The Communicative Functions of Metaphors Between Explanation and Persuasion

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Metaphors: Between Persuading and Explaining

In the literature, the pragmatic dimension of metaphors has been clearly acknowledged. Metaphors have been described as tools that can be used for pursuing a wide range of goals including explaining, summarizing, supporting a viewpoint, illustrating, clarifying or persuading (Semino 2008; Cameron 2003; Goatly 2011, 148-167). These goals, however, are heterogeneous. Summarizing can be considered as a stylistic strategy, pursuing different types of communicative goals (such as persuading or making a decision), while illustrating is normally considered as an instrument for explaining. In contrast, clarifying is commonly considered as a specific type of explanation (Walton 2011), and persuading presupposes supporting a viewpoint. Explaining and persuading are also the two fundamental purposes that most of the works focusing on the communicative goals of metaphors have focused on (Ortony 1975, 45; Jaszczolt 2002, 358; Ottati et al. 1999; Sopory and Dillard 2002; Burgers et al. 2016; Ervas et al. 2015). An analysis of the pragmatics of metaphors needs to start from analyzing these two basic functions, and see how they can be pursued through metaphorical utterances.

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Explanation Versus Persuasion

Explanation and argumentation (and *a fortiori* persuasion) are commonly considered as two distinct "speech acts" (Snoeck Henkemans 2001, 232) or "pieces of discourse" (Walton 2015, 102), both characterized by an inferential relation between one or more premises and a conclusion, which in case of explanations is normally a causal one (Berland and Reiser 2009, 27). These two speech acts are related, as an explanation, to be accepted by the interlocutor, needs to be justified, and thus supported by arguments and evidence, bearing out the claim that the explanation is the "best one" (Bex and Walton 2016; Berland and Reiser 2009). However, the crucial problem is to define the boundaries of the two concepts, and provide criteria for distinguishing them.

The distinction is commonly drawn at distinct levels. At the level of the intended consequences, explanations are provided to increase the listener's comprehension (performing a clarifying function when successful), while argumentation aims at increasing the acceptability of a claim (thus removing the doubt) (Hahn 2011; Snoeck Henkemans 2001). At the goal level, the purpose of an argument is to give a reason to support a claim, while an explanation is intended to help the questioner to improve his or her understanding (Walton 2006, 76). At a formal level, they can be considered as two distinct types of responses, which presuppose two distinct dialogical situations and needs (Walton 2015, 104):

> […] there are two different kinds of why questions. In one type of why question, the speaker asks the hearer to prove some claim made by giving evidence to support it. This type of why question asks for an argument. In another type of why question, the speaker asks the hearer to help him understand something that he presently does not understand.

An explanation is thus not only an answer (Van Fraassen 1980, 134), but an answer to a specific need that leads to a transfer of understanding (Walton 2011, 353). This definition has two dimensions: a cause-effect relation (transfer), and a presupposition (need). The first dimension concerns how understanding is transferred, as explanation is understanding (Schank 1986, 22–24). According to Schank, explanations are repairs of anomalies that occur when a fact or an event fails to make sense, namely it cannot fit in the connections between events that is part of an individual's common knowledge (scripts, i.e. frozen inference chains stored in memory, Schank et al. 2014, 77). An explanation is thus a repair process that is used to help account for the anomaly by using other scripts or modifying the one that failed (Schank, 1986, Chap. 3; Schank et al. 2014, 77–80).

The notion of scripts underscores the relationship between explanation and common ground. The need of an explanation results from the lack of a specific type of information that connects an event to the "story" in which it can make sense. For this reason, an explanation is always relative to the "why-question" that requested it, namely not only the causal relation that provides a reason for an event, but more importantly the "story" of the interlocutor that needs to be integrated through the explanation. As Van Fraassen put it (Van Fraassen 1980, 129):

> […] an explanation often consists in listing salient factors, which point to a complete story of how the event happened. The effect of this is to eliminate various alternative hypotheses about how this event did come about, and/or eliminate puzzlement concerning how the event could have come about. But salience is context-dependent, and the selection of the correct 'important' factor depends on the range of alternatives contemplated in that context. In N. R. Hanson's example, the barrister wants this sort of weeding out of hypotheses about the death relevant to the question of legal accountability; the carriage-builder, a weeding out of hypotheses about structural defects or structural limitations under various sorts of strain. The context, in other words, determines relevance in a way that goes well beyond the statistical relevance about which our scientific theories give information.

An explanation needs to be relevant not only to the why-question, but more specifically to the interlocutor's needs in the given context (Van Fraassen 1980, 126). In the context of medical communication, we can easily identify very different needs behind patients' and providers' explanations. While commonly providers use explanations to share information about the diagnosis, disease management and prognosis, patients need to share information about symptoms also explaining the impact they have in terms of concerns and quality of life. The crucial problem that emerges is the interpretation of the "why" that leads to an explanation.

The distinction between persuasion and explanation is thus pragmatic for distinct reasons. First, if we exclude the definition by consequences (resulting from a successful explanation), we can define explanation as an act aimed at providing a specific type of information, namely a causal relationship that allows the interlocutor to make sense of an event. Second, since it is related to the interlocutor's understanding, it is contextual, and needs to be based on the presumptions about the interlocutor's background knowledge. Third, as an explanation is a response to a request, it essentially depends on the purpose of the request, namely the object and the reason of the need of understanding.

This definition brings the two concepts of explanation and persuasion extremely close. They are both responses to a why question that needs to be interpreted considering the dialogical setting (the context), and they both need to draw on what the interlocutor already accepts or can take for granted. However, in case of persuasion, the question results from a potential difference of interpretation or conflict; moreover, it is not a request of information concerning a (causal) relationship, but of a reason for accepting a doubtful claim, which can be not only opinions, but also problems, hypotheses, or decisions (Walton 1990, 411). Considering this distinction, we notice that the two acts are not only compatible, but often intertwined. Persuasion can occur only if the reasons are more acceptable than the conclusion, and the concepts of understanding and acceptance are extremely interrelated, and at best hard to distinguish (Slovic and Tversky 1974; Stanovich and West 1999).

Persuasive and Explanatory Metaphors

Two functions of metaphorical utterances have been analyzed in the literature as the most important or common ones, namely explaining and persuading. However, these two functions are often considered separately, as two goals that are pursued independently of each other.

The persuasive use of metaphors is one of the crucial topics in communication and rhetoric, as metaphors characterize every persuasive context. Metaphors are regarded as instruments for increasing the persuasiveness of a communication (Sopory and Dillard 2002; Boeynaems et al. 2017; Burgers et al. 2016; Ervas et al. 2018; Ottati et al. 1999), but this effect has been analyzed from distinct perspectives, focusing in particular on their emotive and argumentative role. Metaphorical utterances are regarded as having an emotive function (Ricoeur 1976, 49), as they can be used for evoking emotions and interpersonal intimacy (Bowes and Katz 2015; Hopper et al. 1981; Gibbs 2006; Casarett et al. 2010). They can be used to influence or affect the evaluation of a state of affairs (Hendricks et al. 2018), and convey emotional information, thus creating emotional stimuli (Barchard et al. 2013, 333) that can motivate action (Flusberg et al. 2018). The persuasive effects have been also explained from a cognitive perspective. Metaphorical utterances have been commonly considered as more difficult to process (Searle 1979), thus affecting cognitive elaboration in different ways (Carston 2002; Gibbs 1992). This processing has been explained as resulting in different effects on the central processing, related to greater persuasive effects (Ottati and Renstrom 2010; Sopory and Dillard 2002, 385-387).

The persuasive effects of metaphors have been also explained in terms of their argumentative role. On the one hand, they have been regarded from the perspective of argument "delivery," namely as tools for structuring the arguments of a message, evoking semantic associations that are used for connecting more coherently the arguments in a text, resulting in higher comprehension and thus persuasion (Read et al. 1990; Sopory and Dillard 2002, 387). On the other hand, metaphorical utterances have been analyzed as conveying arguments or elements thereof (Santibáñez 2010; Ervas et al. 2018; Macagno and Zavatta 2014), acting as instruments for mapping arguments (Xu and Wu 2014) or as triggers of analogical inferences for supporting a conclusion (Musolff 2004; Fischer 2014; Van Eemeren and Garssen 2014, 52).

The explanatory function of metaphorical utterances has been analyzed especially in relation to their use as teaching devices (Jaszczolt 2002; Ortony 1975), namely in contexts characterized by an "epistemic imbalance," in which the interlocutors have different knowledge about a subject matter. In these contexts, metaphors are conceived as framing strategies that help understand something that is less familiar and less known in terms of something that is more familiar and already known (Semino et al. 2016; Schiappa 2003). Framing is a strategy of selection (Kittay 1989, 128–131), which allows highlighting some properties of the target while hiding others that are not relevant to the intended purpose of the utterance. This selection can result in bringing to light the explanatory principle that the

speaker intends to convey; however, this process has also another side, namely the interpretation. A metaphor needs to be interpreted, and depending on the interlocutor's background, the property or the properties transferred through the metaphorical utterance (the emergent meaning) can be different from the speaker's intended ones (Gibbs 1992, 587).

To these two crucial functions of metaphors, a third can be added, related to the explanatory one, namely theorizing. While explanatory metaphors make a concept or issue easier to understand to an interlocutor, "constitutive" metaphors are part of the development of a theory concerning an issue (Ungerer and Schmid 2006). They are used to select properties that allow a new explanation, in this case not for the interlocutor but also for the speaker.

The distinction between the two metaphorical functions of explaining and persuading is, however, problematic in two respects. First, persuasion and explanation are defined based on a pragmatic distinction, but this distinction is captured only partially by the standard theories of speech acts, as in both cases we are dealing with assertive speech acts (Searle and Vanderveken 1985, 112) or expositives, defined as acts aimed at clarifying of reasons, arguments, and communications (Austin 1962, 162). Second, the distinction between these two functions becomes extremely complex to draw when we analyze metaphorical utterances. A metaphorical explanation involves a selection of properties and can trigger emotional effects, which can be used for persuasive goals (Ungerer and Schmid 2006, 153). Metaphors provide a new way of looking at a state of affairs (Ungerer and Schmid 2006, 118), which can affect not only understanding, but also our attitude towards it or the further decisions to be made involving or concerning it. These two problems will be addressed in the following sections.

Metaphors and the Blurred Distinction Between Explanation and Persuasion

According to the Aristotelian account, metaphors are defined as a type of "transference" (*epiphora*), a process of change of meaning that concerns the semantic kernel (Ricoeur 1993, 18), and based on logic-semantic relations (Aristotle, *Poetics* 1457b, 7–10):

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

This definition is based on two crucial concepts, namely "transference" and "strangeness" (*allotrios*, that is, "a name that belongs to something else"). The first dimension is the one more discussed. Metaphors are regarded as instruments that bring about a conceptual reorganization (Black 1955, 280-288), extending the boundaries of a concept (Leech 1981, 37). This reorganization is a redefinition of reality, a new organization of a state of affairs that is in itself informative (Ricoeur 1993, 24):

> […] should we not say that metaphor destroys an order only to invent a new one; and that the category-mistake is nothing but the complement of a logic of discovery? […] Pushing this thought to the limit, one must say that metaphor bears information because it 'redescribes' reality. Thus, the category-mistake is the de-constructive intermediary phase between description and redescription.

The second dimension concerns the emotive dimension of metaphors. Metaphors are riddles (Aristotle, *Rhetoric*, 1415b, 9), but more importantly they are paradoxes, in the sense of deviation from the ordinary use (Ricoeur 1993, 29). They are based on strangeness, in the sense that the vehicle "is temporarily employed outside its home context, to which it continually returns" (Moran 2017, 51). Strangeness generates marvel, and thus pleasure, which attracts attention and desire to understand new ideas. This relationship between pleasure (strangeness) and learning is stressed in the *Rhetoric* (Moran 2017, 51), in which metaphors are described as instruments for making a concept easier to understand by generating pleasure and thus interest (Aristotle, *Rhetoric* 1410b, 10–27):

> We will begin by remarking that we all naturally find it agreeable to get hold of new ideas easily: words express ideas, and therefore those words are the most agreeable that enable us to get hold of new ideas. Now strange words simply puzzle us; ordinary words convey only what we know already; it is from metaphor that we can best get hold of something fresh. […] We see, then, that both speech and enthymemes are lively in proportion as they make us seize a new idea promptly. For this reason people are not much taken either by obvious arguments (using the word 'obvious' to mean what is plain to everybody and needs no investigation), nor by those which puzzle us when we hear them stated, but only by those which convey their information to us as soon as we hear them, provided we had not the information already; or which the mind only just fails to keep up with.

This passage expresses a crucial principle, namely that "the way in which a thing is said does affect its intelligibility" (Aristotle, *Rhetoric* 1404a, 9–10), as through the manifestation of our thinking (*lexis*) it is possible to teach (Ricoeur 1993, 35). The key concept in this excerpt is "lively" (*energeia*) (Newman 2002, 4): an apt metaphor sets something vividly before the eyes of the audience (*pro ommaton poiein*) (Aristotle, *Rhetoric* 1411b, 27), making the interlocutor to see things in a specific way. Metaphors are thus at the same time instruments of understanding and believing, as they can lead the audience to see, and consequently experience, feel and believe, a certain state of affairs under a specific perspective (Moran 1989, 91). In this sense, they are linguistic instruments for providing proofs strategically, visualizing a situation in a state of activity and actuality, as a living being (Schneck 2011, 28), so that it can trigger emotions (Aristotle, *Rhetoric*, 1408a, 10). The strategic dimension of energeia is represented by the framing effect, the specific view that metaphors impose (Moran 1989, 108):

> It is almost as if the imagistic "seeing" of metaphor comprehension really involved one's seeing things that way, that is, believing them to be that way, which would give us no way to distinguish between understanding a metaphorical assertion and believing it. Speaking of the adoption of a perspective is useful precisely because it is neutral with respect to belief and assertion. But if this were the only dimension of metaphor, then we couldn't explain, among other things, what denying the statement comes to. For the denial is not the refusal to adopt the perspective, any more than the original statement is simply the invitation to

> take up that perspective. The speaker does not say, "Imagine Juliet as the sun"; rather he makes a statement about Juliet. She is the object of his thinking, and various beliefs of his about her are necessary to account for his original adoption of this perspective. And someone who denies that statement will be sharing that perspective for the moment, but disagreeing with some of what Romeo believes. To sum up, then: there are two dimensions of metaphor, the dimension of effects, which I've referred to in terms of framing or the adoption of a perspective, and the dimension of the beliefs that prompt the comparison in the first place, and which are necessary for the framing-effect to be something other than mere juxtaposition.

The strict interrelation between the explanatory and persuasive functions of metaphors leads to the problem of interpreting the purposes of an explanation, and more importantly the request thereof. To illustrate this issue, we consider an example from one of the less "rhetorical" or persuasive contexts in which explanations are prototypically used, namely medical interviews. In this context, metaphors are employed commonly for sharing information on medical concepts or causal relations. A typical example is the following, in which multiple metaphors clarify a technical concept that could be hardly understood by the patient if technical terminology was used (emphasis added):[1]

Example 1

Physician: This value, madam, needs to be taken care of.
Patient: What is it?
Physician: The glycated hemoglobin is a value very important for us. Now, let us say that, ehh, you know it, we repeated it many times, it is like to have a *river* mm? the blood 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*. Ok? The *size* tells me my condition; I can then *customize* the *model*.

In this case, the doctor replies to a request of understanding: the patient does not understand a specific concept, glycated hemoglobin, and the physician provides a vivid description thereof that can be accessible to the interlocutor. However, if we consider the metaphors used ("*river*," "*pollutants*," "*size,*" and "*model"*), we notice

[1] *Medico:* "*È questa qua signora. mi raccomando eh.*"
Paziente: "Che cosa è?"
Medico: "L'emoglobina glicata è un valore per noi molto importante. Allora diciamo che eh:::: la signora lo sa, gliel'abbiamo detto tante volte, ehm è come avere un fiume *mm? il sangue con degli* inquinanti *che noi dobbiamo tenere sotto controllo. allora la glicemia nel corso della giornata mi dà in quel momento specifico, in quella fascia oraria, come sto* funzionando*. L'emoglobina glicata mi dice l'andamento generale del diabete. come dire: se vado a comprare un* vestito*, l'emoglobina glicata è la* taglia*, la glicemia è il* modello" .
Medico: "Ok? quindi io la taglia *mi dice più o meno* come sto*, e il* modello *me lo* personalizzo."
This example has been already discussed in (Rossi 2016, 42; Ervas et al. 2016, 106). Hereafter, when it is not further specified the examples are part of the corpus collected by Sarah Bigi (2014).

that their role is not limited to providing a response to a request of understanding. If we try to describe what these metaphors have in common with their targets (the blood, the level of glucose, the glycated hemoglobin, and the glycaemia), we come to a system of associations that can be described tentatively as follows:

Target	1 (description of the relevant aspect of the target)	Vehicle	2 (description of the relevant aspect of the vehicle)
Blood	Bodily fluid	River	Stream of a fluid
High level of glucose	Dangerous substance	Pollutants	Toxic substance
Glycated hemoglobin	Trend of the condition	Size	Stable condition
Glycaemia	Temporary condition	Model	Customizable aspect

These associations are not only aimed at setting out a general description of the causal relations underlying the notion of glycated hemoglobin. Rather, they are intended to provide the understanding that the patient needs in the specific context, namely for the specific goal that he is presumed (and in this conversational setting is also expected) to have, i.e. making appropriate decisions concerning the monitoring and the control of his values. The physician is not answering a general request of understanding, but a *goal-directed* need of understanding. The notion of explanation seems to become more complex, and more related to a pragmatic dimension of discourse that involves the types of dialogue that the interlocutors propose to engage in.

Describing the Conversational Goals of Metaphorical Utterances

As underscored above, metaphors are considered as instruments of persuasion for their emotive effects that depend on the cognitive efforts and effects that they involve. Such effects, however, are have also an explanatory function, as they are used for understanding and making understand better the target. Persuasion is thus regarded as related to understanding, which is in turn the result of the actuality (or vividness) of metaphors, which can bring about the other component of persuasion, namely emotive reactions. In all these cases, however, the function of a metaphor is described based on a sign of its successful use. Both persuasion and explanation are defined based on one of the effects that a metaphor has achieved on the interlocutor, namely modifying his or her attitude towards a doubtful viewpoint or making an unclear concept clearer. This description can be problematic for two reasons. First, metaphors failing to persuade the interlocutor or to explain a concept still have been used for a communicative purpose. Second, explanations and arguments can be used to pursue different communicative goals. An argument can be used to support

not only a doubt in difference of opinions, but also a proposal, an offer, a doubtful piece of information, or the acceptability of a hypothesis (Walton 1990). 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 need to be framed within the bigger picture of the conversational goals of metaphors to explain what metaphors are used for. On this view, 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 relevance (Clark 1987; Kittay 1989, 131; Goatly 2011). However, this endeavor faces two issues.

The first concerns the representation of such conversational goals in a way that capture the interactive linguistic nature of the relation between the interlocutors (Gu 1993, 427–28). In the literature, the problem of identifying the goals of metaphors (Semino 2008; Cameron 2003; Goatly 2011, 148-167) has not been addressed systematically, nor are the unit of analysis and the theoretical principles of classification clearly established. The issues that can arise from the detection of the conversational goals of a metaphorical utterance can be explained by considering the following case (emphasis added):[2]

Example 2

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

In this excerpt, 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, if we analyze this example through the categories of the speech act theory, we cannot fully capture the interactive purpose of the move (Streeck 1980). The utterance can be considered as an assertive; if assessed as an indirect speech act, it can be classified as a directive. However, in both cases the speech acts are unilateral (van Eemeren and Grootendorst 1984, 28), while this move is uttered for a specific dialogical purpose (defined by the conversational setting of a medical interview, Bigi and Lamiani 2016), namely making a joint decision. Similarly, our Example 1 can be considered as constituted by assertives, failing to capture the dialogical goal of the utterances, namely the dialogical reason why they are uttered. From an analytical perspective, this challenge corresponds to the problem of determining the joint communicative intention underlying an utterance (Leech 1983, 35).

The second problem concerns the boundaries of the reconstruction of the communicative purpose. As Leech pointed out, "all illocutions are 'indirect' in that their force is derived by implicature" from the sense of an utterance (Leech 1983, 33). However, the degrees of indirectness can vary. Some illocutions can be interpreted

[2] Dottore: "Se io so di avere la pressione diciamo ballerina, me la misuro."
This example has been already discussed in (Rossi et al. submitted).

defaultively, namely applying the most likely pragmatic hypothesis. In other cases, it is necessary to reconstruct it through more complex inferences. To these two situations, we can add a third one, namely the possibility of detecting both a default interpretation and a more indirect one, or two indirect interpretations (Strawson 1964), both plausible and compatible hypotheses in the given context, even though one is more "central" or with a higher degree of probability (Leech 1983, 34–43). An illustration is our Example 2 above. The physician's utterance can have two conversational goals, namely proposing an action ("you should measure your blood pressure") and more indirectly expressing a reason in support thereof ("<you have a *dancing* blood pressure, and > if I know that my blood pressure is, let's say, *dancing*, I measure it <in order to avoid the risks related to unstable blood pressure values>"). Also our Example 1 shows this twofold communicative intention. The physician intends to provide information but does it in a way that can be interpreted as a reason to regard a certain value as important, or even more implicitly, to act in a certain way (monitoring the glycated hemoglobin regularly).

These two issues can be addressed by considering the concept of dialogue move, and consequently the definition of metaphorical move.

Metaphorical Moves

The problems that arise from considering a metaphorical *utterance* as the unit of analysis lie in the limits that the concept of speech act has in the analysis of dialogical interactions. The crucial problem is, however, the development of an analytical instrument that can serve the goal of capturing the interlocutors' conversational goals without considering the conversational settings that can lead to a potentially infinite number of joint acts (Mey 2016; Capone 2010).

From Metaphorical Utterances to Metaphorical Moves

The starting point for our analysis is the concept of metaphorical utterance. Black (Black 1955, 255-257) introduced the idea of metaphorical utterance to underscore the dimension of the use of a metaphorical expression, the relationship between the focus and the frame in an utterance, and the role of the circumstances and more importantly the speaker's intentions in identifying and interpreting a metaphor. The notion of utterance represented the "carrier of 'complete and finished meaning' (according to Fontanier's own expression), in the production of metaphorical meaning" (Ricoeur, 1993, 74). In this sense, metaphorical utterances can be defined as "utterances that are either intended to be understood metaphorically or it is possible to attribute to it a metaphorical interpretation" (Kittay 1989, 148).

The notion of utterance, however, does not provide any specific information on the type of joint intention that the speakers intend to pursue through their metaphor,

namely the "joint action" (Kovecses 2015, 178-180; Goatly 2011, 292) or "local context" (Kovecses 2015, 188) that guide the process of metaphorical interpretation. To capture the conversational goal that a metaphorical utterance pursues, it is necessary to move from the notion of utterance to the one of move. Dialogue moves can be defined as sequences (Grosz and Sidner 1986, 177), which correspond to utterances or aggregates or parts thereof, aimed at proposing a dialogue to the interlocutor (Macagno and Bigi 2017). For this reason, a move is the representation of a dialogical intention, namely an interactional (or, more precisely, communicative) goal that a speaker has (Ruhi 2007, 109; Haugh 2015, 95-97).

This definition leads to the problem of capturing the types of dialogical interactions. Such a typology needs to be general enough to allow a justification of each category, but at the same time specifiable, namely adaptable to the various types of institutional or conversational settings and analyses that require the introduction of context-specific subcategories (Macagno and Bigi 2020a). An effective classification can be made by considering the literature on dialogue games and types of dialogue (Walton 1989, 1998; Walton and Krabbe 1995; Macagno 2008; Dunin-Keplicz and Verbrugge 2001; McBurney and Parsons 2009; Walton 1990). Walton (1989, 1990, 1998; Walton and Krabbe 1995, 66; Macagno 2008) defined seven basic "types of dialogue," namely abstract dialogical intentions that the interlocutors can pursue in their interactions. Such types of dialogue, originally designed for representing formal dialogues of the kind used in artificial intelligence, are summarized in the following Table 1 (Walton 2010; Walton and Krabbe 1995, 66).

Such dialogue types, to which can be translated into categories of conversational demands, namely communicative goals pursued by the speaker and proposed to the interlocutor, which affect the interlocutor's response in a specific fashion (Dascal 1992; Levin and Moore 1977). In particular, the category of eristic dialogue is broadened to include moves aimed at establishing the relationship necessary for

Table 1 Types of dialogue and their characteristics

Type	Initial situation	Main goal	Participants' aims
1. Persuasion Dialogue	Conflicting points of view	Resolution of such conflicts by verbal means	Persuade the other(s)
2. Negotiation	Conflict of interests and need for cooperation	Making a deal	Get the best out of it for oneself
3. Inquiry	General ignorance	Growth of knowledge and agreement	Find a "proof" or destroy one
4. Discovery	Need to find an explanation of facts	Choose best hypothesis for testing	Find and defend a suitable hypothesis
5. Deliberation	Need for action	Reach a decision	Influence outcome
6. Information-seeking	Personal ignorance	Spreading knowledge and revealing positions	Gain, pass on, show, or hide personal knowledge
7. Eristics	Conflict and antagonism	Reaching a (provisional) accommodation in a relationship	Strike the other party and win in the eyes of onlookers

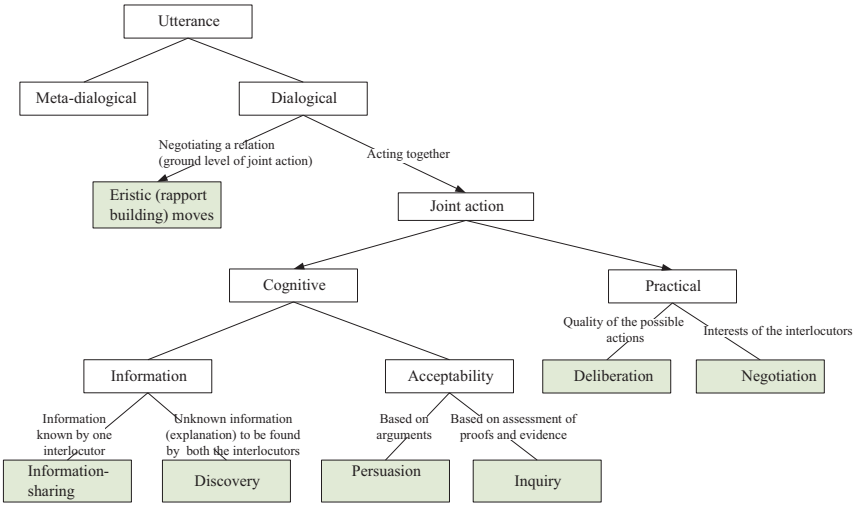

Fig. 1 Classification of dialogical intentions

further dialogues – a kind of basic level of communication necessary for the other types of dialogue. These categories define the types of dialogue moves that can be represented in (Fig. 1) (Macagno and Bigi 2017, 2020a).

Dialogue moves can be thus used as units of analysis as they represent – even though abstractly and generally – the dialogical intentions of the interlocutors. On this view, metaphors need to be conceived in terms of metaphorical moves: they are the result of the interpretation 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, 2012; Sanders 2013, 1987).

Goals of Metaphorical Explanations

The different types of metaphorical moves can be used to describe the most important and general goals that the interlocutors can pursue using their metaphors. In this framework, the distinction between the cognitive function of explanation and the dialogical persuasive goal pursued is not made at the utterance level but looking at the structural organization of the interactions determined through an analysis of the dialogue moves constituting them. In (Rossi et al. submitted), we used this theoretical framework as a coding scheme for detecting the dialogical functions of metaphorical moves, showing how the aforementioned system of dialogue moves (Macagno and Bigi 2017, 2020a) can be used to codify metaphorical moves to clarify the strict interrelation between the conversational setting, the move, and the metaphorical meaning.

Explanatory metaphorical moves will be shown below to be instruments for various dialogical goals. Through a selection of representative examples – drawn from a corpus of diabetes care interviews collected in Northern Italy (Bigi 2014) – the twofold nature of metaphorical explanations will be illustrated.

The most prototypical dialogical function of explanations – and thus explanatory metaphorical moves – is information sharing, which is the most frequent type of metaphorical move that can be found in this corpus (Rossi et al. submitted). A clear illustration of the metaphorical move of information sharing is given by Example 1 above, in which a series of metaphors ("pollutants;" "river;" "size;" "model") are used to provide information to the patient on the concepts of glycated haemoglobin and the functioning of diabetes.

The information-sharing goal can concern also other types of information. In particular, metaphors are frequently used for referring to symptoms that the patient needs to recognize. In these cases, the healthcare provider employs metaphors to request information that would be otherwise complex to understand, making it accessible to a patient who does not know a more technical vocabulary.

Patients also use metaphorical utterances for sharing information with the health providers on their conditions, symptoms, or experiences. In lack of a more specific terminology, and without the necessary medical experience for identifying symptoms and describing them, the use of metaphors makes it possible the communication of complex phenomena and the perceptions thereof, such as in the following case (emphasis added):[3]

Example 3

Patient: […] then I noticed that if I eat gnocchi, it [the glycaemia] *empties itself quickly*. I love gnocchi so much.
Nurse: How does it empty itself quickly?
Patient: Eh it *goes down*, *goes down*.

In this case, the metaphorical expression "empties itself quickly" is used to explain what happens to the patient's glycaemia after she eats gnocchi. The transfer of understanding is achieved through a metaphor, which allows the sharing of important information. Metaphors are crucial instruments for patients in sharing symptoms especially when they are not able to interpret them or to assess their clinical relevance.

The classic rhetorical function of metaphors, *persuasion*, is the second most frequent in the corpus (Rossi et al. submitted). In Example 4 below (emphasis added), the dietician is instructing the patient on how to control better the diabetes, especially on vacation. To support her advice (proposal) of keeping healthy habits, she uses a series of metaphors to represent the patient's unreasonable reasoning:[4]

[3] *Paziente: "Poi ho notato che se mangio gli gnocchi, mi si* svuota *in fretta. A me piacciono tantissimo." Infermiera: "Come si svuota in fretta?"*
Paziente: "Eh va giù, va giù*."*
This example has been already discussed in (Macagno and Rossi 2019, 110)

[4] *Dietista: "Quando si va in ferie il diabete* si porta dietro*, non si* chiude *a Milano e si parte.* Rimane *con lei."*

Example 4

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 play both a cognitive and a persuasive function. The dietician uses them to explain what diabetes is, and more importantly the persistence of the condition. However, at the same time they express a complex argument (Walton 1990), in which the patient's behavior and understanding is interpreted based on the commitments underlying it, which are then attacked by a metaphorical *reductio ad absurdum*. The metaphorical explanation of what happens to diabetes when one leaves is an instrument of persuasion.

Metaphorical utterances can be used at the same time for transferring understanding at a cognitive level, and for pursuing a decision-making dialogical goal at a pragmatic level. Some metaphorical moves at the same time explain a concept and advance a *proposal*, namely suggest a course of action that the interlocutor can accept or refuse. A clear case is Example 2 above, in which the metaphor "dancing" is used to refer to the condition that is presented as requiring action. In that example, the metaphorical expression is used within a move that has a twofold purpose: the cognitive one of *explaining* the importance of measuring the pressure to prevent further complication, but also the pragmatic/dialogical one of securing the patient's commitment to the action described, namely *proposing* a course of action (and often *persuading* him to engage in that action).

Another complex use of a metaphorical expression that combines a metaphorical explanation with a complex combination of a decision-making and persuasive purpose is the following (emphasis added):[5]

Example 5

Doctor: Let's say, the three *levers* of diabetes care are physical exercise, diet, and medications. I am already switching up the medications lever, so it would be better to agree on a strategy to improve the other two levers. Just one, or both, partly one and partly the other one, it is up to you to come up with suggestions or ideas. For instance: what is your plan?

In this example, the doctor is proposing different options to the patient (e.g. to start working on physical exercise and/or diet) to better manage his diabetes (a decision-making move). Within this move, the metaphorical expression "lever" works as an explanation of the possibilities offered. However, this explanation ("the three *levers* of diabetes care are physical exercise, diet, and medications") is aimed not only at proposing a course of action, but also framing the possibilities in a strategic way. In this sense, the explanation is part of a persuasive move intended to justify the need for an individual and personalized choice (we can express it as an

[5] *Dottore: "Se i tre* bracci *della cura sono l'attività fisica la dieta e il farmaco, io sul farmaco sto già ad un livello molto elevato. quindi ci conviene interagire su questi due* livelli*. uno solo, tutti e due, un po' di qua un po' di là, me lo deve dire lei. come: come pensa di riuscire ad organizzarsi?"*

This example has been already discussed in (Ervas et al. 2016, 106).

implicit conclusion of the kind, "it would be better to agree on a strategy to improve the other two levers").

The following Example 6 can be analyzed in a similar way (emphasis added):[6]

Example 6

Dietician: You must try to reach, to get close to the ideal weight. Not gain weight. That's because diabetes and weight generally *go hand in hand*, like an *engaged couple*. So, if you gain weight, also diabetes tends to increase a bit.

The dietician explains the relationship between changes in weight and changes in diabetes by introducing a metaphorical frame developed from the idea that diabetes and weight act as an engaged couple. Once again, this metaphorical explanation is included in a dialogical context characterized also by a strong persuasive argument, aimed at leading the patient to follow the medical recommendation (in this case, to lose weight). The metaphorical explanation is not argumentatively neutral, namely is not a simple sharing of information. The physician does not only secure the patient's understanding of a concept, but also his acceptance of the principle on which the conditional premise of the argument is based ("if you gain weight, also diabetes tends to increase a bit"). Using Toulmin's terminology (Toulmin 1958, 95–98), the explanation acts as a backing of the warrant of an argument, namely it is an integral part of the latter.

Metaphors can be used for explaining a concept or a correlation for the dialogical purposes of discovery, namely providing hypotheses, for new or unknown phenomena, or inquiry, namely assessing evidence. *Discovery moves* are not frequently pursued in the corpus, but they can be crucial for bringing to light the medical misconceptions of the patients (Rapanta 2019). A clear case is the following (emphasis added):

Example 7[7]

Wife: I told him, you have reached almost the maximum levels, now careful, as I *blamed* the melon, the apricot.
Patient: The fuit, the sugar.
Wife: The fruit, yes, the peach, nothing fried as they are not liked at our place.

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[6] *Dietologa: "Bisogna cercare di arrivare, avvicinarsi più che possiamo al peso ideale. Non aumentare. Perché generalmente diabete e peso* viaggiano *come due* fidanzati, mano nella mano. *Allora, se lei mi aumenta di peso, anche il diabete tende un pochino a salire."*

This example has been already discussed in (Rossi forthcoming).

[7] *MO: "A fare quella. no dico sei arrivato quasi al massimo, ora attenzione, perché io* davo la colpa *appunto al melone, all'albic- sì a-"*

P: "Ai frutte::: zuccherini insomma"

MO: "Ai frutti insomma, sì la pesca, fritti niente perché quelli a casa nostra non è che piaccia."

MO: "No. e quindi niente da fare. davo la colpa *a quelle cose, ma se quelle cose non sono, sarà perché cammina poco, non lo so."*

D: "Ma che cosa signora intende?"

MO: "Eh no dicevo davo la colpa quando tornavamo dalle vacanze."

Wife: There is nothing to do. I *blamed* those things, but if these things are not the cause, it can be the fact that he walks very little, I do not know.
Doctor: But what do you mean?
Wife: I was telling what I was *blaming* when we came back from holiday.

The patient's wife is formulating a hypothesis on the possible causes of the worsening of the husband's conditions, and the metaphorical moves explain the vague causal relation between the type of food and the possible effect on health. Through the metaphorical expression "to blame," the wife is humanizing the possible causes of the increase of the levels of glycaemia. This verb attributes agency to inanimate entities, conveys the vaguest possible causal relation. The wife *explains* her *discovery* of a possible cause of the husband's condition as an attribution of responsibility, which does not presuppose a specific type of cause.

Inquiry moves (Rapanta 2019, 45-48) consist in searching and eliciting evidence from the interlocutor and interpreting it in order to explain a phenomenon. In the case of chronic care interactions, the physician does not only collect evidence from the patient to make a decision, but more often and importantly explains to the interlocutor how to interpret it, in a type of educational dialogue (Macagno and Bigi 2020b). An example in which metaphorical explanatory moves play an inquiry function is the following (emphasis added):[8]

Example 8

Nurse: Eh, yes. Because it has a value in itself – a 110 before lunch, ok it is good, I am saying that *it is a very good start*. However, what happened two hours after eating? Was it however – have you find *a target glycaemia*?
Patient: Yes, here it was 109 and 120.
Nurse: Yes, but it would be interesting, on the day in which you do it.
Patient: To have both of them.
Nurse: Instead of doing it before lunch and dinner, I do it before lunch and two hours after lunch, or before dinner and two hours after dinner. Because for me it is good also *in couples*, the important is that it *touches* the different hour phases – breakfast, lunch, and dinner.

Here, the nurse is interpreting the evidence provided by the patient and demanding the data needed for assessing her condition. The search for evidence here is not purely information sharing, as the nurse is interpreting the evidence and teaching the patient how to collect meaningful data that can be used for evaluating the

[8] *I: "Eh sì. perché ha un valore di per sé- di un centodieci prima di pranzo, ok mi va bene sto dicendo che è un'*ottima partenza*. Però poi cosa è successo due ore dopo aver mangiato? É stata comunque un- ha trovato la glicemia* a target."
P: "Sì [qua era] un centonove e un centoventi]"
I: "Sì però il giorno che la fa sarebbe interessante."
P: "Averli tutti e due."
I: "Invece di farlo prima di pranzo e prima di cena, lo faccio prima di pranzo e due ore dopo [pranzo] o prima di cena e due ore dopo cena. […] perché a me va bene anche così a coppia*, l'importante è che mi* tocca *le varie fasce orarie. quelle della colazione, del pranzo e della cena."*

glycaemia. The metaphors play a crucial role, as more complex medical concepts concerning the types of evidence and data collection procedures are explained through the use of metaphors ("in couples;" "touches"). Here, metaphors are explanatory – they clarify concepts by using ordinary language –, but the explanation is an instrument aimed at the specific dialogical goal of collecting and interpreting evidence – and instructing the other on how to interpret it.

Conclusion

Metaphors have been acknowledged to have several different uses, as they can be used to pursue distinct dialogical purposes, regardless of whether they are knowingly used as metaphors as such. In this paper, we have addressed the problem of determining what goals metaphors are used to pursue, especially taking care of the distinction between explanation and persuasion.

Discussing the distinction between the two metaphorical functions of explaining and persuading, we have shown the main theoretical problems behind this distinction and we have built up a theoretical model that puts in connection intuitions from speech act theory, argumentation, and metaphor theory. We have observed that explanations have a cognitive and a pragmatic dimension; however, while the cognitive function of transferring understanding defines what an explanation *is*, different purposes can characterize its use in discourse, namely what it is used *for*. The current approaches mix the two levels, identifying explanation with the common goal of sharing information. However, the transference of understanding can have also other purposes, such as making a proposal, supporting a conclusion or justifying or describing a hypothesis. Metaphorical explanations clearly illustrate this twofold nature of explanations, as they are used frequently to pursue a persuasive goal, and in many cases to propose a course of action, share information, and advance a hypothesis.

The distinction between the two dimensions led us to addressing the pragmatic functions of metaphors using an instrument that merges pragmatics with dialogue analysis and argumentation, namely dialogue moves. We have used this model to detect distinct pragmatic goals that interlocutors intend to achieve in dialogues through different types of explanatory metaphorical moves. We have discussed examples from an Italian corpus of diabetes interviews to describe not only the relationship between metaphors and explanations, but also between metaphorical explanations and dialogical purposes. Future research is needed for highlighting the implications of our model for the practical context of health, stressing its importance for the improvement of the quality of the communication between patients and providers.

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