Conversational implicature

Chris Potts, Ling 130a/230a: Introduction to semantics and pragmatics, Winter 2025

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1 Defined

1.1 Grice's definition

> I am now in a position to characterize the notion of conversational implicature. A man who, by (in, when) saying (or making as if to say) that *p* has implicated that *q*, may be said to have conversationally implicated that *q*, PROVIDED THAT (1) he is to be presumed to be observing the conversational maxims, or at least the cooperative principle; (2) the supposition that he is aware that, or thinks that, *q* is required in order to make his saying or making as if to say *p* (or doing so in THOSE terms) consistent with this presumption; and (3) the speaker thinks (and would expect the hearer to think that the speaker thinks) that it is within the competence of the hearer to work out, or grasp intuitively, that the supposition mentioned in (2) IS required. (Grice 1975:49–50)

Problems Hirschberg (1985:§2) identifies two really problematic aspects of this definition: (i) in crucial places, the agents involved are passivized away ("it must be assumed") or left implicit ("to preserve 1") (p. 20); and (ii) the definition does not fully distinguish conversational implicatures from regular semantic entailments of various kinds (p. 24).

The guiding idea Despite the problems, one can make out the guiding intuition: a conversational implicature is an inference that the hearer is *compelled* to make if he is going to continue to maintain that the speaker is cooperative. In turn, it is often possible to derive conversational implicatures by assuming that the implicature is false and then reasoning to a clash with the cooperativity assumption (i).

1.2 A more fully specified version

Definition 1 (Adapted from Hirschberg 1985:§2)**.** Proposition *q* is a conversational implicature of utterance *U* by agent *A* in context *C* if, and only if:

i. *A* believes that it is mutual, public knowledge of all the discourse participants in *C* that *A* is obeying the cooperative principle.

ii. *A* believes that, to maintain (i) given *U*, the hearer will assume that *A* believes *q*.

iii. *A* believes that it is mutual, public knowledge of all the discourse participants that (ii) holds.

Note The revision is inspired by Hirschberg 1985:§2. She does not stop here. She argues that we need to insist in addition that the inferences be cancellable, reinforceable, and non-conventional.

2 Examples

These examples are meant to convey a sense for what implicatures are like and also to illustrate the calculability property of these meanings.

2.1 Quantity-based

(1) Kyle to Ellen: "I have $9."

Conversational implicature: Kyle does not > $9.

a. *Contextual premise*: Both Kyle and Ellen need $10 for their movie tickets.

b. *Contextual premise*: It is mutual, public information that Kyle has complete knowledge of how much money he has on him.

c. Assume Kyle is cooperative at least insofar as he is obeying Quantity and Quality.

d. Then he will assert what is maximally relevant, informative, and true.

e. By (a), the proposition p that Kyle has $\$n$ for $9 < n \leqslant 10$ is more informative and relevant in this context than the proposition that he has $9.

f. Therefore, Kyle must lack sufficient evidence to assert p.

g. By (b), he must lack evidence for p because it is false.

Comment The implicature is heavily dependent upon the contextual assumptions:

- If tickets cost $9, then "I have $9" is as informative as is required. (e) is false, and the implicature cannot be derived. (Indeed, Kyle's saying "I have $10" might be regarded as immodest in such a context.)
- If Kyle has already said that he can't get some of his pockets open (say, the zippers are broken), then contextual assumption (b) is not true, and we don't derive the implicature, because (g) doesn't hold.

Comment Once we have calculated the implicature and agreed that it was intended, then we can also conclude that Kyle doesn't have $11, $12, etc. These are unlikely to be conversational implicatures, though, since they are not relevant in our context.

2.2 Relevance-based

(2) A: Which city does Barbara live in?

B: She lives in Russia.

Conversational implicature: B does not know which city Barbara lives in.

a. *Contextual premise*: B is forthcoming about Barbara's personal life.

b. Assume B is cooperative.

c. Assume, towards a contradiction, that B does know which city Barbara lives in (the negation of the implicature).

d. Supplying the city's name would do better on Relevance and Quantity than supplying just the country name.

e. The contextual assumption is that B will supply such information.

f. This contradicts the cooperativity assumption (b).

g. We can therefore conclude that the implicature is true.

Comment Here again the implicature is heavily dependent upon the contextual assumptions:

- If B is reluctant to give out personal information about Barbara, then we do not reach the implicature, because we can't assume cooperativity.
- If A and B are planning a trip but have already sworn off going to Russia, then B's answer might contain exactly the needed information, namely, that they won't be visiting Barbara. In this case, premise (d) does not hold, so the calculation doesn't go through.

2.3 A complex manner example

For the next example, I believe we need to supplement Grice with the following principle:

Definition 2 (The division of pragmatic labor; Horn 1984; Levinson 2000)**.** Normal events are reported with normal language. Unusual events are reported with unusual language.

(3) To show that she is pleased, Sue contracts her zygomatic major muscle and her orbicularis oculi muscle.

Implicature: Sue's expressions of happiness are cold, clinical, and robotic.

a. Assume the speaker is cooperative.

b. Assume scientific language is associated with being cold and clinical.

c. There is a shorter, less obscure form, *smiles*, competing with *contracts her zygomatic major muscle and her orbicularis oculi muscle*.

d. By the Levinson/Horn heuristic def. 2, Sue's smiles must be unusual.

e. By b (and a theory of connotations!), her smiles are unusual in being cold and clinical.

Comments The implicature is highly dependent upon contextual assumptions, and it leans heavily on cooperativity.

- For example, if the speaker is known to be cold and clinical himself, then we do not draw the implicature, because premise (a) is false in the relevant sense.
- Similarly, if the context is that of an anatomy class, then the competition in (c) breaks down.

3 Diagnosing conversational implicatures

It is common, in investigations of linguistic meaning, to need to determine whether a given meaning is a semantic entailment of some kind or has the more tentative status of a conversational implicature. The following are especially useful for this:

(4) **Cancellation**: encoding semantically the *negation* of the target meaning. If the result seems consistent, then the target meaning is likely an implicature.

(5) **Suspension**: encoding semantically a *lack of knowledge* about the truth of the target meaning or its negation. If the result seems consistent, then the target meaning is likely an implicature.

(6) **Reinforcement**: encoding semantically the target meaning itself. If the result seems non-redundant, then the target meaning is likely an implicature.

Notes

- All three trace to the tentative – non-entailed – nature of conversational implicatures. This is what allows them to be cancelled/suspended, and this is what makes reinforcing them (making them proper entailments) non-redundant.
- For reinforcement, it is vital that one states *exactly* the target meaning. If one states something that *entails* the target meaning – something more informative than the target meaning – then the result will not seem redundant even for semantic entailments, because of the additional information.
- Cancellation always involves some compromises to cooperativity. The speaker is likely flouting at least one maxim. If the compromises to cooperativity are too great, the implicature might be effectively uncancellable (Lauer 2013).

(7) **Example:** The play was good.

a. **Target meaning**: *the play was not excellent*
b. **Cancellation:** The play was good – in fact, it was excellent. ("not not excellent")
c. **Suspension:** The play was good, maybe even excellent.
d. **Reinforcement:** The play was good, but not excellent.

(8) **Example:** Some of the puppies escaped.

a. **Target meaning**: *not all of the puppies escaped*
b. **Cancellation:** Some – in fact all! – of the puppies escaped. ("not not all")
c. **Suspension:** Some, maybe even all, of the puppies escaped.
d. **Reinforcement:** Some, but not all, of the puppies escaped.

(9) **Example:** Sue got into bed, then brushed her teeth.

a. **Target meaning**: *getting into bed happened before teeth brushing*
b. **Cancellation:** ??Sue got into bed, then brushed her teeth – but not in that order.
c. **Suspension:** ??Sue got into bed, then brushed her teeth – possibly in that order.
d. **Reinforcement:** ??Sue got into bed, then brushed her teeth – in that order.

(10) **Example:** The food was palatable.

a. **Target meaning**: *the food was not delicious*

b. **Cancellation:**

c. **Suspension:**

d. **Reinforcement:**

(11) **Example:** Carol used to play ice hockey.

a. **Target meaning**: *Carol does not play ice hockey now*

b. **Cancellation:**

c. **Suspension:**

d. **Reinforcement:**

(12) **Example:** Carol failed to win the race.

a. **Target meaning**: *Carol did not win the race*

b. **Cancellation:**

c. **Suspension:**

d. **Reinforcement:**

(13) **Example:** Carol wishes that she could juggle

a. **Target meaning**: *Carol cannot juggle*

b. **Cancellation:**

c. **Suspension:**

d. **Reinforcement:**

4 Other properties of conversational implicatures

4.1 Calculation

This is the property illustrated throughout sec. 2: from semantic meanings, contextual assumptions, and Gricean reasoning, the target meaning emerges. This is a good sign that the target meaning is an implicature, though some entailments might seem to be derivable as well (Hirschberg 1985), so it's valuable to apply other tests as well.

4.2 Indeterminacy

Hirschberg (1985:24) writes, "a conversational implicatum is often a disjunction of several possible interpretations of an utterance and is often indeterminate". This is a consequence of the complex reasoning process involved in deriving implicatures. If there is any doubt about the relevant aspects of the context, the knowledge of the speaker, the speaker's assumptions about capabilities of the addressee, and so forth, then there will be doubt about the implicatures.

4.3 Nondetachability

(14) *Nondetachability*: For implicatures deriving from the information-theoretic maxims – quality, quantity, and relevance – forms do not matter, because the pressures govern only content. We therefore predict that synonymous forms generate all the same implicatures. Manner-based inferences create exceptions to this. (Why?)

(15) Sometimes nondetachability gets complicated:

a. Can you pass the salt (please)?

b. Can you reach the salt (please)?

c. Can I have the salt (please)?

d. Are you able to pass the salt ($^{?}$please)?

e. Do you presently have the ability to pass the salt (*please)?

4.4 Nonconventionality

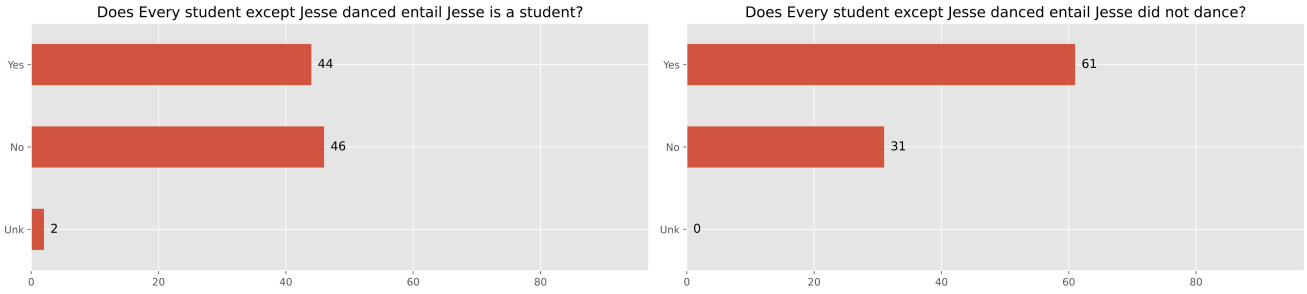
(16) *Nonconventionality*: This is another perspective on calculability — the inferences should derive, not (solely) from lexical or constructional idiosyncrasies, but rather from pragmatic interactions.

In semantics, we confront the arbitrariness of the sign. The only answer to "Why does *dog* pick out dogs?" should be a historical one — there is no formal, or semantics-internal, reason for this connection. But the fact that *some* implicates *not all*, that *or* implicates *not and*, etc., derives from the meanings themselves, not their connection to these words per se. And the relevant meaning relationships are grounded in nonnegotiable, absolute facts about logic and the nature of inference.

5 Case study: Exceptives

5.1 Background

Our first in-class exercise included the following questions about exceptive phrases:



Based on the variability in these results, it seems safe to assume that pragmatic factors are shaping people's judgments. I would like to argue that the meanings are conversational implicatures.

5.2 Proposed semantics

The theoretical proposal:

(17) $[\![\textit{every}\ldots\textit{except Kermit}]\!] = \lambda X\Big(\lambda Y\big(\mathsf{T}\text{ if } X - \{[\![\textit{Kermit}]\!]\}) \subseteq Y,\ \text{else } \mathsf{F}\big)\Big)$

This meaning says that *every Muppet except Kermit danced* is consistent with Kermit not being a Muppet, and with him dancing:

(18) To show that Kermit need not be in A, just note that $A - X$ is defined for all sets A and X, regardless of their relationship to each other. Where they are disjoint, $A - X$ is just A again. In this case, using the exceptive is a lengthy and misleading way of conveying what a plain *every* claim would convey.

(19) To show that Kermit can have danced or not, note that subtracting an element from A in this context just means remaining silent about how that element relates to B. For a concrete illustration, suppose $A = \{a, b\}$. If $B = \{a\}$, then $(A - \{b\}) \subseteq B$ holds, and if $B' = \{a, b\}$, then $(A - \{b\}) \subseteq B'$ holds. The second case is misleading because, intuitively, there is no clear motivation for removing b from the restriction.

These predictions seem to conflict with the vast majority of intuitions people expressed. An alternative that would seem more aligned with the results is as follows:

(20) $\lambda X\Big(\lambda Y\big(\mathsf{T}\text{ if } (X - \{[\![\textit{Kermit}]\!]\}) \subseteq Y \text{ and } [\![\textit{Kermit}]\!] \in X \text{ and } [\![\textit{Kermit}]\!] \notin Y,\ \text{else } \mathsf{F}\big)\Big)$

5.3 Evidence that the meaning is pragmatic

The following sentences seem consistent. They show that the speaker can at least be ignorant of the truth of the relevant meanings, from which it follows that making them entailments would be too strong.

(21) Well, we can't find Karl, but we've verified that everyone except Karl has an alibi, so let's find out whether he does too.

(22) Look, I don't know whether Karl is on the committee, but everyone on the committee except Karl voted in favor, so it doesn't matter whether he's on it or not, because we got our majority.

I also showed a clip from the show Community (season 1, episode 12), in which a character says "All of you are moving on [to Spanish 102] except for Jeff. Turns out you – pause for dramatic effect – will be seeing me next semester. In Spanish 102. Because he passed, you know, and I'm the only Spanish teacher." In this case, the speaker *knows* that Jeff is moving on to Spanish 102 and still uses the exceptive.

All these examples are consistent with (17) and conflict with (20).

5.4 Derivation of the exception implicature

(23) Every Muppet except Kermit danced.

(24) Target implicature: the speaker believes Kermit didn't dance: $B(\neg \mathit{dance}(\mathit{Kermit}))$.

a. *Contextual assumption*: The speaker has comprehensive beliefs about who did and didn't dance. That is, for all x, $B(\mathit{dance}(x)) \vee B(\neg \mathit{dance}(x))$.

b. Assume the speaker is cooperative in the Gricean sense.

c. Towards a contradiction, assume the implicature is false: $\neg B(\neg \mathit{dance}(\mathit{Kermit}))$.

d. By (a), this means the speaker believes that Kermit did dance: $B(\mathit{dance}(\mathit{Kermit}))$.

e. Then the speaker believes *Every Muppet danced* is true, and it is strictly more informative than (23), since it quantifies over a larger domain.

f. Thus, by (b), if the speaker could have used *Every Muppet danced*, they would have (quantity). Since they didn't, we reject (c), thereby deriving the implicature.

6 Universal(?)

If the Gricean program is correct, (most) pragmatic inferences derive from fundamental considerations of rationality. Thus, the basics of the theory should be the same the world over. The only conceivable exception would be a society that was fundamentally irrational. It seems safe to say that no such society would survive. (After all, if it did survive, there would be a rational basis for whatever it was doing!)

The universality of pragmatic inferencing mechanisms does **not** mean that pragmatic inferences will be the same the world over, nor does it mean that everyone's behavior will be superficially the same. On the contrary: the nature of the context is central to the pragmatic meanings that arise, and cultural facts are part of the context, as are our beliefs, desires, and tendencies.

Keenan (1979) discusses pragmatic inferencing in Malagasy society (Madagascar), highlighting the fact that its members seem less susceptible to the pressures of quantity that one might expect:

> To what extent does the maxim 'Be informative' hold for interlocutors in Malagasy society? Despite certain clashes with other maxims, are members generally expected to satisfy the informational needs of co-conversationalists? No. Interlocutors regularly violate this maxim. They regularly provide less information than is required by their conversational partner, even though they have access to the necessary information. If A asks B, 'Where is your mother?' and B responds 'She is either in the house or in the market', B's utterance is not usually taken to imply that B is unable to provide more specific information needed by the hearer. The implicature is not made, because the expectation that speakers will satisfy informational needs is not a basic norm. (p. 70)

Keenan goes on to identify two factors (p. 70):

i. "New information is a rare commodity. [...] Information that is not already available to the public is highly sought after."

ii. "The fear of committing oneself explicitly to a particular claim."

Here is a summary of the evidence that Keenan provides:

- Speakers will give only necessary conditions, rather than necessary and sufficient conditions. ("How do you open the door?" is met with "If you don't turn the knob, it won't open" rather than "By turning the knob".)
- Speakers avoid naming specific people, opting instead for indefinites like *someone*.
- Speakers frequently use passive-like constructions (*The paper was completed*), even when the active would be natural (*I completed the paper*).
- If some information is widely known or easily obtained, then speakers are more forthcoming.

Can you think of situations in which Americans routinely behave this way (see p. 78)?

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