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# Implicatures and hierarchies of presumptions

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**ABSTRACT:** Implicatures are described as particular forms reasoning from best explanation, in which the paradigm of possible explanations consists of the possible semantic interpretations of a sentence or a word. The need for explanation will be shown to be triggered by conflicts between presumptions, namely hearer's dialogical expectations and the presumptive sentence meaning. What counts as the best explanation can be established on the grounds of hierarchies of presumptions, dependent on dialogue types and interlocutors' culture.

**KEYWORDS:** interpretation, implicatures, Grice, argumentation schemes, best explanation, presumptive reasoning.

## 1. INTRODUCTION

When we talk, discuss, argue or negotiate we use our utterances to achieve a specific communicative goal, consisting in producing a specific effect on our interlocutor. The addressee of our speech act can be affected by our move because he or she can understand our intention from what we say. Grice (1989: 220) pointed out this discursive dimension of meaning considering the relationship between the conventional meaning of the words used (the sentence), and the dialogical goal that they are aimed at pursuing (Grice 1975: 44). He noticed that we often use the explicit semantic content to communicate information different from what is semantically encoded; for instance, we can use interrogative or affirmative sentences to perform acts different from questions or assertions (Lyons 1977: 848). On this perspective, words are conceived as instruments to express what is said and communicate what is meant; they provide reasons to support the reconstruction of a specific dialogical intention (Grice 1989: 221). The relationship between what is said and what is meant is guaranteed by the "ordinary usage", a principle that Grice compares to the non-linguistic presumption that, "we usually intend the consequences of our actions" (Grice 1989: 222). However, what happens when this presumptive meaning defaults? What causes the failure of the presumptive association between expression and meaning? What is the reason or the process of reasoning underlying the recovery of the lost meaning?

On Grice's view, what a man says needs to be considered within the context of the expectations and presumptions of the community of speakers he belongs to (Grice 1975: 47). Grice collected such presumptions and expectations under general categories conceived as communicative norms (Sperber and Wilson 1986: 162). If an utterance superficially appears not to conform to the presumptions that the speaker is cooperative and is speaking truthfully, informatively, relevantly, perspicuously, and otherwise appropri-

ately, the hearer tries to explain this failure by reconstructing a new unconventional meaning for the sentence (Bach 2003: 155). How can a speaker recognize that a presumption has been violated? What reasoning process does he or she trigger to retrieve the speaker's meaning? Why can the same dialogical move be differently interpreted, and how can be different interpretations evaluated?

The purpose of this paper is to investigate the reasoning underlying the implicit reconstruction of meaning, analyzed in previous studies as intuitive or heuristic (Allott 2005: 234-235), from an argumentative perspective, where "argumentative" is conceived in a broader sense to include a reasoning process implicitly suggested by the speaker and implicitly performed by the hearer aimed at retrieving the goal of a discourse move. Implicatures will be analyzed as implicit arguments, based on a pattern of reasoning leading from an explicit premise and background knowledge to an implicit conclusion.

## 2. INTENTIONS AS PREDICATES

Grice introduced a pragmatic account of meaning, where "meaning" is the effect on the interlocutor of a move, or act, in a dialogue. However, how can we describe the "dialogical effect" of a move? In argumentation, dialogical moves are considered as instruments to bind the interlocutors to dialogical obligations (Walton and Krabbe 1995). By performing a speech act, the speaker becomes tied to specific commitments, and at the same time he or she restricts the interlocutor's possible replies to some possible prosecutions of the dialogue (Walton 1989: 65-71). For instance, an assertion binds the speaker to the statement asserted, while the other party can keep a record in a dialogue of what has been said, and choose to continue the dialogue maintaining the subject matter mentioned in speaker's assertion, or interrupt the conversation (also by changing dialogue or dialogue game). Similarly, asking a question commits the interlocutor to the choice between continuing the dialogue (by answering the question), or interrupting the conversation by challenging the question. In both cases, the interlocutor is faced with a new alternative. He or she may accept the direction of the dialogue, and continue the conversation according to the new commitments; otherwise he or she can interrupt it, either by challenging its reasonableness or acceptability, or simply by not replying. However, the interlocutor needs to comply with new communicative constraints. It would be somehow dialogically incoherent to reply to the assertion "Bob has got a new cat" with the utterance "My grandmother is old", or to answer, "I haven't met your sister recently" to the question, "Have you seen Bob?" The utterance changes the interlocutor's condition in the dialogue. The utterance faces him or her with a choice between specific alternatives.

This dialogical perspective of meaning subordinates the performance of single speech acts to the compliance with high-level conditions imposed by an abstract dialogical intention. Grice represented such a dialogical meaning using the notion of "direction" of the dialogue, by which the possible future moves need to abide:

Our talk exchanges do not normally consist of a succession of disconnected remarks, and would not be rational if they did. They are characteristically, to some degree at least, cooperative efforts; and each participant recognizes in them, to some extent, a common purpose or set of purposes, or at least a mutually accepted direction. This purpose or direction may be fixed from the start (e.g., by an initial proposal of a question for discussion), or it may evolve during the exchange; it may be fairly definite, or it may be so indefinite as to leave very considerable latitude

to the participants (as in a casual conversation). But at each stage, SOME possible conversational moves would be excluded as conversationally unsuitable. (Grice 1975: 45)

This dialogical intention connecting all discourse moves according to specific pragmatic conditions can be represented as a high-order predicate commonly referred to as a “rhetorical predicate” (Grimes 1975: 209), “logical-semantic connective” (Crothers 1979; Rigotti 2005) or “coherence relation” (Hobbs 1979: 68; Hobbs 1985). This abstract predicate connects discourse sequences explicitly or implicitly. In the first case the purpose of the predicate is made explicit and its set of coherence conditions imposed on its arguments (Grimes 1975: 162) represents a dimension of its semantic structure. Grice analyzed such conditions and implicit information, partially codified in the connector structure, as conventional implicatures (Grice 1975: 45). For instance, in the sentences,

- (1) I am very thirsty, but I cannot drink anything.
- (2) He is an Englishman. Therefore he is brave. (Grice 1975: 44)

the connector ‘but’ presupposes (in the aforementioned sense) two sequences,  $p$  (I am very thirsty) and  $q$  (I cannot drink anything) such that  $p$  must be interpreted as an argument supporting a conclusion  $r$  (I need to quench my thirst) ( $p \rightarrow r$ ), and  $q$  as supporting the contrary or contradictory conclusion  $non-r$  (I cannot quench my thirst) (Ducrot 1978). Similarly, the connector ‘therefore’ presupposes that the second sequence (“being brave”) is a consequence of the first (“being an Englishman”). The discourse relation can be also implicit when the coherence requirements (presuppositions) are not part of the connector semantic structure, but need to be reconstructed (Ballard, Conrad and Longacre 1971) in order to understand the role of the discourse segments or sequences. For instance, coordination can express temporal, causal, explanation relations.

From a pragmatic perspective, discourse relations can be considered as high-level speech acts (Grice 1989: 362; Carston 2002: 107-108), indicating the role of the first level speech acts, or rather, their felicity conditions (Vanderveken 2002: 28). The text is therefore thought of as a hierarchy of predicates connecting sequences. For instance, a dialogue between friends on Bob’s difficult situation may be conceived as a hierarchy of dialogical goals, of which the highest and most general could be “to impress the hearer”, or “to arouse his pity”, etc. and each dialogical move is aimed at achieving a subordinate dialogical effect (Asher and Lascarides 2003). The speaker may interest the hearer in the topic by asking him a question on his knowledge of Bob’s condition, and proceed with a sequence of moves whose purpose is to gradually lead the other party to the main goal. Each move is reasonable only if specific conditions are complied with.

These conditions can be conceived as pragmatic presuppositions (see Vanderveken and Searle 1985: 66-67; Bach 2003: 163), as they express the conditions for a possible effect of a dialogical move. In addition to such conditions, speech acts need to be reasonable to be meaningful to the interlocutor and bring about a possible dialogical effect. They need to be connected to shared knowledge, namely the knowledge that participants in a dialogue share, such as encyclopedic information (knowledge of the world, of the news, of the common acquaintances...) or linguistic information (lexical meaning). Such information is taken for granted, pragmatically presupposed by the speaker. For instance the *utterance*

(3) Have you seen Bob?

will be “void” if the interlocutor does not know who Bob is, or if he or she has never seen Bob before (see Austin 1962: 50-51). Even if it is possible to reconstruct (or rather accommodate, see Lewis 1979) the existence of an individual called Bob, the hearer cannot relate such a person to his or her background knowledge (Asher and Lascarides 1998) and interests. As a consequence, the dialogue cannot be continued, as the conditions for its continuance are not fulfilled. These conditions can be different in nature. For instance, in (1) we need to know that “thirsty people need to drink”, and that “drinking quenches thirst”. At a dialogical level, dialogical moves need to meet dialogical requirements. For instance, in all the aforementioned examples the hearer needs to know and be interested in the subject matter. Otherwise there would not be any need to continue the dialogue. The dialogue sequences in a text are therefore connected not only to the communicative intention, but also to the common ground, or context, including mutual knowledge (for this concept see Clark 1996). We can represent the structure of a dialogical predicate as follows (see Rigotti 2005):

(4) Bob murdered his friend. Therefore he is a criminal.

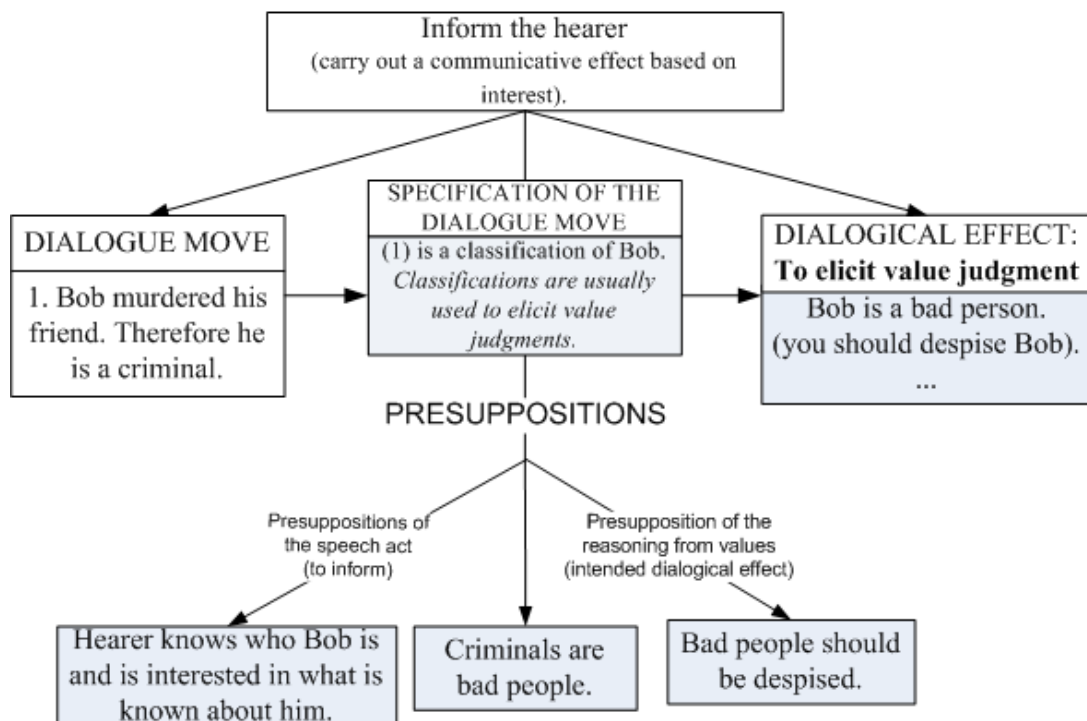


Fig. 1. Dialogical predicates and pragmatic presuppositions

Every discourse move is therefore connected to a conversational situation, including the interlocutors, their knowledge, their interests as well as previous and future moves, by an abstract relation imposing specific constraints and requirements relative to the listener’s knowledge, intentions and expectations. How is it possible to presuppose such information? How is it possible to know what our interlocutor knows, accepts or intends?

## 3. PRESUPPOSITIONS AS PRESUMPTIONS

Presuppositions are requirements for the felicity, or dialogical meaningfulness, of a move, but they depend on the other's mind. They display a world, and at the same time subordinate the reasonableness of displaying this world to the interlocutor's acceptance. This twofold dimension of presupposition can be described by considering presuppositions as implicit acts of a kind.

Ducrot first introduced the notion of act of presupposing. On his view, the speaker, by subordinating his statement to the acceptance, or (relative) truth, of its presuppositions, performs a specific implicit speech act (Ducrot 1968: 87). Presupposing is conceived as the act of setting the conditions for the continuation of the future dialogue game (Ducrot 1991: 91), while the refusal to accept a presupposition amounts to interrupting the dialogue, just like knocking over the chessboard. However, some presuppositions cannot be acceptable by the interlocutor. For instance, the following utterance,

(5) Bob's sister went to the cinema last night.

presupposes that a person called Bob is known to the interlocutor, and that Bob has a sister. Such presuppositions can be *reconstructed* from the sentence structure (Lewis 1979: 340), but cannot be *accepted* by a hearer who knows that Bob has no sisters, or who does not know Bob at all (Asher and Lascarides 1998). In order to account for the meaningfulness of a move, we need to consider not only the *possibility* of reconstructing a presupposition, but also the *acceptability* of such a reconstruction, which involves knowledge of the hearer's knowledge. But how is it possible to know the other's mind?

Stalnaker (1974) and Burton-Roberts (1989) point out that presupposition does not imply prior assumption of the interlocutor's knowledge of the presupposed proposition. They maintain that, from a linguistic point of view, a predicate needs some conditions to be fulfilled; however, the setting of such conditions cannot be considered as an act of displacing a world, but rather a dialogical act of guessing (Stalnaker 1998: 8). Building on Stalnaker's view, we can notice that this guess needs to be made on the grounds of information that everybody knows because it represents communicative or linguistic rules, normal human behavior or connections between facts. In an argumentative perspective, we can call it an act of *presumption* (Freeman 2005: 43), which can be defined as defeasible reasoning in lack of evidence (Rescher 1977: 1). Rescher helpfully outlined the structure of this type of inference as follows:

- *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 (Fact).
- *Premise 3: Proviso D* does not obtain (Exception).
- *Conclusion: P* obtains. (Rescher 2006: 33)

The relationship between *P* and *C* (the *Rule*) can be grounded on rules (of law, behavior or language) or merely on experience (Thayer 1898: 314; Greenleaf 1866: 49; McBaine 1938: 525), and according to its probability it can shift the burden of proof (Best *et al.*

1875: 571; Walton 1993: 139-140). Presuppositions can be described as presumptions, as they are implicit conclusions on the other's behaviour or knowledge, drawn in conditions of lack of evidence. For instance, a speaker can utter to a friend (5) above because he or she is acting on the presumptions that, "People know their friends and their friends' relatives" and "Information relative to friends is interesting" (Kauffeld 2003: 140; Kauffeld 1998). The speaker proceeds from these generic rules of behavior, from his own knowledge concerning Bob, and from the fact that Bob is a hearer's friend.

Dialogical presumptions are different in kind. The speaker can presume the other's knowledge of people or facts, or connections between events, or linguistic and dialogical rules. For instance, we can analyze the presumptions underlying the following example (*case A – the drunkard captain*):

The captain wrote in the ship's log: "The first-mate was drunk all day". When the first-mate read the log, he confronted the captain. The captain replied: "Well, it was true, wasn't it?". The following day the first-mate, whose normal duties include writing up the ship's log, got his revenge. He wrote in the ship's log: "The captain was sober all day". (Fischer 1970: 272)

The first mate, in performing his dialogue move, presupposed that the crew knew who the captain was, but also that logbooks usually report exceptional events, and that captains are bound to be sober on duty. Moreover, he presupposed the relationship between the words uttered and their meaning and the values normally associated with a drunkard captain. Such presumptions are different in nature, strength, and dialogical effect. The relationship between a sentence and its effect, and more generally, between the use of linguistic instruments and their purpose, is a pragmatic presumption, which can be referred to as presumption<sub>0</sub>. The principles guiding the conclusion about the hearer's knowledge are epistemic presumptions, which we can also call presumptions<sub>1</sub>. Finally, the usual connection between facts and events, representing the expected and ordinary course of things, are close to the legal notion of presumptions of fact and can be labeled as presumption<sub>2</sub>. In everyday reasoning we use such presumptions<sub>2</sub> whenever we talk about a person's character, or most of the objects surrounding us. We go to the supermarket presuming<sub>2</sub> that it has not been destroyed; we trust a friend presuming<sub>2</sub> that he has not become unreliable in the last few hours. The character of our friend, the continuance of existence of the supermarket are not proven, but simply inferred from a type of knowledge that does not reflect how things *are* (or how they are perceived by us), but how things *are usually related to each other*. The different types of presumption can be thought of as a specific type of shared knowledge, and can be represented as in Fig. 2.

As Kauffeld noticed, such ordinary presumptions do not always shift the burden of proof; however, they place on the interlocutor a different type of burden, the "risk of resentment, criticism, reprobation, loss of esteem" in the event he or she does not accept a presumptive conclusion (Kauffeld 1998: 264). Depending on the strength and nature of the presumption, the communicative risk of criticism may vary. For instance, not sharing pragmatic presumptions may lead to criticism regarding a speaker's ability to communicate; epistemic presumptions often carry a risk of negative judgment on the interlocutor's interests and knowledge ("Everyone knows that!" or "How can you be indifferent to *x*?"); finally, failure to accept factual presumptions shared by everybody may result in an accuse of poor judgment. For instance, replying "Why?" to the arguments "This is a bird; therefore it flies", or "He is a blind man. He cannot have seen the accident" would be

usually perceived as awkward. The force of an act of presupposing also consists in an implicit threat of a negative ethical, epistemic or communicative judgment.

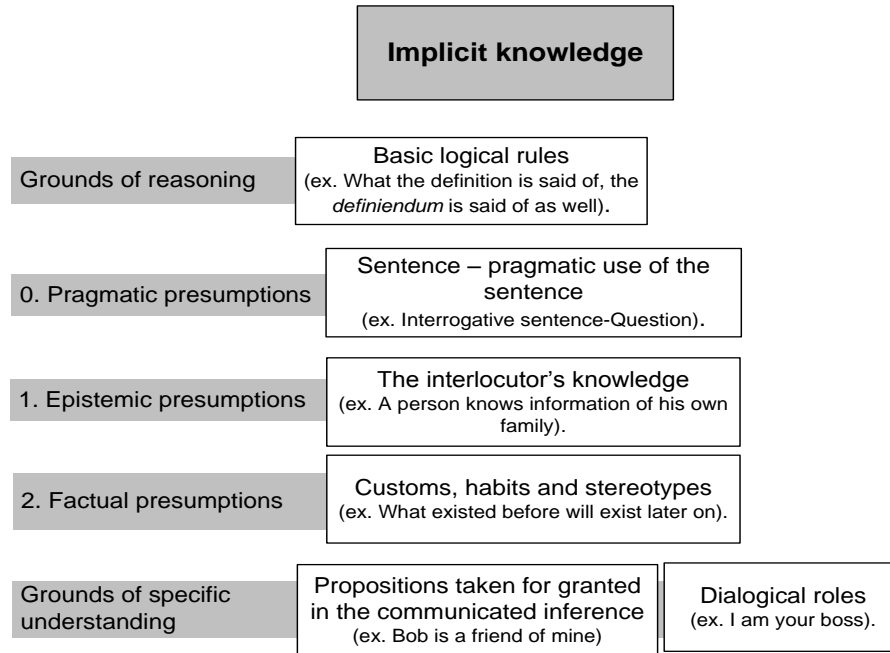


Fig. 2. Types of implicit knowledge and presumptions

The dialogical act of presupposing is therefore distinguished from presupposition. While presupposition is a linguistic fact, referring to the conditions of meaningfulness of a dialogue move, presupposing is the act of deploying epistemic, pragmatic and factual presumptions and subjecting the meaning of the move to them. The act of speaking, or rather the act of performing dialogical moves, is grounded on an implicit act of presuming, that is, reasoning from principles that are, or anyways *should* be, shared.

#### 4. CONFLICTS OF PRESUMPTIONS

Dialogical moves are built on and communicated through different types of presumptions. Speakers can communicate their intention relying on the presumptive relationship between sentence and purpose; they can convey a specific semantic meaning on the grounds of the usual association between word and content; they can take information for granted based on epistemic presumptions and correlations between things and events. The process of interpretation can be considered as a complex process of reasoning from presumptions, largely proceeding from the defeasible *modus ponens* (Lascarides and Asher 1991: 57). Sometimes, however, the speaker decides to convey the meaning resorting to a different strategy, consisting in breaching the dialogical expectations. Instead of relying on presumptions, the speaker can decide to deliberately presuppose inconsistent presumptions. He or she can ground the meaning of his or her moves on conflicts of presumptions, generating an apparent communicative failure. This process underlies the interpretative phenomenon of implicatures. For instance, we can analyse the following utterance:



(6) Can you pass the salt?

This interrogative sentence is presumed<sub>0</sub> to be used to request information; such a dialogical intention requires that the speaker does not know the answer, and presupposes that the interlocutor may know it. Such requirements can be met in a context in which the listener is a physically impaired person, or an interlocutor having an arm in plaster. However, in a normal context, the requirements of the presumed dialogical intention conflicts with the factual presumption<sub>2</sub> that “people can usually perform ordinary actions”. This conflict leads to a failure of the presuppositions of the presumed speech act, which results in an apparent infelicity. The apparent lack of a communicative effect can be solved by attacking one of the two defaultive premises: either the dialogical predicate is interpreted excluding the prototypical association between sentence and intention, or the dialogical context is considered as non-ordinary. In an ordinary context, the dialogical presumption is discarded and the act becomes “indirect”, that is, its meaning is not retrieved presump- tively (see Bach 1994: 13). This conflict of presumptions can be represented as follows:

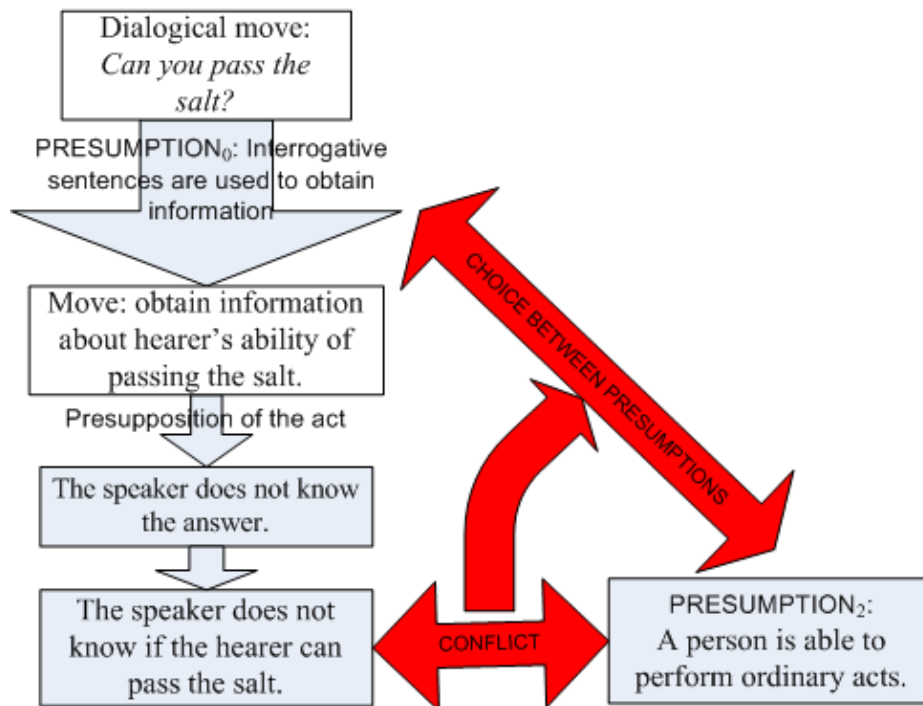


Fig. 3. Conflicts of presumptions and indirect speech acts

In this case, the context provides the information needed to establish the choice between the two presumptions without giving rise to ambiguity. As the interlocutor is physically capable and not injured, the weaker, and therefore defaulting, presumption is the dialogical one. The speaker therefore is led to find another possible intention manifested by the utterance (*to advance a request of action*, in this case). This process of reinterpretation of the discourse move (Asher and Lascarides 2006) can be also triggered by conflicts of pragmatic presumptions belonging to different levels, such as between a discourse relation abstracted from a speech act and the further dialogue moves. For instance, we can consider the following cases of particularized conversational implicatures:

- (7) Sam: Would you like to go to the theatre tonight?  
Tom: I have to study.
- (8) Sam: Do you want another piece of chocolate cake?  
Tom: Is the pope Catholic?

In both cases Sam is confronted with an apparent inconsistency between the requirements of the discourse relations he advances (presumed<sub>0</sub> to be proposals) and the pragmatic presumptions of Tom’s reply (in 7, his move is presumed<sub>0</sub> to provide information; in 8, to request information).

The implicatures analyzed above can be considered as meta-dialogical, as they are forms of reinterpretation of a discourse move, whose presumptive meaning is subject to default. When pragmatic presumptions prevail over factual presumptions, the listener is not led to reconstruct the meaning of a move, but to retrieve the missing information. For instance, in case A above (the *Drunkard captain*), the first mate is presumed<sub>0</sub> to provide exceptional information; this presumption conflicts with the factual one that captains are (should be) usually sober on duty. The abstinence from alcohol is at the same time presumed<sub>0</sub> to be exceptional and presumed<sub>2</sub> to be a normally expected condition. This conflict of presumptions can be represented as follows:

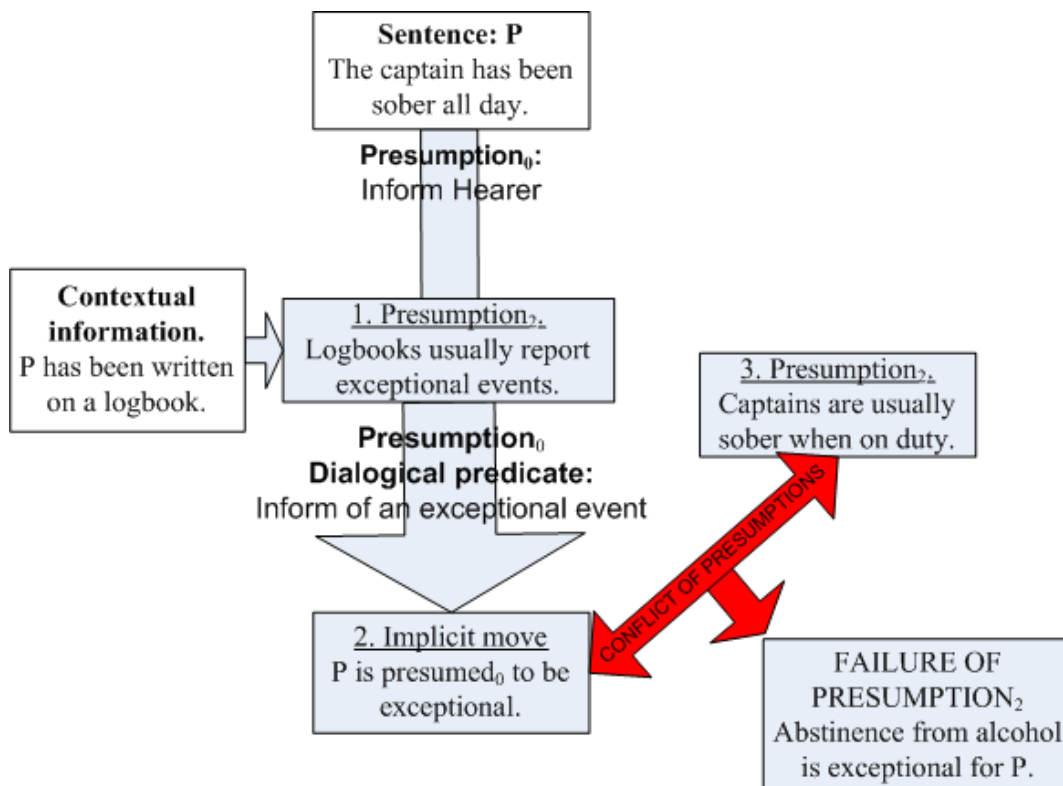


Fig. 4. Conflicts of presumptions and retrieval of missing information

This presumptive approach to meaning and implicatures shows how implicatures, or rather reinterpretation processes, are triggered. In the following section, the mechanism of

reconstruction of meaning is explained in an argumentative perspective. The claim of this paper is that implicatures can be analyzed as implicit arguments, involving a pattern of reasoning leading from a specific premise to a conclusion.

## 5. IMPLICATURES AS ARGUMENTS

How can the hearer reconstruct the meaning of a dialogue move when the presumptive guidance to interpretation fails or is inconsistent? In such cases a complex mechanism of reasoning is activated, based on different possible argument schemes. This reasoning is particularly evident in particularized conversational implicatures, where the process of meaning retrieval is not crystallized in a presumptive procedure like in conventional implicatures.

### 5.1. Reasoning from best explanation

The sentence written on a logbook indicating that “The captain was sober all day” can be differently interpreted in different contexts or cultures. For instance, if a party had been thrown on the ship, the captain would have been praised by that comment. If brought as evidence before a court, the statement would have been interpreted as representing only the captain’s abstinence from alcohol on that specific day. On a pirate ship it would have been almost take as a criticism against the captain’s “temporary teetotalism”. These different possible interpretations can be accounted for by distinguishing between two interpretative reasoning steps. The first one is aimed at resolving the conflict of presumptions establishing the weaker one to be rejected. In the second phase, the excluded presumptive conclusion is replaced with a different one.

In case A above, the interlocutor can explain in different ways the presumptive inconsistency between the presumption<sub>0</sub> (the information provided is exceptional) and the presumption<sub>2</sub> (captain’s sobriety is normally expected): A) the speaker made a mistake (rejection of presumption<sub>0</sub>); or B) he wanted to communicate something obvious because he was joking (rejection of presumption<sub>0</sub>); or C) he wanted the crew to consider what he had written as exceptional (rejection of presumption<sub>2</sub>). The best explanation in the given context is grounded on the presumption<sub>0</sub> that “The speaker usually wants to inform the hearer,” and therefore the presumption<sub>2</sub> needs to be rejected and the statement considered as exceptional. The second reasoning step consists in the process of explaining the exceptionality of the captain’s soberness. A paradigm of possible explanations can be found: for instance, (1) that day the entire crew were drunk (there was a party); or (2) captains are usually drunk; or (3) the captain was sick and needed to drink to recover; or (4) the captain was an alcoholic. Also in this case, the best explanation is the one rebuttable by the weakest contrary presumption<sub>2</sub> (see Asher and Lascarides 1995). If we consider that: (1’) that day there was no party on the ship, that (2’) usually the crew is not drunk on duty, nor is the captain, and (3’) that illness is not usually treated with alcohol, we need to accept the conclusion that the captain was an alcoholic. On this perspective, the best interpretation corresponds to the argument or reason that in a given context is less easily defeated by counter-presumptions, common knowledge or evidence.

The two steps of reasoning involving a defeasible reasoning from paradigms (Macagno and Walton 2010) can be represented by the argument from best explanation:

*Argument from 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 a plausible hypothesis, based on what is known so far. (Walton 2002: 44)

The argumentative structure underlying the particularized implicature of the drunkard captain can be represented in the following figure (“presumption” is shortened to Pr.):

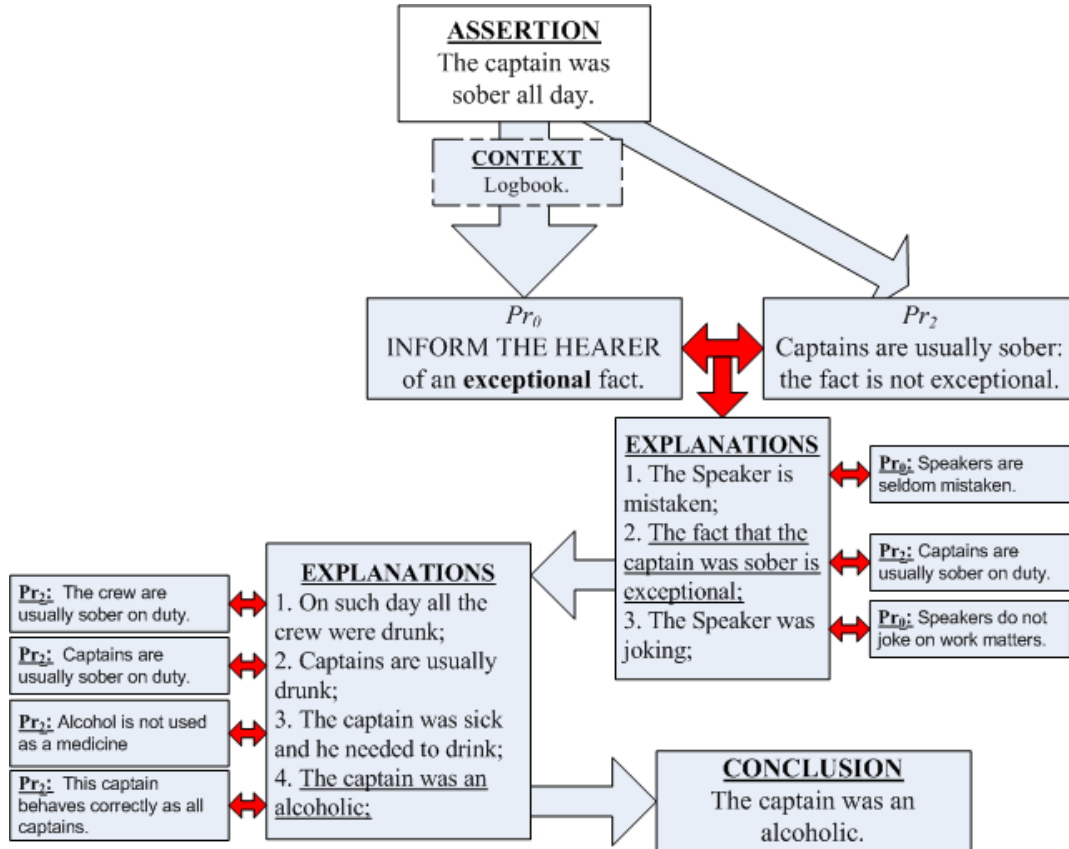


Fig. 5. Argumentative structure of the Drunkard Captain

The structure of this implicature consists in a meta-dialogical process of explanation and a dialogical one aimed at justifying the failure of a factual presumption. The first reasoning is aimed at establishing whether the presumptive interpretation of the dialogue move shall be sustained or replaced with another dialogical purpose. The mechanism of reinterpretation can stop at this level, should a better pragmatic interpretation of the move be found. In the drunkard captain case, however, the alternative pragmatic explanations conflict with stronger counter-presumptions<sub>0</sub>, and therefore the interpretative reasoning proceeds to the second step, where factual explanations are advanced and compared with counter-presumptions<sub>2</sub>.

### 5.2. Analogical reasoning

While the first meta-dialogical step is aimed at explaining an apparent lack of dialogical effect by determining the purpose of the move, the goal of the second phase is to specify the content, or rather the specific purpose, of the dialogical act. This second re-interpretative step can be grounded on different patterns or argument schemes, such as reasoning from best explanation, as seen above, or analogical reasoning. For instance, we can analyze (8) above and (9) below:

- (8) Sam: Do you want another piece of chocolate cake?  
Tom: Is the Pope Catholic?
- (9) Sam: Do vegetarians eat hamburger?  
Tom: Do chickens have lips? (Yule 2008: 43-44)

In both cases, Tom's replies to obvious questions are not pointing out or attacking the triviality of the answer, but advance an implicit argument that we can represent as follows:

#### *Argument from analogy*

- *Major premise:* Generally, case  $C_1$  is similar to case  $C_2$ .
- *Minor premise:* Proposition  $A$  is true (false) in case  $C_1$ .
- *Conclusion:* Proposition  $A$  is true (false) in case  $C_2$ . (Walton 1995: 135-136; see also Walton, Reed and Macagno 2008: 315)

As argued in Macagno and Walton (2009), reasoning from analogy consists in abstracting a generic property, the functional genus, from the characteristics of the two compared entities or situations. This genus is an abstract category, a generic predicate under which the two instances fall not absolutely, but only for the purpose of the argument. For instance, a ship can be like a hotel from the point of view of passengers' rights, because it is a structure hosting guests. In (8) and (9) the abstract genus is the specific purpose of the move. The replies ("obviously yes/no") are abstracted from the analogy between Sam's and Tom's questions (falling under the same category of "obvious questions having obvious positive/negative answers"). However, other more specific generic predicates can be reconstructed according to the context. For instance, in (8) also the feature of "Being known to everyone" and (9) of "Being stupid". In both cases the interlocutor's question is also affected by a value judgment.

### 5.3. Practical reasoning

Assertive statements can be also used not to inform, but to lead the interlocutor to a specific action. In such cases, the inconsistency between the requirements of the prototypical act of informing and the factual presumptions, or shared knowledge, can be explained by resorting to practical reasoning, applied to different circumstances and dialogical goals. For instance, we can consider the following case:

- (10) Sam: I am out of petrol.  
Tom: There is a garage around the corner. (Grice 1975: 51)

The statement “I am out of petrol” contradicts the presupposition of interest of the dialectical predicate ‘to inform the hearer’ prototypically associated with assertive sentences. The speaker cannot presume that his lack of petrol may fall within an unknown hearer’s desire of knowledge. The presumption of lack of interest however conflicts with the counter-presumption<sub>2</sub> that “People should be interested in trying to help who is in a difficult situation.” The epistemic presumption is replaced with a pragmatic one, which does not fulfill the requirement of a proper act of informing, but instead triggers an argument from appeal to pity:

*Appeal to pity*

- Individual  $x$  is in distress (is suffering).
- If  $y$  brings about  $A$ , it will relieve or help to relieve this distress.
- Therefore,  $y$  ought to bring about  $A$ . (Walton 1997: 105)

Sam’s assertion is not a request for help, but triggers a recommendation to act. On the other hand, Tom’s reply does not fulfil the requirement of the predicate imposed by Sam, namely to be “a commitment or non-commitment to help”. Tom’s act, however, is not only a piece of information, but also an invitation to perform a specific action, as it triggers a pragmatic argument from practical reasoning in which the needed premise (“In garages it is possible to find some petrol”) and the conclusion (“You should go to the garage”) are missing. The scheme is the following:

*Practical reasoning*

- *Goal Premise:* My goal is to bring about  $A$ .
- *Alternatives Premise:* I reasonably consider on the given information that bringing about at least one of  $[B_0, B_1, \dots, B_n]$  is necessary to bring about  $A$ .
- *Selection Premise:* I have selected one member  $B_i$  as an acceptable or as the most acceptable necessary condition for  $A$ .
- *Practicality Premise:* Nothing unchangeable prevents me from bringing about  $B_i$  as far as I know.
- *Side Effects Premise:* Bringing about  $A$  is more acceptable to me than not bringing about  $B_i$ .
- *Conclusion:* Therefore, it is required that I bring about  $B_i$ . (Walton 1992: 89-90)

Depending on the context, Tom’s reply can be a refusal to help (in a context in which it is apparent that Sam cannot get there) or a helping action (providing guidance and instructions).

5.4. *Argument from sign*

Sometimes the speaker needs to specify the reasoning from explanation narrowing down the possible relation between the *explanandum* and the explanation and providing indications for the conclusion. For instance we can consider the following implicature:

- (11) Sam: What on earth has happened to the roast beef?  
 Tom: The dog is looking very happy. (Levinson 1983: 126)

The representation of dog's happiness cannot be presumed to fulfill the role of "providing information on the disappearance of the roast beef". However, the relationship between "happiness of the dog" and "information on the roast beef" can be retrieved through an argument from sign:

*Argument from sign*

- Generally, if this type of indicator is found in a given case, it means that such-and-such a type of event has occurred, or that the presence of such-and-such a property may be inferred.
- This type of indicator has been found in this case.
- Such-and-such a type of event has occurred, or that the presence of such-and-such a property may be inferred, in this case. (Walton 2002: 42)

The satisfaction of the dog is a result of a cause narrowed down to the food mentioned in Sam's question. The requirement of the predicate provides the information needed to specify the argument from sign. Sometimes this information is not explicit, but it can be retrieved from the context or shared knowledge. We can consider the following case:

(12) Bill goes up to Scotland every weekend. (Carston 2002: 109)

Carston underscores that, "in different specific contexts this could implicate 'Bill's mother is ill', 'Bill has a girlfriend in Scotland', 'Bill gets as far away from London as he can when he can', 'Bill still hasn't got over his obsession with the Loch Ness monster', etc." (Carston 2002: 110). These conclusions are grounded on specific information and culturally and contextually dependent presumptions. For instance, contextual information can trigger the presumption<sub>2</sub> that "People ought to stay closer to their beloved in a condition of need", or "People wish to stay closer to whom they love", or "People tend to escape/chase what they hate/like".

## 6. CONCLUSION

The mechanism triggering an implicature can be considered as an apparent dialogical failure. The hearer is faced with a dialogical presumption conflicting with other presumptions or facts that are dialogical, factual or epistemic in nature. This inconsistency wants an explanation, which, depending on the culture, context and shared knowledge, can be found in a reinterpretation of the dialogical purpose, or in a default of a factual or epistemic presumption. Argumentation, interpreted in a broader sense covering the implicit reasoning underlying a dialogical activity, can provide an instrument accounting for the structure of sense reconstruction. On this view, the automatic processes of interpretation can be analyzed as forms of presumptive reasoning (defeasible *modus ponens*), while the heuristic processes aimed at recovering a possible communicative failure as complex arguments. Meaning is interpreted as a dialogical action often grounded on implicit reasons. The communication of an apparent inconsistency, of a "lost" meaning, can be thought of as process of grounding a move on implicit reasons that need to be retrieved in order to understand the dialogical purpose.

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# Commentary on “IMPLICATURES AND HIERARCHIES OF PRESUMPTIONS” by Fabrizio Macagno

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## 1. INTRODUCTION

It is not uncommon to claim that a verbal argument may be fruitfully understood as the external form (or the externalized part) of an internal (or mental) reasoning process. In his paper, Fabrizio Macagno (2011) first offers a twist, and then puts flesh to this claim. He provides (what to this commentator is) a novel way of analyzing, thus of understanding, *particularized conversational implicatures* as argumentative. He convincingly demonstrates that “implicatures can be analyzed as implicit arguments, involving a pattern of reasoning leading from specific premises to a conclusion” (2011: 10).

In the following, I briefly summarize (what I take to be) the gist of his paper, then offer constructive criticism. My claim is that, in developing these ideas so that they become machine-implementable, we require a specification of what it means that a presumption P1 is pragmatically (strictly) better, or stronger, than presumption P2. That is to say, we would make an advance if we could at best determine, and at least formally specify, the quality or the strength of a presumption. Moreover, one should be able to test this account empirically (see below).

## 2. IMPLICATURES AND PRESUMPTIONS

Following H.P. Grice and others working in the tradition of natural language philosophy, it has become common to recognize that—with the exception of a literal employment of terms, if such there is—many superficially simple forms of communicative language-use require (both on the part of the analyst, and on the part of speaker and hearer) rather rich background knowledge, some of which varies with contexts, cultures, social strata, suitably specified.

Such knowledge, when shared by speaker and hearer, makes possible various kinds of felicitous communicative acts that are *indirect*. These are indirect in the sense that locutions (i.e., overt message contents) “trigger” information that is non-identical to the literal (sentence-)meaning of terms employed. Rather, locutions take on conventional(ized) meaning(s). At any rate, so we must assume for an analysis which has speaker and hearer communicate by sending messages across a channel.

Conversely, should such knowledge fail to be shared, this may account for infelicitous communicative acts of the kind we normally call “misunderstandings.” In this sense, speaker and hearer can, and do, *presume* information or, in slight variation, make communicative use of *presumptions*. Insofar as we take the speaker to intend to convey the non-literal meaning, we can say that she *implicates* conventionalized meaning(s) or, in slight variation, makes communicative use of *implicatures*.

So far, this is a rather pedestrian account of (some aspects of) “how to do things with words” (Austin). Standard examples include “It’s cold in here!” employed to bring it about that someone more proximal to an open window than the speaker closes it, or the all-time favourite “Can you pass the salt?” to bring about that someone passes it, rather than respond with details on her ability to do so, etc.

Things become more interesting by turning away from conventional ones to *particularized conversational implicatures*.

### 3. CONFLICTS

Making the above ideas on the one hand more precise, and on the other fruitful for argumentation studies, Macagno usefully distinguishes *pragmatic*, *epistemic*, and *factual* presumptions. Invariably, presumptions are thought of as (representable by) sentences which express propositional contents. Importantly, he suggests a process (“mechanism”) by which the hearer decodes the (otherwise implicit) intended message.

Provided some communicative context, certain (*pragmatic*, *epistemic* or *factual*) presumptions can conflict with each other. Speakers may use such conflicts to convey information beyond the overt message content. In recognizing the conflict—or so is Macagno’s assumption—hearers are “not led to reconstruct the meaning of a move, but to retrieve the missing information” (p. 9). The drunkard captain-example shows this very process at work.

Importantly, for the proposed explanation to gain force, we need to assume that presumptions which are accessible to both speaker and hearer are *ordered* by (what we might call) a relation of comparative rejectability/acceptability.<sup>1</sup>

[T]he best interpretation [of the speaker’s communicative intent] corresponds to the argument or reason that in a given context is less easily defeated by counter-presumptions, common knowledge or facts. (2011: 11)

Insofar as this ordering relation can be non-problematically assumed, the rest of Macagno’s paper follows nicely. In particular, the process by which a speaker codes and a hearer decodes such information fits squarely into the schema of the “argument from best explanation” (ibid.). After all, the strongest (i.e., the least rejectable) presumption is that which features in the best explanation.

Moreover, the account naturally extends to analogies, practical reasoning, etc., which I will not discuss. Instead, in the following, I am concerned with making “presumption-strength” slightly more precise, and then turn to the question if Macagno’s account is empirically testable.

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<sup>1</sup> Compare the literature on formal belief revision in the AGM tradition, e.g. Gärdenfors (1988), or Rott (2003) who coined the term ‘comparative retractability’.

## 4. COMPARATIVE REJECTABILITY

Disregarding much of the complexity of the analysis (see Macagno's Fig. 5), assume that, say, three presumptions,  $P_1$  to  $P_3$ , are ordered as follows. Here, ' $<$ ' denotes 'is less rejectable than,' making  $P_1$  a stronger (or better) presumption than  $P_2$ , and so on.

$$(1) \quad P_1 < P_2 < P_3$$

Just in case speaker and hearer share (1), a particularized conversational implicature would be felicitous. In contrast, assume that, instead of (1), the order is weaker, as in (2). Here, ' $\leq$ ' denotes 'is at most as rejectable as', i.e., 'is less than or equally rejectable as':

$$(2) \quad P_1 \leq P_2 < P_3$$

In this case, it is unclear if the conversational implicature would be felicitous. It might be, or not. After all, rather than arrive at the intended meaning—which requires the hearer's order to be a copy of the speaker's, i.e., (1)—the hearer might not come to a decision on whether to reject  $P_1$  or  $P_2$ . Hence, provided there are at least two equally strong presumptions—and thus, in extension, at least two equally good explanations—a speaker may either fail to communicate successfully. Else, the felicitous case might still involve an element of chance (or luck), in case the hearer opts for the intended presumption, *although* she deemed another "as just as fair" (Frost 1920).

Generally, it stands to reason that orders of rejectability (of presumptions) are not a "hard fact." As communicative contexts vary, orders may change. In principle, the conditions under which speakers can justifiably assume that hearers arrive at *a* total order, as in (1)—rather than a partial one, as in (2)—, seem to be empirical conditions (rather than conceptual ones).

Further, rather than changing the quality of the order (partial vs. total), hearers may arrive at an order very different from that the speaker assumed, e.g., (3).

$$(3) \quad P_1 \leq P_3 < P_2$$

At this point complexity arises, insofar as the hearer may have to "fix" an order such as (3), in case she would otherwise be unable to make sense of the hearer's utterance. In other words, the assumption that the Gricean maxims (or similar) hold may lead her to corrections (see below). At any rate, it is such orders that we need to implement, if we seek to arrive at a computational model.

## 4. TESTABILITY?

If the above is accepted as a mild precisification of *comparative rejectability*, this may aid in submitting Macagno's analysis to empirical tests. These tests might vary the communicative context (along dimensions to be discerned), as well as background knowledge and, of course, the overt and the intended message content. Moreover, one might record how long it takes hearers to react to such acts "with signs of understanding," and compare the numbers against those established for more direct forms of communication. Assuming

that (more) reasoning takes (more) time, differences might indicate having corrected an initial order of presumptions.

What would the purpose of such tests be? *Prima facie*, isn't it the case that, no matter what the outcome of testing, Macagno's model is *non-falsifiable*? After all, should speaker and hearer *fail* to share common background knowledge—assume such is verifiable(!) independently—this, of course, explains infelicitous acts of communication. In particular, then, differences between the rejectability orders of speaker and hearer (see Section 3) can explain “communication failure.” Generally, *any act of infelicitous communication* involving particularized conversational implicatures can be explained by recourse to the absence of a shared order. Conversely, felicitous communication may be explained by pointing out that the rejectability orderings were, at some point in time, shared between speaker and hearer.

Now, is it true that we cannot arrive at a falsification? *Answer*: In practice, falsification will be difficult. But in principle the model does not preclude obtaining requisite data. *That* infelicitous communicative acts are explained because conditions on felicitous communication are not fulfilled does not subtract from the analysis's merits. On the contrary, this is very much how it should be.

We can compare with a standard view on the kinds of empirical regularities commonly called “laws of nature.” Such laws only count as falsified when antecedent and boundary conditions are, on the one hand, within their normal range (otherwise, why even start a test?) and, on the other, exactly as was assumed for the sake of calculating a prediction about some “system”. This is sometimes expressed by saying that applied laws are hedged by a *ceteris paribus* clause (Zenker 2009). Should antecedent and boundary conditions have been different, then it cannot surprise to learn that a prediction is not born out. Hence, the law does *not* count as falsified. Rather, the test conditions were “bad.”

Clearly, there may be some difficulty in establishing *independently of the felicity of the communicative act* that, for instance, background knowledge is shared. However, such difficulties are practical. In sum, Macagno's insightful analysis provides a testable model; hence, it deserves to be called *empirical*.

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