Arrangements of conversational implicature diagnostics

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Salmon, William. 2021. Arrangements of conversational implicature diagnostics. *Linguistic Research* 38(3): 425-444. The question of properties and diagnostics for Gricean (1975) conversational implicature is a complex one, and it has been the subject of ongoing debate since the 1970s. At present, there is often a tendency for researchers to assume that the question has been answered decidedly and to move forward in further analyses without acknowledgment that it is in fact very much still an open debate. In a recent article, for example, entitled "Manner Implicatures and How to Spot Them" (Rett 2020), it is assumed with very little discussion that conversational implicatures of Manner are distinguishable with the following set of diagnostics: *calculability, reinforceability, discourse sensitivity* to the 'Question under Discussion,' and *embeddability.* The article goes on to assume as well that this set of properties can pick out all conversational implicatures in general. In this present paper, I show that this assumption is not justified and that there are serious problems with the proposed diagnostic arrangement. It is suggested at the very least that the arrangement should be presented as a tentative or exploratory one—rather than a settled one—before then going on to make larger claims about the conversational implicature category. **(University of North Texas)**

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1. Introduction

The article, "Manner Implicatures and How to Spot Them," (Rett 2020) begins by laying out Grice's (1975) original conception of conversational implicature and diagnostics, including calculability, cancellability, and non-detachability.[1] The article assumes that the latter two diagnostics are unreliable, which leaves only calculability from Grice's original set. It then proposes that further diagnostics of reinforceability, discourse sensitivity to QUD, and embeddability should be included as category

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[1] Grice's ideas on conversational implicature were originally presented at Harvard University in 1967 as the William James Lectures. The lecture most relevant to this paper is entitled "Logic and Conversation" and was published in 1975, though it and the other lectures circulated widely in draft form from 1967 onward. The complete lectures were later collected and published in 1989. Throughout this paper I will refer to the 1975 publication.

diagnostics.

In the sections that follow below, I will raise questions for Rett's presentation of Grice's original diagnostics as well as for her presentation of the non-Gricean diagnostics of reinforceability, discourse sensitivity, and embeddability.[2] The outcome here is that the arrangement of properties and diagnostics as presented does not hold and so should not be assumed to distinguish (Manner) conversational implicatures from other types of meaning. There are likely consequences from this outcome for the larger analysis made in Rett (2020), though that is not explored in this short paper.

Let us begin in the next section with Rett's presentation of Grice's diagnostics, beginning with calculability, followed by cancellability, non-detachability, and so forth, proceeding in order with the basic organization of Rett's paper.

2. Conversational implicature diagnostics

2.1 Calculability

Calculability is one of the original properties outlined in Grice's introduction of conversational implicature in (1975), and it distinguishes the implicature content in question from compositional, semantic content. As Rett writes, "[the conversational implicature] arises in context as the result of the speaker's reasoning about the utterance and the context of utterance" (46). She provides the following example [Rett's (3)], the point of which is that the content of B's implicature cannot be derived from the semantics of B's assertion; rather it must be worked out, or calculated, based on context, beliefs about intentions, and assumptions about Grice's Cooperative Principle and attendant Maxims.

(1) A: What did you think of the presentation?
     B: The handout was well-formatted.
        B's implicature: I did not like the presentation.

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2   It should be noted that there is a large body of literature on the topic of diagnostics in general since the 1970s. For purposes of brevity, I will not attempt to synthesize all of it here. See Horn (2004), Huang (2014) and Potts (2015) for accessible discussion of conversational implicature properties and extensive references on the subject.

Rett argues—alongside Grice and nearly every conversational implicature theorist since Grice—that calculability is a primary diagnostic of the category.

2.2 Cancellability

According to Rett (47), "An implicature of a word or phrase is cancellable iff it can arise from an utterance in a particular context, but it need not." Grice's original formulation of this concept can be found in Grice (1975: 44). In (2) we see a standard type of example [Rett's (4)] to illustrate the process with a scalar implicature.

(2) Ann ate some of the pizza … in fact, she ate all of it.

The idea in (2) is that use of the scalar term *some X* can convey the conversational implicature of *not all X*. This implicature can then be cancelled by the overt inclusion of material that contradicts it: i.e., the appended clause *she ate all of it* contradicts, or cancels, the implicature that *she ate not all of the pizza*. Here is an attested example from author J. D. Salinger, writing in 1955, in which Salinger cancels the implicature that *not all* of his friends are children:

I'm aware that a number of my friends will be saddened, or shocked, or shocked-saddened, over some of the chapters of *The Catcher in the Rye*. Some of my best friends are children. In fact, all of my best friends are children.

The general idea of cancellation has been with us since Grice's original conception of conversation implicature. Rett argues that it does not hold, however, and provides two examples which purport to show that some Quantity implicatures are not cancellable. In (3a) [Rett's (7a)], Rett argues that the Quantity implicature conveyed by use of *a woman* is not cancellable. In (3b), [Rett's (7b)], Rett similarly argues that the Quantity implicature conveyed by use of the tautology is not cancellable. Intuitions on both judgements in (3) are from Rett's article.

(3) a. John met a woman at the bar last night … #in fact, he met his wife.
     b. War is war … #in fact, there is nothing unusual or stereotypical about war.

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It should be noted that both of these examples—sans the *in fact* cancellation clauses —are presented in Grice (1975) as instances in which Quantity implicatures are conveyed. Rett agrees with Grice that Quantity implicatures are conveyed but claims that they cannot be cancelled. Let us take a closer look at this claim.

For (3a), I completely disagree with Rett's intuition that the implicature is non-cancellable. Example (3a) is perfectly acceptable to me, and it can be made even more unobjectionable in something like (4).[3]

(4) Oh yes, of course John met a woman at the bar last night. It was his wife, you know.

I do not believe, then, that (3a) accomplishes what Rett intends it to.

Turning to the tautology in (3b) now. Grice (1975) and Rett (2020: 49) assume that utterance of *War is war* is "uninformative in every context." As such, a speaker's intended, conversational implicature meaning must be inferred from use of the tautology. Herein lies the problem, as Rett shows above in (3b), cancellation of the conversational implicature can appear troublesome.[4] This drives Rett to conclude that cancellation must not be a universal property of conversational implicature after all. There is a quick fix to this concern, though. Wierzbicka (1987) argues that the "conversational implicature" meaning usually associated with tautologies of this kind is not actually conversational implicature; rather, she argues compellingly that *War is war* and many other tautologies of this and related forms are actually partially filled idioms.[5] That is, some aspects of

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3   Cf. Blome-Tillman's (2013: 178) example (12'), of which he writes, "[Generalized conversational implicatures] have all of the indicators of conversational implicatures: they are cancellable, non-detachable, and calculable. To illustrate this consider the following cancellations of the conversational implicatures in [i]":

   (i)   I'm meeting a man for dinner tonight. It's my husband.

   Blome-Tillman continues in discussion of (i) "While utterances of [i] may seem somewhat odd or conversationally misleading, they crucially do not express contradictions and do not give rise to the type of conceptual tension exemplified by cancellation attempts of conventional implicatures."

4   Though, see Ward and Hirschberg (1991) for a pragmatic defense of Grice's take on tautologies. See Davis (1998:42) for criticism of Ward and Hirschberg's pragmatic account.

5   See also Gibbs and McCarrell (1990) and Davis (1998) on the idiomatic natures of tautology constructions such as *War is war*. Interestingly, Davis and Wierzbicka take the conventionality of tautologies as an example of a failure of Gricean implicature theory. I take it, on the other hand, to be simply a "construction"

their form are frozen, while some are variable, and their sentential semantics include content not derivable from a traditional Fregean compositional process alone or pragmatic inferences. The idiom in this particular case is schematic, as seen in (5), which is Croft and Cruse's (2004) example (51). Note the restrictions on the kinds of noun that are able to fill the variable slots in (5a) versus (5b).

(5) $N_{abstract}$ is $N_{abstract}$
    a. War is war.
    b. *Kid is kid.

Croft and Cruse write that the construction in (5a) includes a general meaning of a "sober attitude toward complex activities." They go on to write that this semantic content "cannot be inferred either from general rules of semantic interpretation in English or general rules of the pragmatics of communication" (245). Essentially, what has been considered a "conversational implicature" meaning with respect to these forms since Grice (1975) is argued not to be a conversational implicature at all, but it is instead a lexical meaning associated with a constructional sub-type, which we would not expect to be cancellable in any case. As such, this kind of example would not seem to support Rett's argument against cancellation; nor, if it is truly constructional, for that matter, does it support Grice's (1975: 52) own illustration of flouting the first maxim of Quantity.

2.3 Non-detachability

Rett moves next to Grice's detachability test for conversational and conventional

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with abstract associated meaning, similar, perhaps, to the "formal idioms" discussed in the Construction Grammar of Fillmore, Kay, and O'Connor (1988) and work in that tradition, and not damaging at all to the Gricean program. It was, perhaps, not a good example for Grice to use as he did, but it is straightforward to find other examples to fit Grice's illustrative needs for the claim in question—i.e. flouting the first maxim of Quantity—and Grice provides others himself. See Grice (1975: 52).

    For Fillmore, Kay, and O'Connor, this kind of construction would likely be called a "formal idiom." See also Kim and Michaelis (2020: 20-23) on phrasal idioms in general.

    Another option here, if one wished to stay clearly in a traditional Gricean framework, would be to say that the meaning in question here with these tautological forms is a "conventional" implicature, which is a lexical but non-truth conditional meaning associated with a form. See Horn (2004, 2013), Salmon (2011, 2014), Potts (2015) for in-depth discussion of Grice's (1975) conventional implicature.

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implicature, and assumes that it cannot be used as a reliable diagnostic. The basic idea of detachability is that conventional—i.e. semantic but non-truth conditional—implicatures can be detached from a sentence without changing the propositional value of it, while this is more difficult to do with conversational implicatures, which Grice describes as non-detachable, and which then distinguishes between Grice's two categories of implicature.

The most straightforward way of testing detachability is to look for another way of saying the same thing, but which does not convey the conversational implicature; in other words, paraphrasing the sentence in question but maintaining truth-conditional equivalence. A clear example of detachability, as Rett notes, can be seen with *but* and *and*; these conjunctions are well known to be truth-conditionally equivalent, with *but* carrying the further meaning of contrast. As such, exchanging *but* and *and* in a sentence does not affect its propositional potential, even though the *contrast* meaning will only be present if *but* is used. Thus, this *contrast* meaning can be seen to be detachable. On the other hand, conversational implicature meaning is frequently considered, following Grice (1975), to be non-detachable. Huang (2014: 41) provides the following example in (6), which shows that "the use of any linguistic expression that is synonymous with *almost* will trigger the same conversational implicature" [Huang's (2.22)].

(6) The film almost/nearly won/came close to winning an Oscar.
   Conversational Implicature: The film did not quite win an Oscar.

Now, it has been known since Grice (1975) that conversational implicatures of Manner present a problem for this diagnostic: i.e. when the implicature is conveyed due to some aspect of form or word choice. Here is Blome-Tillman (2103) on the matter:

As Grice notes, conversational implicatures that are due to an unusual or obscure choice of words are detachable, for they depend on how one formulates what one says rather than on what one says itself (as we shall see below, conversational implicatures of this type exploit what Grice calls the Maxim of Manner). However, given the obviousness of the mentioned type of conversational implicature, the non-detachability test is still a very useful tool that allows us to distinguish reliably between conventional and conversational implicatures.

The usual example cited here, and seen below in (7), originates in Grice (1975: 55).

(7) a. Miss X sang "Home Sweet Home."
     b. Miss X produced a series of sounds that corresponded closely with the
        score of "Home Sweet Home."

We are instructed by Grice to notice that the striking difference in word choice of (7a) and (7b), while not differing much truth conditionally, can generate the implicature that "Miss X's performance suffered from some hideous defect."[6] The idea is that the propositional content has been kept the same in (7a) and (7b), but the conversational implicature regarding the hideous performance does not occur in both examples.

Rett argues that the idea of non-detachability is flawed, as it appears that implicatures of scalar terms can be detached in downward-entailing contexts. She provides example (8), [Rett's (11)], with no context, to illustrate.

(8) Ann didn't eat some of the pizza.

According to Rett, (8) "doesn't carry a scalar implicature; it doesn't implicate that Ann didn't eat not all of the pizza, i.e. that she ate all of the pizza" (51). Rett is certainly correct that the scalar term *some* seems to behave differently in this negation environment. This different behavior has been well documented in the literature, and it is still in the middle of a highly active debate. But is it evidence of detachability? I don't think so. If anything, in instances where there seems to be no scalar implicature conveyed by sentences such as (8), it would seem to be more in line with implicature cancellation, as discussed in the previous section. Non-detachability is tested by paraphrase, in which propositional content is maintained, and then the presence or absence of a putative implicature is observed, as in (7). Rett's isolated example in (8) doesn't do this at all. Let us try the paraphrase, though, in (9a-b), and observe what happens with conversational implicature potential.

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6   Strictly speaking, it's not clear to me that Grice's locutions in *sang "Home Sweet Home"* and his *produced a series of sounds that corresponded closely with the score of "Home Sweet Home"* are actually truth conditionally equivalent; but, the import of the example is clear.

(9) a. Ann didn't eat some of the pretzels.

  b. Ann didn't eat a number of the pretzels.

  c. There are some pretzels that Ann didn't eat.

  d. Ann didn't eat all of the pretzels.

I am not sure if *some* and *a number* in (9a) and (9b), respectively, are exactly equivalent, but the paraphrase is close enough for our purposes with this diagnostic. The sentences seem to mean almost exactly the same thing, which is expressed in (9c), and they facilitate almost exactly the same scalar implicature, which is found in (9d). So, whatever else is said about examples such as (8) and (9a)—and there has been a lot—the example as arranged by Rett doesn't cause trouble for the traditional characterization of (non)detachability.

Rett turns next to the problem of tautologies again, with examples (10a-b) [Rett's (12a-b)]. Rett "assume[s] tautologies, for instance, are all synonymous: they all denote the set of all possible worlds, or some theoretical equivalent. But the conversational implicatures associated with each of the tautologies in [(10)] are quite different" (51).

(10) a. War is war.

  b. Five bucks is five bucks.

Rett continues:

The tautology in [(10a)] is a commentary on the inevitable costs and tragedies of war; [(10b)] most naturally amounts to a claim that five dollars isn't a substantial cost to pay. So while each of these tautologies carries a conversational implicature—as Grice predicts—the implicature is so different from one example to the next that it's hard to think of them as the same implicature. Does this mean non-scalar Quantity implicature is non-detachable? Do tautologies count as an instance in which the manner of expression plays no role in the calculation of implicature? Because of these confounds, I will avoid non-detachability as a property of conversational implicature (51).

On an understanding where the semantics of (10a-b) were literally synonymous, Rett's reasoning here would be sound. However, as we saw in the discussion above, work

such as Wierzbicka (1987), Davis (1998), Croft and Cruse (2004), and others do not conceive of tautologies in this way. Wierzbicka, for example, argues that there are several different, though related, tautological constructions, each coming with their own variational shades of constructional, lexical meaning. On this understanding, there is no mystery as to why the various tautologies are used to convey different messages, and so, *pace* Rett, raise no problem for the non-detachability diagnostic.

2.4. Reinforceability

Rett turns next to reinforceability, which, as she notes, does not originate with Grice, and which is most associated with Sadock (1978). She considers it, along with calculability, to be one of the two "necessary properties for conversational implicature."

According to Levinson (1983), "Sadock notes that implicatures seem to be the only kinds of pragmatic or semantic inferences that are freely reinforceable, i.e. can be conjoined with an overt statement of their content without a sense of anomalous redundancy" (120). Rett provides (11) [her (14)], in which (11a) purports to show that a presupposition becomes redundant when reinforced, while the conversational implicature in (11b) does not.

(11) a. #John is a bachelor and/but he is a man.[7]
       b. Some people left early ?and/but not everyone did.

She concludes, then, with little further discussion, that reinforceability is a necessary feature of conversational implicature. There are problems, though, that do not find their way into Rett's analysis. Horn (1991), for example, notes a range of rhetorical opposition constructions that befuddle reinforceability, writing "It is unfortunate that our results vitiate one of the few apparently reliable tests for distinguishing conversational implicata from logical inferences and semantic entailments, but vitiate it they do" (334).

Consider (12), adapted from Levinson (1983). Here, the complement of *before* is said

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7   This example is perfectly acceptable with the *but* variant. Consider a situation where someone is looking for a married man, but all that can be found is John, who is a bachelor. Someone then says, *John is a bachelor, but he is a man.* There is no redundancy here, and this is in line with Horn's (1991) criticism of reinforceability with *but*-clauses.

to be presupposed in (12a), and we can see that this is likely as it survives in the negation of (12b). However, in (12c) it is quite clear that the complement of *before* is canceled in the face of the conflicting matrix verb.[8] This is because we know that when someone dies, they do not go on to finish their thesis. In (12d), we see a perfectly acceptable reinforcement of the presupposed content.

(12) a. John cried before he finished his thesis.
          Presupposition: John finished his thesis
      b. John didn't cry before he finished his thesis.
      c. John died before he finished his thesis.
      d. John cried before he finished his thesis, and/but he did finish it.[9]

This result is problematic if, as Rett maintains, reinforceability is a necessary property of conversational implicature that distinguishes it from presupposition.

2.5 Variation with discourse status

Rett moves next to an idea, which she dates to van Kuppevelt (1995), which holds that "if an implicature (even a scalar one) is at issue, it isn't cancellable" (52). Rett assumes that conversational implicature content is "at issue" if it responds directly to the "Question Under Discussion," which is a concept associated with Roberts (1990).[10] This is illustrated in the article with (13) [Rett's (17)], in which a specific question is raised by speaker A, and then a scalar implicature that directly addresses that question is argued to be non-cancellable. Thus, consider (13), below, with Rett's acceptability intuitions.

(13) A: How many exams did John pass?
      B: (John passed) Some. #In fact, he passed all of them.

According to Rett, (13) "is not cancellable, but is rather part of the asserted at-issue content" (53). I strongly disagree with Rett's characterization of this data; (13B) is

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8   This observation dates to Heinämäki (1972).

9   This example is fine with *but*, as Horn would predict, but it's fine with *and* here too, for that matter.

10 There are a few different understandings of "at-issue" content in the semantics and pragmatics literature. See Koev (2018) for an overview of the variety of ways in which this description has been used.

absolutely fine, and it sounds no odder than any other run-of-the-mill, textbook scalar implicature cancellation. Sentences like (14) are routinely taken to be acceptable scalar implicature cancellations in the literature; it feels no different than Rett's (13B) and feels no different than J.D. Salinger's cancellation above in Section 2.2.

(14) Some of John's kids are here; in fact, they are all here.

Recall as well Blome-Tillman's remark above in Note 3, which is fitting here too: i.e. cancellation of generalized conversational implicatures "may seem somewhat odd or conversationally misleading, they crucially do not express contradictions and do not give rise to the type of conceptual tension exemplified by cancellation attempts of conventional implicatures" (178).

Based on (13), Rett goes on to write "This diagnostic illustrates two things: first, as we saw in §2.2, not all conversational implicatures are cancellable. But, more importantly, we can predict when a conversational implicature is cancellable: when it is not at issue" (53). Unfortunately, neither of these two claims can be made based on examples like (13); and, it seems as if the utility of the QUD, as arranged by Rett, is rather limited as a conversational implicature diagnostic.

2.6 Embeddability

The final property Rett considers is embeddability, writing that it "appears to be a property that all conversational implicatures exhibit (in contrast to presuppositions); it is not, of course, a sufficient property, because other types of content (e.g. asserted content, conventional implicature) is embeddable as well" (56).

The assumption that all conversational implicatures are embeddable is highly controversial, and most of the examples Rett gives in support of the assumption have been explained in other ways that do not require embedding. For example, consider (15) [Rett's (21)], of which she writes "The standard generalization is that, in this context, the scalar implicature can (and must) be interpreted locally; i.e. in the embedded proposition, as part of the object of Jane's belief" (54).[11]

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11 Data of this type and claims of embeddability are most often associated with Chierchia (2004) and work in that tradition.

(15) Jane believes [$_{cp}$ that some students are waiting for her.]
   implicates Jane believes that not every student is waiting for her.

Rett does note that there are alternative stories available, though she does not go further into detail than this simple mention.[12] Russell (2012), for example, not cited by Rett, argues that examples such as (15) do not show embedding of the conversational implicature at all but can be explained instead via probabilistic reasoning based on strong and weak propositions. Geurts (2010) summarizes several other Gricean solutions for this data that account for it without resorting to embedding the conversational implicature, including van Rooij and Schulz (2004), Russell (2006), and Spector (2006).[13] It is hasty, then, for the present work to assume that "the scalar implicature can (and must) be interpreted locally; i.e. in the embedded proposition" (Rett 54). At the very least, this data should be treated as part of an ongoing, open question.

   Rett's next example involves disjunctive *or* in the antecedent of a conditional sentence, of which she writes "Attitude reports are not the only context in which conversational implicatures need to be incorporated into the sub-utterance truth conditions: implicatures seem to embed in the antecedents of conditionals (rather than project, as presuppositions do) [...]". To illustrate, Rett provides (16) [Rett's (22)].

(16) If you are registered for Phonology or Semantics, get in Line A. (If you are registered for both, get in Line B.)

The idea here is that in order to make sense of the two-sentence utterance, the conversational implicature *but not both* needs to be understood as embedded in the

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12 Rett cites Russell (2006) and Simons (2010, 2017) as "some neo-Gricean rebuttals," but does not say more than this.

13 Geurts also points out that "embedded" implicatures of this kind are limited to belief reports, writing "For example, unless forced by contrastive stress on "some", the following should not hold" which is indicated by "-/->" in (170, (14)):

   (i)   Tony hopes that Cleo had some of the figs.
       -/->Tony hopes that Cleo didn't have all the figs.

As Geurts goes on to point out, then, the embedding hypothesis for this kind of data does not hold for other attitude verbs, and so is subject to criticism that it largely overgenerates.

antecedent of the conditional: i.e. the sentence should read as something like (17).

(17) If you are registered for Phonology or Semantics but not both, get in Line A.

Let's look closer at (16), starting with just the first sentence, as in (16').

(16') If you are registered for Phonology or Semantics, get in Line A.

The most obvious interpretation here, especially when voiced in a neutral intonation, does not involve the *but not both* implicature. Read neutrally, without contrastive stress on any of the constituents or any other directing intonation, it would be fine to get in Line A even if you were registered for both phonology and semantics.[14] This concern, that contrastive stress or context is necessary to obtain the scalar implicature in "embedded" examples is well known, and it is a large part of the argument that the "embedded" scalar implicatures discussed in the literature are actually quite rare and appear to be discussed only for special contexts. See Geurts (2010), Geurts and van Tiel (2013), Huang (2014), and references therein.[15]

To get the *but not both* reading in (16'), a good bit of intonational work is actually required, and even then, it still seems much better if *but not both* is actually articulated as part of the utterance. Consider (18), in which *or* carries contrastive stress.

(18) If you are registered for Phonology *OR* Semantics, get in Line A.

Here at least there is a possibility that the *but not both* implicature is expected, but it still feels like a rather weak implicature. In any case, with the addition of the stress,

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14 The *but not both* intuition is even more anemic when the consequent clause is deontically weakened, as in (i):

(i) If you are registered for Phonology or Semantics, you can get in Line A.

Here it seems very clear that you can be registered for both phonology and semantics and still get in Line A.
15 Here is Geurts and van Tiel (2013: 33):

On the conventionalist view, narrowing is freely available, and therefore we should expect to regularly observe its effect in embedded positions, too. On the Gricean view, narrowing requires special circumstances, like contrastive stress for example, and therefore embedded UBCs should be the exception rather than the rule.

the meaning potential of the sentence itself is now changed, and the argument that the conversational implicature is embedded has become weaker, and, in fact, a somewhat different question. This intuition is similar to that made by King and Stanley (2005), writing on related examples of putative embedding of conversational implicatures. As King and Stanley argue, placing focal stress on "an element that is conventionally associated with a scale affects interpretation by giving rise to a presupposition or an implicature that the sentence frame is false for the members of that scale that are of greater "strength" (151). It is striking that claims made about sentences such as (16) rarely involve discussion of intonation or stress, especially when these further considerations make quite a lot of difference in the meaning potential of a sentence.

Returning to the two-sentence utterance in (16), it is certainly true that some sort of adjustment needs to happen in order to render the sequence as felicitous. Does this mean that we have to accept that the *but not both* implicature is embedded, though? Not at all. The most natural reading of the sequence in (16) is actually one in which the speaker anticipates that dual-registered addressees—i.e. those registered for both phonology and semantics—will get in Line A against the speaker's wishes. With the second sentence, then, the speaker provides further, clarifying information for where the dual-registered addressees should actually go. This sort of repair or clarification seems like the most straightforward way to describe this data without needing to posit extra grammatical machinery.

So far, in terms of intuitions about data, we are right in line with Chierchia's (2017) characterization of similar data. Consider (19) [Chierchia's (13b)].

(19) a. If some students in your class are having difficulties, talk to them.
    b. If you have cheese or dessert, you'll be full.

Chierchia writes in description of these:

When a sentence like example [19a] or [19b] is uttered out of the blue, *some* and *or* are not construed exclusively. For instance, sentence [19a] is not typically understood as meaning *If some though not all of the students are having difficulties, talk to them.*

It is only with a further continuation, Chierchia suggests, that these sentences then

exhibit the readings in question, as in (20) [Chierchia's (14)]

(20) a. …but if all of them are having difficulties, don't talk to them; talk to
me first.
b. …but if you have cheese and dessert, you'll get sick.

Chierchia then continues, and here we part ways:

These continuations force hearers to essentially embed an exclusiveness
implicature in the antecedent of a conditional. And in planning an utterance like
sentence [19a] with continuation [20a], the speaker relies on the rhetorical effect
that continuation [20a] will have.

Pace Chierchia, hearers are not forced to embed an implicature to make sense of the
now two-part utterance. The clearest explanation for what is happening here is that now,
with the continuations in (20a-b), there is a contrast situation set up, and Chierchia tacitly
acknowledges this with his use of *…but* at the beginning of the second sentences in (20).[16]
In this new contrast context, we also expect contrast stress and intonation, and we clearly
find it. The most natural articulation of Chierchia's two-sentence utterance is in (21), with
heavy, linking stress on *some* and *all*, and likely a rising and falling intonation as well.

(21) If SOME students in your class are having difficulties, talk to them…but if
ALL of them are having difficulties, don't talk to THEM; talk to ME first.

The contrastive, linking stress seems to be a necessary part of the rhetorical
opposition in these sequences. Consider (22), for example, which is similar to (21), but
which does not involve scalar items. The stress naturally falls on non-scalar *coffee* and
tea in (22). It is actually very difficult to say (22) without stress on *coffee* and *tea*.

(22) If you want COFFEE in the morning, get in Line A. If you want TEA in
the morning, get in Line B.

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16 Chierchia's discourse structure here is in fact a textbook example of rhetorical *antithesis*, which relies on
parallel arrangement of words or clauses to convey a contrast between two ideas.

Chierchia's examples, and Rett's, follow this exact pattern of rhetorical opposition. Here is Rett's example, in which the stress falls naturally on *semantics* and *both*, in (23).

(23) If you are registered for Phonology *OR* SeMANtics, get in Line A. (If you are registered for BOTH, get in Line B.)

It seems, then, that what we are looking at in these examples is that the grammar and rhetoric of contrast is forcing the construal that Chierchia, Rett, and others of similar thought, take to be embedded implicature. Thus, Geurts (2010), Geurts and van Tiel (2013), Cummins (2014), Huang (2014, 2017), and more suggest that the contrast requirement means that the phenomenon of "embedded" implicature—if it exists at all— is rare and should be handled by a theory of contrast (Geurts 2010) or typicality (van Tiel 2014), or some other way, but is, in any case, not widely available across contexts.

Rett provides one additional example of "embedded" implicature, which is the non-monotonic sentence found below in (24) [Rett's (23)].

(24) Exactly three students registered for Phonology or Semantics. (The others took both.)

Sentences like this have been the subject of experimental work recently, including Geurts and Pouscoulous (2009), Clifton and Dube (2009), Chemla and Spector (2011), and Potts et al. (2016). These non-monotonic examples seem to provide the best evidence at the present that conversational implicatures can be embeddable; even here, though, results are mixed, with many questions still to be asked and answered, and no consensus that embedded implicatures are widespread or necessary.[17] For example, here is Potts et al. (2016), "We conclude from these responses that local enrichment is possible even in non-monotone environments, and that local enrichment might be available in downward-monotone environments as well" (20). Whatever the outcome ultimately is with the non-monotonic sentences—i.e. whether implicatures are embeddable or not—it would still be far from clear that embeddability was a necessary property of all conversational implicatures.

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17 My intuition is that this example also requires contrastive stress on *or* to get the *but not both* reading of the "embedded" implicature.

I will leave this section with a couple of quotes, beginning with Cummins (2014: 14):

Despite the recent wave of experimental literature on the topic, there is still no consensus as to the nature and prevalence of embedded upperbound construals. Geurts and van Tiel (2013) draw attention to two major obstacles to the interpretation of the existing experimental data: the presence of contrast effects in the elicitation paradigms used, and the possibility of typicality effects in the interpretation of scalar terms (and other items). They convincingly demonstrate the difficulty of inferring the existence of "embedded implicatures" on the basis of the data available so far.

Here is another quote from Huang (2017: 170):

[C]ontrary to the conventionalist hypothesis [...] that it 'occurs systematically and freely in arbitrarily embedded positions' (Chierchia et al. 2012), an embedded Q-$_{scalar}$ implicature requires special linguistic marking such as a contrastive stress. It is marginal and rare and sometimes the upper-bounded reading has to be forced. In other words, an embedded Q-$_{scalar}$ implicature constitutes an exceptional and marked case [...].

And finally, a quote from Rett (2020: 56), claiming the opposite is true:

[E]mbeddability appears to be a necessary property of conversational implicature, as it appears to be a property that all conversational implicatures exhibit.

The weakest conclusion that can be drawn here is that the question of "embedded" implicatures is still a very open one, and, as such, embeddability cannot be considered to be a necessary property of implicature at this point.

3.   Conclusion

What we have seen in this paper is that the discussion of what should and shouldn't be considered a diagnostic for, or a property of, conversational implicature is still very

much ongoing, and as such, it is far too early to claim that some diagnostics are necessary, while dispatching others to the wastebasket of pragmatics. The science is far from settled on these issues, and so they shouldn't be assumed unconditionally as part of larger analyses, as often happens in the literature. The larger goal of Rett (2020) is to provide an analysis of Gricean Manner implicatures. Before doing so, however, she first briefly lays out the diagnostics for conversational implicature that she will rely upon in this analysis. As we have seen in the present paper, those assumptions rest on shaky ground, and this will very likely have implications on the larger analysis made in that paper, though that is a question I do not take up at the present.

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