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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.

Grice

Our talk exchanges do not normally consist of a succession of disconnected remarks and would not be rational if they did. They are characteristically, to some degree at least, cooperative efforts; and each participant recognizes in them, to some extent at least, a common purpose or set of purposes, or at least a mutually accepted direction.
<table>
<thead>
<tr>
<th>Maxims</th>
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<tbody>
<tr>
<td><strong>Maxims</strong></td>
</tr>
<tr>
<td>Quantity</td>
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<tr>
<td>Quality</td>
</tr>
<tr>
<td>Relation</td>
</tr>
<tr>
<td>Manner</td>
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</table>
Maxims: Features of rational cooperation

Not necessarily talk exchanges

<table>
<thead>
<tr>
<th>Quantity</th>
<th>If you are assisting me to mend a car, and at some stage I need four screws, I expect you to hand me four, rather than two or six.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>I expect your contributions to be genuine and not spurious. If I need sugar as an ingredient in a cake you are assisting me to make, I do not expect you to hand me salt; if I need a spoon, I do not expect a trick spoon made of rubber.</td>
</tr>
<tr>
<td>Relation</td>
<td>I expect a partner’s contribution to be appropriate to the immediate needs at each stage of the transaction. If I am mixing ingredients for a cake, I do not expect to be handed a good book . . .</td>
</tr>
<tr>
<td>Manner</td>
<td>I expect each partner to make it clear what contribution he is making and to execute his performance with reasonable dispatch.</td>
</tr>
</tbody>
</table>
Properties of implicature I

1. Cancellability

_He solved some of their problems. In fact, he solved all of them._

2. Non-detachability: Different ways of saying the same thing will have the same implicature

try to X, endeavor to X, attempt to X, set oneself to manage to X, X

Two exceptions: manner-related implicature (why?) and conventional implicature. The issue of presupposition (which has been called a kind of conventional implicature) also rears its head with these examples

3. Calculable: An argument from the maxims exists

4. Defeasible: Features of context can block an implicature

5. Reinforcable (Sadock), some but not all, *some but not none
Communication does not require convention

Grice’s influential articles (1957, 1967) . . . In the earlier of these papers, Grice promulgated the idea that ordinary communication takes place not directly by means of convention, but in virtue of a speaker’s evincing certain intentions and getting his or her audience to recognize those intentions (and to recognize that it was the speaker’s intention to secure this recognition). This holds, Grice suggested, both for speech and for other sorts of intentional communicative acts. In his view, the utterance is not in itself communicative, but only provides clues to the intentions of the speaker.

Sadock 2004
A vision of Meaning

1. Invented pragmatics as we now understand it
2. Defined one extremely influential understanding of the relation between pragmatics and semantics
3. Made pragmatics an important and challenging area of study, with connections to multiple subfields of linguistics: lexical semantics, discourse, morphology, historical linguistics, psycholinguistics
Neo-Griceans

Challenge or extend Grice’s original program

1. Atlas
2. Atlas and Levinson
3. Horn
4. Levinson
5. Sperber and Wilson
Horn: R

### R-Principle

Say no more than you must, modulo Q

- Can you close the window? (cf. Are you able to close the window?)
- I don’t think that $\phi$
- I broke a finger.
- Sue left Tom and he became very depressed.

Includes **SHORT-CIRCUITED CONVERSATIONAL IMPLICATURE or STANDARIZED NON-LITERALITY**
Horn: Q

Q-Principle

Say as much as you can, modulo Quality & R

- Jill is in Denver by now.
  - I liked *Bridge of Spies*.
  - Jill is in the kitchen or in the bedroom. ⇒ I don’t know which
  - The kitchen is a mess. ↳ The bedroom isn’t.
  - Jill may be in the kitchen ⇒ I don’t know she is in the kitchen
  - Bachelors are unmarried ↳ I don’t know that it’s necessarily true.
Q: Base cases

or → not and
some → not all
possible → not necessary
like → not love
Equal economy: Q works

\{ always, usually, often, sometimes \}
\{ and, or \}
\{ certain, likely, possible \}
\{ cold, cool, lukewarm \} (missing: warm, hot. Why?)
\{ excellent, good, OK \}
\{ the, a \}
R-implicata: pre-emption

- finger $\rightarrow$ non-thumb
- $\not\rightarrow$ non-pinky
- toe $\not\rightarrow$ non-big toe
- rectangle $\rightarrow$ non-square
- triangle $\not\rightarrow$ non-equilateral triangle
- Friday $\rightarrow$ today, tomorrow is not Friday
R implicata: Division of labor

a. He got the machine to stop.  He stopped the machine.
b. Her blouse was pale red.  Her blouse was pink.
c. She wants her to win.  She wants PRO to win.
d. I am going to marry you.  I will marry you.
e. My brother went to the church.  My brother went to church.
f. It’s not impossible that you will solve the problem.  It’s possible that you will solve the problem.
g. That’s my father’s wife.  That’s my mother.

## Impliciture

### Challenging the assumption that what is said bears the truth conditions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>I haven’t had breakfast. today</td>
</tr>
<tr>
<td>b.</td>
<td>John and mary are married to each other.</td>
</tr>
<tr>
<td>c.</td>
<td>They had a baby and they got married in that order.</td>
</tr>
<tr>
<td>d.</td>
<td>Robin ate the shrimp and got food poisoning as a result</td>
</tr>
<tr>
<td>e.</td>
<td>Everybody solved the riddle. everybody in our pragmatics class.</td>
</tr>
</tbody>
</table>

Bach 1994, Bach 2001

If they got married and had a child, their parents will be pleased, but if they had a child and got married, their parents will not be pleased.
A brilliant observation

The bottleneck

Speech articulation is extraordinarily slow and comprehension and inference fast. Design result: Build a system that maximizes inferences. “Linguistic coding is to be thought of less like definitive content and more like interpretive clues.” (Levinson 2000:29)

Levinson chooses an approach which builds in a notion of default interpretation.
Consequences for Gricean program

1. An essential component remains intact: Default interpretation plays the role of what is said.

2. General implicature remains a meaningfully different kind of implicature. GIs are the implicatures that go through based entirely on default interpretations, requiring no features of specific contexts.

3. Note: This is certainly not the only approach that could work, given the articulation bottleneck.
Levinson: What do we keep?

<table>
<thead>
<tr>
<th>Maxim</th>
<th>Fate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Only a background role. Different.</td>
</tr>
<tr>
<td>Relevance</td>
<td>Applies to immediate, “ever-variant” conversational goals. Generates only PCIs.</td>
</tr>
<tr>
<td>Quantity</td>
<td>Q1 ⇒ Q-Heuristic</td>
</tr>
<tr>
<td></td>
<td>Q2 ⇒ I-Heuristic</td>
</tr>
<tr>
<td>Manner</td>
<td>M1 ⇒ M-Heuristic</td>
</tr>
<tr>
<td></td>
<td>M4 ⇒ M-Heuristic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manner</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Avoid obscurity</td>
</tr>
<tr>
<td>2.</td>
<td>Avoid ambiguity</td>
</tr>
<tr>
<td>3.</td>
<td>Be brief,</td>
</tr>
<tr>
<td>4.</td>
<td>Be orderly.</td>
</tr>
<tr>
<td>1.</td>
<td>Make your contribution as informative as required</td>
</tr>
<tr>
<td>2.</td>
<td>Do not make your contribution more informative than required.</td>
</tr>
</tbody>
</table>
I have $200 (consistent with NOT exactly, Q interaction with manner, doesn’t seem to match Levinson’s principle ordering)

\[ Q > M > I \]

Q-clausal $>$ Q-scalar
or Q-implicates **not and**, so **not and** is hardly ever lexicalized (*nand*).

Contraries can never both be true; contradictories can never both be be true and can also never both be false.
Some Q-implicates not all, so not all is hardly ever lexicalized.

What are some other examples of lexicalization gaps predicted by Q-implication?

Contraries can never both be true; contradictories can never both be true and can also never both be false.
Consider the scales on the LHS and RHS of the square, \langle Strong, Weak \rangle. Strong entails Weak (going downward):

\langle All, Some \rangle
\langle No, Not all \rangle

Weak Q-implicates Not Strong. Some Q-implicates Not all. Similarly Not all Q-implicates Not no, i.e., the contradictory of No, which is Some.
# Deontic (Aristotelian) Square

<table>
<thead>
<tr>
<th>Corners</th>
<th>Lexicalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>must</td>
<td>mustn’t</td>
</tr>
<tr>
<td>must not</td>
<td></td>
</tr>
<tr>
<td>can/may</td>
<td>can’t/mayn’t</td>
</tr>
<tr>
<td>can/may not</td>
<td></td>
</tr>
</tbody>
</table>

![Deontic Square Diagram](image-url)
Degree (Aristotelian) Square

Hot

contra\(\text{ries}\)

Cold\(\downarrow\)

Warm

contra\(\text{dictories}\)

Cool\(\downarrow\)

I

subcontra\(\text{tries}\)

O

Not \(\text{Cold}\)

Not \(\text{Hot}\)
Scales

Other potential lexical sets

identical/similar/dissimilar/different; complete/partial; long-term, short-term; permanent/durable; huge/large; ancient/old; adore/love/lie; loathe/hate/dislike; knowing/believing; freezing/cold/cool/lukewarm?; excellent/good/allright(OK); awful/bad/mediocre; the/a (Hawkins 1991), Givenness hierarchy (Gundel et al. 1993), present tense/past tense
### Diagnostics for scalar implicature

#### Cancelling

<table>
<thead>
<tr>
<th>Statement</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>“W and even S”</td>
<td>Some and even all of them came.</td>
</tr>
<tr>
<td>“Not only W, S”</td>
<td>Not only some of them came; all of them came.</td>
</tr>
<tr>
<td>“W in fact/indeed S.”</td>
<td>Some, in fact, all of them came.</td>
</tr>
</tbody>
</table>

#### Suspending

<table>
<thead>
<tr>
<th>Statement</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>“W, or possibly even S”</td>
<td>Some or possibly all of them came</td>
</tr>
<tr>
<td>“W, if not S”</td>
<td>Some, if not all of them came.</td>
</tr>
<tr>
<td></td>
<td>Many, if not most came.</td>
</tr>
<tr>
<td></td>
<td>#Most, if not many, came.</td>
</tr>
</tbody>
</table>
Non-logical/pragmatic scales: *at least, even, etc.*

(1)  
   a. Smoking marijuana is (at least) a misdemeanor in most states.
   b. Smoking marijuana is (at least) a felony in most states.
   c. #? Smoking marijuana is a misdemeanor and in fact it’s a felony in most states.

Contraryness, modification by *at least* does not secure a **logical** Q-scale.

(2)  
   a. He’s not an Aztecs fan. He’s not even a Chargers fan.
   b. He doesn’t like *Rocky IV*. In fact, he doesn’t even like *Rocky*.
   c. He voted for Mitt Romney. He even voted for Donald Trump. (Well, just how conservative is he?)
   d. He can do the round in 72, if not 70. (Golf!)
   e. John can climb hills. (He can’t climb mountains)
Conditionals fail the DE text

1. If you vacation in Malta, you will have a good time.
2. If you vacation in Malta and are attacked by terrorists, you will have a good time.
3. If (a) is true, that does not seem to guarantee (b).
4. Since

\[ \{\text{you vacation in Malta and are attacked by terrorists}\} \subseteq \{\text{you vacation in Malta}\} \]

that means conditionals are NOT DE (contra Ladusaw).
Conditionals are highly context-bound

The essentially pragmatic nature of conditionals

Conditionals are always evaluated versus a rich background context. For example, we have to hold some assumptions constant in evaluating any counterfactual:

(3) a. If Bizet and Verdi were compatriots, then Verdi would be French.
    b. If Bizet and Verdi were compatriots, then Bizet would be Italian.
Heim’s pragmatically limited DE-ness

- NPIs do not require a context which yields all DEs. They only require a context yielding all entailments on a **pragmatic scale**: relevant to the conditional. (Israel 2004):

  **Informativeness scale**

  a reads $N$ newspapers and $a$ is informed to degree $d \Rightarrow a$ reads more than $N$ newspapers and $a$ is informed to at least degree $d$

- The speaker **only** commits to strengthenings that move you up that scale.

  (4) a. If you read any newspaper, you are well-informed.
  b. If you read two newspapers, you are well informed.
  c. If you read a newspaper and have a memory like a sieve, you are well informed.
Heim’s prediction

Pragmatically sound vs. pragmatically odd

Given the informativeness scale:

(5)  a. If you read any newspaper at all, you are well-informed.
    b. If you read any newspaper at all, you remain quite ignorant.
Horn’s metalinguistic negation and Q

- He didn’t eat 3 carrots – he ate 4 of them.
- She isn’t aptriotic or quixotic — she’s both.
- I’m not happy – I’m ecstatic
☐ She wasn't able to solve the problem. (≠ She didn't!) (≠ She was able to solve it but didn't).

☐ He wasn't clever enough to figure out the answer. (≠ He didn't)

☐ # My secretary didn't smile. I have a male secretary.

☐ John didn't have a drink. That was a Shirley Temple!
Revisions

1. Importance of various maxims not equal.
2. Some reformulation of the maxims seems desirable.
3. Isn’t a principle about rational action what’s called for? (Collaboration not required)
   \[ Do \text{ enough}; \text{ don’t do too much}. \]
4. Propositional content not determined by the explicit linguistic forms (goes beyond deixis)
5. Implicature still needed
Conversational implicature.  

You don't say?  

Pragmatics and the lexicon.  
In Horn and Ward (Horn and Ward 2004), 488–514.

Cognitive status and the form of referring expressions in discourse.  

On (in)definite articles: implicatures and (un)grammaticality prediction.  

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*Presumptive meanings: The theory of generalized conversational implicature*.  
Cambridge, MA: MIT Press.