Entailed Conversational Implicatures

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Abstract

Many philosophers and linguistics agree that there are two kinds of conversational implicatures: there are not only the well-known paradigm examples of conversational implicatures that are not entailed by the sentences that are used to bring them about; there are also less-often discussed conversational implicatures that are entailed by the sentences in question. In this paper, I take a closer look by examining classical candidates as well as novel contenders for entailed conversational implicatures. I argue that one might rightly classify some of these cases as conversational implicatures but show that doing so has so far unnoticed consequences.

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1 Introduction

Many philosophers and linguistics follow Wilson and Sperber (1986), Sperber and Wilson (1986, ch.4), Davis (1998, ch.1), Carston (2002, ch.2), and Bach (2006) in holding that there are two kinds of conversational implicatures. There are not only the well-known paradigm examples of conversational implicatures such as (1c) and (2c) that are not entailed by (1b) and (2b), respectively:[1]

(1) a. Did Hannah eat all of the cookies?
b. Hannah ate some of the cookies.
$\rightsquigarrow$ c. Hannah didn't eat all of the cookies.

(2) a. Did Trump win the 2020 election?
b. Sure. Trump also won the Nobel Peace Prize.
$\rightsquigarrow$ c. Trump did not win the 2020 election.

There are also less-often discussed conversational implicatures that are entailed by the sentences that are used to bring them about.[2]

[1] Here and in the following, '$\rightsquigarrow$' is used to indicate that the speaker conveys (or in Grice's parlance: means) the proposition in question. It leaves open how the proposition is conveyed. So, by using '$\rightsquigarrow$' I only suggest that the proposition is conveyed; I discuss in the main text how it is conveyed.

[2] Apart from Wilson and Sperber (1986), Sperber and Wilson (1986, ch.4), Davis (1998, ch.1), Carston (2002, ch.2), and Bach (2006), this position is proposed in Higashimori and Wilson (1996), Carston (2004), Blome-Tillmann (2013, p. 172), Haugh (2013, ch.2.1), Rett (2015, ch.4), Sullivan (2017, p. 169), Davis (2019), and Moldovan (2019). For the question of whether the converse holds, i.e. whether conversational implicatures can entail the proposition semantically expressed, see, e.g., Vicente (1998) and the literature cited therein.

In this paper, I take a closer look. I examine classical candidates as well as novel contenders for entailed conversational implicatures. I argue that one might rightly classify some of the cases as conversational implicatures but show that doing so has so far unnoticed consequences. For instance, contrary to what is claimed in the debate, granting that some of these cases are conversational implicatures does not require a modification of the well-known and often-used cancellability test.

The plan is as follows. Section 2 presents classical candidates for entailed conversational implicatures taken from the literature (§2.1) and argues that we should refrain from classifying them as conversational implicatures (§2.2). Section 3 presents novel contenders for entailed conversational implicatures (§3.1) and argues that we might well take them to be conversational implicatures because doing so does not require a modification of attested features of conversational implicatures (§3.2). Section 4 concludes.

A couple of clarifications are in order before I start. First, I work in a Gricean framework, broadly construed. I assume that conversational implicatures exist and that the Cooperative Principle is in place (Grice, 1989, ch.2). To not beg the question against either proponents or opponents of entailed conversational implicatures, I do not presuppose a substantive definition of implicature (conversational or otherwise). Like Grice, who does not give a definition of implicature anywhere in his writing, I rely on characteristic features of conversational implicatures to investigate whether the cases presented below should be considered conversational implicatures.[3] I clarify the status of these features as we go along. Furthermore, I adopt Grice's terminology, with one minor variation: I use 'what is said' and 'the proposition that is semantically expressed' by a sentence interchangeably, and instead of saying that a speaker 'makes as if to say' what is semantically expressed by a sentence if she speaks figuratively, I say that she 'says' what is semantically expressed by it (for the same terminological choices, see, e.g., Neale, 1992 and Bach, 1994).

Second, like proponents of entailed conversational implicatures, I work with a classical notion of entailment; more precisely, I assume the following in this paper (see, e.g., Sperber and Wilson, 1986, p. 84):

(Ent) For any two sentences s_1 and s_2: the proposition semantically expressed by s_1 entails the proposition semantically expressed by s_2 if, and only if, it is impossible that the proposition semantically expressed by s_1 is true while the proposition semantically expressed by s_2 is false.

I assume that it is impossible that the proposition semantically expressed by s_1 is true while the proposition semantically expressed by s_2 is false iff there is no possible world in which the proposition semantically expressed by s_1 is true while the proposition semantically expressed by s_2 is false. I leave open whether to consider the possible worlds in question logically possible worlds or metaphysically possible worlds. Either way, nothing of importance would change.

Third, again like proponents of entailed conversational implicatures, I do not assume the following in this paper:

(Imp) For any two sentences s_1 and s_2: if the speaker's use of s_1 implicates the proposition expressed by s_2, it is possible that the proposition expressed by s_1 is true while the proposition expressed by s_2 is false.

[3] For what Grice calls a characterization of conversational implicature to set it apart from conventional and further forms of nonconventional implicatures, see Grice (1989, 30f.). For discussion, see, e.g., Potts (2015, ch.3.2).

Assuming (Imp) would prejudge the question at issue: whether there are entailed conversational implicatures. For assuming (Ent) *and* (Imp), a given proposition could never be both an entailment and an implicature (whether conversational or otherwise). After all, the proposition expressed by a sentence s_2 could be both an entailment and an implicature of (the speaker's use of) s_1 only if it were both impossible and possible that the proposition expressed by s_1 is true while the proposition expressed by s_2 is false. So, in the spirit of an open-minded investigation, I do not take (Imp) for granted in this paper.[4]

2 Classical Candidates

In this section, I present candidates for entailed conversational implicatures taken from the literature and discuss whether we should in fact consider them conversational implicatures.

2.1 The Cases

Consider as a first set of cases the following three dialogues, the first modeled after Bach (2006, p. 24), the second and third after Davis (1998, p. 6); see also Wilson and Sperber (1986, p. 61) and Carston (2002, 139f.):

(3) a. Has anybody ever put the shot more than 24 meters?
b. Hannah has put the shot more than 24 meters.
⇝ c. Someone has put the shot more than 24 meters.

(4) a. Has Hannah put the shot more than 24 meters or thrown the discus more than 75 meters?
b. Hannah has put the shot more than 24 meters.
⇝ c. Hannah has put the shot more than 24 meters or thrown the discus more than 75 meters.

(5) a. Has Hannah put the shot more than 24 meters or thrown the javelin more than 100 meters?
b. Hannah has put the shot more than 24 meters.
⇝ c. Hannah has put the shot more than 24 meters or thrown the javelin more than 100 meters.

According to the authors listed above and in footnote 2, (3c)–(5c) are conversationally implicated by the speaker's use of (3b)–(5b) in the dialogues at hand. Clearly, though, (3c)–(5c) are also entailed by (3b)–(5b). After all, (3b)–(5b) cannot be true if (3c)–(5c) are false, respectively.[5]

[4] It is not clear whether Grice, the progenitor of implicatures, considers (Imp) true—both when it comes to conversational implicatures and when it comes to conventional implicatures; for suggestive but not unambiguous passages in favor of (Imp), see Grice (1989, 25f., 39). Likewise, Horn (2007, p. 39), Geurts (2010, 8, 9f.), and Potts (2015, p. 186) are careful to only state that the truth value of an implicature has no 'effect' or no 'bearing' on the truth value of the proposition semantically expressed and that implicatures are truth-conditionally inert, which might only mean that the fact that an implicature is true/false does not *make* the proposition semantically expressed true/false. By itself, this does not imply (Imp).

[5] According to (Ent) from the introduction, we get that every proposition semantically expressed by a sentence s is also entailed by s. The converse does not hold though: not every proposition that is entailed by the proposition semantically expressed is itself semantically expressed by s. Proponents of entailed conversational implicatures take (3c)–(5c) to be entailed by (3b)–(5b) without being semantically expressed by (3b)–(5b). I follow this assumption in this paper. Thanks to a reviewer of this journal for pushing me to clarify this.

Consider as a second set of cases the following two exchanges, the first an example of an overstatement, the second an example of an understatement (Davis, 2019 gestures at cases like these but does not give concrete examples):

(6) a. Was Hannah's jump longer than any of her previous jumps?
b. Hannah's jump was 100 times longer than any of her previous jumps.
⇝ c. Hannah's jump was longer than any of her previous jumps.

(7) a. Was Hannah's jump shorter than any of her previous jumps?
b. Hannah's jump was 100 times shorter than any of her previous jumps.
⇝ c. Hannah's jump was shorter than any of her previous jumps.

Following Davis (2019), one might hold that (6c) and (7c) are conversationally implicated by the speaker's use of (6b) and (7b) in the exchanges at issue. But, here too, (6c) and (7c) are also entailed by the sentences that are used to bring them about: (6b) and (7b) cannot be true if (6c) and (7c) are false.[6]

Note that the above cases differ on at least two dimensions. First, (3c)–(5c) are candidates for what are sometimes called additive conversational implicatures; they are conveyed *in addition* to the propositions that are semantically expressed by (3b)–(5b). (6c) and (7c), by contrast, are candidates for substitutive conversational implicatures in that they are conveyed *instead* of what is semantically expressed by the sentences (for this distinction, see Vanderveken, 1991, Meibauer, 2009, and Dinges, 2015): while (3b)–(5b) are meant literally, (6b) and (7b) are cases of figurative speech. Second, while (3c) as well as (6c) and (7c) are candidates for generalized conversational implicatures in the exchanges at hand, (4c) and (5c) are candidates for particularized conversational implicatures in the context of (4) and (5) (for this distinction, see, most prominently, Grice, 1989, 37ff.). The implicatures (3c) and (6c)/(7c) seem fairly self-standing, whereas the implicatures (4c) and (5c) heavily depend on the contextual cues: even though (4b) and (5b) are identical, (4c) is only conveyed in the context of (4), not in the context of (5), and, likewise, (5c) is only conveyed in the context of (5), not in the context of (4). So, if the above cases exemplify conversational implicatures, entailed conversational implicatures are a global phenomenon and can be found throughout the full spectrum of conversational implicatures.[7]

Why, though, think that (3c)–(7c) are conversationally implicated in the cases at issue? Many proponents of entailed conversational implicatures rely on intuitions (see, e.g., Higashimori and Wilson, 1996, p. 1998, Davis, 1998, p. 6, Bach, 2006, p. 24, and Blome-Tillmann, 2013, p. 172): (3c)–(7c) as conveyed in (3)–(7) intuitively seem to belong to the same category as (1c) and (2c) as they are conveyed in (1) and (2). I do not want to deny that intuitions play a role here, but I am skeptical that we should rely only on intuitions when it comes to technical notions like conversational implicature. In the following, I thus go beyond immediate intuitive verdicts about whether (3c)–(7c) are conversational implicatures. I argue that while these propositions fulfill one noteworthy feature of conversational implicatures, they do not meet another, equally important feature. I comment on the status of these features in section 2.2.[8]

[6] One might argue that one or more of (3c)–(7c) are not conveyed in the context of (3)–(7), contra those listed in footnote 2. This would provide an immediate problem for the claim that they are conversational implicatures, since conversational implicatures are conveyed. For the sake of the argument, I'm going along with advocates of entailed conversational implicatures in this respect. Thanks to a reviewer of this journal for pushing me on this point.

[7] The above cases also differ in that they instantiate different inference schemata. For instance, (3c) follows from (3b) by existence introduction, whereas (4c) and (5c) follow from (4b) and (5b) by disjunction introduction.

[8] I focus on two noteworthy features in the following. I comment on further features in footnote 13.

First, as discussed in detail by Carston (2002, 139f.) and Moldovan (2019, sec.3), the alleged conversational implicatures seem to be calculable.[9] That is, there is a reasoning roughly along the following lines: If the speaker of (3b)–(7b) had not conveyed (3c)–(7c) in the context of (3)–(7), she would have violated Grice's cooperative principle. Since she does not violate this principle, she must convey these contents. Carston and Moldovan more specifically suggest that if the speaker of (3b)–(5b) had not conveyed (3c)–(5c), she would have violated the maxim of relation by not answering the question under discussion. In the case of (3), for instance, she would not have answered whether anybody ever put the shot more than 24 meters if she had not conveyed that someone has put the shot more than 24 meters. To be sure, there is an ongoing discussion about how to spell out calculability reasonings in more detail (well-known challenges are the symmetry problem, which conversational maxims exactly to presuppose, and whether calculability reasonings are psychologically real or rational reconstructions). But it seems fair to assume that whichever solution to these problems can be provided, it can be adopted by Carston and Moldovan for the cases at hand.[10]

Second, as has been noted by most scholars in the debate, the cases in question are not cancellable (see, e.g., Neale, 1992, Vicente, 1998, Carston, 2002, 139f. Blome-Tillmann, 2013, Sullivan, 2017, and Moldovan, 2019, sec.4; Haugh, 2013, p. 138 is an exception, though see Moldovan, 2019, p. 53 for in my view convincing criticism).[11] Consider the following three sentences.

($3'$) Hannah has put the shot more than 24 meters, but nobody has put the shot more than 24 meters.

($4'$) Hannah has put the shot more than 24 meters, but it's not the case that Hannah has put the shot more than 24 meters or thrown the discus more than 75 meters.

($5'$) Hannah has put the shot more than 24 meters, but it's not the case that Hannah has put the shot more than 24 meters or thrown the javelin more than 100 meters.

There is no context in which these sentences can be used felicitously, or used without seeming 'linguistic offense', as Grice (1981, p. 186) puts it. Since ($4'$) and ($5'$) are fairly cumbersome, consider also the following two sentences that are equivalent to ($4'$) and ($5'$).

($4''$) Hannah has put the shot more than 24 meters, but Hannah has neither put the shot more than 24 meters nor has she thrown the discus more than 75 meters.

[9] For calculability as a feature of conversational implicatures, see, most prominently, Grice (1989, pp. 31, 39). Some researchers speak of propositions *being derivable*, or of *hearers being able to be work them out*.

[10] The above gives only a rough outline of the reasoning process suggested by Carston and Moldovan. Carston would for instance refer to her maxim of relevance. Note also that they only consider cases like (3)–(5); it seems though that a similar reasoning applies to (6) and (7) as well: if the speaker hadn't conveyed (6c)/(7c), she wouldn't have answered the question under discussion. I am assuming for the sake of the argument that they are right and that the cases in question are calculable. Note that if they were not calculable, this would provide further support for my claim that they are not conversational implicatures; see section 2.2 for discussion.

[11] For cancellability as a feature of conversational implicatures, see, most prominently, Grice (1989, pp. 39, 44), but also Grice (1981, p. 186). I'm following Zakkou (2018) in how I understand Grice's notion of cancellability but my arguments would go through on many other conceptions as well. For recent discussion, see Huitink and Spenader (2004), Weiner (2006), Blome-Tillmann (2008), Åkerman (2015), Sullivan (2017), Zakkou (2018), and Rett (2020, sec.2.2). For more on cancellability, see footnote 12.

(5″) Hannah has put the shot more than 24 meters, but Hannah has neither put the shot more than 24 meters nor has she thrown the javelin more than 100 meters.

Again, there is no context in which these sentences can be used felicitously. Consider furthermore the following two sentences.

(6′) Hannah's jump was 100 times longer than any of her previous jumps, but it was not longer than any of her previous jumps.

(7′) Hannah's jump was 100 times shorter than any of her previous jumps, but it was not shorter than any of her previous jumps.

Here, too, there is no context in which these sentences can be felicitously used.

2.2 Discussion

Which conclusion should we draw from this mixed result? While calculability and cancellability play an important role for Grice, he takes neither feature to present a definition of conversational implicature. He is explicit that he considers both features necessary, but neither of them sufficient (see Grice, 1989, p. 39 regarding calculability and Grice, 1989, p. 44 regarding cancellability.).[12] In other words, he only subscribes to the following:

(Cal) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c, then it is calculable.

(Can) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c, then it is cancellable.

If we classify (3c)–(7c) as conversational implicatures of (3)–(7), we can uphold (Cal) but we must reject (Can). If, by contrast, we refrain from classifying them as conversational implicatures, we can uphold both (Cal) and (Can). After all, since (Cal) and (Can) give only necessary conditions for conversational implicatures, meeting one of these conditions does not imply that (3c)–(7c) are conversational implicatures.[13]

[12] See also Grice (1989, pp. 42, 44), where he stresses that there is no 'decisive test' for conversational implicatures since we cannot take the fulfillment of calculability or cancellability to imply that something is a conversational implicature. For defense of the claim that cancellability is a necessary condition against recent objection (bracketing potential cases of entailed conversational implicatures), see Blome-Tillmann (2008) and Zakkou (2018). More specifically, Blome-Tillmann and Zakkou hold that explicit cancellability and contextual cancellability are each necessary conditions for conversational implicatures. So while Davis (2019) is right to point out that (4c) and (5c) are contextually cancellable, they are, as seen above, not explicitly cancellable and so do not meet the respective necessary condition. As indicated above, I follow Zakkou (2018) in how I understand cancellability and I take her to suggest that all conversational implicatures are cancellable with respect to at least one QUD. So her conclusion seems compatible with Rett (2020) who argues that cancellability is QUD sensitive. Davis (1998) and Potts (2015, p. 183) provide further support for the claim that calculability is not a sufficient condition, while Sadock (1978) and Carston (2002) substantiate the claim that cancellability is not a sufficient condition.

[13] Apart from calculability and cancellability, Potts (2015, p. 183), drawing on among others Hirschberg (1985), lists four further features of conversational implicatures: (i) non-detachability, (ii) indeterminacy, (iii) non-conventionality, and (iv) re-inforceability. I bracket (i) and (ii) because they are neither necessary nor sufficient for conversational implicatures, which makes them of little help for the task at hand (Grice, 1989, 43f. and Sadock, 1978, p. 285); for further criticism of non-detachability as a diagnostic for conversational implicatures, see Bach (2006), Blome-Tillmann (2013), and Rett (2020). I bracket (iii) and (iv) because I agree with Potts that (iii) is 'just another perspective on calculability' and because (iv) is not due to Grice. Note, though, that especially (iv) would provide

In light of this, one might naturally conclude that we should not classify (3c)–(7c) as conversational implicatures. But as indicated in the introduction, most scholars in the debate reach a different conclusion. They hold that acknowledging (3c)–(7c) as conversational implicatures requires only a harmless modification of (Can) (see, e.g., Carston, 2002, 139f. Blome-Tillmann, 2013, p. 172, Rett, 2015, p. 92, Sullivan, 2017, p. 169, Moldovan, 2019, p. 60).[14] Instead of (Can) we simply assume

(Can′) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c but not an entailment of s, then it is cancellable.

This way we can classify all of the above cases as conversational implicatures and uphold cancellability as a meaningful criterion for paradigm conversational implicatures such as the two examples from the outset.

A closer look reveals, however, that classifying (3c)–(7c) as they are conveyed in (3)–(7) as conversational implicatures has far-reaching consequences that have not been acknowledged so far. To foreshadow, if we take these cases to be conversational implicatures, then, by parity of reason, we will have to grant that propositions can be both conversationally implicated and, at the same time, conventionally implicated or semantically presupposed. Furthermore, if we go along with this, then we have to restrict (Can) in far less harmless ways than (Can′). I will develop these two points in more detail in turn and explain why they seem problematic.

Consider first the following three cases which feature the ambiguous term 'bank', the context sensitive expression 'soon', and the pronoun 'she':

(8) a. Where in the nature reserve is Hannah's favorite spot?
b. Hannah's favorite spot is by the bank.
⇝ c. Hannah's favorite spot is by the river bank.

(9) a. It's 8 am. I know that Hannah will arrive today. But I don't know when exactly. Will she arrive in the morning?
b. Hannah will arrive soon.
⇝ c. Hannah will arrive in the morning.

(10) a. Is Hannah going to the river bank?
b. She is going to the river bank.
⇝ c. Hannah is going to the river bank.

It is commonly assumed that (8c)–(10c) are semantically expressed by (8c)–(10b) in the context of (8)–(10), respectively.[15] But if we take (3c)–(5c) to be conversational implicatures of (3)–(5), then, by parity of reason, we will have to grant that (8c)–(10c) are conversational implicatures of (8)–(10) as well. There is no principled reason for classifying them differently. To see this, consider the two features discussed before.

First, like (3c)–(7c), (8c)–(10c) are calculable. In fact, they seem calculable in the same way as (3c)–(5c). If the speaker of (8b)–(10b) had not conveyed (8c)–(10c), she

further evidence against classifying the cases from section 2.1 as conversational implicatures, since none of (3c)–(7c) seems reinforceable ('Hannah has put the shot more than 24 meters, and someone has put the shot more than 24 meters' sounds clearly redundant).

[14] Two noteworthy exceptions are Neale (1992) and Vicente (1998). They hold that (3c)–(7c) are not conversational implicatures because they are not cancellable; they do not recognize the overgeneration problem, however, that I am about to present.

[15] Grice (1989, p. 25) would agree. He'd say that (8c)–(10c) are what is said in the context of (8)–(10) (see my terminological remark in the introduction). (8c) and (9c) might be considered explicatures or implicitures instead, but at least (10c) seems to be a clear case of a proposition that is semantically expressed in (10). I thank a reviewer of this journal for pushing me on this point.

would have violated the maxim of relation by not answering the question at hand in (8)–(10). Take (8), for instance. If the speaker of (8b) had not conveyed (8c) but, say, that Hannah's favorite spot is by the credit institution, she would not have answered where in the nature reserve Hannah's favorite spot is.

Second, unlike (3c)–(5c), (8c)–(10c) are cancellable.[16] Consider, for instance, the following:

(8′) Hannah's favorite spot is by the bank, but it's not by the river bank.

There are contexts in which (8′) can be used felicitously. If asked where Hannah's favorite spot is the speaker might respond with the following, for instance:

(8″) Hannah's favorite spot is by the bank, but it's not by the river bank; it's by the credit institution.

(8″) might sound cumbersome but surely it is felicitous. The same holds, *mutatis mutandis*, for (9) and (10).

Now, if (3c)–(5c) are classified as conversational implicatures in the context of (3)–(7) because they meet one of the two necessary features of conversational implicatures, then (8c)–(10c), which meet both these features, should be classified as conversational implicatures of (8)–(10) as well. (8c)–(10c) would thus be both semantically expressed by (8b)–(10b) and, at the same time, conversationally implicated in the context of (8)–(10).[17]

This outcome conflicts with how Grice thought of implicatures. He introduces the label 'implicature' to pick out precisely those content that are *not said* but still *conveyed* by the use of a given sentence at a given context. He clarifies that what is said is not completely determined by the conventional meaning of the sentence in question and that contextual cues are needed especially when it comes to resolving ambiguities and fixing the referent of indexicals and demonstratives, but that only shows that he grants what is said some degree of context dependence, not that he allows what is said to be sometimes conversationally implicated as well.[18]

Note though that since (8c)–(10c) are cancellable, they would not call into question (Can′) from above. So considering the semantically expressed propositions (8c)–(10c) to be also conversationally implicated in (8)–(10) might be considered acceptable after all.

Consider next though the following six cases:

(11) a. Is Hannah the queen of England?
b. I'm going to meet Hannah, the queen of England, later.
⇝ c. Hannah is the queen of England.

(12) a. Is there a contrast between being tall and being beautiful?
b. Hannah, for instance, is tall but beautiful.
⇝ c. There is a contrast between being tall and being beautiful.

[16] That (8c)–(10c) of (8)–(10) are cancellable even though they are semantically expressed has been acknowledged in the debate as early as Sadock (1978) and is one of the reasons for denying that cancellability is a sufficient condition of conversational implicatures. See also Wilson and Sperber (1981, p. 159), Miller (2016, 543f.) and Zakkou (2018).

[17] If (8c) and (9c) are considered explicitures or implicitures, we'll get that they are both that and conversationally implicated.

[18] See Grice (1989, 24f.). Carston (2002, p. 102) agrees with this interpretation of Grice. She observes that "[i]t is clear that Grice intended the distinction between 'saying' and 'implicating' to be sharp."

(13) a. Does being a Brit entail being brave?
b. Hannah, for instance, is a Brit and therefore brave.
⇝ c. Being a Brit implies being brave.

(14) a. Is there a queen of England?
b. Look at the balcony. The queen of England is waving at us.
⇝ c. There is a queen of England.

(15) a. Hannah didn't take the exam, right?
b. Hannah {passed/failed} the exam.
⇝ c. Hannah took the exam.

(16) a. Hannah is not home, right?
b. I know that Hannah is home.
⇝ c. Hannah is home.

(11c)–(16c) are either conventionally implicated or semantically presupposed by (11b)–(16b). (11c)–(13c) are usually taken to be conventionally implicated while (14c)–(16c) are often considered semantically presupposed, but the exact classification does not matter. What is important is that it is almost universally agreed that they belong to one of the two categories.

If we take (3c)–(7c) to be conversationally implicated in (3)–(7), then, by parity of reason, we have to grant that (11c)–(16c) are conversationally implicated in (11)–(16) as well. For, as before, there is no principled reason for classifying them differently.

First, like (3c)–(7c), (11c)–(16c) are calculable; in fact, they seem to be calculable in the same way as (3c)–(5c). If the speaker of the (11b)–(16b) had not conveyed (11c)–(16c), she would have violated the maxim of relation by not answering the question under discussion. Take (11), for instance. If the speaker of (11b) had not conveyed (11c), she would not have answered whether Hannah is the queen of England.

Second, like (3c)–(7c), (11c)–(16c) are not cancellable. Consider, for instance, (11′) and (14′).

(11′) I'm going to meet Hannah, the queen of England, later, but Hannah is not the queen of England.

(14′) The queen of England is waving at us, but there is no queen of England.

There is no context in which these sentences can be felicitously used. The same holds, *mutatis mutandis*, for (12) and (13) as well as (15) and (16).

As before, if (3c)–(7c), which only meet the calculability requirement, are classified as conversational implicatures in the context of (3)–(7), then (11c)–(16c) showing the same pattern should be classified as conversational implicatures in the indicated contexts as well. (11c)–(16c) would thus be conventionally implicated or semantically presupposed by (11b)–(16b) and, at the same time, conversationally implicated in (11)–(16).

This outcome conflicts with how Grice thought of implicatures as well. He famously distinguishes between two kinds of implicatures, conventional implicatures, on the one hand, and nonconventional implicatures, on the other. He then he singles out conversational implicatures as a 'subclass' (Grice, 1989, p. 26) of nonconventional implicatures. Now, if conversational implicatures are a subclass of nonconventional implicatures and nonconventional implicatures and conventional implicatures are mutually exclusive as indicated by the labels already, then propositions cannot be conversationally implicated and conventionally implicated at the same time. Grice is notoriously skeptical about semantic presuppositions. For instance, when discussing

definite noun phrases like 'the king of France' he suggests to conceive of the proposition that there is a unique king of France as a classical, Russellian entailment in some of the cases and as a conversational implicature in others (Grice, 1981). But this does not show that he thinks that propositions can be conversationally implicated and semantically presupposed at once; it shows that he takes semantic presuppositions to be inexistent. So, if we want to stay true to how Grice thought of implicatures, we should reject the above picture according to which conversational implicatures overlap with the categories just outlined.

One might not feel the need to stay true to every bit of Grice's original framework. Two things should be noted, however. First, there have been plenty of reductive projects to get by with just one type of conventionally triggered content—Boër and Lycan (1976), for instance, hold that we can dispense with semantic presupposition, whereas Bach (1999) famously argues that we can forgo conventional implicatures—but few would deny that at least one of these categories exists and even fewer, to my knowledge, have acknowledged that they can overlap with conversational implicatures.[19] Second, 'conversational implicature' is a term of art, so we are in principle free to choose what it refers to. But that does not make all possible terminological choices equally good. A use of 'conversational implicature' that, wherever possible, is faithful to what the coiner of the term and many researchers after him had in mind is to be preferred over a use that breaks with the tradition in important respects.

The view sketched above has a further problematic consequence. If we grant that propositions conversationally implicated can be conventionally implicated or semantically presupposed at the same time, we have to further restrict the cancellability requirement on conversational implicatures. As pointed out above, while (8c)–(10c) are cancellable, the conventional implicatures and semantic presuppositions (11c)–(16c) are not. Accordingly, we should restrict (Can) as follows:

(Can″) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c but neither an entailment, nor a conventional implicature nor a semantic presupposition of s, then it is cancellable.

That is, we should grant that some conversational implicatures that are not entailed by the sentence that is used to bring them about are still are non-cancellable.

Restricted this way, though, cancellability loses much of its predictive power as a diagnostic for conversational implicatures. Granted, since cancellability has never been intended by Grice to be a sufficient condition for conversational implicatures, one should have never inferred from the mere fact that a given conveyed content is cancellable that it is a conversational implicature. But given the initial, unrestricted claim (Can) it is correct to conclude from the fact that a conveyed content is not cancellable that it is not a conversational implicature. Given (Can″), though, this is not the case anymore: a given non-entailed conveyed content might be non-cancellable and still be a conversational implicature.[20] One can of course help oneself with further tests to find out whether a given conveyed content is a conversational implicature or something else instead. But that does not change the fact that by substituting

[19] There are more wide-ranging reductive projects. For instance, Stalnaker might be seen as suggesting that all contents that are conveyed but not semantically expressed are pragmatically presupposed. Interpreted this way, however, Stalnaker's framework does not acknowledge implicatures (whether conversational or otherwise) and so it is not the target of this paper. See my first clarificatory comment in the introduction.

[20] On the flipside, we'd have to give up the claim that conventional implicatures and semantic presuppositions are non-calculable, contra e.g. Levinson (1983, p. 127), Leech (1983, p. 11), Bach (1999, p. 329), Potts (2015, 191f.), and Rett (2020, p. 47).

(Can″) for (Can) we limit the usefulness of what is often described as the 'best test' for conversational implicatures (Sadock, 1978, p. 292; see also Levinson, 1983, p. 114, Hirschberg, 1985, p. 27 and Blome-Tillmann, 2008, p. 156).

To conclude, if we classify the entailments from section 2.1 as conversational implicatures, we have to reconstrue Grice's notion of implicature and we have to water down one of the central tests for conversational implicatures. Neither consequence presents a knock-down argument against classifying these cases as conversational implicatures, but they do seem to be noteworthy theoretical costs. Not classifying the entailments from 2.1 as conversational implicatures avoids these costs. We stay true to the Gricean picture according to which conversational implicatures, on the one hand, and conventional implicatures and semantic presuppositions, on the other, are mutually exclusive categories, and we can keep not only calculability but also cancellability as a useful diagnostic.[21]

3 Novel Contenders

In this section, I present novel candidates for entailed conversational implicatures and outline how they differ from those cases presented above.

3.1 The Cases

Here is a first set of cases.

(17) a. Are all prime numbers smaller than 100?
b. Some prime numbers are smaller than 100.
⇝ c. Not all prime numbers are smaller than 100.

(18) a. Are all prime numbers smaller than 2?
b. Some prime numbers are smaller than 2.
⇝ c. Not all prime numbers are smaller than 2.

(17c) and (18c) are conveyed by the speaker's use of (17b) and (18b). But (17c) and (18c) are also entailed by (17b) and (18b). After all, (17c) as a mathematical truth is true with necessity and (18b) as a mathematical falsity is false with necessity: (17c) is true in all possible worlds and (18b) is false in all possible worlds. So, it cannot be the case that (17b) is true while (17c) is false and, likewise, it cannot be the case that (18b) is true while (18c) is false.[22]

Here is a second set of cases.

(19) a. Does 2 + 2 = 5?
b. Sure, and Trump won the Nobel Peace Prize.
⇝ c. 2 + 2 ≠ 5

(20) a. Did Trump win the Nobel Peace Prize?
b. Sure, and 2 + 2 = 5
⇝ c. Trump didn't win the Nobel Peace Prize.

[21] One might wonder how to classify (3c)–(7c) if not as conversational implicatures. This question deserves thorough discussion, and I don't venture an answer here. I just register that I would find it plausible that they form a category of their own, which might be further analyzed as an entailment that addresses the QUD in the sense of Roberts (2012).

[22] In other words, since (17c) is necessarily true it is entailed by anything and since (18b) is necessarily false it entails everything.

(19c) and (20c) are conveyed by the speaker's use of (19b) and (20b), but they are also entailed by these very sentences. (19c) is true with necessity and (20b) is false with necessity. So, it cannot be the case that both (19b) is true and (19c) is false and, likewise, it cannot be the case that both (20b) is true and (20c) is false.

Note that like the cases from section 2 these two sets of cases differ on two dimensions. First, (17c) and (18c) seem to be candidates for additive conversational implicatures in that both the b- and the c-propositions are being conveyed; (19c) and (20c), by contrast, are candidates for substitutive conversational implicatures in that the speaker merely tries to get across the c-proposition, not the b-proposition. Second, the former cases arise without special help from the context; the latter, however, heavily depend on contextual cues. So, if they are conversational implicatures, they are generalized and particularized conversational implicatures, respectively.

But should we take (17c) and (18c) as well as (19c) and (20c) to be conversationally implicated in the given cases? One might refer to intuitions. For instance, one might point out how intuitively similar (17c)–(20c) as conveyed in (17)–(20) are to (1c) and (2c) as conveyed in (1) and (2). But as indicated above I would like to bracket intuitions here. Let's rather look at the two characteristic features discussed above.

First, (17c)–(20c) as conveyed in (17)–(20) are calculable. There is a reasoning roughly along the following lines: If the speaker of the respective b-sentence had not conveyed the c-sentence in question, she would have violated Grice's cooperative principle. More specifically in the cases at hand, if the speaker of (17b) and (18b) had not conveyed (17c) and (18c) in addition to (17b) and (18b), she would have conveyed less than what she could have conveyed and so would have violated the maxim of quantity; and if the speaker of (19b) and (20b) had not conveyed (19c) and (20c) instead of (19b) and (20b), she would have conveyed something that she does not take to be true herself and so would have violated the maxim of quality. So, (17c)–(20c) are calculable.[23]

Second, (17c)–(20c) as conveyed in (17)–(20) are also cancellable. To begin with, consider the following sentences.

(17′) Some prime numbers are smaller than 100, but it's not the case that not all prime numbers are smaller than 100.

(18′) Some prime numbers are smaller than 2, but it's not the case that not all prime numbers are smaller than 2.

There are contexts in which these sentences can be felicitously used. Consider, for instance, the following:

(17″) Some prime numbers are smaller than 100, but it's not the case that not all prime numbers are smaller than 100. All prime numbers *are* smaller than 100.

(18″) Some prime numbers are smaller than 2, but it's not the case that not all prime numbers are smaller than 2. All prime numbers *are* smaller than 2.

To be sure, the first phrase of (17′/17″) is necessarily true and the first phrase of (18′/18″) is necessarily false, but since they are not obviously or transparently true

[23] As above, this is only a very rough sketch of the relevant reasoning process (a more precise reasoning process regarding (17c) and (18c) will most likely refer to scales), and, as noted before, there is an ongoing debate about various aspects of calculability reasonings. It seems fair to assume though that since (1c) and (2c) are calculable, (17c) and (18c) as well as (19c) and (20c) are calculable as well, no matter the details.

and false, respectively, that does not make the contributions on the whole infelicitous (or in Grice's parlance: a linguistic offense). Also, as explained above, the respective first phrase entails what the speaker denies with the second phrase, but that in itself does not make the contributions infelicitous either. Surely, we are often agnostic especially about the not so immediate or transparent entailments of the sentences we use, and so denying them does not lead to infelicity.

Next, consider the following sentences.

(19′) Trump won the Nobel Peace Prize, but 2 + 2 = 5.

(20′) 2 + 2 = 5, but Trump won the Nobel Peace Prize.

There are contexts in which these sentences can be felicitously used. Consider, for instance, the following exchanges (see, similarly, Zakkou, 2018):

(19″) a. Trump didn't win the Nobel Peace Prize, and 2 + 2 = 5, right?
b. Trump won the Nobel Peace Prize, but 2 + 2 = 5.

(20″) a. 2 + 2 = 5, and Trump didn't win the Nobel Peace Prize, right?
b. 2 + 2 = 5, but Trump won the Nobel Peace Prize.

Both conjuncts of (19′/19″b) and (20′/20″b) are false, the one contingently and the other one necessarily so, but, as before, that does not make the contributions on the whole infelicitous. For surely, even mathematically and politically ill-informed people can make felicitous contributions.

3.2 Discussion

What to do with these novel contenders? Recall that Grice considers calculability and cancellability to be necessary but not sufficient conditions for conversational implicatures and thus commits to the following.

(Cal) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c, then it is calculable.

(Can) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c, then it is cancellable.

If we classify (17c)–(20c) as conversational implicatures of (17)–(20), we can uphold both (Cal) and (Can).[24] Moreover, unlike with the cases from section 2.1, classifying the cases from section 3.1 as conversational implicatures does not get us into the slippery slope discussed above. To see this, recall (11)–(16) which were considered the problematic ones in section 2.2. For instance, recall (11) and (14), repeated here as (21) and (22)

(21) a. Is Hannah the queen of England?
b. I'm going to meet Hannah, the queen of England, later.
⇝ c. Hannah is the queen of England.

[24] As indicated, there are further characteristic features of conversational implicatures which I bracket here; see footnote 13. Note though that re-inforceability does not provide evidence against classifying the entailments from section 3.1 as conversational implicatures. Neither 'Some prime numbers are smaller than 100, but not all prime numbers are smaller than 100' nor 'Trump won the Nobel Peace Prize, and 2 + 2 ≠ 5' sounds redundant.

(22) a. Is there a queen of England?
b. Look at the balcony. The queen of England is waving at us.
$\rightsquigarrow$ c. There is a queen of England.

where (21c) and (22c) are conventionally implicated or semantically presupposed. If we take (17c)–(20c) to be conversational implicatures of (17)–(20), we do not have grant that (21c) and (22c) are conversational implicatures of (21) and (22) as well. For there is a principled reason for classifying them differently.

Like (17c)–(20c), (21c) and (22c) are calculable. But unlike (17c)–(20c), (21c) and (22c) are not cancellable. As seen above, there are no contexts in which

(21′) I'm going to meet Hannah, the queen of England, later, but Hannah is not the queen of England.

(22′) The queen of England is waving at us, but there is no queen of England.

can be used felicitously.

In sum, even if we classify the entailments from section 3.1—which either stem from a necessarily false proposition or are themselves necessarily true propositions—as conversational implicatures, we can uphold the view that conversational implicatures, on the one hand, and conventional implicatures and semantic presuppositions, on the other, are mutually exclusive, and we do not have to restrict (Can)—neither as given in

(Can′) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c but not an entailment of s, then it is cancellable.

nor, for that matter, as given in

(Can″) If a proposition p is a conversational implicature of the speaker's use of a sentence s at a context c but neither an entailment, nor a conventional implicature nor a semantic presupposition of s, then it is cancellable.

So, we can stay true to the Gricean notion of implicature and we can keep not only calculability but also cancellability as useful diagnostics. In light of this, we might just follow intuitions, and classify the respective cases as instances of conversational implicature.

4 Conclusion

In this paper, I examined classical candidates as well as novel contenders for entailed conversational implicatures. I argued that different considerations apply. I suggested that while we should be wary of classifying the former as conversational implicatures, we might be right to classify the latter as conversational implicatures. More specifically, I have made two so-far unnoticed observations. First, if we classify the former cases as conversational implicatures, an overgeneration worry lurks that affects how we see conversational implicatures not only vis-à-vis entailments, but also vis-à-vis conventional implicatures and semantical presuppositions, and which threatens to reduce the use of cancellability as a test for conversational implicatures. Second, if we classify the latter cases as conversational implicatures, we do not have to worry about overgenerating conversational implicatures and we can keep cancellability as a useful necessary condition of conversational implicatures.

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