńska 1995: 596).

    Metaphor understanding has been shown to be essentially related to culture, or more precisely to sets of "conceptual mappings" that in many cases pre-exist communication, structuring "our thinking, reasoning, and understanding" (Gibbs 1992: 596). The consequence of this relation is that metaphors can be interpreted correctly only if the interlocutors share the needed common ground, which can be broader or narrower. As Gibbs put it (Gibbs 1987: 574):

> As with ambiguous language, the search for the acceptable interpretations of most metaphors will involve a large range of cultural conventions and mutually held beliefs, some of which may be quite idiosyncratic to particular people and contexts. […] Thus, if two people use the word *teapotted* to mean something unique such as 'rubbing the back of someone's leg with a teapot', then the expression "John *teapotted* the policeman" can only by interpreted correctly by people who share this intimate knowledge.

The cultural dimension of metaphors and metaphor interpretation can become a problem when different cultures meet, as "the 'images' different languages and cultures employ can be extremely diverse" (Kövecses 2005; Kövecses 2010; Kovecses 2015: 3; Musolff 2015).

The inferential dimension of metaphors has been developed in depth by the Relevance Theory, according to which a metaphorical utterance results in a "wide array of contextual implications" that can be retained or discarded depending on their cognitive effects (Carston 2002: 85; Wilson and Carston 2006; Sperber and Wilson 2008). However, it is unclear how a metaphorical expression can trigger these inferences, or rather, how it is possible to represent in an objective way the inferences that are activated.

5.2 Metaphors and connotation

The stereotypical associations that are evoked by a metaphorical utterance can be analyzed considering the notion of connotation (Dobrzyńska 1995: 597; Kittay 1989: 147–149). Connotation can be defined as a meaning of a term that is different from its lexicographic definition, and that is commonly associated with its denotation. A strict formulation of this definition is the following (Mel'čuk 2015: 283; Mel'čuk and Iordanskaja 2009):

A meaning 'σ' is a lexical connotation of an LU L of language L if and only if 'σ' satisfies simultaneously Conditions 1–2:
1. 'σ' is associated by language L with the denotation of L and has observable linguistic manifestations in L.
2. 'σ' is not part of L's lexicographic definition.

This definition involves the linguistic manifestation (such as in phrasemes or derivatives) of a lexical connotation. This requirement excludes encyclopedic connotations that are bound to a culture more than a linguistic system. However, this criterion underscores an aspect of connotation that can provide an objective criterion for justifying it, namely its manifestation.

According to the broader accounts of connotation (for an overview, see Garza-Cuarón, 1991, pp. 230–235), connotative meaning is described as speech meaning, which can derive from different sources (Kerbrat-Orecchioni 1977: 167) and becomes integrated at a cultural level (Garza-Cuarón 1991: 213–214). The context in which a lexical item is used can become culturally associated with the use of a specific term, which acquires a more stable connotative meaning (Kerbrat-Orecchioni 1977: 119). In a sense, the lexical items thus "encapsulate" prior cultural knowledge and contexts of experience (Stubbs 2001: 3–4); as Kecskes put it, "they carry context (prior context), encoding the history of their prior use (prior context) in a speech community" (Kecskes 2008; Kecskes 2013; Kecskes and Zhang 2009). In particular, Kecskes points out a dimension of meaning (which involves "word-specific elements" and "culture-specific conceptual properties," see Cruse 1992;

Kecskes 2003: 40–43) distinct from the semantic (definitional, or better conceptual) one.

We can draw a correspondence between the first dimension (including both lexicalized and cultural properties of a lexical item) and the "emotive meaning," and between the second (conceptual) dimension and the "descriptive meaning." They jointly constitute what Kecskes refers to as "coresense," namely "a summary of the most familiar, regular, typical, and (generally, but not always) frequent uses of a word" reflecting the history of use of the word (Kecskes 2013: 141) – its "diachronic pragmatics" (Kecskes 2019: 503–504). This "mini-world or universe of discourse" created by the use of a word (Stubbs 2001: 7) mirrors its conventions of usage, namely how it is used for accomplishing specified purposes (Gibbs 1984: 296).

The prior contexts can be conceived as sets of possible inferences that can be drawn from the use of a word (cf. the notion of "schemata" in Stubbs 2001: 7–10). The repeated use of a word to pursue a specific conclusion can crystallize (Jeshion 2016: 134) the premise leading to the intended conclusion, which is commonly referred to as "stereotype" in philosophy of language and "warrant" or "*topos*" in logic and dialectics. This account captures the intuition developed by Ducrot in his theory of *topoi*. According to Ducrot, an utterance can be described as a bundle of *topoi*, namely argumentative connections representing instructions such as "uttering *x*, the conclusion *y* is supported" (Ducrot 1979; Anscombre and Ducrot 1983). As a consequence, the "connotation" of words can be described not starting from a previous knowledge of reality (their "descriptive meaning") but considering their discursive (argumentative) potential (Ducrot 1984; Ducrot 1993). These inferences are not necessarily linguistically manifested. However, they are commonly associated with the use of a lexical item (Kecskes 2019), so that the use of the latter triggers inferences that are part of the common ground of the interlocutors.

6 Metaphors as triggers of implicit arguments

The arguments that are necessary for interpreting the dialogical (discursive) function of a metaphorical utterance do not exhaust the inferential "power" thereof. As Davidson underscored, an account of metaphorical inferences needs to explain how the "original" meaning of a vehicle remains active in a metaphorical setting (Davidson 1978: 34). In our specific perspective, it is necessary to explain how a vehicle can trigger inferences that are not directly relevant to the conclusion that it is used to support, and that are commonly triggered by its use. The notion of connotation can provide a useful starting point: the frequent use of an expression in specific contexts develops and crystallizes a range of inferences that remain active in a metaphorical uses (see Carston 2010). The problem is to determine

objectively what these inferences are: to this purpose, the tools of corpus linguistics (Semino 2008b; Semino et al. 2015) will be used for establishing the most frequent contexts of use of a vehicle in a specific language, and thus the common conclusions it is used to support.

6.1 Connotation and implicit premises in the "dancing" metaphor

In our Example 1, the conversational effects of describing the fluctuating blood pressure as "dancing" go beyond the indication of a practical argument from rules. One of the additional argumentative effects can be reconstructed considering the common associations that "dancing" has in similar contexts, and in particular the common inferences that are drawn from it. If we analyze the most common contexts in which this metaphor occurs in Italian, we notice that it is commonly associated with negative events. To assess this hypothesis, a corpus linguistic package, Sketch Engine.7 was used to perform a quantitative investigation of a corpus (in this case, the Italian corpus available in the software plus an additional corpus obtained through a manual search on Google using the key phrase "*è ballerina/a*" (to be dancing) in the construction copula + adjective phrase). 106 occurrences in total were found, of which 40 are used descriptively to indicate instability (the light is dancing; the Earth is dancing …) and thus are argumentatively neutral, while all the remaining 66 occurrences are argumentatively used to trigger a negative evaluation. This negative judgment is usually specified by distinct strategies:

- Semantic-pragmatic markers, and in particular the adversative conjunction "but" conjoining two evaluative clauses (Anscombre and Ducrot 1977; Ducrot 1972) (signaling an implicit conclusion that is contradicted by the second conjunct). *Example:* "*the heart of a priest is not dancing, but it is pierced and firm in our Lord.*"
- Elaborations (Lascarides and Asher 2008) of metaphorical moves providing negative evaluations, or metaphorical moves of elaborations following sequences expressing negative evaluations. *Example:* "*also my health is dancing and cannot go too far away from the plane where I live*"; "*The defense continues to be dancing, five goals in two matches are a lot.*"
- Corrections (Lascarides and Asher 2008) of negative judgments potentially triggered by metaphorical moves. *Example:* "[…] *people think that I am a bit dancing in romantic relations, but it is not true. I am an artist, I live of and for love.*"

The most typical negative judgment is related to the value of stability (unstable, therefore unreliable), focus (not concentrated, therefore weak or subject to errors), certainty (uncertain, therefore dangerous), or fragility (weak, therefore dangerous). In this sense, the metaphor is commonly associated with negative evaluations that in the case of pressure can affect the dimension of the stability and reliability of health conditions (the pressure is not stable and thus the health condition weak or fragile), and lead to possible action-oriented judgments (the pressure can be dangerous). The "dancing" metaphor thus triggers an implicit argument that is based on the negative assessment of a state of affairs and leads to a desire of action. This inference can be represented as follows (See Figure 2):
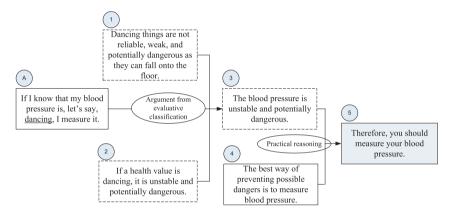

Figure 2: Argumentative structure of metaphor use – "dancing".

In this figure, the metaphorical move (A) combines with commonly shared evaluative presumptions that are associated with "dancing," namely the implicit premises (1) and (2). This implicit argument from evaluative classification (Macagno and Walton 2018) leads to the conclusion (3), which is in turn combined with the consequent of (A) (I measure it) in premise (4). This type of reasoning can be reconstructed as a practical argument (Walton, Reed and Macagno 2008: 94–96) based on a possible negative state of affairs which can occur in the future and leads to the ultimate conclusion (5).

This type of argumentative reconstruction captures one of the possible inferences that "dancing" can trigger. An additional dimension characterizing the "dancing" metaphor is its use for triggering emotions. In the corpus, the metaphor is used for expressing or reporting fear situations (17 instances) and contempt (10 instances). For example, "dancing" is used to describe a condition that justifies the fear of going far away ("my health is dancing"), of being betrayed ("in addition to this worry, the minister unwillingly suggests that the majority in the Parliament is

dancing"), or of serious consequences ("the hearth is dancing and diseases can attack a debilitated organism").

This type of inference, normally associated with the use of "dancing" to describe health conditions, can be represented as an argument from fear appeal (Walton et al. 2008: 102–105):

Argumentation scheme 5: Argument from fear appeal.

PREMISE 1	If you are not acting in an appropriate way, then *your blood pressure will continue to be dancing*.
PREMISE 2	*A dancing blood pressure* is very bad for you.
PREMISE 3	Therefore, you ought to prevent *a dancing blood pressure* if possible.

In this sense, the metaphor can involve an additional and implicit action-oriented element, namely the emotion commonly evoked by similar contexts of use.

6.2 Connotation and implicit premises in the "journey together" metaphor

This analysis of the (argumentative) metaphorical effects in terms of implicit arguments triggered by the connotation of a lexical item used metaphorically can be used to analyze another persuasive metaphorical move that we took into account at Section 3.3 above. The concordance analysis on the same corpus as the one used for Example 1 showed that out of 1,125 occurrences of the nominal phrase "journey together," 1,058 were metaphorical. In these occurrences, the word having a higher T-score is "our" (5.84), indicating a non-casual association between the phrase and the word. The qualitative analysis was conducted by detecting in the first 300 occurrences the most frequent lexemes (at least 2 occurrences) that can alone lead to a metaphorical interpretation of the phrase. The frequency of such lexemes in the whole corpus was then searched automatically. We selected the terms occurring in the same context (constituted of 6 words preceding or following the metaphorical phrase) with a frequency higher than 1%, amounting to a total of 31 words. The most frequent terms (walk - 10%, and road - 7%) constitute extended metaphors together with "journey together." The remaining 29 words were analyzed as belonging to 3 distinct semantic fields:

- "Personal/intimate relation" (meeting, life, friends, sharing, story, partner, love, couple, family, relation, community, trust, hearth) (54% of occurrences);
- "Decision" (decision, choice, project, goal, change) (14%);
- "Help" (help, assist, face, give a hand, support, problem, pain) (13%).

From this analysis, we can infer that these concepts are the ones normally associated with the metaphor "journey together," which can be thus evoked by its use.

If we analyze the first metaphor together with its variant, used by the physician (the "journey with you"), we notice that the argument from commitment that justifies the conversational goal of the move is not the only one. The two metaphors do not describe only a commitment, but also a situation in which the interlocutor's dedication to the joint activity is the result of a common value (for example, respect and altruism in case of "working together;" friendship and altruism in case of "journey together"). By using these metaphors, the physician indirectly appeals to a personal relation and a common project. The commitment of the patient thus stems from a set of values that is likely to share. This type of reasoning can be represented as follows (Walton et al. 2008: 321):

Argumentation scheme 6: Argument from values.

PREMISE 1	The value of *having a joint project of helping the patient* is positive as judged by *the patient*.
PREMISE 2	The fact that the value of *having a joint project of helping the patient* is positive affects the interpretation and therefore the evaluation of *providing all the necessary data* instantiating it.
CONCLUSION	The value of *having a joint project of helping the patient* is a reason for retaining commitment to *providing all the necessary data*.

In this case, we notice that the journey metaphor (further specified through the final clause "to help you") provides an argumentative premise (the value of "having a joint project") that is not explicit in the text. In this sense, the metaphor adds an implicit premise that modifies the argumentative structure of the move.

7 Non-persuasive metaphorical moves and their argumentative potential

The argumentative analyses developed in Sections 3 and 5 can be used for analyzing also a fundamental dimension of the communicative effects of metaphors that are not used in persuasive moves, namely that are not directly intended to express an argument. Some of the metaphorical moves that do not directly communicate an argument can lead to an inference that can be perceived as intended or not intended by the speaker, which can affect the communication in different ways. These side-arguments triggered by the use of a vehicle need to be considered as an argumentative potential of the metaphor, namely conclusions that *can* be drawn only based on the common associations with a specific lexical item.

For example, in our Example 3, the metaphorical move was aimed at making a proposal (recommendation). The vehicle ("reasoned") was used for describing the action that the patient was demanded to perform (self-monitoring his glycemic values):

> *Nurse: "For a person who works, I understand that it is more complex. However, we need to do it like I say, a bit* **more reasoned***, as I can* **start off** *with a good value, but what happens after I have eaten?"*

This metaphor, however, can trigger indirect (not "manifest") argumentative effects. To explore this hypothesis, its collocations were analyzed according to the aforementioned methodology. The collocation candidates (in the Italian corpus) of this lemma having the highest statistical association values (log-dice) (Rychlý 2008), excluding its use as a noun phrase "Annotated bibliography", are "aware" (frequency: 92), "reasonable" (frequency: 60), "thoughtful" (frequency: 25), and "instinctive" (frequency: 11). In all these cases, most of the uses of the term are related to a choice or a decision (54%), either for describing it directly by conveying a positive judgment, or for evaluating positively the action on which a choice can be made (a reasoned use; a reasoned purchase). The other frequent use of the term is for evaluating a state of affairs positively (34%), or negatively by denouncing the lack of this characteristic (8%). "Reasoned" is thus used in contrast with the notions of "emotion (in the sense of instinct)," "ignorance," and other concepts that are in conflict with balance, order, and attention. "Reasoned" thus appear as an evaluative term used in argumentative contexts for promoting a course of action or praising a state of affairs.

In our example, this "connotation" is used to trigger two distinct arguments. On the one hand, the physician is qualifying the method for making the measurements (profiles) in a way that leads the patient to retaining his commitments to it (he cannot deny an action that is reasoned). On the other hand, she is attacking implicitly the way the patient is measuring his values (not reasoned enough). In both cases, the argument can be reconstructed as implicit argument from values (Argumentation scheme 6), which in the second (more complex) inference can be represented as follows:

PREMISE 1	The value of *associated with by* "*reasoned*" *(acting thoughtfully, reasonably, and in an organized way, as opposed to confusingly or disorderly)* are positive as judged by *the patient*.
PREMISE 2	The fact that the values *associated with by* "*reasoned*" are positive affects the interpretation and therefore the evaluation of *the way the patient is doing his profiles,* which is described as not characterized by it.
CONCLUSION	The values *associated with by* "*reasoned*" are a reason for rejecting the commitment to *the way the patient is doing his profiles*.

This metaphor is thus a trigger of evaluative inferences, which can justify the proposal made by the nurse affecting the patient's assessment of the past and proposed measurement procedure in a twofold way.

Metaphors can trigger also implicit, side-arguments in metaphorical moves aimed at sharing information. In Example 4 above, the physician is using the "river" metaphor, establishing an analogy between "polluting substances" and glucose. Also in this case, the metaphor is not neutral from an evaluative point of view. Among the most frequent adjectives co-occurring with the vehicle in the Italian corpus, we can find only three that can be used to express a value judgment, namely "dangerous," "harmful," and "toxic," which lead to a negative assessment of the state of affairs that is characterized by having or producing "polluting substances." This connotation is not excluded by the metaphorical use of the noun phrase, which can trigger an implicit evaluation of the patient's condition (if my blood is polluted, then it is dangerous/toxic), and possible inferences from consequences (if my blood is polluted, then I am in danger/I can suffer damages).

8 Conclusion

This paper advances the theoretical grounds of a methodological proposal – whose reliability needs to be confirmed by further empirical studies – for analyzing the arguments conveyed by metaphors, addressing the complex relationship between the persuasive function of metaphors and the arguments that they can convey starting from the notions of persuasion and conversational relevance. In particular, it investigates how the contextual effects of metaphor uses explained by the Relevance Theory in terms of strong and weak implicatures can be analyzed at a non-cognitive level. The problem is to develop a method for reconstructing and justifying the arguments directly and indirectly triggered by metaphorical moves on linguistic evidence that can make such reconstructions replicable.

The definition of metaphorical move (Kittay 1989: 148) was shown to provide a crucial element for reconstructing the patterns of arguments that metaphors can be used to convey. By identifying the generic goal of a move and the specific conclusions that it leads to, it is possible to determine the structure of the arguments (Macagno 2017; Macagno 2018). However, the reconstruction of the "necessary" argumentative relation (namely the one guaranteeing the relevance of the metaphorical expression) explains only one of the arguments that metaphorical moves *can* trigger. To retrieve the arguments "weakly" implied by metaphorical moves, it is necessary to adopt a bottom-up approach (Kittay 1989: 158), investigating the meanings analogically related to the vehicle and compatible with the relevance constraints. To this purpose, the notion of connotation was explored, to show the

relationship between a word's prior contexts of use and its potential inferences. The contexts frequently associated with a word's use thus also define its inferential potential. In this sense, the reconstruction of metaphorical meaning was shown to be not only constrained by the general and specific purpose of the metaphorical move, but also by the connotation of the vehicle.

References

Anscombre, Jean-Claude & Oswald Ducrot. 1977. Deux mais en français?. *Lingua* 43(1). 23–40.

Anscombre, Jean-Claude & Oswald Ducrot. 1983. *L'argumentation dans la langue*. Bruxelles, Belgium: Pierre Mardaga.

Aristotle. 1991a. Rhetoric. In Jonathan Barnes (ed.), *The complete works of Aristotle*, vol. II. Princeton, NJ: Princeton University Press.

Aristotle. 1991b. Poetics. In Jonathan Barnes (ed.), *The complete works of Aristotle*, vol. II. Princeton, NJ: Princeton University Press.

Barchard, Kimberly A, Hensley Spencer, Emily D Anderson & Holly E Walker. 2013. Measuring the ability to perceive the emotional connotations of written language. *Journal of personality assessment* 95(4). 332–342.

Bellack, Arno, Kliebard Herbert, Hyman Ronald & Jr. Frank Smith. 1966. *The language of the classroom*. New York, NY: Teachers College Press.

Bigi, Sarah. 2014. Healthy reasoning: The role of effective argumentation for enhancing elderly patients' self-management abilities in chronic care. In Giovanni Riva, Paolo Ajmone Marsan & Claudio Grassi (eds.), *Active ageing and healthy living: A human centered approach in research and innovation as source of quality of life*, 193–203. Amsterdam, Netherlands: IOS Press.

Black, Max. 1955. Metaphor. *Proceedings of the Aristotelian society, new series* 55. 273–294.

Bowes, Andrea & Albert Katz. 2015. Metaphor creates intimacy and temporarily enhances theory of mind. *Memory and Cognition* 43(6). 953–963.

Burgers, Christian, Elly A. Konijn & Gerard J. Steen. 2016. Figurative framing: Shaping public discourse through metaphor, hyperbole, and irony. *Communication Theory* 1–21. https://doi.org/10.1111/comt.12096.

Cameron, Lynne. 2003. *Metaphor in educational discourse*. London, UK: Continuum.

Carston, Robyn & Catherine Wearing. 2011. Metaphor, hyperbole and simile: A pragmatic approach. *Language and Cognition* 3(2). 283–312.

Carston, Robyn. 2002. Metaphor, ad hoc concepts and word meaning - more questions than answers. *UCL Working Papers in Linguistics* 14(2002). 83–105.

Carston, Robyn. 2010. Metaphor: Ad hoc concepts, literal meaning and mental images. *Proceedings of the Aristotelian Society* 110(3pt3). 295–321. https://academic.oup.com/aristotelian/article-lookup/doi/10.1111/j.1467-9264.2010.00288.x.

Casarett, David, Amy Pickard, Jessica M. Fishman, Stewart C. Alexander, Robert M. Arnold, Kathryn I. Pollak & James A. Tulsky. 2010. Can metaphors and analogies improve communication with seriously ill patients? *Journal of Palliative Medicine* 13(3). 255–260.

Charteris-Black, Jonathan. 2005. *Politicians and rhetoric: The persuasive power of metaphor*. New York, NY: Palgrave.

Clark, Herbert. 1987. Relevance to what? *Behavioral and Brain Sciences* 10(4). 714–715.

Cruse, Alan. 1992. Antonymy revisited: Some thoughts on the relationship between words and concepts. In Adrienne Lehrer & Eva Feder Kittay (eds.), *Frames, fields, and contrasts*, 289–306. Hillsdale, NJ: Lawrence Erlbaum Associates.

Davidson, Donald. 1978. What metaphors mean. *Critical Inquiry* 5(1). 31–47.

Deignan, Alice. 2003. Metaphorical expressions and culture: An indirect link. *Metaphor and Symbol* 18(4). 255–271.

Dobrzyńska, Teresa. 1995. Translating metaphor: Problems of meaning. *Journal of pragmatics* 24(6). 595–604.

Ducrot, Oswald. 1972. *Dire et ne pas dire*. Paris, France: Hermann.

Ducrot, Oswald. 1979. Les lois de discours. *Langue française* 42. 21–33.

Ducrot, Oswald. 1984. *Le dire et le dit*. Paris, France: Minuit.

Ducrot, Oswald. 1993. Les topoi dans la "Théorie de l'argumentation dans la langue." In Christian Plantin (ed.), *Lieux communs, topoi, stéréotypes*, 233–248. Paris, France: Kimé.

Ervas, Francesca, Marcello Montibeller, Maria Grazia Rossi & Pietro Salis. 2016. Expertise and metaphors in health communication. *Medicina & Storia* 16(9–10). 91–108.

Ervas, Francesca, Elisabetta Gola & Maria Grazia Rossi. 2018. Argumentation as a bridge between metaphor and reasoning. In Steve Oswald, Thierry Herman & Jérôme Jacquin (eds.), *Argumentation and language – linguistic, cognitive and discursive explorations*, 153–170. Cham, Switzerland: Springer.

Garza-Cuarón, Beatriz. 1991. *Connotation and meaning*. Berlin, Germany: Walter de Gruyter.

Gibbs, Raymond & Lynne Cameron. 2008. The social-cognitive dynamics of metaphor performance. *Cognitive Systems Research*. Elsevier 9(1–2). 64–75.

Gibbs, Raymond, Markus Tendahl & Lacey Okonski. 2011. Inferring pragmatic messages from metaphor. *Lodz Papers in Pragmatics* 7(1). 3–28.

Gibbs, Raymond. 1984. Literal meaning and psychological theory. *Cognitive Science* 8(3). 275–304.

Gibbs, Raymond. 1987. Mutual knowledge and the psychology of conversational inference. *Journal of Pragmatics* 11(5). 561–588.

Gibbs, Raymond. 1992. When is metaphor? The idea of understanding in theories of metaphor. *Poetics Today* 13(4). 575–606.

Gibbs, Raymond. 2006. Metaphor interpretation as embodied simulation. *Mind and Language* 21(3). 434–458.

Glucksberg, Sam & Boaz Keysar. 1990. Understanding metaphorical comparisons: Beyond similarity. *Psychological Review* 97(1). 3–18.

Goatly, Andrew. 2011. *The language of metaphors*. London, UK: Routledge.

Grosz, Barbara & Candace Sidner. 1986. Attention, intentions, and the structure of discourse. *Computational Linguistics* 12(3). 175–204.

Hesse, Mary. 1965. Aristotle's logic of analogy. *The Philosophical Quarterly* 15(61). 328–340.

Hopper, Robert, Mark L Knapp & Lorel Scott. 1981. Couples' personal idioms: Exploring intimate talk. *Journal of Communication* 31(1). 23–33.

Jaszczolt, Kasia. 2002. *Semantics and pragmatics: Meaning in language and discourse*. Harlow, UK: Pearson.

Jeshion, Robin. 2016. Slur creation, bigotry formation: The power of expressivism. *Phenomenology and Mind* 11. 130–139.

Kecskes, Istvan & Fenghui Zhang. 2009. Activating, seeking, and creating common ground: A socio-cognitive approach. *Pragmatics & Cognition* 17(2). 331–355.

Kecskes, Istvan. 2003. *Situation-bound utterances in L1 and L2*. Berlin, Germany, and New York, NY: Mouton de Gruyter.

Kecskes, Istvan. 2008. Dueling contexts: A dynamic model of meaning. *Journal of Pragmatics* 40(3). 385–406.

Kecskes, Istvan. 2013. *Intercultural pragmatics*. Oxford, UK: Oxford University Press.

Kecskes, Istvan. 2019. Impoverished pragmatics? The semantics-pragmatics interface from an intercultural perspective. *Intercultural Pragmatics* 16(5). 489–515.

Kerbrat-Orecchioni, Catherine. 1977. *La connotation*. Lyon, France: Presses Universitaires de Lyon.

Kinneavy, James. 2002. Kairos in classical and modern rhetorical theory. In Phillip Sipiora & James Baumlin (eds.), *Rhetoric and kairos: Essays in history, theory, and praxis*, 58–76. Albany, NY: SUNY Press.

Kittay, Eva Feder. 1989. *Metaphor: Its cognitive force and linguistic structure*. Oxford, UK: Oxford University Press.

Kövecses, Zoltán. 2003. *Metaphor and emotion: Language, culture, and body in human feeling*. Cambridge, UK: Cambridge University Press.

Kövecses, Zoltán. 2005. *Metaphor in culture: Universality and variation*. Cambridge, UK: Cambridge University Press.

Kövecses, Zoltán. 2010. Metaphor, language, and culture. *DELTA: Documentação de Estudos em Lingüística Teórica e Aplicada* 26. 739–757.

Kovecses, Zoltan. 2015. *Where metaphors come from: Reconsidering context in metaphor*. Oxford, UK: Oxford University Pres.

Labov, William & David Fanshel. 1977. *Therapeutic discourse: Psychotherapy as conversation*. New York, NY: Academic Press.

Lascarides, Alex & Nicholas Asher. 2008. Segmented discourse representation theory: Dynamic semantics with discourse structure. In Harry Bunt & Reinhard Muskens (eds.), *Computing meaning*, 87–124. Dordrecht, Netherlands: Springer.

Leech, Geoffrey. 1981. *Semantics: The study of meaning*. Harmondsworth, UK: Penguin.

Levinson, Stephen. 1992. Activity types and language. In Paul Drew & John Heritage (eds.), *Talk at work: Interaction in institutional settings*, 66–100. Cambridge, UK: Cambridge University Press.

Levinson, Stephen. 2012. Action formation and ascription. In Jack Sidnell & Tanya Stivers (eds.), *The handbook of conversation analysis*, 101–130. Chichester, UK: John Wiley & Sons, Ltd.

Macagno, Fabrizio & Sarah Bigi. 2017a. Understanding misunderstandings. Presuppositions and presumptions in doctor-patient chronic care consultations. *Intercultural Pragmatics* 14(1). 49–75.

Macagno, Fabrizio & Sarah Bigi. 2017b. Analyzing the pragmatic structure of dialogues. *Discourse Studies* 19(2). 148–168.

Macagno, Fabrizio & Sarah Bigi. 2020. Analyzing dialogue moves in chronic care communication – Dialogical intentions and customization of recommendations for the assessment of medical deliberation. *Journal of Argumentation in Context*. Advance online publication.

Macagno, Fabrizio & Douglas Walton. 2018. Practical reasoning arguments: A modular approach. *Argumentation* 32(4). 519–547.

Macagno, Fabrizio & Maria Grazia Rossi. 2019. Metaphors and problematic understanding in chronic care communication. *Journal of Pragmatics* 151. 103–117.

Macagno, Fabrizio & Maria Grazia Rossi. Forthcoming, 2020. The communicative functions of metaphors between explanation and persuasion. In Fabrizio Macagno & Alessandro Capone (eds.), *Inquiries in philosophical pragmatics. Theoretical developments*. Cham, Switzerland: Springer.

Macagno, Fabrizio & Benedetta Zavatta. 2014. Reconstructing metaphorical meaning. *Argumentation* 28(4). 453–488.

Macagno, Fabrizio, Douglas Walton & Christopher Tindale. 2017. Analogical arguments: Inferential structures and defeasibility conditions. *Argumentation* 31(2). 221–243.

Macagno, Fabrizio. 2017. The logical and pragmatic structure of arguments from analogy. *Logique et Analyse* 60(240). 465–490.

Macagno, Fabrizio. 2018. Assessing relevance. *Lingua* 210–211. 42–64.

Mel'čuk, Igor & Lidija Iordanskaja. 2009. Connotation (in linguistic semantics). In Sebastian Kempgen, Peter Kosta, Tilman Berger & Karl Gutschmidt (eds.), *Die slavischen sprachen* (*ein internationales handbuch zu ihrer struktur, ihrer geschichte und ihrer erforschung*), 875–882. Berlin, Germany, and New York, NY: Walter de Gruyter.

Mel'čuk, Igor. 2015. *Semantics: From meaning to text*. Vol. 3. Amsterdam, Netherlands-Philadelphia, PA: John Benjamins Publishing Company.

Merin, Arthur. 1994. Algebra of elementary social acts. In Savas Tsohatzidis (ed.), *Foundations of speech act theory*, 242–272. London, UK: Routledge.

Moran, Richard. 2017. Artifice and persuasion: The work of metaphor in the rhetoric. In Richard Moran (ed.), *The philosophical imagination: Selected essays*, 49–60. Oxford, UK: Oxford University Press.

Musolff, Andreas. 2015. Metaphor interpretation and cultural linguistics. *Language and Semiotic Studies* 1(3). 35–51.

O'Keefe, Daniel. 2004. Trends and prospects in persuasion theory and research. In Robert Gass & John Seiter (eds.), *Readings in persuasion, social influence, and compliance gaining*, 31–43. Boston, MA: Pearson Allyn & Bacon.

Ortony, Andrew. 1975. Why metaphors are necessary and not just nice. *Educational Theory* 25(1). 45–53.

Oswald, Steve & Alain Rihs. 2014. Metaphor as argument: Rhetorical and epistemic advantages of extended metaphors. *Argumentation* 28(2). 133–159.

Ottati, Victor & Randall Renstrom. 2010. Metaphor and persuasive communication: A multifunctional approach. *Social and Personality Psychology Compass* 4(9). 783–794.

Pilkington, Adrian. 2000. *Poetic effects: A relevance theory perspective*. Amsterdam, Netherlands-Philadelphia, PA: John Benjamins Publishing.

Read, Stephen J, Ian L. Cesa, David K. Jones & Nancy L. Collins. 1990. When is the federal budget like a baby? Metaphor in political rhetoric. *Metaphor and Symbol* 5(3). 125–149.

Reinhart, Tanya. 1976. On understanding poetic metaphor. *Poetics*. Elsevier 5(4). 383–402.

Ricoeur, Paul. 1976. *Interpretation theory: Discourse and the surplus of meaning*. Fort Worth, TX: Texas Christian University Press.

Rossi, Maria Grazia, Fabrizio Macagno & Sarah Bigi. Submitted. *Dialogical functions of metaphors in medical communication*.

Rossi, Maria Grazia. 2016. Metaphors for patient education. A pragmatic-argumentative approach applying to the case of diabetes care. *Rivista Italiana di Filosofia del Linguaggio* 10(2). 34–48.

Rychlý, Pavel. 2008. A lexicographer-friendly association score. In Petr Sojka & Aleš Horák (eds.), *Proceedings of Recent Advances in Slavonic Natural Language Processing, RASLAN*, 6–9. Brno, Czech Republic: Masaryk University.

Sanders, Robert. 1987. *Cognitive foundations of calculated speech: Controlling understandings in conversation and persuasion*. Albany, NY: Suny Press.

Sanders, Robert. 2013. The duality of speaker meaning: What makes self-repair, insincerity, and sarcasm possible. *Journal of Pragmatics* 48(1). 112–122.

Santibáñez, Cristián. 2010. Metaphors and argumentation: The case of Chilean parliamentarian media participation. *Journal of Pragmatics*. Elsevier 42(4). 973–989.

Schiappa, Edward. 2003. *Defining reality. Definitions and the politics of meaning*. Carbondale and Edwardsville, IL: Southern Illinois University Press.

Semino, Elena, Zsófia Demjén, Jane Demmen, Veronika Koller, Sheila Payne, Andrew Hardie & Rayson Paul. 2015. The online use of violence and journey metaphors by patients with cancer, as compared with health professionals: a mixed methods study. *BMJ supportive & palliative care* 7(1). 60–66.

Semino, Elena, Zsófia Demjén & Jane Demmen. 2016. An integrated approach to metaphor and framing in cognition, discourse, and practice, with an application to metaphors for cancer. *Applied Linguistics* 39(5). 625–645.

Semino, Elena. 2008a. *Metaphor in discourse*. Cambridge, UK: Cambridge University Press.

Semino, Elena. 2008b. Corpus linguistics and metaphor. In Barbara Dancygier (ed.), The Cambridge handbook of metaphor and thought, vol. 280, 463–476. Cambridge, UK: Cambridge University Press.

Sinclair, Michael & Malcolm Coulthard. 1992. Towards an analysis of discourse. In Malcolm Coulthard (ed.), *Advances in spoken discourse analysis*, 1–34. London, UK: Routledge.

Sopory, Pradeep & James Price Dillard. 2002. The persuasive effects of metaphor: A meta-analysis. *Human Communication Research* 28(3). 382–419.

Sperber, Dan & Deirdre Wilson. 1995. *Relevance: Communication and cognition*. Oxford, UK: Blackwell Publishing Ltd.

Sperber, Dan & Deirdre Wilson. 2008. A deflationary account of metaphors. In Gibbs Raymond (ed.), *The Cambridge handbook of metaphor and thought*, 84–106. Cambridge, UK: Cambridge University Press.

Steen, Gerard. 2008. The paradox of metaphor: Why we need a three-dimensional model of metaphor. *Metaphor and Symbol* 23(4). 213–241.

Stubbs, Michael. 1983. *Discourse analysis: The sociolinguistic analysis of natural language*. Vol. 4. Chicago, IL: University of Chicago Press.

Stubbs, Michael. 2001. *Words and phrases: Corpus studies of lexical semantics*. Oxford, UK: Blackwell Publishers Ltd.

Walton, Douglas, Christopher Reed & Fabrizio Macagno. 2008. *Argumentation schemes*. New York, NY: Cambridge University Press.

Walton, Douglas. 1989. *Informal logic*. New York, NY: Cambridge University Press.

Walton, Douglas. 1990a. What is reasoning? What is an argument? *Journal of Philosophy* 87. 399–419.

Walton, Douglas. 1990b. *Practical reasoning*. Savage, MD: Rowman and Littlefield.

Walton, Douglas. 2004. A new dialectical theory of explanation. *Philosophical Explorations* 7(1). 71–89.

Walton, Douglas. 2007. The speech act of clarification in a dialogue model. *Studies in Communication Sciences* 7(2). 165–197.

Widdowson, Henry George. 1979. *Explorations in applied linguistics*. Oxford, UK: Oxford University Press.

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

Bionote

Fabrizio Macagno

Department of Philosophy and Communication, Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, Lisbon, Portugal

fabriziomacagno@hotmail.com

Fabrizio Macagno (Ph.D. in Linguistics, UCSC, Milan, 2003) works as an associate professor at the Universidade Nova de Lisboa. His current research is focused on the persuasive use of emotive language and on the dialectical dimension of discourse implicitness. He is author of several papers on definition, informal fallacies, argumentation schemes, and dialogue theory published on major international peer-reviewed journals. His most important publications include the books *Argumentation Schemes* (CUP 2008), *Emotive language in argumentation* (CUP 2014), *Interpreting Straw-man argumentation* (Springer 2017), and *Pragmatics and argumentation in statutory interpretation* (CUP, forthcoming).