Generalized conversational implicature (GCI) Theory

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Postgridiots!

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Broad definition

Meaning which is not coded within a linguistic expression but which is inferred based on some basic assumptions about the nature of conversation. The main assumption which GCI theory begins with is Grice’s cooperative principle (1989: 26):

*Make your contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged*

In other words, speakers in conversation intend with every utterance to further the conversation in some way.
Introductory examples

(1) **A:** I’m hungry
    **B:** I’ve got some crisps in my bag
    + > You can have the crisps which are in my bag which may help reduce your hunger

(2) **A:** Where’s John?
    **B:** He’s either at the bar or in the toilet.
    + > I’m not sure of the actual whereabouts of John but these are my best guesses at his current location.

Implicatures are a massive component of our everyday talk. It is very rare that will are fully explicit (is this even possible to achieve?).
Maxims of quality

Try to make your contribution one which is true
Do not say things you believe are false
Do not say things which you lack evidence for
Maxim of relation

Be relevant
Maxims of quantity

Q1 Make your contribution as informative as is required for the current purpose

Q2 Do not make your contribution more informative than required
Maxims of manner

Be persipicuous

Avoid obscurity
Avoid ambiguity
Be brief (avoid unnecessary prolixity)
Be orderly
The maxims and rationality

Grice argued that his maxims were not simply used in conversation, but are merely a special case of purposive, rational behaviour. He provided analogues for his maxims found in other behaviours (Grice 1989: 28).

**Quantity:** If A is helping B mend a car, A should contribute no more or less than required. If B needs 4 screws at some point, A should hand over 4 screws – not 2 or 6.

**Quality:** If A is helping B make a cake and B requires sugar, A should not hand over salt. If B needs a spoon, A should pass a wooden one not a trick spoon made of rubber.
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**Relation:** While B is mixing the cake mix, A shouldn’t pass B an oven glove – because at that time it is not required.

**Manner:** If A has offered to help, A should make it clear how s/he will help and perform his/her duties properly.
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Criticism of the co-operative principle

The co-operative principle has been criticised as being too idealistic and critics suggest that it doesn’t acknowledge talk where the participants are clearly in conflict. This criticism can be addressed with an appeal to rationality, too.

*The participants have some common immediate aim, like getting a car mended; their ultimate aims may, of course, be independent and even in conflict – each may want to get the car mended in order to drive off, leaving the other stranded. In characteristic talk exchanges, there is a common aims even if, as in an over-the-wall chat, it is a second-order one, namely, that each party should, for the time being, identify himself with the transitory conversational interests of the other.*
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Implicatures don’t always arise

Implicatures arise **only** when hearers believe that the speaker is wishing to convey additional information with her utterance.

→ Thus if a speaker is lying (i.e. covertly violating Quality maxim) and the hearer does not know this, the hearer will not derive an implicature from the Quality maxim.

→ Speakers can actively opt out of maxims, which blocks implicatures from arising.

(3) ‘No comment’

(4) ‘I’m afraid that information is confidential’
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(3) ‘No comment’

(4) ‘I’m afraid that information is confidential’
Heeding the maxims

(5) Mary rode her bike home and had a large glass of wine
+ > In that order, the sub-maxim within Manner, ‘be orderly’, is observed

(6) A: I’m all out of petrol
B: There’s a garage around the corner
+ > You’ll be able to buy petrol there

Observe Relation and Quantity
Flouting the maxims

(7) Laura produced a series of sounds that resembled *Land of my Fathers*

\[ \text{+ > She didn’t sing it well; derived from violating Manner maxim.} \]
A clash of maxims

(8) **Context:** James is writing a letter to Nathan

**James:** Where does Nathan live?

**A:** Somewhere in Prestwich

+ > A doesn’t know exactly where N lives

Clash between Quality and Quantity – Quality wins
Properties of implicatures

**Defeasible:** Mary rode her bike and had a glass of wine ... but not necessarily in that order (not contradictory)

**Reinforceable:** Mary rode her bike and had a glass of wine ... in that order (not redundant)

**Calculable:** With a knowledge of the literal meaning and an assumption that the speaker is being co-operative, we can work out the value of the implicature.
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Actual vs. potential implicatures

In some situations, implicatures which would arise in a nonce context are not conveyed.

(9)  **A:**  How long have you lived in the UK?
    **B:**  I’ve lived here for five years.
    \(+ >\)  B has lived in the UK for not more than 5 years

(10)  **A:**  If you’ve lived in the UK for a minimum of five years you can apply for UK citizenship.
    **B:**  I’ve lived here for five years.
    \(+ \not\succ\)  B has lived in the UK for not more than 5 years
Particularized vs. generalized conversational implicatures

‘Some conversational implicatures seem context-bound, while others have a very general currency [...] a single utterance-form might suggest fundamentally different propositions (PCIs) in two different contexts, while at the same time implicating something else (a GCI) in both these contexts’ (Levinson 1995: 92)
Particularized vs. generalized conversational implicatures

(11)  **A:** What time is it?  
      **B:** Some of the guests are already leaving.  
      **PCI:** It must be late.  
      **GCI:** Not all of the guests are already leaving.

(12)  **A:** Where’s John?  
      **B:** Some of the guests are already leaving.  
      **PCI:** Perhaps John is already leaving.  
      **GCI:** Not all of the guests are already leaving.
Particularized vs. generalized conversational implicatures

PCIs require a specific context to arise, but GCIs are so common that they go through by default and require some special context for them to be cancelled. Indeed, as Levinson notes, \textbf{some + > not all} is so general that it might be mistaken for part of its coded meaning – that it is a pragmatic inference comes from ‘(a) its predictability by general principle of maxim, (b) the semantic compatibility of its overt denial (as in \textit{Some, in fact all, of the guests are already leaving})’ (1995: 92).
What does GCI theory offer?

Levinson argues that GCI theory is ‘a generative theory of idiomaticity, that is to say a set of principles guiding the right expression to suggest specific interpretations […] GCI theory offers a systematic account of why, for example, saying “See you on Tuesday” when tomorrow is Tuesday would suggest not seeing you tomorrow’ (1995: 94).
How do GCIs occur?

GCIs are inferred on the basis *inferential heuristics* which are derived from (some of) Grice’s Maxims. Heuristics act as guides to speakers on how to formulate their utterances and hearers on how to process the utterance.

**Q(uality):** What isn’t said, isn’t the case

**I(nformativeness):** What is expressed simply is stereotypically exemplified

**M(arkedness):** What is said in an abnormal way is not normal
Q-implicatures

Speakers should say as much as they can, whilst remaining truthful. This leads to hearers processing utterances which are ‘weak’ as implicating that the ‘strong’ version is not the case. Examples (a number adapted from Levinson 2000: chap. 1):

(13) Some of us take milk in our tea + > not all of us take milk
(since there is a scale <all, some>)

(14) I saw Terry chatting to a man earlier
+ > not his brother, father, etc.

(15) John likes Mary + > he doesn’t love her, (based on a scale <love, like>)

(16) James went to the library or for coffee
+ > James didn’t do both things
I-implicatures

Speakers need not say what will otherwise be taken for granted.

Examples:

(17) I don’t like spinach $\quad + > I$ dislike spinach

(18) The boxer was knocked out $\quad + >$ The boxer was a male one

(19) John & Jenny bought a piano $\quad + >$ They bought one together, not one each

(20) John turned the key and the engine started $\quad + > p$ then q, p caused q, intention to cause q
M-implicatures

Where a marked expression is used in place of an unmarked one, the hearer should expect a marked state of affairs.

(21)  
a. You are permitted to leave but you may stay vs.

b. You may leave and please do so by I-heuristic

(22) The Spanish caused the Aztecs to die

+ > they didn’t kill them directly, e.g. they starved them
M-implicatures cont.

(23)  a. She went to the school/church/university/bed/etc.  

        + > she went to the place but not necessarily  

        to do the stereotypical activity  vs.  

    b. She went to ø school/church/university/bed/etc.  

        + > she went to do the associated stereotypical activity  

        by I-implicature  

(24)  I’m not unhappy  + > I’m less than happy
Ordering the heuristics

Unlike the original Gricean framework, Levinson gives a proposal for what actually occurs when different principles governing implicature converge in a single utterance. According to Levinson (2000: 158):

- Q-implicatures ‘defeat’ those I-implicatures which are inconsistent with them
- Q-implicatures defeat M-implicatures
- M-implicatures defeat I-implicatures
Examples of inference clashes

(25) John and Mary bought a sofa, or they bought one each

I+ > They bought one together
Q+ > Both conjuncts are probably not true
Q>I thus, + > the speaker is unsure of the number of sofas bought
Examples of inference clashes

(26) It’s not unlikely that the Postgridiots understand GCI theory – in fact, I think they do.

\[ \text{It’s less than fully likely that they understand} \]

\[ \text{I have reason to believe it likely} \]

\[ \text{thus, + > I am fairly confident in my assertion} \]
Examples of inference clashes

(27) Yesterday, I went to the university and I talked to my supervisor

I+ > The second event took place while I was at university
(because of ‘and’)  
M+ > The two events were not (necessarily) related
(because of the second ‘I’)  
M>I thus, + > the talking to the supervisor happened separately from the going to university.
Typologically dispreferred (/banned?) lexical entries

* $p$ and $q$ are contraries if they both can’t be TRUE; but they both can be FALSE. (e.g. John can’t be both happy and sad, but he can be neither)

* $p$ and $q$ are contradictories if they both can’t be TRUE; and they both can’t be FALSE. (e.g. The number can’t be both odd and even, and it can’t be neither).
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* $p$ and $q$ are **contradictories** if they both can’t be TRUE; and they both can’t be FALSE. (e.g. The number can’t be both odd and even, and it can’t be neither).

**Figure**: Traditional logical square of opposition
Typologically dispreferred (/banned?) lexical entries

* Some ‘by default’ implicates not all
  * Because of this default relationship there is not need for a separate entry of *Nall
  * If Some + > Not all was generated as a nonce inference, this would take up a great deal of cognitive effort, and lexicalization would be preferred.
Typologically disprefered (/banned?) lexical entries

<table>
<thead>
<tr>
<th>A</th>
<th>All</th>
<th>E</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Some</td>
<td>O</td>
<td>Not all</td>
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Further examples of a lexicalization constraint

<table>
<thead>
<tr>
<th>A</th>
<th>Always</th>
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</tr>
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<tbody>
<tr>
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<td>O</td>
<td>*Nalways</td>
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Further examples of a lexicalization constraint

A And E Neither...nor

I Or O *Nand
Better predictions

(From Levinson (2000: 58-9)) Theories of nonce-implicature generation prefer ‘low-cost’ (in cognitive terms) deductions. Consider:

(28)  **A:**  If the spy had possibly more than two passports, then he may yet escape

**B:**  He has two passports

To allow for low-cost deduction, nonce-implicature theories predict that the spy had *at least* two passports, allowing for the deduction that the spy may yet escape.

GCI theory predicts two things: first, by I-inference that the condition is raised to biconditional (iff), and by Q-inference that they spy had *at most* two passports. As a result, the spy may not yet escape. This seems the correct interpretation.
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The next few slides are based on Geurts (2009) fantastic book, *Quantity Implicatures*. There are three main criticisms of (neo-)Gricean pragmatic accounts (and lots of other ones to boot!):

1. Abduction is dead hard
2. Working out what is going on in other people’s heads is dead hard
3. Working out what people could alternatively say is also dead hard.
Abduction is hard

Wilson (2000:416) (and others) complain about the (neo-)Gricean way of deriving implicature. She says ‘it is hard to imagine even adults going through such lengthy chains of inference’. In response, Geurts (2009: 70) dismisses this saying:

the way an argument is displayed on the page need not reflect how it is implemented by the brain [...] Another problem with Wilson’s argument is that it is really too impressionistic. Consider visual perception. What could be easier than seeing a blue train, for example? [...] But then textbooks on visual perception invariably run into hundreds of pages. If these textbooks were right, visual perception should be bafflingly complex. Isn’t that enough to prove that they are wrong? Evidently not. What it proves is just that we’re unaware of the perceptual feats we perform throughout our waking lives.
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(Neo-)Gricean approaches rely on the idea that hearers are constantly working out what their interlocutor is thinking/getting at. This ‘theory of mind’ is notoriously tricky. However, this doesn’t mean that hearers are *actually* working out what is going on in speakers’ heads. As Geurts (2009: 76) suggests it may be that ‘people have an arsenal of quick-and-dirty heuristics that allow them to simulate intentional stance [...] Even if people are merely pretending to be taking the intentional stance, there can be no doubt that they are exceptionally good at it’
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Alternatives are hard to calculate

GCI theory posits that hearers have to keep track not only of what is said, but also what isn’t. According to Noveck & Sperber (2007) ‘it is this type of onerous inference that makes the Gricean account of implicature derivation seem implausible from a cognitive and developmental point of view’. However, lots of experimental work shows that speakers are constantly making and revising judgements about what is about to be said.
Alternatives are hard to calculate

Event-related brain potentials (ERPs) measure brain activity associated with designated words. The N400 measure shows a peak in ERP activity 400ms after an event which indicates the ‘surprise value’ of a given event. High N400 values are found with examples like:

(29) He spread his warm bread with socks
(30) Jenny put the sweet in her {pocket/mouth} after the lesson
(31) The peanut was in love
Alternatives are hard to calculate

BUT: ‘the peanut was in love’ would not yield high N400 values in the following:

A woman saw a dancing peanut who had a big smile on his face. The peanut was singing about a girl he had just met. And judging from the song, the peanut was totally crazy about her. The woman thought it was really cute to see the peanut singing and dancing like that. The peanut was {salted/in love}, and by the sound of it, this was definitely mutual. He was seeing a little almond. (Nieuwland and van Berkum 2006: 1106)

But ‘salted’ would!
Sedivy et al’s (1999) study saw hearers presented with a tall glass and a tall pitcher. When told to pick up the tall glass, they would wait for the noun before looking at a particular object. When a short glass was added, and they were told to pick up the tall glass – hearers frequently looked at the target glass after the adjective. This fits in with a Gricean approach.
Conclusion

GCI theory suggests that some implicatures go through by ‘default’

Overt cancellation is required to prevent the implicature being processed.

Criticisms levelled at the psychological plausibility of such a model are probably unfair.

Alternatives make the wrong predictions.

The theory explains why some lexical entries don’t exist.
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Thank you
Bibliography


