A Brief Introduction to (Neo-)Gricean Pragmatics

I hope you had an opportunity to view and listen to Karen Lewis’ Khan Academy video lecture on Gricean Pragmatics:
https://www.khanacademy.org/partner-content/wi-phi/wiphi-metaphysics-epistemology/wiphi-language/v/gricean-pragmatics

Conversational implicature:
Consider the following example, taken from Ruth Kempson (1988):
Speaker A: What’s the new Pizza House like?
Speaker B: All the cooks there are Italian.
Speaker A: Let’s go there then.

Here B is attempting to convey more than she is saying. She is indirectly answering A’s question, but to understand the answer, A will have to make some inferences on the basis of common-sense knowledge about food establishments, what sort of food is served at what sorts of restaurants, who is likely to be good at producing what sorts of foods, etc.

Examples of (particularized) conversational implicature discussed in Karen Lewis’ video:

- Visiting Montreal case
- Party case
- Letter of recommendation case
- Package case (2 variants)

Grice’s Cooperative Principle:
Make your conversational 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.

The Conversational Maxims:

**Quantity**: (1) Make your contribution as informative as is required. (2) Do not make your contribution more informative than is required.

**Quality**: (1) Do not say what you believe to be false. (2) Do not say that for which you lack adequate evidence.

**Relation**: Be relevant.

**Manner**: Be perspicuous (i.e., avoid obscurity of expression, avoid ambiguity, be brief, be orderly)

Grice recognizes that there are other maxims (aesthetic, social, moral), such as “Be polite”. But his focus is on maxims that he thinks are especially relevant to talk exchanges. He wishes to see talk exchanges as a form of rational, purposive behavior. He thinks that there are analogs of his 4 maxims governing non-verbal behavior. The video illustrates this with situations such as fixing a car or baking a cake together.

Generalized vs. particularized conversational implicatures:
Grice distinguishes between generalized and particularized conversational implicatures (GCIs and PCIs). The latter he describes as “cases in which an implicature is carried by saying that p on a particular occasion in virtue of special features of the context”. The former he characterizes as cases in which the “use of a certain form of words ... would normally (in the absence of special circumstances) carry such-and-such an implicature or type of implicature.”

Examples of sentences that give rise to GCIs:

(1) He ate some of the cookies [but not all of them]
(2) The water is warm [but not hot]
(3) Robert broke a finger [of his own] last night.

Conventional vs. conversational implicature

Examples of conventional implicatures:
(4) He is English therefore he is brave.
(5) Mary is poor but honest. (an example Grice gives in his paper ‘The causal theory of perception’)

Grice’s distinctions summarized:

Calculability and the “working out schema”:

CIs must be calculable. To figure out what the speaker S has conversationally implicated by her utterance, the hearer reasons as follows:

(a) S has expressed the proposition that p.
(b) There is no reason to suppose that S is not observing the maxims or at least the Cooperative Principle.
(c) S could not be doing this unless S thought that q.
(d) S knows (and knows that I know that S knows) that I can see that the supposition that S thinks that q is required.
(e) S has done nothing to stop me thinking that q.
(f) S intends me to think, or is at least willing to allow me to think, that q.
(g) So, S has implicated that q.

Other features of conversational implicatures:

(A) Conversational implicatures (including GCIs) can be cancelled.

A CI will be explicitly cancelled when the speaker says something incompatible with the CI. For example, the speaker of (1) could follow her utterance of (1) with the following assertion without contradicting herself:

(1*) In fact, he ate all of the cookies.

A CI will be implicitly cancelled when contextual information that is mutually manifest to both speaker and hearer is incompatible with the CI. For example, if it is part of our shared background knowledge that Robert is a Mafia enforcer, then we may very well not derive the GCI that Robert broke his own finger.

(B) Conversational implicatures are non-detachable.

If uttering a sentence in some conversational context gives rise to a conversational implicature, then the utterance of any roughly synonymous sentence will also give rise to that implicature.
Conversational implicatures are not part of the conventional meanings of the expressions whose use gives rise to those implicatures.

Conversational implicatures are not carried by sentences or even by the propositions expressed by those sentences. Rather, it is by uttering or saying those sentences that one may implicate something.

As a result, what is said or expressed could be true, while what is implicated could be false. Devious people often rely on this. They say something that is true but that strongly implicates something in addition, expecting their listeners to "jump to conclusions". When someone later accuses them of being misleading, they can retreat and claim that they didn't (strictly and literally) say anything false.

What is conversationally implicated can be somewhat indeterminate. When one tries to calculate what has been implicated there may be various possible equally plausible implicatures.

Natural language expressions vs. expressions in logic:

Not, and, or, if...,then..., all, some, the

\[ \neg, \land, \lor, \rightarrow, (\forall x), (\exists x), (x) \]

Natural language expressions, such as the ones listed above, seem to differ in meaning from their logical counterparts.

For example:

(i) The old king died and a republic was declared.
(ii) A republic was declared and the old king died.
(iii) \( A \land B \)
(iv) \( B \land A \)

(i) and (ii) differ in what they communicate, yet (iii) and (iv) are logically equivalent. This suggests that English ‘and’ and the truth-functional connective ‘\( \land \)’ diverge in meaning. Grice considers two possible responses to this apparent divergence:

Formalist – we need to develop an ideal logical language, since natural languages are inadequate for scientific purposes. Terms used in science require precise and clear definitions and sentences must be capable of being assigned a definite truth-value in every circumstance. Meanings that cannot be captured in this way cannot be theorized about in a scientifically rigorous way.

Informalist – ordinary language is perfectly in order; it serves purposes other than those of scientific inquiry. The logic of natural language is different from and sometimes in conflict with formal logic. We must study natural language on its own terms.

Grice rejects the common assumption of formalists and informalists that there is a divergence of meaning between ordinary language expressions and logical ones. It was to address this issue that Grice introduced his notion of conversational implicature. He thinks that ‘and’ always means truth-functional ‘and’, but it sometimes conversationally implicates another meaning in addition (‘and then’, ‘and as a result’, etc.)

Grice also formulates what has become known as Modified Ockham’s Razor – “Do not multiple meanings beyond necessity”. This is taken to mean that if we can explain a phenomenon pragmatically, we ought to prefer the pragmatic account to one that explains the phenomenon by positing lexical ambiguities (e.g., multiple meanings for ‘and’).
**Larry Horn's neo-Gricean Pragmatics:**

Horn argues in favor of a (dualist, Manichaean) view which reduces the principles governing talk exchanges to two competing principles that must constantly be balanced against each other:

- **The Q-principle** – “Say enough”
- **The R-Principle** – “Don’t say too much”

The Q-Principle is hearer-oriented and sets a lower-bound on how much information speakers need to give. We can see it as combining Grice’s 1st submaxim of Quantity and the first two Manner submaxims. As listeners, we prefer a 1-1 relation between words and meanings (we don’t like “pernicious homonymy”).

The R-principle on the other hand is speaker-oriented and combines the 2nd submaxim of Quantity together with Relation and the last two submaxims of Manner. It embodies the idea that we operate with a principle of least effort that demands minimal forms. We have a preference to pack as much meaning as possible into a single word.

Horn objects to Grice’s idea of cooperativity; however, he accepts the idea that verbal communication is a rational activity. Principles of the form “Do enough” and “Don’t do too much” constrain any sort of rational, goal-oriented activity and Horn thinks that his Q- and R-Principles are the “linguistic instantiation of these rationality-based constraints on the expenditure of effort” (p. 178).

The “least effort” (R-Principle) idea allows Horn to explain a range of phenomena about language use:

1. It explains why high-frequency words are short and why familiar words have reduced phonological forms
2. It also explains other types of reductions:
   a. Acronyms (e.g., NATO or initialisms such as U.S.A.)
   b. Blends (e.g., motor hotel = motel)
   c. Clipping/truncation (e.g., gas, prof, zoo, narc)
3. It can explain the process of semantic broadening, where a salient member of a category comes to denote the category (e.g., ‘kleenex’ to denote tissues or ‘guys’ to denote males and females)
4. It can explain the opposite process of R-based narrowing, where a general term picks out a salient specific member of the category (e.g., ‘drink’ for alcoholic drink, ‘temperature’ for one in the fever range)
5. A special case of such narrowing is euphemism (e.g., ‘boyfriend’ for lover; ‘sleep with’ for have sex; ‘pass’ for die)
6. It can also explain cases of understatement (e.g., saying ‘I don’t like ouzo’ meaning ‘I dislike ouzo’ – the motivation here may be wanting to downplay the negative force of one’s utterance so as to reduce the potential offense it may cause)
7. It can explain strengthened understandings of sentences like ‘I don’t want you to go’, where the speaker really means ‘I want you not to go’ (possibly because there are social constraints against direct expression of the stronger form)

The Q-Principle can also explain a range of phenomena, but especially:

1. It explains the generation of scalar implicatures based on scales ordered from informationally strong (S) to weak (W) lexical items:
   a. <all, most, many, some> ‘I ate some of the cake’ ‘some but not all’
   b. <certain, likely, possible> ‘It’s possible it will rain’ ‘possible, not certain’
   c. <hot, warm> ‘It’s warm’ ‘warm but not hot’
   d. <adore, love, like> ‘She likes him’ ‘but does not love him’
2. The general pattern here is that if you assert ‘...W...’ you implicate that you are not in an epistemic position to assert ‘...S...’ and hence that you don’t know that ‘...S...’, which, other things being equal, suggests that you know that ‘not[...S...]’.
3. It also explains why we have single terms for ‘all’, ‘none’ and ‘some’ but no single word for ‘some not’, which is logically equivalent to ‘not all’ (‘*nall’).

4. A similar explanation would be given for why we have single words for ‘always’, ‘never’ and ‘sometimes’ but not for ‘not always’ (‘*nalways’) and we have single words for ‘and’, ‘or’ and ‘nor’ but not for ‘not and’ (‘*nand’)

5. Also, this principle can explain Q-based narrowing: E.g., the hypernym ‘lion’ has a special hyponym ‘lioness’ referring to the set of female lions. This allows the hypernym to do double duty and also act as the hyponym referring to the complement of this set, namely to the set of male lions. This is because when I say ‘lion’ you can assume I mean ‘male lion’ because if I had intended to refer to female lions I would have said ‘lioness’. Similarly, ‘animal’ refers to non-human animals, as the hypernym ‘animal’ has a special hyponym ‘human’ referring to human animals.

The Division of Pragmatic Labor: The two principles also interact in such a way as to divide up the pragmatic labor. E.g., if I say ‘that’s my father’s wife’ as opposed to ‘that’s my mother’, you will not assume that I meant to put you to unnecessary processing effort but that I had some reason for my word choice (e.g., the woman is my dad’s 2nd wife). Similarly, if I say that someone likes detective novels, you will assume that the extra specification had a purpose and that it is not true that the person likes other sorts of novels.

Conditional perfection (also called conditional strengthening) can be explained along similar lines. E.g. your mom says that if you mow the lawn she’ll give you $5. You assume that if you don’t mow the lawn she won’t give you $5. You have strengthened her “if..., then...” statement into an “If and only if” one. In fact, what your mother said is compatible with her giving you $5 even if you don’t mow the lawn.

Horn has an interesting discussion of how these principles can explain our avoidance of “pernicious” synonyms and homonyms and also account for facts about first language acquisition of words (e.g., children’s initial overgeneralization of word meanings – ‘moon’ to refer to ‘round things’ – and their predisposition to reject lexical overlap – i.e., their reluctance to accept unfamiliar labels for familiar objects that they already have a label for). However, in the interests of condensing Horn’s paper, I will skip this very interesting section of the paper (sec. 5, pp. 174-178).

The final section of the paper (sec. 6) points out that some frameworks, such as Relevance Theory (RT) and the view defended by Asa Kasher, appeal to just a single (minimax) principle. Stephen Levinson appeals to three principles (The Q-, I- and M-Principles), whereas Horn has just two principles (the R- and Q-Principles). What is the right number? Can we reduce the two principles (Q- and R-) to just a single principle, as the defenders of RT have claimed? Horn thinks not. We will pick up the discussion of RT next time.

The Traditional Square of Opposition:

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A: All tigers are striped

B: Some tigers are striped

C: No tigers are striped

D: Some tigers are not striped
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A- and O-type sentences, as well as E- and I-type sentences, are **contradictories**; always have opposite t-values
A-type sentences entail I-type ones, as do E-type ones entail O-type ones.
A- and E-type sentences are **contraries** (i.e., they cannot both be true though they can both be false), whereas
I- and O-types are **sub-contraries** (i.e., they cannot both be false but could both be true)
Levinson’s Three Principles:

The Q-Principle: This principle can be summarized in the slogan ‘What is not said is not the case’. From a speaker’s point of view, it enjoins one not to make statements informationally weaker than one’s knowledge of the world allows. From the hearer’s point of view, it invites one to assume that the speaker has made the strongest statement consistent with what she knows.

This heuristic operates under a constraint. It applies only in cases in which there are expressions that form a contrast set. So-called Horn or entailment scales would be examples of contrast sets. For instance, <all, some> forms an entailment scale. However, Levinson allows that there are other kinds of contrast sets in addition to such entailment scales.

When the constraint on the Q-Principle is satisfied, i.e. when there is an appropriate contrast set \( \{F, G\} \), and \( A(\_\) is a sentence-frame of the appropriate sort, then when a speaker asserts that \( A(G) \) she implicates that she doesn’t know that \( A(F) \) is true. On the additional assumption that she either knows that \( A(F) \) is true or knows that \( A(F) \) is not true, it follows (by disjunctive syllogism) that she knows that \( A(F) \) is not true, which in turn presupposes that \( A(F) \) is not true (because ‘know’ is a factive verb).

Examples are as follows:

1. <all, some>
   - S-sentence: All of the students were in class.
   - W-sentence: Some of the students were in class.
   - GCI from assertion of W-sentence: The speaker knows that not all of the students were in class.

2. <...,3,2,1>
   - They scored two goals.
   - GCI: The speaker knows that they scored no more than two goals.

3. <and, or>
   - You can have either soup or salad.
   - GCI: The speaker knows that you cannot have both soup and salad.

4. <hot, warm>
   - This tea is warm.
   - GCI: The speaker knows that this tea is not hot.

Q-implicatures of the sort illustrated in (1) – (4) are called scalar implicatures and have been extensively discussed by others besides Levinson, such as Horn (1984, 1989) and Hirschberg (1991). So-called clausal implicatures are also included under the heading of Q-implicatures. Levinson (2000: 76) claims that these are generated when there is a contrast set of expressions \( \{S,W\} \) and a sentence frame \( A(\_\) and a speaker’s assertion of \( A(W) \) fails to entail an embedded sentence \( p \) which the assertion of a stronger sentence \( A(S) \) would have entailed. In such a case the assertion of the weaker sentence implicates that the speaker doesn’t know whether or not \( p \) obtains.

An example is as follows:

5. <and, or>
   - Stronger sentence: John is a poet and a philosopher.
   - Entails: John is a poet/ John is a philosopher.
   - Weaker sentence: John is either a poet or a philosopher.
   - GCI from assertion of the weaker sentence: For all the speaker knows, John is perhaps a poet or perhaps not a poet, perhaps a philosopher or perhaps not a philosopher. (cf. Levinson 2000, p.109).

The I-Principle: This principle can be summarized in the slogan ‘What isn’t said is the obvious’ (Levinson 1987b) or, less perspicuously, ‘What is simply described is stereotypically and specifically exemplified’ (Levinson 1995). From the speaker’s point of view, following this heuristic means minimizing what one says when the hearer is able to use contextually accessible information to enrich the informational content of one’s utterance. From the hearer’s point
of view following this heuristic means amplifying or enriching the informational content of the speaker’s utterance up to the point that one judges is the speaker’s intended meaning.

Once again, there are constraints on the application of the I-Principle. It applies only to “unmarked, minimal expressions” (Levinson 1995: 97). Moreover, this heuristic invokes “world knowledge of stereotypical relations” (ibid.), and it is on the basis of this information about stereotypes that the hearer will engage in the enrichment of the speaker’s minimal expression to arrive at her intended meaning.

Examples are as follows:

(6) John smiled at the secretary.  
GCI: John smiled at the female secretary.  
(7) John’s book is on the table.  
GCI: The book John owns/bought/borrowed/read/wrote etc. is on the table.  
(8) Conjunction-buttressing  
Susan turned the key and the engine started.  
GCI: Susan turned the key and then the engine started.  
GCI: Susan turned the key and as a result the engine started.  
(9) Conditional perfection  
If you cooperate, there’ll be no trouble.  
GCI: If you don’t cooperate there’ll be trouble.  
Combination of what is said and GCI: If and only if you cooperate, there’ll be no trouble.  
(10) Negative strengthening  
I don’t like Alice.  
GCI: I positively dislike Alice.  
(11) Bridging inferences  
Harold bought an old car. The steering wheel was loose.  
GCI: The steering wheel of the car Harold bought was loose.

The italicized expressions are the “unmarked, minimal expressions” that trigger the I-Principle, thereby giving the hearer access to stereotypical information for enrichment purposes. What exactly the stereotypical information is that is accessed is clear enough in some cases (e.g., we presumably all have something like a mental schema for the typical parts of a car). It is not so clear in other cases (e.g., it is unclear what stereotypical information is used in the inference from ‘If P then Q’ to ‘If not P then not Q’).

The M-Principle: This principle can be summarized in the slogan ‘Marked or more prolix expressions warn of an abnormal situation’. From the speaker’s point of view this heuristic directs one to use marked expressions only if one wants to draw the hearer’s attention to something unusual in the situation. From the hearer’s point of view the result of following this heuristic is to arrive at interpretations that are the complement of the ones that would have been induced had the speaker used an unmarked or brief expression.

Clearly, the operation of this heuristic is constrained to situations in which a marked or prolix expression is used. It requires a comparison between unmarked and marked expressions. In other words, the hearer must realize that there is a simpler, less marked way of saying the same thing.

Examples are as follows:

(12) (stopped; caused to stop)  
James caused the car to stop.  
GCI: James caused the car to stop in some non-stereotypical way, e.g., by using the hand brake.  
(13) (ate; ate and ate)  
He ate and ate.  
GCI: He ate more than a normal meal.  
(14) (chair; chairperson)  
The chairperson will be arriving soon.
The female chairperson will be arriving soon.

(15) (drink; beverage)
   He asked for a beverage.
   GCI: He asked for a non-alcoholic drink.

The pairs of expressions in parentheses are what Levinson calls “lexical doublets”, with the first member of the pair being the unmarked form and the second the semantically equivalent marked form. Levinson (1995: 104) lists a number of such lexical doublets and the I- and M-implicatures that they would generate.