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Practical (un)cancellability

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ABSTRACT

Cancellability is an essential feature of implicatures. However, its reliability has been challenged by several cases and examples in which conversational implicatures seem to be hard or even impossible to cancel. Should it then be concluded that not all implicatures are cancellable, and therefore Grice's cancellability test should be weakened or abandoned? The present paper addresses this problem by drawing a distinction between theoretical and practical cancellability, where the latter concept captures the (un)reasonableness of explicit or contextual cancellation. By analyzing three legal cases of misleading advertising, I show how the indefensibility of an interpretation can account for the practical uncancellability of an implicature. To explain and account for the reasonableness of an interpretation, the presumptive inferences involved must be reconstructed and evaluated considering different dimensions, such as the conversational context and the associated presumptions.

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Cancellability poses a problem for pragmatics. On the one hand, Grice has highlighted that the possibility of being cancelled is an essential feature of conversational implicatures. In particular, he pointed out that cancellation would amount to the speaker implicitly or explicitly making clear that they are opting out of the cooperative principle (Grice, 1975, p. 39) – an option always available to individuals engaging in a conversation. On the other hand, some implicatures, including those playing a role in the assignment of truth conditional content and normally referred to as “enrichments”¹ (see Levinson, 2000, 166–167), have been claimed to be non-cancellable both for empirical and theoretical reasons (Sullivan, 2017). From a theoretical perspective, it has been argued that if an enrichment corresponds to the speaker's intention, its cancellation by the speaker would simply mean that it was not intended in the first place. From an empirical perspective, however, some instances of cancellation seem problematic (Carston, 2004a, 2002, pp. 139–140), such as in the following example drawn from a job interview (Ariel, 2008, p. 10).

(1) *Theoretical and practical cancellability*

Boss: You have small children. How will you manage the long hours on the job?

H.D.: I have a mother.

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¹ In this paper, in accordance with a neo-Gricean framework, the term “enrichment” is used to refer to the implicatures that contribute to the determination of “what is said,” and thus the truth-conditional content, without drawing a distinction between implicatures and the “combination of linguistically encoded and contextually inferred conceptual features” (Sperber and Wilson, 1995, p. 182), called “explicature” in Relevance Theory (Carston, 2002, p. 123), or the specific processes of expansion and completion of what is said, which Bach labels as “implicature” (Bach, 1994). Following one anonymous reviewer's comments, the term “unsaid contents” is used to refer to both implicature and enrichments.

H.D.'s reply, apparently irrelevant to the boss's question, generates the implicature (easily drawn in some cultures, such as in Italy) that the mother will take care of her daughter's children when she is at work. The problem lies in the fact that H.D.'s mother could not help the daughter with her small children (Sternau et al., 2017, p. 103). This implicature can be theoretically cancelled, as in a counterfactual scenario in which what is said is not logically incompatible with the negation of what is allegedly meant. However, is this case of cancellation reasonable from a practical point of view? Or more precisely, is it justifiable *in this specific context*? This question becomes crucial in law, where the determination of the reasonableness of an interpretation is essential and at the same time based so far only on intuitive grounds. These theoretical and empirical issues also raise some challenges at a theoretical level: Are there boundaries to cancelling a specific implicature? Is cancellation a gradual property? Is cancellation always possible, and if so is it still a valid test for implicature status?

In the literature, these problems have been addressed experimentally through two interrelated discursive concepts: deniability and accountability (Hall and Mazzarella, 2023; Mazzarella et al., 2018; Sternau et al., 2017). Deniability captures the speaker's perceived *ability* to actually *deny* a specific implicature in a given context (Sternau et al., 2015, p. 90). Deniability rests on two features: a) the inference affects truth judgments, and b) the inference is "interactionally necessary" (Sternau et al., 2017, p. 105). For example, in example (1) H.D.'s reply would be judged as false in view of the evidence that her mother does not help her with the small children, and thus the implicature would be considered interactionally relevant. However, why does this implicature affect the truthfulness of H.D.'s reply? How is it possible to prove this judgment, especially when other possible interpretations are available?

Accountability refers to the speakers' dialogical responsibility for the contents of their messages. According to Hall and Mazzarella (2023), accountability for what is unsaid depends on the nature of the false implicit content, whether it is a particularized conversational implicature or an enrichment of what is said based on either completion or expansion. In particular, those authors have argued that speaker's liability, and thus what Mazzarella calls "the perceived plausibility" of denying what is unsaid (2023, 227), depends on its divergence from Grice's "what is said." However, this view relies on hearers' perceptions and captures the *perceived trustworthiness* of the speaker in case of falsity, but not the *reasons why* the denial of an implicature is *not* possible in a given context or why an implicature arises in a given circumstance.

This paper intends to address these problems by showing how the intuition that some unsaid contents are more cancellable than others, or are not cancellable at all, is not incompatible with Grice's notion of cancellability. The claim is that cancellability has a theoretical and a practical dimension. While theoretical cancellability rests on the lack of logical contradiction between what is said and the negation of what is implicated therefrom (Åkerman, 2015; Sullivan, 2017, p. 165), practical cancellability concerns the determination of the *reasonableness* of cancellation. In other words, practical cancellability captures whether the cancellation of an implicature can reasonably be justified against possible criticisms, that is to say whether it is *defensible* (Walton, 1989).

The goal is to propose a logical framework for understanding and implementing practical (un)cancellability upon which legal reasoning can rest. To this purpose, the Neo-Gricean framework for reconstructing implicatures and the notion of "best interpretation" will be developed in a dialectical perspective. The general principles of quantity of information and relation (Horn, 1984; Levinson, 2000) will be shown to be problematic for the purpose of proving the acceptability of an implicature (or its cancellation). For this reason, they are replaced by different levels of presumptions that work as warrants in interpretative arguments (Macagno, 2012). The possibility of cancelling an implicature will be shown to depend on the reasonableness of rejecting the presumptions on which it is based, and the degree of acceptability of the alternative interpretation.

1. Theoretical cancellability

For Grice, cancellability is a defining characteristic of conversational implicatures (Grice, 1975, p. 39; Levinson, 1983, p. 114), and can arise in two distinct ways: explicitly or contextually. While in the first case the speaker denies an implicature, by simply uttering denials such as "I do not mean to imply that *p*," in the second the context prevents the potential implicature from arising (Grice, 1978, pp. 115–116). For instance, if we modify the context of example (1) and suppose that the conversation happens between friends who share the fact that H.D.'s mother is the extremely busy owner of the company in which H.D. works, the implicature that 'she is going to help the daughter with the children' would not arise.

Overall, cancellation has been commonly regarded as a counterfactual test for determining the nature of some inference drawn from an utterance. However, the literature has pointed out three main criticisms of this assumption (for a review, see Sullivan, 2017): 1) from a theoretical point of view, the possibility of cancelling an implicature is inconsistent with the notion of meaning; 2) from an empirical perspective, some particularized conversational implicatures are not cancellable or are extremely hard to cancel; and 3) the cancellation of some Generalized Conversational Implicatures would result in oddity. These three challenges will be discussed below.

1.1. Cancellation and intentionality

The theoretical debate on the cancellability of implicatures hinges on the relationship between intention and implicatures, and the distinction between what is said and what is implicated. Grice underscored the central role of intentions in communication (Grice, 1957), which was also emphasized later by the Relevance Theory (Sperber and Wilson, 1995, pp. 54; 62). The relationship between communication, implicatures, and intentions has been the object of the theoretical concerns about the

notions of cancellability (Burton-Roberts, 2010, 2013; Capone, 2009, 2013) and speaker's responsibility (Hall and Mazarella, 2023). For instance, if a speaker intends an implicature resulting in enrichments necessary for or contributing to the determination of an evaluable propositional form, it cannot be cancelled – as this would mean that it was not intended in the first place (Burton-Roberts, 2010; Capone, 2009). Thus, a difference must be drawn between the expression and the utterance of *I went to the market and bought some meat*: while the potential implicature that 'the meat was bought in the market' is assigned to the expression independently of the speaker's intention, the speaker can clarify that this was not the case by providing the relevant context or denying it. Either way, the speaker does not *cancel* an implicature: either s/he clarifies that it was not intended and thus clarifies an ambiguity (Sadock, 1978, p. 294), or the context cancels it, and it is no longer an *actual* implicature.

As Haugh (2013, 139) has stated, this criticism holds only if the notion of implicature is equated with the speaker's *process* of intending something in addition to what is said, and not the product thereof, i.e. the implicatum. The latter refers to an implication distinct from the logical one, which is communicated by the speaker and retrieved by the hearer based on "certain general features of discourse" (Grice, 1975, p. 26), namely what is said and the presumptions governing communication between rational agents (Horn, 2012a, p. 74, 2012b). For Grice logical contradiction, consisting in asserting and denying what is said, was simply distinguished from the possibility of denying what is implicated, which does not result in any logical contradiction. Thus, from a theoretical perspective, the notion of cancellability introduced by Grice survives the criticisms. A more complex problem, which will be addressed in the next section, is raised by the empirical observation that some implicatures, Particularized or Generalized Conversational Implicatures, seem to be non-cancellable or at least much less cancellable than others.

1.2. Non-cancellable implicatures

The criticism that certain implicatures cannot be cancelled results from the empirical analysis of some specific implicatures that appear to be cancellation resistant. The first case concerns uncancellable Particularized Conversational Implicatures, such as the following example (Burton-Roberts, 2013, p. 19).

(2) Uncancellable PCI

Max: Do you ever speak to Charles?
Ann: I never speak to plagiarists.

As Burton-Roberts pointed out, Ann's reply conversationally implicates that Charles is a plagiarist, and this implicature cannot be cancelled by adding an explicit denial of the kind 'I am not suggesting that Charles is a plagiarist, mind you' (Burton-Roberts, 2010, p. 151). A different kind of allegedly cancellation-resistant PCI is illustrated in example (3) (Weiner, 2006, p. 128).

(3) Cancellation-resistant PCI

Suppose that Alice and Sarah are in a crowded train; Alice, who is obviously able-bodied, is sprawled across two seats, and Sarah is standing. Sarah says to Alice, "I'm curious as to whether it would be physically possible for you to make room for someone else to sit down."

Here, Sarah is flouting of the quality maxim, as she is neither curious nor does she not know what is physically possible. This flouting, together with the use of the expression *I am curious as to...* (Colonna Dahlman, 2013) and background knowledge (normally people make room for others in public transports; normally people are physically able to make room for others), triggers a sarcastic implicature that seems to resist cancellation attempts of the kind 'Not that you should make room; I'm just curious.'

Some Generalized Conversational Implicatures seem to be resistant to cancellation, or more precisely, their cancellation creates "some sense of oddity" (Carston, 2002, p. 138). An illustration is the following example (4) (Yamaguchi, 1988, p. 326).

(4) Humorous cancellation of GCI

Arthur: Today on the school bus a little boy fell off his seat, and everybody laughed except me.
Teacher: Who was the little boy?
Arthur: Me.

Arthur cancels explicitly the GCI that was actually triggered by the use of the expression *a little boy*. By providing an indefinite description instead of a more specific one (a self-referential pronoun in this case), the speaker can be assumed not to be "in a position to be specific" (Grice, 1975, p. 57; Levinson, 2000, p. 17), leading to the implicature that the "little boy" is not the speaker. This inference is reinforced by the contradictory speaker's behavior: while he fails to make a contribution as informative as is required in the first conjunct, in the second conjunct he complies with the quantity maxim by identifying himself ("except me"), excluding some possible alternative readings (the speaker is ashamed, etc.). For this reason, this GCI is particularly hard to cancel, as manifested by the "logical oddness" (Hungerland, 1960, pp. 253–254; Nowell Smith, 1954, p. 80) of Arthur's retroactive clarification in the third turn. This case is not isolated as GCIs can be hard to cancel in some specific contexts, as in the following example (from Burton-Roberts, 2010, 151).

(5) Cancellation-resistant GCI

Ann: How many children do you have?
Bill: Three –?and in fact I have four.

Imagining this exchange occurring within a formal context, such as a declaration of the family status, the implicature to the more informative propositions, namely ‘I have *no more than* 3 children,’ seems to be resistant to cancellation.² However, if we imagine a different context, Bill’s reply would not be unacceptable (he may have adopted a fourth child).

Finally, some pragmatic enrichments such as disambiguation and reference assignment, not classified by Grice under the label of implicatures, are also commonly regarded as pragmatic developments and determinants of the logical form of the utterance. Levinson has claimed that they are based on particularized or generalized implicatures, and for this reason they are cancellable (Levinson, 2000, pp. 174–176).³ However, in some cases cancellation would result in oddity, as in the following cases from Burton-Roberts (2010, 151) and Levinson (2000, 174) respectively.

(6) *Cancellation-resistant disambiguation*

Ann: What did you do before 7.00 am today?

Bill: I prepared breakfast, and I ate it –?but not in that order.

(7) *Cancellation of disambiguation*

a. Mary left the book *on* the atom – ?I mean, above the atom.

b. I love nature. The view would be destroyed by the addition of a *plant* out there – ?I mean a tree.

In examples (6) and (7), the cancellation attempts would result in pragmatically odd utterances or humorous effects (Yus, 2008), as world knowledge excludes some readings (examples (6) and (7a)), while the previous context makes the cancellation in (7b) humorous.

The examples cited thus far are characterized by a type of contradiction that is not logical, but rather communicative, as the speaker expresses an intention that is then withdrawn or denied (Burton-Roberts, 2010, p. 151). Thus the speaker seems to opt out of a conversational principle, which makes the utterance weird, odd, or humorous in a given context. However, these cases are not evidence of the *theoretical* non-cancellability of an implicature. Grice underscored very clearly that cancellability derives from the possibility of opting out of observing the cooperative principle (Grice, 1975, p. 57), as the humorous examples (4) and (7b) illustrate. Moreover, Grice’s notion of cancellability concerns the possibility of retracting the unsaid content without logical contradiction (Åkerman, 2015). These cancellation attempts show that in some contexts it would be *unreasonable* or *indefensible* to cancel an implicature, but not contradictory. For this reason, the cancellability they instantiate is not theoretical, but involves the practical problem of determining under what circumstances and to what degree we can opt out of compliance with the cooperative principle. In this sense, the debate on theoretical cancellability needs to be complemented with the analysis of the possibilities of practical cancellability.

2. Practical (un)cancellability

Practical (un)cancellability is a crucial problem in law, particularly in advertising law. Advertising materials often suggest conclusions or interpretations that are, unfortunately, false. The ads do not *say* anything false; the false message is merely implicated, and thus from a theoretical perspective it can be explicitly or contextually cancelled. However, is there a limit to cancellation? Furthermore, rulings of some legal cases express a judgment not on the theoretical possibility of cancelling certain pragmatic inferences, which are indeed denied without any contradiction, but rather on the reasonableness and acceptability of such cancellation. For this reason, the answer to the problem of cancellability in law cannot be found either in the notion of theoretical cancellability or in its dialogical counterpart of deniability, which focuses on its possible causes or perception (Mazzarella, 2023; Walton, 1996a). Instead, a dialectical approach must be pursued, which can justify why an inference is triggered in a given context in a way that its retraction, modification, or alternative interpretation is considered unacceptable.

The first case we will look at concerns the allegedly implied “Italianity” of Barilla pasta produced by Barilla America Inc. and manufactured neither in Italy nor with Italian ingredients (*Sinatro et al. v. Barilla America, Inc.* 4:2022cv03460).

Case 1: Non-Italian Italian pasta

Defendant (Barilla America, Inc.) labels the Products (different types of pasta) with the label: “ITALY’S #1 BRAND OF PASTA,” surrounded by an artistic recreation of the Italian flag. The net-effect or net-impression on consumers is that the Products are made in Italy—including the harvesting of ingredients from Italy and the manufacture of the pastas in Italy.

The problem with this advertisement is that the Barilla pasta sold in the United States is in fact manufactured in Iowa and New York with wheat purchased around the world. The plaintiff claimed that the representation was misleading, as it was both affecting the value judgment on the product (Bonaiuto et al., 2021) and allegedly false. According to the plaintiff’s argument, the above sentence together with the packaging and overall marketing campaign leads reasonable consumers to believe that the product advertised is of Italian origin, which is false (*Sinatro et al.* at 25–27).

From a linguistic perspective, the label does not say anything about the product itself. As claimed by the defendants, it can be interpreted as providing a “geographical reference” of the brand (*Sinatro et al.* Order on motion to dismiss first amended complaint, at 21). The allegedly misleading information that the label conveys is purely a matter of pragmatic inferences and

² The oddity of Bill’s reply also results from considering the use of the conjunction *and* which suggests a compatibility between the answer and its cancellation.

³ In Relevance Theory such enrichments fall under the notion of explicature (Sperber and Wilson, 1995, p. 179), and since they are the result of pragmatic processing they are regarded as cancellable (Carston, 2002, p. 138).

the broader context, in this case the other statements on the packaging indicating the American origin of the product, clearly cancels the latter. Why then is this label still perceived as misleading? Does the implicature that the advertised pasta is of Italian origin survive cancellation in this context?

A similar case is *De Dios Rodríguez v. Olé Mexican Foods* (WL 1731604, C.D. Cal. Apr. 22, 2021), which concerned the advertising of tortillas suggesting their Mexican origin.

Case 2: Non-Mexican Mexican tortillas

Plaintiff purchased Defendant's product (corn tortillas) relying on references to the Mexican flag, the phrase "El Sabor de Mexico!" or "A Taste of Mexico!", the brand name "La Banderita," and the Spanish phrase "Tortillas de Maíz" on the label of the Corn tortillas. Plaintiff believed he was purchasing tortillas made in Mexico, and would not have purchased them or would have paid significantly less had he known that they were not made in Mexico. However, the tortillas were not made in Mexico.

Again, the problem lies in what is *unsaid*. The plaintiff draws the inference concerning the origin of the product based on what is said on the packaging and reasoning based on the stereotype associated with the product. Thus, since tortillas are a Mexican food, and "what is expressed simply is stereotypically exemplified" (Levinson, 2000, p. 37), he concluded that they were from Mexico. This reading was challenged by the defense, which maintained that the packaging and advertising materials do not state that the tortillas are made in Mexico, and therefore that the reference to this country can be interpreted as evoking only "the cuisine, culture, history, people, spirit, or feeling of a country" (at 5). Moreover, the label indicates that the product is made in the USA, thereby contextually cancelling the alleged implicature that the geographic origin of the product is Mexico. Again, the practical problem of cancellation appears to be more complex than its theoretical explanation.

The problems with cancellation just described do not concern only subsentential expressions but also the more classical cases of free enrichment such as stereotypical pragmatic assumptions associated with lexical concepts (Carston, 2004b; Levinson, 2000, p. 32). An example is *Astiana v. Dreyer's Grand Ice Cream, Inc.* (No. C-11-2910 EMC, at 10–14, N.D. Cal. Jul. 20, 2012), where the interpretation of the labels "All natural" and "All natural flavors" is at stake.

Case 3: Non-natural natural ice cream

Plaintiffs purchased ice creams labeled as being "All Natural Ice Creams" and containing "All Natural Flavors." However, they later discovered they contain artificial and synthetic ingredients and flavors (alkalized cocoa processed with a synthetic ingredient – potassium carbonate, glycerin, mono and diglycerides, tetrasodium pyrophosphate, and xanthan gum).

Two distinct interpretative problems arise from the enrichments of the two labels found on the ice cream packaging. The first concerns the interpretation of ice cream in "All Natural Ice Creams." According to the plaintiffs, the label is pragmatically enriched to mean that "<all of the> ice cream <servings in the container>" contain natural ingredients, while the defendant claims that ice cream represents the narrower concept of "ice cream <base>" (which can be referred to as "ice cream^N"). According to the defendant's view, it is the *ice cream^N* that is claimed to be natural, excluding the mix-ins indicated on the ingredient list, which separates the ice cream from the mix-ins.

The second interpretative issue involves the broadening of the concept *flavor* (*flavor^B*) to mean *types of ice cream* in "All Natural Flavors." According to the plaintiffs, a reasonable consumer would interpret it to mean that all of the contents of the container of ice cream, and not only their flavoring ingredients, are "all natural." The defendant pointed out that the label excluded this enrichment, as it indicated the artificial substances that were not the flavoring ingredient. In both cases of implied interpretation of the product label, the court found that the defendant's interpretation was implausible. Again, this is a case of contextual cancellation, as the context in which the statement is made excludes the implicature that is presumptively triggered. However, even though this cancellation is possible, as claimed by the defendant, it has been found to be unacceptable.

3. Cancellability and justification of implicatures

The three cases mentioned in the previous section concern the practical indefensibility of cancellation. The *unsaid* content is at the same time explicitly denied by the manufacturing companies and contextually cancelled by certain indications on the labels. However, even by providing indications that the suggested implicatures are not true and not intended, their cancellation has been challenged and in the last two cases has been found to be unacceptable. How is this phenomenon addressed? In law, the courts rely on the very intuitive standard of the *reasonable reader*, which in itself is not an explanation of why cancellation can be reasonable or not. Pragmatic theories mostly focus on the analysis of how pragmatic processing occurs, but the problem of assessing and proving the reasonableness of their outputs, i.e. the interpretations, is only minimally considered. The most relevant approach to this problem has been developed by Neo-Griceans, who provide criteria for the justification of an interpretation and the analysis of the reasoning underlying it.

In a Neo-Gricean perspective, the reconstruction of conversational implicatures is based on three heuristics (Levinson, 2000, pp. 35–39).

1. Q-heuristic: What isn't said, isn't. This principle leads to upper-bound, more definite implicata (see also Horn, 1972; Atlas and Levinson, 1981, 37–38; Horn, 1984);
2. I-heuristic (which Horn calls R-Principle): What is simply described (see M) is stereotypically exemplified. This principle induces lower-bound, more informative implicata (see Horn, 1984, 13);

3. M-heuristic: What is said in an abnormal way isn't normal, or in other words, a marked message indicates a marked situation. According to this principle, if something is said simply, briefly, and thus in an unmarked manner, then the stereotypical interpretation should be inferred; if, in contrast, a marked expression is used it can be inferred that the stereotypical interpretation should be avoided (Levinson, 2000, p. 38).

This inferential structure can account for the possibility of alternative interpretations; however, as Carston suggested (1995, 220), such heuristics cannot predict why the defendants' interpretation in cases such as these would be unacceptable. In a Neo-Gricean framework, the defendant's and plaintiffs' interpretations of Case 3 could be reconstructed as follows (Table 1).

Table 1
Radical pragmatics and interpretation.

Defendant	Plaintiffs
<p>"All Natural Ice Creams" (nonspecific)</p> <p>1. Q: "All Natural Ice Creams" provides all the necessary information;</p> <p>2. What is not <i>ice cream</i> is not claimed to be "all natural;"</p> <p>3. Mix-ins such as chocolate, syrup, etc. are not <i>ice creams</i>;</p> <p>4. Therefore, the ice cream <i><bases></i> are claimed to be "all natural."</p>	<p>1. I: <i>Ice Creams</i> is not a marked linguistic expression, and therefore it shall be stereotypically interpreted;</p> <p>2. What is normally referred to as <i>ice cream</i> is claimed to be "all natural;"</p> <p>3. <i>Ice creams</i> are normally used to refer to ice cream <i><servings></i> ("How many ice creams are there in this box?");</p> <p>4. Therefore, the ice cream <i><servings/products></i> are claimed to be "all natural."</p>

A similar analysis can be carried out on the label "All Natural Flavors," which can be interpreted either based on the Q-heuristic or the I-heuristic. The defendant's interpretation "All natural flavoring ingredients" is reached by excluding what is not said, namely reasoning that if the speaker had wanted to indicate that the *ice cream* was all natural, s/he would have said that. In contrast, the plaintiffs' interpretation is based on a stereotype-based inference where *flavor* stereotypically means *variety of ice cream*, such as strawberry or chocolate.

The analysis of the Italian Barilla pasta and the Mexican tortilla cases would follow similar parallel paths. For the defendants, the statements do not say more than what it is written. Thus, for them *<the brand>*, and not *<the product that the brand produces>*, is Italy's No. 1 pasta, and *<the tortilla has>* a taste *<that characterizes>*, but is not *<produced in>*, Mexico. In contrast, for the plaintiffs the statements need to be interpreted based on the I-heuristic, drawing a more informative proposition considering the stereotypes associated with pasta and tortilla and the stereotypical ways of referring to their place of origin. Thus, the crucial problem with the Neo-Gricean approach is that both the plaintiff and the defendant can use a heuristic to justify their interpretation, and even to justify a claimed prevalence of their chosen heuristic over the alternative.

An additional problem with this inferential mechanism involves the notions of stereotypicality and informativeness (see Atlas, 2005, 94). The relevance of the concept of informativeness in the context of advertising is discussed in Section 5.2 below. Stereotypicality was defined by Atlas and Levinson as contextually determined in terms of being consistent with the presumptions of the common ground in context *K* (Atlas, 2005, p. 91; Atlas and Levinson, 1981, p. 40). But what does this mean exactly? The first issue is the context: stereotypicality needs to be bound to a specific conversational setting. In an ordinary conversation *ice-cream flavor* stereotypically indicates the mixture of the ingredients resulting in products such as chocolate, strawberry, vanilla ice-cream. However, in the context of a technical discussion on the manufacturing process, it indicates stereotypically the flavoring ingredients. The same contextual considerations apply to the concepts of *pasta* and *tortilla*, which are stereotypically Italian and Mexican. However, when talking about their manufacturing, industrial products are made of ingredients that are not stereotypically Italian or Mexican. The second issue is the fact that there can be multiple stereotypical interpretations. For example, the phrase *a taste of place X* can be stereotypically interpreted in at least two ways, namely as a taste *<characteristic of>* Mexico (*like Mexican tastes/foods*), and a taste *<that is produced in/comes from>* Mexico.

4. Justifying the best interpretation

To address the problem of practical (un)cancellability, it is necessary to provide a justification not only of why an interpretation should be preferable over another, but also why the alternative is not acceptable (or reasonable). In other words, the practical problem of cancellability shifts the theoretical challenge from the explanation of how an implicature is derived (logically, cognitively) to the analysis of its acceptability and reasonableness in a given context. For this reason, an argumentative mechanism is needed to account for the quasi-formalization of reasoning that can represent the relationship between an utterance and its possible interpretations (Atlas, 2005, p. 73).

4.1. Interpretation and interactional purposes

The starting point for an analysis of the interpretation of a message is the logical reasoning that can represent it. Neo-Griceans introduced the idea that interpretation relies on abductive reasoning (Atlas, 2005; Atlas and Levinson, 1981), also

referred to in the logical tradition as “inference to the best explanation” (Harman, 1965, p. 88). This type of reasoning can be represented according to the following scheme (Walton et al., 2008, p. 171) (Table 2).

Table 2
Reasoning from best explanation.

Premise 1	<i>U</i> (an utterance) is an observed communicative act.
Premise 2	<i>I</i> (Interpretation 1) is a satisfactory description of the meaning of <i>U</i> .
Premise 3	No alternative meaning description <i>I'</i> (such as Interpretation 2, 3, etc.) given so far is as satisfactory as <i>I</i> .
Conclusion	Therefore, <i>I</i> is a plausible hypothesis based on what is known so far.

The first problem with this pattern of reasoning is the definition of the *explanandum*, namely the object of interpretation in Premise 1. Utterances are commonly referred to as “communicative acts” (Carston, 2002, pp. 127–128), but this notion is not distinguished further. An utterance is regarded as the product of a verbal act, and is characterized by a specific goal or function in goal-oriented activities (Leech, 1983, pp. 13–14). However, the *activities* that utterances are a part of and the *verbal act* that constitutes them are considered as a uniform category. Grice himself highlighted that his focus was on a specific type of talk whose purpose is “a maximally effective exchange of information,” and acknowledged that other types of talk, or more precisely other activity types (Levinson, 1992), also needed to be accounted for, such as “influencing or directing the actions of others” (Grice, 1975, p. 47).

The distinction between the different types of talk exchanges can provide a useful guide for understanding the contribution of each utterance to the “work of the interaction in which it occurs” (Geis, 1995, pp. 10; 32). While there is no consensus about the possible ways to classify the types of talk, a possible and productive classification has been proposed in argumentation theory, where eight types of dialogue (Persuasion, Negotiation, Inquiry, Deliberation, Discovery, Information-sharing, Rapport building, and Meta-dialogue) have been described according to their joint and individual interactive purposes (Krabbe, 2003; Macagno and Bigi, 2020, 2017; Walton, 2010; Walton and Krabbe, 1995, p. 66).

In the specific case of product labels, the interactional purpose consists in influencing the customers' behavior (Pollaroli and Rocci, 2015, pp. 163–165; Walton et al., 2016). More specifically, product labels are written using language intended to convey information and persuade the consumer. For example, all three legal cases cited above are characterized by the same interactional purpose: providing the readers with a reason to buy the specific product instead of its alternatives. This goal would *presumptively* decrease the likelihood of the interpretations aimed at providing only information and increase the likelihood of interpretations that provide stronger reasons in support of the desirability of the advertised product.

4.2. Interpretation and presumptions

The second problem in the above reasoning pattern for reasoning from best explanation (Table 2) is the determination of the *best* interpretation. The notion of informativeness, at the core of the Neo-Gricean framework, is defined in terms of satisfaction of the hearer's needs or interests (Atlas and Levinson, 1981, p. 42), which can hardly be operationalized or determined in an objective or specific way. While intuitively it might capture the relationship between an utterance and its conversational purpose, it is hard to use for justifying the comparative plausibility of the alternative interpretations.

An explanation, which here corresponds to an interpretation of an utterance, is normally considered to be the most satisfactory one when it is accessible, acceptable, and more importantly has the highest explanatory power (Pennington and Hastie, 1991, p. 528). In a Neo-Gricean framework, the first two aspects are taken into account through the two notions of presumptive meaning, which captures the preferential path of interpretation (accessibility) (Clark, 1977, p. 261), and non-controversiality, which refers to the coherence with the presumptions of the common ground (acceptability). However, the third aspect (higher explanatory power of an interpretation) is hard to represent in this theory as the evidence that the speaker can be presumed to rely on by uttering *U* is not described in detail or classified (Clark, 1977, p. 258).

To assess the *bestness* of an interpretation under those three aspects, it is useful to analyze interpretations as the result of presumptive inferences, i.e. conclusions based on defeasible maxims of inference (Rescher, 2006, p. 33), which hold until and unless they conflict with other evidence or stronger presumptions (see the account of context in Rickheit et al., 1985, p. 26). Depending on the existence and acceptability of such default conditions, or instead the presence of corroborating evidence, the conclusions will be less or more acceptable (Clark and Marshall, 1981; Grice, 2001, p. 7). The distinction between the types and the relative strengths of presumptions on which an interpretation is based (see the notion of merger in Jaszczolt (2005) thus becomes a necessary element for assessing it.

Building on the analysis of the presumptions constituting *common knowledge* by Bach and Harnish (1979, 8–15) and Clark (Clark and Brennan, 1991), it is possible to identify four levels of presumptions at work in interpretation. The first and more basic type of presumption, called Level 0, captures the relationship between an utterance, or part thereof, and its communicative purpose in a given communicative context (Kecskes, 2008; Kecskes and Zhang, 2009; Kissine, 2012). This category includes the presumed interactional purpose of an utterance that is represented by the 8 types of interactions mentioned

above. This type can be inferred from the previous exchanges or from the communicative setting (Clark, 1979, p. 470), but also through culturally shared or prior uses of an utterance type, such as ‘Can you pass me the salt?’ which is normally used to request salt in English. In our case, an advertisement, as an utterance type, is presumed to have a persuasive goal and more specifically the goal of providing reasons for buying a product, while a label is presumably aimed at informing the consumers of the content of the packaging.

The second type of presumptions, called Level 1, refers to the presumptive meaning of lexical items or syntactic constructions (Hamblin, 1970; Levinson, 2000; Macagno, 2011), which can lead to a default, literal interpretation of the semantic representation of the utterance when other presumptions do not prevail (Giora et al., 2015, 2017). An example is the use of the term *terrorist*, commonly used to refer to someone who commits violent, criminal acts and at the same time is affiliated with or inspired by foreign terrorist or illegal organizations or nations – which does not correspond to its dictionary definition. Thus, a statement of the kind ‘We are fighting against a terrorist state,’ triggers specific inferences concerning the unlawful and criminal nature of the referent. Another case would be the use of *children* normally used to refer to biological children, as in example (5) in Section 1 above.

The third type of presumption, referred to as Level 2, concerns the default, stereotypical connections between events or facts that are shared within a specific community, culture, society, and have been investigated as scripts or frames (Pennington and Hastie, 1991, pp. 522–523; Schank and Abelson, 1977; Walton, 2007, p. 114, 1996b, p. 115). For example, homemade food or products are commonly considered better, healthier, or tastier; and in an Italian restaurant, customers normally have a three-course meal. This level also includes presumptions about the probable background knowledge (commitments) of an individual or group. For example, Italians are presumed to know who Dante is, and what he wrote.

The last type of presumption, called Level 3, includes presumptions about what people usually prefer, value, and like. For example, people usually prefer products that are healthier or homemade.

These types of presumptions can be ordered by degrees of specificity, which affect their defeasibility conditions (Clark, 1996, chap. 4; Clark and Brennan, 1991). Thus, Level 0 presumptions triggered by the conversational setting are less defeasible than the generic ones. For instance in the absence of a more specific context the utterance type of example (3) from Section 1 above (“I am curious as to whether ...”) would be presumably interpreted as the expression of a feeling, or more commonly as a request for information. However, in a busy train, or if uttered by a speaker known for their sarcasm and indirectness, the presumptive function of seeking information or expressing curiosity might be superseded, as the object of the speaker's curiosity is available to all the interlocutors and the venting of emotions is inappropriate to that context. Level 1 specific presumptions refer to how linguistic items are presumably used by specific speakers or in specific contexts. For example, *trash bag* can be used in some groups to refer presumptively to someone *who engages in excessive behavior while partying*⁴; or a specific speaker can use normally *tipsy* to mean *drunk*. Level 2 specific presumptions can concern how a specific interlocutor is presumed to behave in a given culture. For example, while in many European countries mothers (and often fathers) are normally presumed to help their daughters with children, a specific parent can be presumed to be of little help, thus preventing the implicature in example (1) from Section 1 above. Finally, specific presumptions of level 3 can represent what a specific group or individual is presumed to like, e.g. Italians normally like soccer, while some Italians do not.

4.3. Cancellability and reasonableness in interpretation

This framework can be used to analyze the cases 1–3 presented above in Section 2 (Macagno, 2018). For instance, in Case 3, both parties share the following evidence and the related generic (that is, acceptable in absence of a more specific context) and specific presumptions:

Statement (S): “All Natural Ice Creams” (nonspecific).

1. S is printed on a box containing ice cream servings (products);
2. S can be enriched as “<These products have> All Natural Ice Cream <bases>;”
3. S can be enriched as “<These products are> All Natural Ice Cream <servings>;”
4. S is uttered for promotional purposes; thus, it is presumed to provide a reason to prefer the product (the content of the box) over its alternatives (Level 0);
5. 2 and 3 are common enrichments of S (Level 1 – generic);
6. S is presumed to refer to the contextually more available referent (Level 1 – generic);
7. Natural food is presumed to be healthier than artificially produced food (Level 2 – generic);
8. Healthier food is more desirable than less healthy food (Level 3 – generic);

Both the plaintiff and the defendant share this background information. However, their interpretative reasoning diverges at this point, reaching conclusions that have different degrees of acceptability. The different interpretative paths can be represented as follows in Table 3.

⁴ <https://slangdefine.org/t/trashbag-a838.html>.

Table 3
Presumptions and comparative interpretation in case 3.

Defendant (D)	Plaintiffs (P)
9. “All Natural Ice Creams” (S) is presumed to refer to a <u>specific part</u> of the product. <i>Evaluation. This presumption is incompatible with the Level 1 presumption concerning the referent (6 above).</i>	9. “All Natural Ice Creams” (S) is presumed to refer to <u>ice-cream servings or products</u> . <i>Evaluation. This presumption is compatible with the Level 1 presumption (6) and the available evidence (1).</i>
10. The interpretation of S as <i>All Natural Ice Cream</i> <bases> (2) is possible because <i>ice cream</i> can be presumed to mean its <i>base</i> (5). <i>Evaluation. This presumption is less common than its alternative Level 1 presumption concerning the meaning of ice cream and requires a specific technical context that would conflict with (4).</i>	10. The interpretation of S as <i>All Natural Ice Cream</i> <servings> (3) is possible because <i>ice cream</i> can be presumed to mean <i>servings</i> (5). <i>Evaluation. This interpretation is presumably stronger than its alternative because it is based on a Level 1 generic presumption (5) commonly used in everyday conversation.</i>
11. Interpretation (2) would provide a reason to buy the product, as a natural base is healthier than a processed base (7), and natural food is better than processed one (8). <i>Evaluation. If the ad does not say that the rest of the ice cream is natural, it can be concluded that it is not natural and thus presumably unhealthy (Q principle – What isn't said, isn't).</i>	11. Interpretation (3) would provide a reason to buy the product stronger than 2, as a healthy, natural serving is better than a healthy, natural part thereof (8). <i>Evaluation. A fortiori: if a natural base is healthy, a natural serving would be even healthier.</i>
12. All in S can be adjusted as an emphatic expression. <i>Evaluation. This inference conflicts with a Level 1, generic presumption, as all is commonly used to refer to the totality of something. The label has no specific context.</i>	12. All in S should be intended to mean the <i>totality</i> of, as this is the most stereotypical, shared generic use (<i>Level 1 – general</i>). <i>Evaluation. S is simply described; therefore, it is stereotypically exemplified (1 heuristic). This interpretation is justified as an ice-cream product is commonly known to have different components (Level 2 presumption).</i>
13. Therefore, the ice cream <bases> are claimed to be “all natural.”	13. Therefore, the ice cream <servings/products> are claimed to be “all natural.”

Balancing the competing presumptions shows how the plaintiffs' interpretation is based on more evidence and less defeasible presumptions than the defendant's. The strength of the plaintiffs' conclusion (P13) can be hardly rebutted by contrary evidence: even if the list of ingredients showed partly supports the defendant's intended meaning, this interpretation still needs to be compatible with the exclusion of its alternative, as argued by the plaintiffs. In this view, the cancellation of the default implicature “<all of the> ice cream <servings in the container>,” as claimed by the defendant, still needs to account for the Level 1 presumptions that are subject to default for this interpretation, namely the stereotypical reference assignment and the interpretation of *ice cream* (plaintiffs' steps 9 and 12).

The cancellation that the defendant supports would also conflict with another Level 1 presumption concerning the stereotypical interpretation of *all* in 12 thus assigning a special sense to this expression (Grice, 1978, p. 119), which is not warranted by the context. Finally, the cancellation would result in an interpretation that is presumably less coherent with the goal of the advertisement than its alternative. In this sense, even if the theoretical possibility of cancelling the enrichment “<all of the> ice cream <servings in the container>” did exist, its practical cancellability would be justified only by accepting that some presumptions do not apply or are not defeated by evidence to the contrary, which would make the defendant's intended meaning unreasonable. The same pattern of reasoning and evaluation would apply to the other label in Case 3, “All natural flavors.”

The evaluation of the interpretation of the labels in the tortilla case (Case 2) is similar to Case 3. However, it involves different Level 2 and Level 3 presumptions, namely: a) tortillas are normally a Mexican food; b) authentic, locally manufactured food is presumed to be more genuine, tastier, or of a better quality than imitations; and c) more genuine, tastier, or better-quality food is presumed to be more desirable. The presumptive reasoning also involves Level 1 presumptions, as the term *authentic* can lead to two competing presumptive inferences: either the product has been *manufactured* in Mexico, or it is *like* the Mexican food. However, the additional evidence provided on the box, i.e. the writings in Spanish and the Mexican flag, corroborate the presumption that the enrichment should be that the product *was manufactured in Mexico*, while making it less compatible with the alternative (i.e., that the product *tastes like one produced in Mexico*).

In Case 1 the comparative analysis of the presumptive interpretations is more complex. We can reconstruct the presumptions involved as follows.

S. “ITALY'S #1 BRAND OF PASTA” (nonspecific).

1. S is printed on a Barilla's box containing pasta (products);
2. S can be enriched as “<Barilla is> Italy's no. 1 brand of pasta” or “<Barilla is> the no. 1 brand of pasta <registered in Italy>”;
3. S can be enriched as “<This product belongs to> the no. 1 brand of pasta < manufacturing all of its products in Italy>”;
4. S is uttered for promotional purposes; thus, it is presumed to provide a reason to prefer the product (the content of the box) over its alternatives (*Level 0*);
5. 2 and 3 are based on common sentence types that can be used to complete S and presumptive interpretations of the possessive 's (*Level 1 - generic*);
6. S is presumed to refer to the contextually more available referent (*Level 1 - generic*);
7. Pasta is generally known as an Italian food (*Level 2 – generic*);

8. Italian pasta and the ingredients thereof are presumed to be better/healthier than their North American (or non-Italian) counterparts (*Level 2 – generic*);
9. Healthier (tastier, etc.) food is more desirable than less healthy (tasty, etc.) food (*Level 3 – generic*);

The reasoning underlying the two conflicting interpretations can be represented as follows.

Table 4

Presumptions and comparative interpretation in Case 1.

Defendant (D)	Plaintiff (P)
10. The referent of <i>brand</i> in S is Barilla (evidence: writing).	10. The referent of S is the product itself (evidence: content).
11. The interpretation “<Barilla is> Italy’s no. 1 brand of pasta” (2) is based on a Level 1 presumption (6) and the availability of Barilla’s logo.	11. The interpretation “<This product belongs to > no. 1 brand of pasta < manufacturing its products in Italy>” (3) is based on a Level 1 presumption (6), the image of the product, and the goal of giving a reason to buy the product.
<i>Evaluation. If the goal is to advertise the product, the product is more relevant than the brand.</i>	
12. Interpretation (2) would provide a reason to buy the product based on an argument from cause: If the producer (the efficient cause of the product) is good, the product (the effect) is also good.	12. Interpretation (3) would provide a reason to buy the product, namely the Level 2 presumption concerning the quality of pasta (8).
<i>Evaluation. This conflicts with a Level 2 presumption concerning the origin of the product (8).</i>	<i>Evaluation. P12 provides a stronger reason than D12: if both the origin and the producer of the product is good, then a fortiori the product is more likely to be better than the one only manufactured by a good producer.</i>
13. Therefore, S should be enriched as (2): Barilla is claimed to be Italy’s no. 1 brand of pasta.	13. Therefore, S should be enriched as (3): The content of the box (this product) is claimed to belong to the no. 1 brand of pasta manufacturing its products in Italy (and, therefore, it is made in Italy).

As shown in Table 4 the defendant’s interpretation is possible, but it would be less plausible than its alternative and also only weakly relevant to interactional goal that the statement is presumed to have. Even if the plaintiff’s interpretation is cancelled based on other information provided in the box it would still be the most reasonable option as the defendant’s would be based on defeated presumptions.

5. Conclusion

The cancellability of an implicature is both a theoretical and a practical problem. From a theoretical perspective, cancellability is a crucial test for implicatures; however, some implicatures are perceived as non-cancellable or less cancellable than others. Is this test then useful? From a practical perspective, the possibility of cancelling an implicature is inherently related to the speaker’s commitments (Hall and Mazzarella, 2023). This relationship is crucial for assessing the speaker’s untruthfulness or deceptive intention.

As pointed out in the introduction, the concepts of deniability and accountability have been developed in the literature to investigate this problem considering whether and in what circumstances an implicature is normally perceived as cancellable (or not). This paper offered a complementary perspective by trying to answer the question of *why* an implicature is not perceived as cancellable in a given circumstance. By distinguishing theoretical from practical cancellability, it is possible to reconcile Grice’s test for implicatures and the perception of uncancellability or degrees of cancellability of some pragmatic inferences. The notion of practical cancellability is defined from a logical perspective as the reasonableness of cancelling an implicature in a specific context, considering the available evidence, presumptions, and alternative interpretations.

Developing the Neo-Gricean concepts of “best interpretation” and presumptive meaning (Macagno and Walton, 2013), an implicature and its cancellation are analyzed as possible interpretations based on defeasible, non-monotonic inferences (Walton, 1990, 1996b). Such inferences are based on different types and levels of presumptions, which are responsible for distinct aspects of an interpretation, from the communicative function of an utterance to the presumptive meaning of its lexical items and the stereotypes characterizing a specific culture. According to this framework, an implicature can be cancelled when its cancellation results in a less defeasible interpretation, because a) contextual evidence undermines the presumptions on which the implicature is based, or b) the presumptions characterizing the cancellation have a lower degree of defeasibility. This approach has the advantages of operationalizing the concept of “interactional necessity” underlying the notion of deniability and allowing the justification of an implicature or the cancellation thereof based on arguments that can be evaluated, rejected, and compared. Furthermore, this framework can be a useful instrument for addressing legal disputes concerning some crucial pragmatic aspects of ordinary utterances.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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