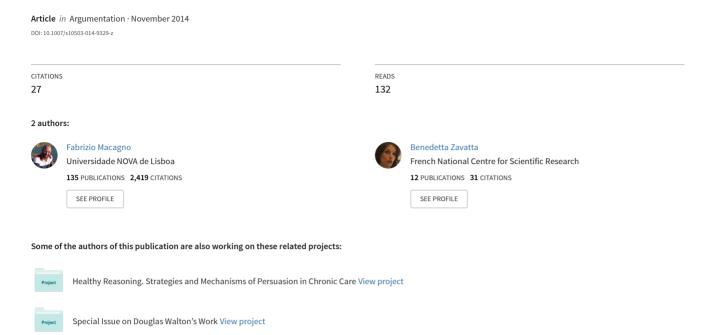
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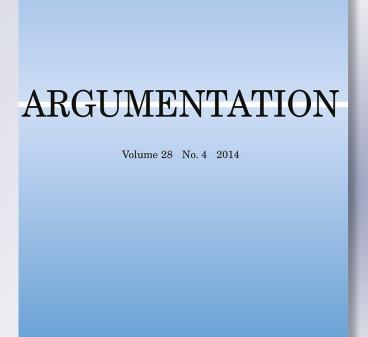
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Reconstructing Metaphorical Meaning

Fabrizio Macagno · Benedetta Zavatta

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Abstract Metaphorical meaning can be analyzed as triggered by an apparent communicative breach, an incongruity that leads to a default of the presumptive interpretation of a vehicle. This breach can be solved through contextual renegotiations of meaning guided by the communicative intention, or rather the presumed purpose of the metaphorical utterance. This paper addresses the problem of analyzing the complex process of reasoning underlying the reconstruction of metaphorical meaning. This process will be described as a type of abductive argument, aimed at explaining how the vehicle can best contribute to the purpose of the utterance. This type of reasoning involves the analysis of the possible predicates that can be and usually are attributed to the vehicle, and the selection of the one (or ones) that can support the implicit conclusion constituting the communicative goal of the metaphorical utterance. Metaphorical meaning, in this perspective, becomes the outcome of a complex process of meaning reconstruction aimed at providing the best explanation of the function of the vehicle within a discourse move.

 $\begin{tabular}{ll} \textbf{Keywords} & \textbf{Metaphor} \cdot \textbf{Relevance} \cdot \textbf{Interpretation} \cdot \textbf{Pragmatics} \cdot \textbf{Argumentation} \cdot \textbf{Argumentation} \cdot \textbf{Argumentation} \cdot \textbf{Support Support Suppor$

Metaphors are at the center of a fundamental and critical relation between thought and language, which has been thoroughly investigated in cognitive science, linguistics, and psychology (Tendahl and Gibbs 2008; Gibbs 1994). In the last 30 years, metaphor has been mainly regarded as a mental mapping setting up systematic correspondences from one conceptual domain to another (Lakoff and Johnson 1980) or as conceptual

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blending between different mental spaces (Fauconnier and Turner 2002). These cognitive accounts illustrate the mental dimension of metaphor, explaining how it affects our conceptual system. However, this crucial relationship between thought and metaphor can be analyzed also from a different point of view, which takes into account the processes of reasoning that are needed for retrieving metaphorical meaning.

The purpose of this paper is to inquire into why and how the usual, presumptive reasoning that we use for reconstructing the meaning of an utterance fails in case of metaphorical utterances, and what patterns of reasoning are triggered in this type of non-defaultive (or rather non-presumptive) interpretation. The purpose is to analyze from a quasi-logical and linguistic perspective what makes an utterance metaphorical, and what happens when we cannot rely on the heuristics of presumptive meaning for interpreting it. The retrieval of metaphorical meaning will be investigated from an analytical perspective (Tindale 2004), examining this process as a chain of arguments aimed at explaining how a specific "word, sentence, or expression" can support a specific communicative purpose, i.e. can express what the speaker means.

This logical-semantic account of metaphorical interpretation addresses the inferential nature of the relationship between a metaphorical utterance and its interpretation, analyzing the complex structure of reasoning linking the metaphorical meaning with the literal one (Stern 2006: 261). To this purpose, the first step will be to address the process of interpretation from a logical point of view, distinguishing the different types of reasoning involved in literal and metaphorical interpretation (Sect. 1). Metaphorical interpretation will be shown to be based on a non-presumptive type of reasoning, triggered by a failure of the presumptive and automatic mechanisms of interpretation. Such a failure can be conceived as an incongruity between a semantic or pragmatic predicate and its logical-semantic arguments at different levels, i.e. at the level (1) of the sentence, (2) of the speech act and the relations between speech acts, or (3) of the dialogue (Sect. 2). These types of incongruity can be regarded as different types of presuppositional failures, corresponding to conflicts between presumptions governing dialogical expectations, semantic meaning, usual facts and events, or common knowledge (Sect. 3). These incongruities can be conceived as contradictions between the presumptions at the basis of a presumptive reasoning, one of which is semantic and governing the "literal" interpretation of the vehicle (Sect. 4). This unreasonableness needs to be explained and solved through a meta-dialogical process of reasoning from best explanation, where the interpreter relies on the expected and presumed purpose of the utterance and disregards the semantic presumption (Sect. 5). In the last sections, we will analyze the logical-semantic nature of the process involved in the selection of the relevant features of the vehicle (Sects. 6 and 7) and the structure and the rules of inferences governing the transfer to the topic of the predicates attributed to the vehicle (Sect. 8). This approach will be then illustrated through the analysis of the reasoning process underlying the reconstruction of the meaning of two famous creative metaphors (Sect. 9).



1 Meaning and Presumptive Meaning

Metaphorical meaning represents a crucial case of the so-called "pragmatic intrusion" (Levinson 2000: 239), that is, the intervention of non-deductive reasoning processes, normally belonging to the field of pragmatics, for the semantic interpretation of a sentence (Levinson 2000: 258). Metaphors, or more precisely creative metaphors (conventionalized metaphors have become already part of our everyday conceptual system, see Gibbs 1994: 13; 320; Indurkhya 1992), represent cases in which complex interpretative processes intervene because the "literal meaning" cannot be computed, or cannot lead to a semantic interpretation. In other words, a person that uses a sentence metaphorically does not intend to assert the proposition that is literally expressed by such a sentence (Bergmann 1991: 487). In this sense, metaphorical meaning can be considered as the result of a process of interpretation that intervenes when the "sentence or word meaning" does not correspond to the speaker's meaning (Searle 1981: 77). On this perspective, the problem of metaphorical meaning concerns the difference between what the speaker wants to communicate through his speech act (speaker's meaning) and the "semantic" (Stern 2008: 263; Carston 2002) or "sentence" meaning, or rather what the "word, expression or sentence actually means" (Searle 1981: 77).

An interesting approach to the explanation of the difference between the speaker's and the "semantic" or "sentence" meaning comes from the medieval doctrine of supposition. In the Later Middle Ages, metaphor was considered as an "improper supposition" (Kretzmann et al. 1982: 192; Zavatta 2014a). On this view, a word was used to refer to something not by means of its own signification, i.e. the usual causal relation between a word and its understanding by the hearer (Kretzmann et al. 1982: 188), but through the signification of another word (Buridani *Summulae de Dialectica* 4.3.1). As this ancient account seemed to point out, metaphorical meaning cannot be retrieved using the almost causal, i.e. heuristic, relation between a sentence and its literal meaning. Metaphorical interpretation needs a more complex process of reasoning.

Building on this ancient insight, in an argumentative perspective we can regard the passage from sentence to speaker's meaning as mediated by two different processes. The first one can be considered as a *prima-facie* interpretation (Patterson names it "understanding"), i.e. is the attribution by default of an intention (or meaning) to a dialogical move based on the presumptive meaning arising from literal meaning or lexical items (the ordinary meaning of the sentence) (Patterson 2004: 247; Levinson 2000: 258–259; 369). The other process consists in a more complex reasoning that Searle called "strategy for interpretation" (1981: 102), namely an explanation of meaning that is non-presumptive, but rather more complex, as grounded on abductive or other non-deductive processes of reasoning (Levinson 2000: 258).

¹ «<suppositio> impropria est quando uox supponit secundum significationem alterius uocis, ex transsumptione, propter similitudinem uel ironiam aut huius modi aliam causam, ut si dicamus pratum ridere.» (Buridani Summulae de Dialectica, 4.3.1).



The distinction between non-presumptive and prima-facie interpretation can be used to account for the process of reconstruction of metaphorical meaning. On this view, meaning is considered as the result of a process of associating an intention (speaker's meaning) to a sentence used in a specific utterance. Such an association or pairing is more immediate in specific prototypical contexts, while it is more complex when a sentence is used in a less typical way. In the first case, the process of meaning retrieval can be considered as defaultive, because grounded on the prototypical pairing between semantic interpretation and speaker's meaning. In case of words used with their conventional meaning, including conventionalized metaphors, the interpretative process is automatic and effortless, based on heuristic reasoning (Kahneman 2003; Petty and Cacioppo 1986; Petty et al. 2005; Chen and Chaiken 1999). In the second case (to which creative metaphors belong), the prototypical meaning is found not to correspond, for different reasons, with the speaker's intention. As a result, the process of meaning reconstruction becomes more complex and articulated, involving patterns of reasoning aimed at establishing what interpretation can be the best one. In this sense, both literal and metaphorical meaning involve a process of meaning reconstruction (see Sperber and Wilson 2008: 93) based on two distinct types of reasoning. The distinction between presumptive and non-presumptive reasoning accounts for the distinction between conventional and creative uses of language from an analytical perspective.

From an argumentative point of view, presumptive meaning can be thought of as the result of a process of meaning attribution grounded on presumptions (leading to "presumptive solutions," see Levinson 2000: 238; Atlas and Levinson 1981; Walton 1996). In order to be able to communicate his dialogical intention, the speaker acts on the basis of several presumptions (see Hamblin 1970: 294–295). In particular, he presumes that the hearer knows the ordinary semantic meaning of a sentence or the lexical items elements thereof. In order to understand the speech act, the hearer presumes in turn that the speaker is using the sentence according to its ordinary semantic meaning, and reconstructs the meaning based on shared semantic rules and prototypical inferential processes (Levinson 2000: 177–188). These rules govern the process of *prima-facie* interpretation in lack of contrary evidence, i.e. unless problematic outcomes or textual clues block the use of such specific presumptions (Macagno 2012).

Hamblin linked the presumptions at the basis of interpretation with the notion of ordinary use. On this perspective, words do not have an immutable, fixed meaning, but instead their meaning is the result of an abstraction from the patterns of their use. Their meaning in this sense is conventional (Grice 1975: 50). For this reason, new semantic meaning can be introduced by the speaker, who can use word with a peculiar and not widely known pattern of use (Hamblin 1970: 295). The boundaries of the freedom of word uses lie in the presumptions on which the dialogue is grounded and the possibilities of reconstructing the non-conventional meaning (Hamblin 1970: 300; Macagno 2011).

Metaphorical interpretation, or more precisely the interpretation of creative metaphors, is a clear case in which the "pairing" between sentences and their preferred interpretations (Levinson 2000: 27) fails and needs to be accommodated. In such cases the heuristics that are used to identify a possible prediction about the presumptive meaning arising from the lexical item fail (Levinson 2000: 369), and



different reasoning processes need to be activated. This failure has been traditionally regarded as a flout of a conversational maxim (quality) because of the relationship between metaphors and truth-values. This can be the case when metaphorical utterances represent propositions that are literally false or are supposed to be false (Martinich 1991: 510). However, in many cases metaphorical interpretation is not triggered by falsity, but by other different phenomena, such as nonsense or non-informativeness (more generally "incongruity," see Rigotti 2005). For this reason, it is necessary to analyze such failures of presumptive meaning at the level of speaker's meaning, and regard them as apparent communicative failures. By identifying the different causes of metaphorical interpretations it is also possible to distinguish between distinct types of metaphors.

2 When Meaning Becomes a Problem

Metaphors are crucially related to the failure of the presumptive association between the "speaker's meaning" and the "sentence meaning." In these cases, there is a mismatch between the intention of the speaker, or rather the purpose of a speech act, and the presumptive, *prima-facie* interpretation of the sentence meaning. The first crucial problem is to establish how to recognize when and how this mismatch occurs, identifying the conditions that a discourse unit (such as a metaphorical utterance) needs to fulfill in order to be dialogically meaningful. We can distinguish between three levels of intended communicative breaches, corresponding to the non-fulfillment of the conditions at the level of the sentence, the relations between sentences or speech acts, and the discourse.

2.1 Sentence Conditions: Presuppositions of the Predicates

A discourse unit can fail at the level of the sentence level, namely at the level of the well-formedness conditions (Levin calls it "linguistic deviance", Levin 1977). At this level we distinguish well-formed sentences as "The king of France is bald" from sentences which are not well-formed, as "Australia is bald" or "The stone died" (Seuren 2000: 279; Atlas 2005; Levin 1977: 33). The problem of grammaticality was deeply analyzed by Katz and Fodor (1963), and by Chomsky (1971). From such approaches and subsequent studies a crucial relationship emerges between the conditions required by semantic predicates (or selectional restrictions) and the fundamental semantic features of their arguments. Selectional restrictions can be described as the conditions (or preconditions, Seuren 2000: 277) that a predicate imposes on the elements acting as its arguments (Hobbs 1979: 70; Grimes 1975: 162). Such conditions represent the categorical presuppositions of the predicate (McCawley 1971: 290; Antley 1974; Chomsky 1971: 205), that is, the categorical conditions imposed on the denotation of a semantic structure. For instance, the predicate "to read" requires an animate being having specific characteristics as a first argument, and a written text as a second argument. Therefore, in order for the predicate to be correctly attributed to an entity acting as its grammatical subject, the latter needs to be



animated; similarly, the read entity needs to be hyponym of "written document" (Rigotti 2005: 79).

According to the Congruity Theory (Rigotti 2005: 79), a predicate imposes specific preconditions on its arguments (i.e. determine certain presuppositions) and triggers specific implications (Rocci 2008: 252; see also Kempson 1975: 63). For example, the sentence "Louis reads the newspaper" cannot be true if its implication, "Louis understands the meaning of what is written in the newspaper" is false. Presuppositions are relative to the possibility of attributing the predicate: if Louis is a dog, he cannot read a newspaper.

2.2 Relations Between Speech Acts

The relationships between a speech act (which we will refer to also as a discourse unit when it is part of an act complex, see Van Eemeren and Grootendorst 1984: 34, or a dialogue—or communicative—move when part of a dialogue) and its effects on the context (in this case intended as encompassing both the co-text and the conversational setting, including the possible interlocutor's reactions) can be represented as high-order, abstract pragmatic predicates called in the Congruity Theory "connective predicates" (Crothers 1979; Rigotti 2005; see also the similar notions of "rhetorical predicates," Grimes 1975: 209, and "coherence relations," Hobbs 1979: 68; Hobbs 1985). These abstract predicates account for rhetorical relations and illocutionary forces in a dialogue. They represent the speaker's intention, and can connect discourse units explicitly (through connectors) or implicitly.

The set of coherence conditions (or pragmatic presuppositions, see Vanderveken 2002: 47; Bach 2003: 163) that a connective predicate imposes on its arguments is part of its semantic structure (Kempson 1973). For instance let us consider the following argument:

I. (A) Bob punched his brother. Therefore, (B) Bob is violent.

The connector "therefore," expressing a relation of justification, presupposes that the first discourse unit is a reason supporting the second one. For instance, if we replace the aforementioned text with the following, "Bob punched his brother. Therefore Sam is violent (or the sun rises)," we can notice a potential unreasonableness, which can be avoided only by providing or imagining extra information. Connectors impose specific conditions on the discourse units, and the fulfillment of such conditions depends on the implicit knowledge shared by the interlocutors. For instance, it would be unreasonable, or infelicitous, to claim that "The Earth is round because the king was bald," as the second discourse unit cannot be thought of as a reason supporting the attribution of a property to the Earth.

2.3 Dialogical Conditions and Dialogical Failures

Connective predicates impose conditions on the order and the role of the discourse units, and represent the individual goal in a communicative exchange (Rocci 2005:



103). However, such individual intentions need to be framed within a dialogical activity in which different individual goals need to adapt to and be coherent with a joint purpose (Rocci 2005: 104–106). Higher connective predicates, which can be called dialogue-game predicates (Rocci 2005: 106; Macagno and Walton 2007; Macagno 2008), need to be introduced. Such dialogue-game predicates connect the speech acts of a *dialogue*, and the individual communicative goals, with the purpose of a joint collaborative verbal activity. The assertion "I have met Pierre this morning" cannot be understood as a disconnected remark; on the contrary, it opens up certain possibilities of reply (such as "Ah, really?" or "What did he say?") and excludes others (such as "I have eaten an apple"). According to Grice, communication is a cooperative activity aimed at achieving a common purpose (Grice 1975: 45). On this view, every speech act needs to be interpreted not as an isolated remark, but within a cooperative setting (van Eemeren and Grootendorst 2004: 72).

Inasmuch as every speech act has to provide a contribution to the achievement of a common goal, it must comply with some requirements. These requirements regard the quality and the quantity of the provided contribution, its relation to what has been said before and the conversation goal, as well as the manner in which it is made. For example, it would be "unsuitable" to answer a question regarding the location of a specific monument with a remark on the weather (violation of the maxim of relation), or adding also a detailed report of its history (violation of the maxim of quantity). On this view, the listener *expects* the received contribution to be meaningful and relevant for the actual communicative setting and triggers an interpretative reasoning aimed at retrieving the presumed speaker's intention. The possibility of exploiting a maxim relies exactly on this expectation. In case the presumptive meaning is not acceptable (because of several possible reasons), i.e. it is not compliant with the requirements, the listener begins to look for an alternative one.

2.4 Types of Presupposition

The conditions that dialogue-game and connective predicates impose on the speech acts in a dialogue involve the knowledge that the participants in a dialogue share. Such background knowledge includes several levels, from purely semantic competence (lexical meaning—for instance, the meaning of "to meet someone") to encyclopedic information (knowledge of the world as shared in a certain community—for instance, the knowledge that meeting friends is usually pleasurable) and shared knowledge (knowledge of common acquaintances and past communicative exchanges). In addition to these types of knowledge, Ducrot underscored how some speech acts presuppose also the interest of the interlocutor in the subject matter. He took into account the following case (1966: 46):

If, during a conversation, I abruptly say, «I have met Pierre this morning», my sentence is linguistically absurd if my interlocutor is not interested in Pierre.



As Ducrot put it, this speech act presupposes not only the existence of "Pierre," but the interlocutor's acquaintance with him (see Austin 1962: 50–51) and, most importantly, his interest in him.

On this perspective, the presuppositions of a dialogue unit need to include the participants to the dialogue, their interests, and the background knowledge (see Rigotti and Rocci 2006). Specific requirements are imposed on the relationship between the interlocutors and their speech acts. For instance, an order requires a (conversational or social) position of authority held by the speaker (it would be rather infelicitous for a pupil to tell the teacher: "Be quiet now!"), while the purpose of assertions (i.e. to inform the hearer or, dialogically speaking, to alter his commitments) can be fulfilled only if the propositional content can be informative for the hearer. The speaker, in order to reasonably intend to modify the interlocutor's commitments (knowledge), needs to utter a sentence that, at least, can be informative for (unknown by) the hearer. For this reason, it would be not only infelicitous, but unreasonable to tell the interlocutor, "You are born" or, "The Earth is round," as such assertions are aimed at achieving the purpose of informing the hearer by providing information that cannot be informative. In this sense, the failure of the individual goal of a discourse unit results in the failure of the purpose of the joint communicative action. We represent the structure of the presuppositions of the speech act of assertion as follows (Fig. 1):

In this figure the components and the requirements of the speech act aimed at informing the interlocutor ("Asserting that p," or "Ap") are represented. In the central box the propositional conditions are made explicit: p needs to represent a piece of information that can alter the interlocutor's dialogical or cognitive

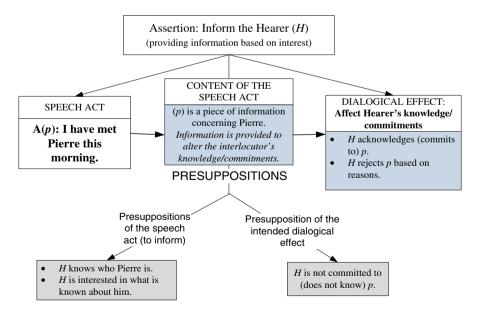


Fig. 1 Presuppositions of a speech act in a dialogue



condition (commitments or knowledge). For this reason, the requirements need to be further specified in relation to the purpose of the act (the hearer needs to be interested in and know the subject matter of the assertion) and the interlocutor's dialogical or cognitive condition (the interlocutor needs not to be previously committed to or already know the content of the assertion). The effects of the speech act can be represented in a dialogical perspective as the possibilities that its successful performance opens up, in this case a choice between acknowledging the information and continuing the dialogue accordingly, or rejecting it.

If we maintain a dialogical perspective of meaning, we can conceive all the different conditions that dialogue-game and connective predicates impose on their arguments as "pragmatic presuppositions" (Stalnaker 1974; Vanderveken and Searle 1985: 66–67; Bach 2003: 163), or requirements for the felicity of a speech act (Austin 1962: 34; 51),² as they express the conditions for the possible effects that it can have in a dialogue. Building on the Congruity Theory (Rigotti and Rocci 2001; Rigotti 2005; Rigotti and Rocci 2006; see also Asher and Lascarides 2003), we maintain that the common goal (the discourse purpose) is represented as a higherlevel abstract predicate, the dialogue-game predicate, which assigns a role to each speech act (Grosz and Sidnert 1986: 178; Walton 1989: 68). The text is thus thought of as a hierarchy of predicates connecting discourse units. For instance, a dialogue between the speaker, Bob, and a friend on Bob's difficult situation may be conceived as a hierarchy of dialogical goals, of which the highest and most general could be the dialogical one of exchanging or communicating information. This dialogical goal imposes the conditions on all the subordinate speech acts expressing individual goals. For example, Bob's speech acts can be aimed at "impress the hearer," or "arouse his pity," etc. (Asher and Lascarides 2003). The speaker may arouse the hearer's interest in the topic by asking him a question on his knowledge of Bob's condition, and proceed with a sequence of dialogue moves whose purpose is to gradually lead the other party to the conversational situation that represents the super-ordinate goal. What is essential for our purposes is that each speech act can be considered as reasonable only if specific conditions are complied with.

3 Dialogical Conditions and Presumptions

Connective and dialogue-game predicates impose specific preconditions, such as the interlocutor's knowledge or interest. Not only are facts, entities, and qualities presupposed, but also the dialogical setting and the values, the presumptions, and the expectations of the interlocutors. However, the fulfillment of the conditions of these connectives depends on information that is not known to the speaker, as it concerns the interlocutor's mind or inner states. The problem of knowing the other's mind risks turning a linguistic issue, the possibility of presupposing, into a psychological concern focused on beliefs (Soames, 1982: 486; Stern 2000: 117). To avoid this, we will approach this issue from a purely linguistic and argumentative perspective,

² These felicity or "meaning" (in Grice's sense) conditions will be referred to simply as "presuppositions" in this paper, considering the dialogical or pragmatic meaning of this concept.



investigating the rational process or mechanism underlying how we can reconstruct our interlocutor's possible beliefs (Freeman 2005: 43). On this view, presupposition can be thought of as a speaker' act (Ducrot 1972a, b; Hopper 1981) grounded on a specific type of educated guess on what is or can be part of the common ground. As an educated guess, presupposition can be treated as a reasoning process that is subject to certain quasi-logical constraints and determining its acceptability. For this reason, it can be described and assessed as reasonable or unreasonable.

The importance of this reasoning dimension has been pointed out in the literature in pragmatics. Stalnaker (1974) and Burton-Roberts (1989) pointed out that presuppositions need to be considered as the result of a dialogical act of guessing on the grounds of shared information (Stalnaker 1998: 8). From an argumentative perspective, we can examine this type of grounded and tentative conclusion concerning the other's knowledge, interests and values as the outcome of a process of presumptive reasoning (Freeman 2005: 43; Walton 1993), defined as reasoning in lack of evidence (Rescher 1977: 1; Walton 1996). This type of reasoning can be represented as follows (Rescher 2006: 33):

Presumptive reasoning

Premise 1: P (the proposition representing the presumption) obtains whenever the condition C obtains unless and until the standard default proviso D (to the effect that countervailing evidence

is at hand) obtains (Rule)

Premise 2: Condition C obtains (<u>Fact</u>)

Premise 3: Proviso D does not obtain (Exception)

Conclusion: P obtains

In case of presuppositions, we can believe that the other party may know a proposition on the basis of his previous declarations (testimony) or dialogues with other people, or because it is part of the so-called common knowledge. As Freeman put it (Freeman 2005: 346):

[...] the mark of common knowledge is that everyone, or virtually everyone, in an historical or cultural situation believes that statement. As we argued [...], common knowledge is presumptively reliable.

The speaker presumes that the hearer accepts or already knows a given piece of information on the basis of shared and commonly known rules, concerning common behavior or values or usual connections between facts or entities. Stern (2000: 113) calls such a "shared background" necessary for the interpretation of an utterance (even of a non-metaphorical utterance) "the set of *presuppositions* of its context (or *context set*)." For instance, in uttering "I have met Pierre this morning," the speaker acts on the known fact that Pierre is known by the interlocutor and the presumption that "Information relative to acquaintances is interesting" (Kauffeld 2003: 140; cf. Kauffeld 1995: 510).

On this perspective, the reasonableness of a discourse move can be assessed in terms of validity of the presumptive reasoning underlying its presuppositions (Macagno and Walton 2014: 180–182). For instance, if we consider the aforementioned case of a speaker telling that "I have met Pierre this morning" to a passerby, we



can analyze the failure of the presupposition concerning the interlocutor's interest in the subject matter as follows:

Premise 1: P (the Hearer is interested in the subject matter of a statement) obtains whenever the condition C (the Hearer is acquainted with the person the Speaker is talking about) obtains unless and until the standard default proviso D (he cannot remember him, etc.) obtains (Rule)

Premise 2: Condition *C* (the Hearer is acquainted with Pierre) **CANNOT obtain** (a passerby cannot know a friend of an unknown person) (Fact)

Premise 3: Proviso D (the Hearer has problems of memory) does not obtain (Exception)

Conclusion: P (the Hearer is interested in Pierre) OBTAINS

In this case, the hearer cannot accommodate the presupposition, and for this reason begins a meta-dialogical reasoning process aimed at reconstructing the interlocutor's reasoning underlying his move. The reconstruction of the presumptive meaning underlying the presuppositions, or rather conditions of the dialogical move, shows the speaker's unreasonableness, which can result in an infelicity. In many cases, however, the meta-dialogical process of presupposition assessment can lead to a renegotiation of the speaker's individual intention. The speaker's presumptive meaning needs to be interpreted in a dialogical condition, in which the joint goal (exchange information, reaching a shared point of view...) constitutes the highest presumption of intention. In order to preserve the reasonableness of the dialoguegame predicate, the hearer can reconstruct the speaker's move in a way that his move can be considered as reasonable. For this purpose, the meta-dialogical process of a move reconstruction needs to evaluate the various presumptions on which the speaker may have relied on in his speech act, maintaining the highest ones imposed by the dialogue-game predicate.

The context sets underlying the performance and interpretation of an utterance (Stern 2000: 113) are composed of different types of presumptions. As mentioned above, some of them are directly related to the possibility of mutual understanding. To this group belong the presumptions concerning the knowledge of linguistic items and structure (called semantic–linguistic presumptions), and the ones relative to the pragmatic purpose of the discourse, that can be indicated by the type of illocutionary act (pragmatic presumptions). Other presumptions are about encyclopedic knowledge, such as facts, common connection between events, or behaviors and habits. Others concern mutual knowledge, involving values, interests, and other information that strictly depends on what the interlocutors share. The levels of presumptions can be represented as follows (Fig. 2):

This account of presupposition in terms of presumptions, and consequently of presuppositional breaches (incongruity) in terms of contradictory presumptive reasoning, develops the congruity theory (Rigotti and Rocci 2006)—grounded on the idea of a match between the presuppositions of the predicate and the features of the argument—from a reasoning and quasi-logical point of view. The introduction of the distinct levels of presumptions allows one to analyze the failures of presumptive meaning that trigger metaphorical interpretations as different types of failures of presumptive reasoning. In metaphorical utterances, these levels of



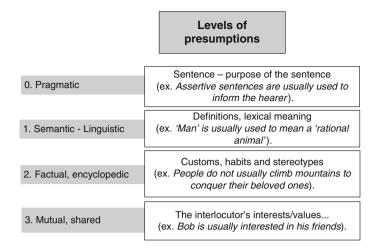


Fig. 2 Levels of presumptions

presumptions can be used to understand at a meta-dialogical level where the presumptive breach occurs, and what kinds of presumptions can be used to guide the meta-dialogical reconstruction of meaning.

4 Metaphors, Presumptions, and Breaches

The stimulus to treat meta-dialogically a sentence as being used metaphorically can be considered as the result of a failure of the presumptive meaning. In this case, the prototypical interpretation of a sentence leads to a communicative failure (Bergmann 1991: 489; Searle 1981: 105). This approach to meaning and interpretation leads us to analyzing and classifying metaphors according to the types of presumptive failures that trigger the non-presumptive interpretation. In turn, these types of metaphorical triggers lead to distinct meta-dialogical processes of meaning reconstruction. We distinguish at least five different kinds of communicative breaches, which correspond to five different kinds of metaphors:

- 1. The ship ploughs the waves.
- 2. Shakespeare lives on the Parnassus.
- 3. No man is an island.
- 4. Juliet is the sun.
- 5. I have spent the last 2 years licking my own wounds.

In all these examples, a non-presumptive interpretation is required because of a failure of a semantic presumption, caused by a contradiction with presumptions of the same or other levels.

In (1), the contradiction is caused by a conflict between semantic presumptions. The predication of "to plough" fails because the characteristics of its semantic



arguments, "ship" and "waves," do not match with its presuppositions. The communicative breach is provoked by an apparent unreasonableness of the predication. "To plough" semantically presumes (Level 1) that the first argument can perform the action of cutting and revolving, and that the second one is a solid surface. Such presumptions conflict with the semantic presumptions (Level 1) of both "ship" and "waves." In (2), the failure occurs because of an incompatibility between semantic and factual presumptions. Shakespeare cannot be presumed to be known as living nowadays (Level 2, factual presumptions, see Rigotti and Rocci 2001: 68), as dead men cannot be presumed to live (Level 1, semantic presumptions).

In (3) the apparent breach of the dialogical effect of the move is due to lack of informativeness rather than ungrammaticality or un-verifiability (see Martinich 1991: 514). The speaker performs a move that is infelicitous because it is obviously true and, therefore, not informative.³ In this case there is a conflict of presumptions between the presumed communicative intention (pragmatic presumption of Level 0, "to inform the interlocutor") and the presumed meaning of the statement (Level 1, presumptions concerning the definitions of "man" and "island"). We represent the levels of the breach of case 3 in the following figure (Fig. 3), where the Assertion of p (Ap) to a Hearer (H) is presumed to inform him:

Case (4) is similar to (3), as the breach of dialogical requirements also involves a conflict between pragmatic, semantic, and encyclopedic presumptions. According to Grice (1975: 34), metaphors of this kind arise from exploiting the maxim of quality, i.e. they utter obvious falsities. In cases of metaphorical utterances such as "Juliet is the sun" or "You are the cream in my coffee" (Grice 1975: 53), the speaker utters a sentence whose falsity is obvious, i.e. immediately known to the reader. In other words the hearer, only based on his semantic competence, can draw the conclusion that under no circumstances the aforementioned statements can be true, and for this reason informative. The sentences uttered cannot be presumed to be informative (presumption 0), as Juliet, a female human being in love with Romeo in Shakespeare's drama (Level 2, factual presumptions), cannot be at the same time presumed to be the gaseous sphere at the center of the solar system (Level 1, definition of "sun"). Similarly, in Grice's example, a human being (the interlocutor) cannot be the cream in the coffee of anyone. For this reason, case 4, just like case 3, is unreasonable at a dialogical level, as it is presumed at the same time to produce a specific effect (at the level of speaker's intention, or purpose of the speech act) and not to produce it (at the level of the meaning and factual presumptions).

Case 5 is more problematic, as it can be interpreted both literally and metaphorically. This breach results from an incompatibility at the level of the socially shared principles concerning common associations between events and behaviors (Level 2 of presumptions), triggered by the semantic knowledge of what is "licking" and what is a "wound" (Level 1 of presumptions), and what is known about the interlocutor and the actual circumstances (Level 3). Human beings can be injured and lick a small wound (a scratch or an insect byte) to get some kind of

³ Stern defines this type of unreasonableness as a breach to the "redundancy principle", see Stern 2000: 128.



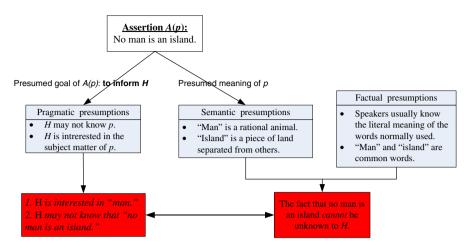


Fig. 3 Breaching informativeness

relief. However, what appears to be unreasonable is the duration of the action (2 years), which is not physically impossible, but completely unusual under ordinary circumstances, like the present ones.

All these types of breaches consist in conflicts of presumptions involving crucially the semantic-linguistic ones, i.e. the one related to the "literal meaning" of a predicate. Such a potential communicative failure can be avoided by resorting to a process of interpretation, in which the semantic presumptions concerning the meaning of a component of the utterance (the vehicle) are discarded, while the other ones are maintained. The crucial problem is to account for the meta-dialogical reasoning process of meaning reconstruction, providing a link between the semantic features of the vehicle, the background knowledge, and the meaning of the metaphorical utterance.

The interaction theories on metaphor provide us with useful hints in this regard. Richards (1936) explains the process of reconstruction of metaphorical meaning as based on the interaction between the tenor (today often called the "topic," or the subject matter of a predication) and the vehicle. Max Black pointed out that the interaction is actually established not just between two terms, but between two "systems of associated commonplaces" (Black 1954: 287) or "systems of associated implications" (Black 1954: 289), i.e. sets of assumptions that are commonly associated with the two subjects of a metaphorical utterance. The commonplaces associated with the metaphorical expression (or "focus") are filtered by the co-text in which it occurs (the "frame"). Stern developed a modern version of interaction theory by elaborating an approach to the process of interpretation of metaphorical utterances (called "literalist," Stern 2006), grounded on a double process of production and selection of properties. Through a first set of presuppositions (called the Productive Set) associated with the literal vehicle, the interpreter generates the properties to be transferred to the topic. Applying a second set of presuppositions (called the Filter



Set) associated with the co-text and context, the interpreter then filters out, among the generated properties, the ones that are unsuitable (Stern 2000: 147–8).

Such approaches, and in particular Stern's one, are unsatisfactory. Stern challenges the distinction between literal and metaphorical interpretation, listing a number of cases in which the utterance is not grammatically deviant, nor absurd, redundant, or pragmatically inappropriate (Stern 2000: 3). He considers literal and metaphorical interpretations as parallel alternatives, differently "accessible" depending on the contexts (Stern 2000, 4-6). Stern seems to fail to account for all the complex dialogical conditions at different levels and, consequently, for the various breaches underlying "deviance." Thus, he does not explains satisfactorily what makes an interpretation more or less accessible. Moreover, in such approaches the reasoning process of meaning reconstruction remains unclear. Although Stern suggests an interesting paradigm for reconstructing metaphorical meaning (based on a double process of generating and selecting properties to be attributed to the vehicle) and notices rightly that such a process is context-dependent, he does not explain how it really works. In order to address such issues from a logical-semantic point of view, we need to show how the non-presumptive reconstruction of meaning resulting from a breach of presumptions works, and how it is guided by the joint and the (presumed) individual communicative intention.

5 Metaphorical Meaning as the Most Relevant Explanation

The breaches of the presumptive, *prima-facie* understanding of a speech act can be considered as the triggers of specific patterns of reasoning, aimed at providing an alternative interpretation of its communicative goal, in case of implicatures (Macagno 2012), or literal meaning, in case of metaphors (Rigotti and Cigada 2004: 139–140). As seen above, in interpreting metaphorical utterances, the interpreter chooses to rely on the pragmatic (and factual) presumption and ignores the semantic one (relative to the item that in this fashion becomes the vehicle) conflicting with it. However, the vehicle needs to be reinterpreted in a way that it becomes relevant to the presumed purpose of the utterance, without conflicting with other possible presumptions or facts.

In argumentation theory, the non-presumptive interpretation of an event (a discourse unit in this case) can be regarded as a form of reasoning from best explanation, where the selection of the "best" of the possible explanations is performed through the assessment of the explanatory power of the alternatives. This type of interpretative reasoning can be formalized using the argumentation schemes (Walton et al. 2008). These provide us with a structure allowing one to assess the process of reconstructing the meaning of a metaphorical utterance in a given context. In Walton (2002: 44), the process of explaining an event has been described

⁴ On Stern's account, "the meaning of a metaphor is the rule that determines its content for each context, that is, its character" (Stern 2000: 16). He substantially adapts David Kaplan's theory of demonstratives to explain the reconstruction of metaphorical meaning and states: "The character of an expression Φ interpreted metaphorically (or Mthat(Φ)) is thus a function from the relevant set of properties P presupposed to be associated with Φ in context c" (Stern 2000: 115).



in the following abductive pattern of reasoning (cf. Harman's inference to the best explanation: Harman 1965):

Argumentation scheme: Best explanation

F is a finding or given set of facts.

E is a satisfactory explanation of F.

No alternative explanation E' given so far is as satisfactory as E.

Therefore, E is plausible, as a hypothesis.

This process of reasoning consists of two steps of reasoning: the abduction of an explanation, and the comparison between the explanations. In abductive reasoning, a state of affairs needs to be explained, and a cause or an antecedent needs to be found. For instance, if we notice the tracks of a bear on a path, we can conclude that a bear has passed by because if a bear walks on a path it usually leaves tracks on it. However, more than one explanation may be found for the same event or fact. For instance, bear tracks may have been made by a practical joker, or by an animal similar to a bear. The second step consists of comparing the possible explanations and establishing the best one based on the evidence provided (Walton et al. 2008: 170; 198–199; Walton 2004a: Ch. 5). For instance, a bear is the most likely cause of bear tracks in normal conditions, as it is the most common or acceptable cause of the tracks.

The non-presumptive interpretation of an utterance can be thought of as a kind of reasoning from best explanation. However, in order to assess what is the "best" explanation of an utterance, it is necessary to show the relationship between the distinct components of the explanatory process. In particular, we need to specify what is to be explained, i.e. the communicative function of the vehicle, the possible explanations, i.e. the set of possible alternative interpretations, and the criterion for selecting the best one. Our claim is that the best explanation is selected as the *more relevant* one to the communicative goal, which leads us to analyzing what relevance is from a reasoning point of view.

5.1 Relevance as an Argumentative Relation

The notion of relevance has been developed in the Relevance Theory (Sperber and Wilson 1986; 2008) as a balance between the cognitive effects and the processing efforts of ostensive stimuli: the greater the cognitive effects achieved by processing a stimulus, the greater its relevance; the smaller the processing effort required to achieve these effects, the greater the relevance (Sperber and Wilson 2008: 88). However, in order to explain interpretation as a meta-dialogical process of reasoning triggered by a breach of presumptions, we need to show how relevance can be thought of in a logical–semantic perspective as a set of requirements presumed by the speaker. In this perspective, the most relevant explanation of an utterance will be the one that best supports the presumed or presumable dialogical intention of the utterance. In this sense, based on the dialogical context, co-text, and the content of the utterance, the hearer develops specific presumptions on the speaker's communicative intentions, which can be later contradicted or confirmed. At a given moment of the dialogical exchange, the hearer presumes a specific



speaker's intention that can be drawn from and be coherent with the joint purpose of the dialogue and the other textual and contextual information.⁵

The retrieval of the specific function of a speech act for the global purpose of the discourse can be analyzed as the reconstruction of the grounds of its relevance. Relevance is here conceived as a purely verbal (textual) relation, and its effects are described from a purely dialogical perspective in terms of communicative and dialogical effects (Van Eemeren and Grootendorst 2004: 72). In this sense, this account is focused on the logical-semantic and pragmatic dimension of the relation between a speech act and its context. According to van Eemeren and Grootendorst (1992: 142) and Walton (2004b: 169), a speech act (or element of discourse) is relevant to a goal directed conversation to the extent that it is functional to the goal of such a discourse or part of discourse (van Eemeren and Grootendorst 2004: 70–71). On this view, a speech act in a dialogue is relevant when it supports the abstract conclusion that represents the purpose of the dialogue (or part of it). For this reason, it needs to be structurally connected to such a conclusion, i.e. instantiate a pattern of reasoning leading to it (Walton 2003: 1312).

The idea advanced in argumentation theory of "purpose of the dialogue" and the pragmatic notions of "speaker's meaning" or "contextual effects" become more specific in Ducrot's structuralistic approach to pragmatics. According to Ducrot (1972a, b: 20; Ducrot and Anscombre 1986: 88) the meaning of a speech act consists in the effect it produces on the interlocutor, which is defined as the way in which it modifies the latter's communicative situation by restricting the paradigm of his possible replies. On his view, the purpose of a move corresponds to the inferences that can be reasonably triggered by it, or more specifically, to the implicit conclusion the interlocutor needs to reconstruct and, if it is the case, reply to. For instance, let us consider the following argument, already mentioned in Sect. 2 above:

1. (A) Bob is violent. (B) He punched his brother.

The relevance of *B* to the context and co-text in which it occurs can be analyzed starting from the semantic-ontological relations between the discourse units. In this case, the connective predicate expresses a relation of motivation ("*B* is a reason for

⁶ In this sense, this account of relevance is much narrower than Sperber and Wilson's one, where the implications yielded by an input are relevant inasmuch as they achieve cognitive effects. However, this approach can be compared with the Relevance theory one in the sense that also in this latter framework the relevance of an utterance is conceived in terms of the implicit conclusion warranted by the explicatures and the implicit premises (Sperber and Wilson 2008: 92).



⁵ We consider the presumption of the speaker's intention as the leading presumption as a possibility of meta-dialogically reconstructing a move in cases in which a presupposition failure occurs. The utterance "I will park my Bentley and I will reach you" uttered to an interlocutor that cannot know that the speaker owns a Bentley, can be reconstructed in two different ways. The hearer can renegotiate the literal meaning as "I will park my (expensive) car" maintaining the presumed pragmatic intention (inform the hearer of his action). Otherwise, he can renegotiate the presumed intention maintaining the literal meaning, presuming that the speaker intends to avoid the responsibility of informing the hearer of an exceptional fact (he bought a Bentley). Depending on the force of the underlying presumptions, one interpretation will prevail over the other.

A") and can be further specified by taking into account the content of the speech acts. The purpose of the conclusion A is to attribute a quality to an individual, in this case "Bob." The second sequence describes a particular action carried out by the individual. This action can be relevant to the conclusion, i.e. can somehow motivate it, if it is interpreted as a sign of the stable disposition indicated in A. This reconstruction of relevance as an argumentative link can be represented as follows (Fig. 4):

In this figure, the purpose of a dialogue unit is represented as an abstract predicate (the connective) imposing certain conditions onto the dialogue units. In this specific case, A needs to express a reason for accepting B; i.e. A is relevant inasmuch as it provides a reason for accepting B. Clearly, this relation is extremely generic, and needs to be further specified through the information provided by the content of the discourse units. Since A expresses a classification of the subject (Bob) and B indicates an action committed by the latter, B can be considered as relevant because provides an indication from which a judgment is drawn. The best explanation for the motivating relationship between a judgment and an action is a sign relation, i.e. an argument linking abductively the quality of an action with the quality of the agent's character.

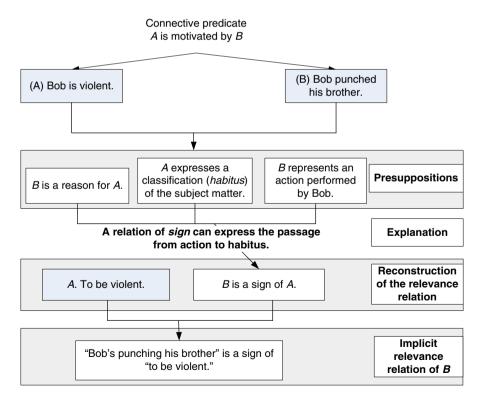


Fig. 4 Relevance as an argumentative relation



This relationship between the connective, the background knowledge (first level in Fig. 4, "presuppositions") or co-text, and the reasoning from best explanation (second passage, "explanation") allows one to specify the conditions that need to be fulfilled in order to bring about the communicative effect. On this perspective, the account of the Congruity Theory (Rigotti and Rocci 2006) is developed in order to account not only for the generic requirements, but also for the specific relevance relation. On this view, the relevance of a speech act can be represented as its specific contribution to the purpose of the discourse. In this sense, a speech act (or a linguistic element) is relevant inasmuch as it fulfills the specific logical and semantic requirements of the connective predicate and the dialogue-game predicate. In the case above, the relevance of *B* can be reconstructed by interpreting the discourse unit as expressing a sign of the negative character judgment (being violent) indicated in *A*.

5.2 Metaphorical Relevance and Best Explanation

As shown in Sect. 4 above, metaphorical utterances cannot be interpreted in a presumptive way because of some contradictions between the semantic–ontological presumptions (Level 1) and other presumptions also of different levels. In metaphorical interpretation, the interpreter explains the communicative failure by relying on his understanding of the speaker's communicative intention, i.e. what Martinich called "the author's attitude towards the described state of affairs" (Martinich 1991: 511). As a result, a semantic presumption needs to be rejected and an alternative interpretation of the vehicle needs to be found in order for it to become relevant to the intended purpose of the speech act.⁷

In order to explain how a vehicle can fulfill the function of the discourse unit, it is necessary to analyze the relationship between the former and the communicative intention as a relevance relation, intended in terms of a logical-semantic connection. For instance, we consider the following metaphors mentioned above:

- 3. No man is an island.
- 4. Juliet is the sun.

In both cases we notice a communicative incongruity (Rigotti 2005). The prototypical interpretation leads to a contradiction with the presuppositions of the connective predicate. In order to explain the non-presumptive meaning, it is necessary to identify the goal of the metaphorical utterances. In the first case, the cotext (comparing mankind to a continent made of parts of land) specifies that the goal of the speaker is to express a judgment on mankind. In the second example, as Romeo contrasts Juliet with the "envious moon," and considering the dialogue-

⁷ Stern explained the reconstruction of the meaning of the vehicle as a double process of creating and filtering of properties. The characteristics that are unsuitable to the co-text and context are excluded because inconsistent or redundant (Stern 2000: 139). For instance, "Juliet is the sun" cannot be interpreted as meaning that Juliet is the source of draughts, as it would be inconsistent with the context in which Romeo is praising her. However, nothing in the context of Shakespeare's play would prevent "Juliet is the sun" from meaning that Juliet is blonde. Juliet is not said to have dark hair, and this interpretation would have been somehow informative.



game predicate (to express and acknowledge feelings and praises), we can assume that he wants to point out the beneficial effects of Juliet's presence on his life, i.e. express a classification of Juliet that is praiseworthy because of her "salvific properties." We can represent the process of best explanation at the level of the presumptions and the reconstruction of the relevance relation as follows (Fig. 5):

In this figure, the mechanism of explanation is illustrated. The communicative breach is explained as a failure of a semantic presumption (Level 1), and the reconstruction of the meaning of the vehicle is guided by the reconstruction of the communicative purpose (Level 0). This presumed purpose, retrieved from the joint dialogical intention (the kind of dialogue the interlocutors are engaged in) and the cotext, specifies the relevance relation that "the sun" needs to fulfill in order to contribute to the purpose of the utterance. The selection of the best explanation relies on the specification of the relation between the metaphor and the communicative goal (the relevance relation), which is retrieved on the basis of the information provided in the co-text. Among the different characteristics of "sun," only the ones that can be used to praise to a woman for her salvific effects can be considered as relevant. In this sense, the purpose of the dialogue unit, which has been made specific by the co-text (Juliet "dispels the envious moon," therefore she has a salvific effect), establishes the respect under which the features of the vehicle are selected and become the "emergent" ones (Wilson and Carston 2006).

The analysis of metaphors in terms of best explanation raises other problems. What are the features that need to be selected, where do they come from, how can they become relevant, and how can they be "transferred" to the topic? How can a feature of the vehicle support a conclusion that is not related thereto? In order to address these problems, we need to analyze the specific relevance relation in terms of inferential relations grounded on a specific type of predication, the genus.

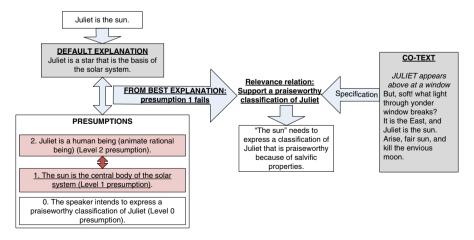


Fig. 5 Explaining non-presumptive meaning



6 Functional Genus and the Reconstruction of Metaphorical Meaning

As Sperber and Wilson pointed out, the analysis of the relationship between an utterance and its interpretation as inferential in nature allows one to treat the "properties" emerging in metaphorical interpretation as the result of an inferential process (Sperber and Wilson 2008: 97; see also Wilson and Carston 2006). However, this approach, just like the interaction-based ones, leads to the problem of explaining the nature of such inferences, and how they can account for the selection of the relevant feature of the vehicle (Vega-Moreno 2004: 301). The crucial problem is to explain from a logical-semantic point of view how the vehicle can be contingently redefined, i.e. how it can be attributed a new meaning that does not correspond to the semantic presumptions (resulting from its presumptive semantic structure). As shown above, the process of explanation of presumptive contradictions can be guided by the dialogical presumptions in case the semantic ones fail. For this reason, it is necessary to understand how it is possible to represent from an inferential point of view this specific "relevance relation" that the vehicle needs to instantiate.

A possible answer can be found in the ancient treatment of metaphor and semantic relations. In the Poetics Aristotle defines metaphor fairly broadly as "the transference to one thing of a name belonging to another thing" (*Poetics* 1457b7–8). Actually, μεταφορα should be understood in this case as transferences or tropes in general. Aristotle's perspective can be described as "referential" in that μεταφορᾶ is not the replacement of one term with another, but the attribution of a term to an object for which there is no conventional term available, or that is conventionally indicated with another term. Aristotle's classification of the term that is transferred as improper or extraneous ($\alpha\lambda\lambda \delta \pi \rho \delta \delta \nu$) expresses precisely the absence of a conventional link between the term and the object that it is designating. The transfer must be justified by a relation between the object conventionally designated by the term that is transferred and the object to which this term is improperly applied (Zavatta 2014b). According to Aristotle, the transfer in metaphors occurs by analogy between the terms (τό ὁμοιον) (Poetics 1457b9–10). Since analogy is a proportion, the transfer that is based on it should always be valid in the two senses. So if Dionysus is to the cup of wine as Ares is to the shield, I can say both that "the cup is Dionysus' shield" and that "the shield is Ares' cup." In this sense, we can understand metaphor as the elucidation of a functional analogy that goes beyond the boundaries of the shared meaning of the terms (Zavatta 2014a).

The relationship between analogy and metaphor can be understood considering the idea of common feature. Aristotle pointed out how the function of the vehicle is to convey a generic feature common to both terms (Aristotle, *Rhetoric* 1410b 14–16):

When the poet calls old age 'a withered stalk', he conveys a new idea, a new fact, to us by means of the general notion of 'lost bloom', which is common to both things.

This "general notion" contextually redefines both the topic and the vehicle of the metaphorical utterance, insofar as both human beings and flowers are put under a



genus created *ad hoc* for the purpose of the comparison (lost bloom). The nature of the metaphorical "new idea" can be understood from the Aristotelian treatment of analogy, where he noticed that a pounce (of a cuttlefish), a spine (of a fish), and a bone (of an animal) share a common generic predicate (a genus in his system of predicables, see Macagno and Walton 2009) that represents their function (structure sustaining the body) or nature (osseous structure) (*Posterior Analytics*, 98a20-23). This genus is not part of the semantic structure of the terms, but it can be attributed essentially to all the aforementioned species (a bone, a pounce, or a spine can sustain the body).

This idea of representing a generic concept under which the terms of the analogy fall *for the purpose of the analogy* can be extended to the treatment of the relevance relation. The connective predicate establishes the fundamental requirements that the comparison between topic and vehicle needs to fulfill in order to be relevant. In this sense, the vehicle and the topic are placed under a common superordinate predicate (extensionally analyzed as a "common superordinate category," Glucksberg 2008: 74; Glucksberg and Keysar 1990). Such a common predicate modifies the meaning of the vehicle, as some of its accidental properties are selected while some essential ones are disregarded. For example, "the sun," in "Juliet is the sun," does not refer to the star at the center of the solar system, but rather it is regarded as a specific instance of a generic predicate "to be a salvific entity" (or "to be unique," "to be at the center of one's life," etc.) (Glucksberg 2008: 78) under which also Juliet, a female human being in love with Romeo in Shakespeare's drama, falls.

In this sense, the topic and the vehicle are "made similar" by the metaphor, i.e. they are regarded as two instances of the same genus created *ad hoc* by the metaphorical utterance. The vehicle is contextually redefined by its inclusion in a superordinate genus, while the topic is attributed the relevant and accessory predicates commonly associated with the vehicle. In the utterance *homo homini lupus*, i.e. "the man is a wolf for other men," "wolf" is humanized, i.e. it is deprived of all the features that cannot be attributed to a human being (e.g. having a tail or fur), while "man" is "vulpinized," being characterized by predicates commonly associated to the wolf (such as to be aggressive and ferocious) (Black 1954: 288).

This account of metaphorical meaning is based on a pragmatic interpretation of a logical–semantic principle. The connective predicate imposes specific conditions on the vehicle, which specify the characteristics of the metaphorical predicate under which the vehicle needs to fall. This predicate is intensionally superordinate to the vehicle and indicates its new metaphorical meaning. In this sense, it becomes a component of the new definition of the vehicle, as it expresses "what is predicated in what a thing is of a number of things exhibiting differences in kind" (Aristotle, *Topics* 102a31–32). From a logical-semantic point of view, it is a genus, a predicate that can be attributed to the different specific concepts falling under it and indicating what they are *essentially*, i.e. semantically (Rigotti 2006; Rigotti and Morasso 2010; Kienpointner 1992). In this sense, the metaphorical genus indicates what the vehicle is in the specific metaphorical context.

The metaphorical genus created by the relevance relation needs to be conceived as a *functional* or *pragmatic* genus (Macagno and Walton 2009) that contextually



redefines the vehicle only for the purpose of the utterance. For instance, a man can be "an island" only because "island" is considered as falling within the predicate "to be an entity in a certain (negative) relationship with others." Similarly, Juliet can be "the sun" because "the sun" is regarded as characterized by "to be a salvific being." The metaphorical genus is *functional* because, by representing the conditions of the relevance relation, it accomplishes the purpose of the utterance (to express a judgment on the human relations; to praise a woman). Nothing prevents a metaphor to express distinct genera, each fulfilling different functions. The problem consists in identifying the specific communicative intention of the utterance.

It needs to be noticed that the idea of a functional (or pragmatic) genus is selfcontradictory if we conceive "essence" as an immutable meaning, pre-existing the utterance. However, from a pragmatic perspective, the use of a sentence in a speech act can create meaning that is different from the semantic one (Searle 1981: 77; Stern 2008: 263; Carston 2002). By means of metaphors it is possible to redefine contingently the concepts used, for the purpose of the communication (Glucksberg and Keysar 1990: 9). In this sense, in a metaphorical utterance the vehicle is characterized by semantic features that are different from its definitional ones, merely functional to the communicative goal of the metaphor. For this reason, the metaphorical genus does not refer to a characteristic of the terms of the comparison that describes "what a thing is absolutely," but simply "what a thing is contextually," i.e. for the specific communicative and pragmatic purpose of the metaphor. On this perspective, the connective predicate imposes on the vehicle the conditions for the relevance thereof, i.e. a set of features that identify the functional genus, which is exemplified and specified by the vehicle. In this sense, the latter is functionally and contingently redefined. The problem that arises at this point is to describe from a logical-semantic perspective how a vehicle can exemplify and fall under the functional generic predicate.

7 Exemplifying the Functional Genus

The functional genus is the cornerstone of the best-explanation process of reconstruction of the metaphorical meaning. It represents the predicate that the vehicle needs to instantiate through one or more characteristics. It is the principle according to which among the many possible features which can be associated with the vehicle just a few are selected and become "salient" (Martinich 1991: 313), i.e. relevant to the specific communicative purpose. In order to account for this process of selection, it is necessary to describe the nature of such characteristics of the vehicle at the level of the logical–semantic relations, from a quasi-logical point of view. The purpose is to take into account only the structure of the predication, and analyze such "characteristics" as predicates (modifiers) attributed to the head of the construction.



7.1 Predicables and Vehicles

In the ancient theory of the predicables, based on Aristotle's *Topics*, predicates were distinguished according to how they were attributed to the subject (essentially—i.e. indicating semantic fundamental characteristics—vs. accidentally; convertibly vs. non-convertibly). This account yields a hierarchy of the predicates that can be attributed to the subject according not to their content, but rather to the logical structure of the predication (see Aristotle *Topics*, book I; Rigotti 2009). In case of metaphors, the vehicle is subjected to different predications. For instance, different predicates can be attributed to "island," such as "to be a piece of land," "to be small," "to be separated from other lands," etc. Some of these predicates are attributed to the concept essentially, indicating what it is (to be a land; to be a piece of land separated from all the others); others specify the possible features that may characterize it or not (to be small...), i.e. accidentally. Some of these predicates are uniquely attributed to the subject, distinguishing it from all the other concepts ("to be separated from all other lands"). Aristotle called these latter predicates absolute properties. Others, called relative properties, characterize the concept only relatively, i.e. from a specific point of view, which can be provided by the culture, the context, or the co-text (for instance a lion is "the courageous animal").

If we conceive the "features" of the vehicle in terms of predicates that can be attributed to it, we can explain from a logical–semantic perspective the process of selection operated by the functional genus. In metaphors, the vehicle is redefined by the functional genus, which selects among all the possible predicates that can be attributed to the vehicle only the ones that do not conflict with the features of the generic predicate. These predicates can be essential (i.e. part of the meaning) or accidental, depending on the kind of metaphor.

The exemplification of the functional genus through an essential characteristic of the vehicle can be described as the selection of a semantic predicate of the vehicle, which becomes its new generic semantic predicate (the semantic genus), with the exclusion of its more specific characterizations (see Levin 1977: Ch. 4). For instance, we consider the following metaphorical utterances in which the vehicle is the noun or verb phrase in a syntactic structure "NP + VP:"

- 5. The ship ploughs the waves.
- 6. Thy glory is setting (predicate).
- 7. The eye of the sky is setting (argument).

In these cases, the presumptive contradiction derives from a presuppositional failure of the semantic predicate, i.e. a conflict between two semantic presumptions (the sea at the same time is presumed to be and not to be "a solid surface;" immovable entities are presumed to move down; an organ is presumed to be possessed by an inanimate being). A solution to this contradiction can be found by reconstructing the functional genus of the metaphorical utterance as a semantic requirement. For example, a possible explanation of (1) is that the vehicle ("to plough") is relevant inasmuch as it represents an action performed by "the ship" on "the waves," and the predicate that can fulfill this function is one of its semantic features, i.e. "to



make depressions in a surface." In this sense, in order to be relevant, the vehicle is reduced to one of its generic essential and semantic features, excluding the specifications ("making depressions in a *solid* surface *through blades*") that cannot meet the requirements of the functional genus (see Levin 1977). This generic essential property can be attributed to "ship" and "waves" without generating any presuppositional failure. Similarly, in 6 the vehicle ("setting") needs to exemplify an action to which "glory" is subjected. A possible explanation is to reduce the vehicle to some of its generic essential features, i.e. "moving down" or "disappearing," which do not include the specifications (differences) incompatible with the functional genus. In (7) the vehicle corresponds to the noun phrase ("the eye of the sky") and exemplifies a functional genus characterized by the absence of the essential feature "to be an organ" (incompatible with the modifier "of the sky" and the verb "setting"). In this sense, the functional genus "body that can move in the sky" is exemplified by the generic properties "to be a round and central body" to which "the eye" is reduced to.

The exemplification of the functional genus through an accidental property of the vehicle is more complex, and it occurs prototypically in nominal metaphors. In this kind of metaphor it is not sufficient to accommodate the semantic traits of the vehicle to the conditions of the functional genus, identified through the "semantic markers" of the predicate or the arguments (Levin 1977: Ch. 4). Instead, the vehicle often needs to be redefined through some of its accidental features.

7.2 Properties and Nominal Metaphors

As mentioned above, the vehicle can be redefined also through its accidental predicates (Walton and Macagno 2009). For instance, a wolf becomes an "aggressive animate being;" a reed is redefined as "the crushable and vulnerable being." The non-definitional features need to identify the vehicle relatively to a specific circumstance. In this sense, the redefinition occurs through what in the ancient dialectical theory is called a *property*.

Culturally relative properties are especially important in metaphors, as they correspond to the characteristic that distinguish a specific concept from all the other ones within a specific culture. For instance, in western cultures a lion is considered as the courageous animal (if we consider moral qualities), while sharks are the cruel and relentless ones (Topics, 128b 34-129a6). Relative properties can be compared to what Black calls "system of associated commonplaces," i.e. the set of assumptions commonly associated with a term. As Black pointed out, it is not relevant whether such assumptions are true or false, but just the fact that they are easily evoked. If I say that, "Homo homini lupus," I do not refer to the dictionary meaning of "wolf" but to the fact that the wolf is the aggressive and selfish animal (Black 1962: 40). Similarly, the fact that gorillas are actually shy and sensitive is not relevant to the understanding of the metaphorical utterance "Richard is a gorilla" (Searle 1981).

⁸ Levin (1977) analyzed this "integration" of the semantic structure of the topic with the transferred features of the vehicle, but without regarding it as aimed at fulfilling the requirements of the predicate. In this sense, the account proposed here is focused on the problem of accommodating presuppositional requirements.



Much more relevant is that they are regarded as *the* rude animals. The "culturally relative property" allows the reconstruction of the metaphorical meaning based on an easily accessible characteristic.

However, creative metaphors often express features that are not culturally shared or have never been associated with the vehicle but are produced on the specific occasion of the utterance (Black 1954: 290; Stern 2008: 266; Indurkhya 1992: Ch. 2; Vega-Moreno 2004). Nothing prevents a speaker or a writer from giving a specific characterization of a term before using it as a vehicle of metaphorical meaning (Stern 2000: 111). For instance, in the famous metaphor, "Man is a only a reed, but a thinking reed," Pascal does not use the culturally relative property commonly associated with the term "reed" (the flexible plant), but creates a new, ad hoc, characterization for it. Whereas a reed is commonly thought of as very resistant building material, because of its flexibility, Pascal uses it to depict human frailty. Among all the possible characteristics of a reed, only the fact that it is empty and easily crushable (i.e. vulnerable) can support the communicative intention. For this reason, relatively to the specific purpose of the metaphorical utterance (expressing a judgment on human weakness), a reed means the vulnerable entity. In this sense, an accident characterizes the vehicle from the point of view established by the communicative intention as specified by the co-text, and becomes the characteristic that can identify the vehicle within this specific co-text.

The relativity of the property leads to possible alternative explanations of the metaphorical meaning. Different predicates can be considered to be "properties," depending on the specificity of the communicative intention. Out of context, "Juliet is the sun" can be interpreted as "Juliet is as beautiful as the sun" (the sun is *the* beautiful or *the* shiny star), which can simply support the intention of flattering Juliet. However, "the sun" can be considered as *the* yellow star, or the most important one, etc. Depending on our culture, we can access some predicates more easily than others, as they can be cultural properties, or common predications. The mechanism of interpretation becomes more complex when a specific relevance relation is reconstructed (sometimes through thorough philological studies), and certain properties of the vehicle need to be retrieved from a cultural background that does not correspond to ours, nor is immediately accessible (see for instance the analysis of metaphors in more ancient texts).

8 Metaphorical Inferences

Nominal metaphors can be characterized by two kinds of logical-semantic relations between the topic and the vehicle: inclusion i.e. species-genus, and convertibility. In the first case (which characterizes metaphorical utterances such as "man is a wolf" or "man is a reed"), the topic is regarded as a species of the generic category exemplified by the vehicle. In the second case (such as in "Juliet is the sun" or "you are the cream of my coffee"), the metaphorical utterance establishes an identity, i.e. a convertible relation between vehicle and topic. The problem is to account for the transfer of the redefinition of the vehicle to the topic from an inferential point of



view. A possible solution is to analyze this passage using the topics governing the genus and the definitional statements.

In nominal metaphors characterized by an inclusion relationship, the transference can be described according to the genus-species topics. For example, we consider the utterance "man is a wolf," in which "wolf" is redefined by the functional genus as "the aggressive animate being." "Aggressive animate being" is stated to be the genus of "man," and from this predication the following can be inferred: (1) that a man can be considered as "an aggressive animate being;" and (2) that "an aggressive animate being" is not a "rational animal" (i.e. a man). Such inferences are based on the principle that "species partake of the genera, but not the genera of the species" (Aristotle, *Topics* 121a 12).

Instead, in case of definitional relationships of predication ("Juliet is the sun"), in which the (re)definitional meaning of the vehicle is attributed to the topic, the topics governing the property and the definition apply, and in particular the rules of inference stating that "The property (or the definition) is predicated convertibly" (*Topics* 132a 3–6; 132a10–132a21). For this reason, if "to be the salvific source of what is essential for life" is what identifies and redefines "the sun" in the metaphorical utterance, Juliet is the salvific source of what is essential for Romeo's life.

This analysis of metaphorical predications can also explain a further phenomenon of metaphors, i.e. the *possible* and accessory inferences that can be triggered in addition to the ones that constitute the redefinition of the vehicle. These additional inferences account for the "polysemy" that has been traditionally attributed to the metaphor (Zavatta 2014a). Metaphor has thus the side effect of transferring onto the topic many attributes that are not essential for the metaphorical meaning (Black 1954: 289). For instance, the metaphorical utterance "man is a wolf" can trigger the inference that man is hateful and alarming. "Juliet is the sun" can lead to the additional conclusions that Juliet is beautiful and shiny. According to the ancient rules of inference governing the genus, "What is predicated of the parts (in this case essential part, the species) is predicated also of the whole (in this case essential whole, the genus)." The genus, in other words, can be attributed the possible predications of the species. We reconstruct the inferences as follows:

Principle of inference	Example
All the attributes that belong to the species belong to the genus as well	"Man is a wolf" "Aggressive animate being" is the genus of man Wolves are hateful and alarming
	An aggressive animate being can have the characteristic of being hateful and alarming
All the attributes that belong to the species belong to the genus as well	"Juliet is the sun" "Salvific entity" is the genus of "the sun" The sun is bright, warm and shiny A salvific entity can have the characteristic of being bright, warm and shiny

⁹ "Quod enim singulis partibus inest, id toti inesse necesse est" (Boethii *De Topicis Differentiis*, 1189A).



The functional genus in these cases is attributed to the predicates of its species, which become *possible* predications that may be transferred to its subordinate concepts.

This reconstruction of metaphorical meaning and the structure of metaphorical predications can show how a presumptive contradiction can be solved in a way that fulfills the purpose of the utterance, and how the predicates that can fulfill the functional genus and the other accessory ones can be transferred to the topic.

9 Explaining Metaphors

In the previous sections, the analysis and the reconstruction of metaphors has been accounted for from an argumentative perspective. In particular, we have pointed out the distinct structures of the reasoning underlying the need of retrieving a non-prototypical meaning, the process of explanation, the identification of the relevance relation, and the selection and abstraction of the relevant property of the vehicle. As we have underscored, the mechanism of selection of the relevant features can be more or less complex, depending on the type of metaphor. In case of verbal metaphors triggered by presuppositional failures, the selection of the characteristics is guided by the semantic features that the functional genus needs to exclude. In such cases the result of the abstraction process results in a new semantic genus of the vehicle. In nominal metaphors, instead, the mechanism of explanation is more complex. In some cases, the selected characteristics correspond to the absolute or culturally relative property. However, in some other cases semantic and cultural knowledge is not enough. The speaker, or the poet, can associate with the vehicle predicates that are relevant only contextually and contingently.

In the following subsections the theoretical argumentative approach explained above will be illustrated through the two famous metaphors, "Juliet is the sun" and "Man is a reed."

9.1 Juliet is the Sun

The description of Juliet as the sun is one of the best known metaphors in literature. Romeo crafts this expression when he sees Juliet appearing on the balcony (Shakespeare, *Romeo and Juliet* II.2, 2–6):

But, soft! What light through yonder window breaks? It is the east, and Juliet is the sun.

Arise, fair sun, and kill the envious moon,

Who is already sick and pale with grief,

That thou her maid art far more fair than she.

In this case, both Juliet and the possible audience know that a young lady is obviously not a celestial body. For this reason, the meaning of Romeo's statement needs to be retrieved in a non-prototypical way. The process of reconstruction can follow two distinct patterns. On the one hand, the connective predicate needs to be



reconstructed and specified, so that the relevance requirements of the vehicle, corresponding to the functional genus, can be identified. On the other hand, the distinct predicates that can be attributed to the vehicle need to be filtered by taking into account their relevance, i.e. how they can instantiate the functional genus.

In this case, the co-text and the context specify that the purpose of the move is to express a judgment on the salvific properties of Juliet. For this reason, "the sun" is regarded as a specific case of "salvific entities," narrowing down the possible predicates that can be attributed to the vehicle to the ones that are likely to instantiate and specify this functional genus. The sun is commonly considered as the star that is the source of life on earth (absolute property), and this strong association between the vehicle and its property makes the best explanation of meaning almost presumptive. However, in addition to the absolute property, the sun is also characterized by the relative property of dispelling the darkness (in contrast with the moon). The last step consists in the passage from the predicate to the actual metaphorical meaning. This reasoning is based on the selection of the relevant properties ("to be the source of what is vital," "to be able to turn negative state of affairs into positive ones") and their further predication ("Juliet is the source of what is vital to Romeo;" "Juliet can turn a situation negative for Romeo into a positive one") and specification considering the relevance relation and the contextual information ("Juliet is the source of love;" "Juliet turns despair into hope;" etc.). This process can show what the "best" explanation of metaphorical meaning is.¹⁰ This complex pattern of reasoning can be represented as follows (Fig. 6):

The failure of the presumptive reconstruction of meaning results in a complex, systematic reasoning from best explanation, in which the presumed communicative intention ("to praise Juliet") imposes on the vehicle specific requirements for its relevance ("to have a quality supporting a positive value judgment on Juliet"). This generic requirement is further specified by the context. Here, Romeo contrasts the sun with the moon, i.e. a negative entity, and this contrast provides further characteristics, determining the functional genus (to be a "to be a salvific being"). Many properties can explain his intention of flattering Juliet (the sun is shiny, beautiful, warm...). However, only few of them can instantiate the specific functional genus as specified by the context. In particular, one predicate can best explain the metaphorical expression ("to be a salvific being that is the source of what is essential for life"). This generic property is then attributed to the topic, after being specified through the common knowledge about human life and Romeo's life (Juliet is the source of love and hope). The best explanation does not prevent the vehicle from being the trigger of possible further defeasible inferences. We can additionally assume that she is beautiful, blonde, and/or shiny in joy. The best explanation simply prevents us from drawing inferences that are contradictory with it.

¹⁰ The fact that many properties of the vehicle can be suitably attributed to the speaker's beloved (beautiful, bright, etc.), although they are not sufficiently relevant to provide the best explanation, is part of the poetic effect of metaphor. The different possibilities leave open the explanatory possibilities, which leave freeway to several interpretations, all potentially co-existing. This non-contradictory ambiguity of meaning characterizes the poetic effect.



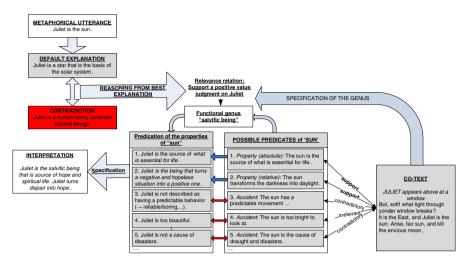


Fig. 6 Explaining the sun

9.2 Man is a Thinking Reed

In the well-known metaphor created by Pascal man is defined a "thinking reed:"

Man is only a reed, the weakest in nature; but he is a thinking reed. There is no need for the whole universe to take up arms to crush him: a vapor, a drop of water is enough to kill him. But even if the universe were to crush him, man would still be nobler than his slayer, because he knows that he is dying and the advantage the universe has over him. The universe knows nothing of this.

From a purely biological perspective, reeds are flexible and can be easily bent by the wind. This feature constitutes a culturally relative property, as it can be regarded as positive (for instance in the Italian cultural tradition) or negative (for instance in the North American one). However, in this case, Pascal is not grounding his metaphor on the common "association" between reeds and flexibility (Pascal 1966: 55-fragment 347), but rather on a new characteristic (Vega-Moreno 2004), i.e. their frailness.

Pascal is using the concept of reed to describe the natural dimension of man. This has to be considered as the presumed communicative intention on whose basis the relevance relation can be retrieved. The metaphor is triggered by a contradiction between the semantic content of "reed" and the one of "man:" a man is not a plant. This default of the presumptive meaning is reconstructed by means of reasoning from best explanation, represented in Fig. 7 below.

Here, the purpose of this specific discourse move (to express a judgment on the human condition) imposes its requirements on the vehicle, which are further specified by the co-text and context, resulting in the functional genus (the vehicle needs to instantiate the characteristic of being a "weak entity" that justifies a negative judgment on human condition). Among the possible accidents of reeds, we



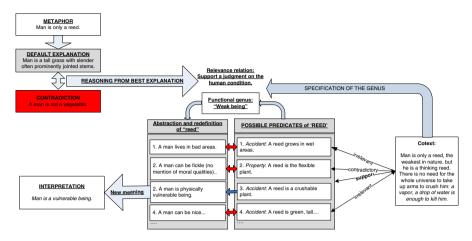


Fig. 7 A reed, a thinking reed

can find the characteristics of being green, tall, etc. Moreover, due to its physical structure (it is empty inside), a reed can be easily crushed and for this reason it is vulnerable. This is the only characteristic that can fall under the functional genus, and can redefine "reed" as a specific "vulnerable entity," under which also man falls.

This metaphor shows the link between the relevance relation and the interpretation of a metaphor. While in many cases metaphors rely on cultural properties that distinguish the concept from all others from a specific perspective, in "man is only a reed" it is not possible to reconstruct the metaphorical meaning based on this strategy. In this case, the relevance relation selects one of its possible accidents as the *only* one of them that can possibly support the purpose of the move. This predicate becomes the "essential" property relative to the co-text and the communicative intention. In this sense, a metaphorical utterance can redefine the vehicle using not "common associations," or rather the culturally relative property or properties, but rather one of its possible accidents, i.e. the co-textually relevant property. Reeds are not particularly frail plaints, because their flexibility allows them to resist external pressures by bending. The only thing we can tell is that they can be crushed, more easily than a pine or other plants. This accident, which can be attributed to reeds as much as to many other plants and entities, makes the metaphor possible. The metaphor, moreover, modifies also the hierarchy of the predicates that can be attributed to it. The most relevant property of the reed becomes the fact that it can be easily crushed, while its flexibility is moved to the background.

10 Conclusion

Metaphors can be considered as contextual renegotiations of meaning, guided by the communicative intention, or rather the purpose of the metaphorical utterance. Metaphorical interpretations are triggered by apparent communicative breaches, i.e.



defaults of the prototypical interpretation commonly associated with the vehicle. This breach can occur at different levels, which can explain the different strategies that can be used for reconstructing the metaphorical meaning. In all cases, a complex process of reasoning is involved, aimed at retrieving the best explanation of how the vehicle can contribute to achieving the purpose of the utterance. This type of reasoning involves the analysis of the possible predicates that can be and usually are attributed to the vehicle, and the selection of the relevant one (or ones), i.e. that can support the implicit conclusion constituting the purpose of the metaphorical utterance.

This account raises three crucial problems. The first problem involves the notion of relevance. How can a predicate be relevant to a specific purpose? The second one consists in the individuation of the predicate among the virtually infinite ones that can be attributed to the vehicle. The third one is to explain from a logical semantic point of view how a specific predicate attributable to the vehicle can support a pragmatic goal and how it can be "transferred" to the topic.

These issues can be addressed considering how these different aspects are interrelated. Relevance, in our perspective, can be explained as an argumentative relation, in which the single utterances, or rather discourse moves, need to support a specific conclusion, an abstract goal representing a generic communicative intention. On this view, the relevance of a move consists in its possibility of and effectiveness in supporting the abstract purpose by means of an adequate argumentative pattern. In case of metaphorical meaning, a metaphor becomes relevant to the extent that one of the possible predicates that characterize it can be used to support the presumed communicative purpose of the metaphorical utterance, which can be reconstructed through different clues. The relevance relation imposes specific requirements onto the vehicle, which define the functional genus that needs to be instantiated by a predicate (or more than one) of the vehicle. In some cases such a predicate corresponds to the genus, the abstract generic property expressing what the concept is. In other cases, it is represented by a culturally relevant property, i.e. the predicate that identifies the concept expressed by the predicate within a certain culture. Finally, in other more complex cases, the predicate is the property that is relative to the relevance purpose itself, that is, the only characteristic among the possible ones that can support the purpose of the utterance. This treatment of the selection of the characteristics of the vehicle in terms of logical-semantic relations can account for the transfer of the "emerging features" to the topic, and the possible accessory inferences that can be drawn from the vehicle.

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