

Q- and R-based implicature (Horn 1984)

Pragmatics WG

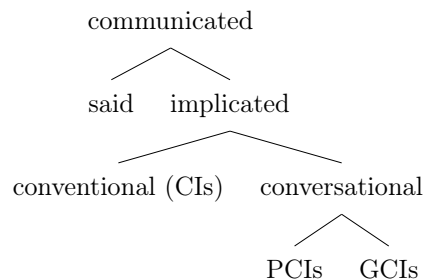
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1 Background

1.1 Grice 1975

- Certain linguistic inferences (incl. those associated with NL counterparts of formal connectives, pp.41–43) can be explained by giving “attention to the nature and importance of the conditions governing conversation.”
- **Important distinction:** what is *meant* vs. what is *said*
 - Truth-conditional content vs. **conventional implicature** (p.45; Karttunen & Peters 1979, Potts 2005, a.o.): discourse effect (e.g.: general relation of consequence assoc. with *therefore*)
 - **Generalized conversational implicature** (pp.56–58) and **particularized conversational implicature**: PCIs are highly context-dependent while GCIs (e.g., *some* \leadsto *not all, but*) are somewhat conventionalized, require cancellation (they are *presumptive*; Levinson 2000)



Conversational implicatures follow from the assumption that conversational participants in any given context are adhering to a **cooperative principle** governing interaction/exchange:

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

- b. *Quality*
 - 1. Do not say what you believe to be false. (supermaxim?)
 - 2. Do not say that for which you lack adequate evidence.
- c. *Relation*. Be relevant.
- d. *Manner*
 - 1. Avoid obscurity of expression
 - 2. Avoid ambiguity
 - 3. Be brief
 - 4. Be orderly

- Conversational participants can fail to adhere to the CP by **violating** a maxim (misleading), **opting out** (signaled departure, no implicature), experiencing a **clash** (e.g., Quant-1 vs. Qual-2), or by **flouting/exploiting** a maxim (resolution/explanation leads to implicatures)

“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 [CP]; (2) the supposition that he is aware that, or thinks that, q is required in order to make his saying [...] 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.” (pp.49–50)

- 1. **Cooperative presumption:** conversational implicatures are only validly drawn where the CP can be assumed to be operative (participants have mutual goal or are aware of each others’ goals)
- 2. **Determinacy:** conversational implicatures are determined by adherence to the CP (the speaker’s knowledge of and intention to adhere)
- 3. **Mutual knowledge:** conversational implicatures involve S and H reasoning about each others’ behavior (*vis a vis* the CP)

- **Features/properties of conversational implicature:**

- 1. *Calculability*. Implicatures can be worked out roughly as follows:
 - (a) S has expressed proposition *p*
 - (b) S has not signaled or inadvertently indicated non-adherence to the CP
 - (c) S would not express *p* unless S thought that *q*
 - (d) S knows (and knows that H knows that S knows) that H reason that S thinks *q* is required
 - (e) S does not stop H from thinking *q*
 - (f) S is willing to allow H to think that *q*
 - (g) So, S has implicated that *q*
- 2. **Cancelability/defeasibility**. Speaker denial of the implicature is non-contradictory (and blocks the implicature).

Uncanceled implicatures are supposed to be optional, which doesn’t necessarily square with *determinacy*; Lauer (2013) argues for a class of non-optional implicatures

3. **Non-detachability.** Implicatures are based on truth-conditional meaning, not the form in which that meaning is presented (but: manner?)
4. **Additional properties:** implicated meaning is not conventionalized, only associated with the *use* of sentences, content of the implicature can be *underdetermined* (conflicts with determinacy?)

- **Examples given by Grice:** pp.51–56

- (A) Implicatures can be generated by assuming no maxim is violated (out of gas scenario)
- (B) Implicatures generated by clashes (ignorance inferences)
- (C) Overt violations (underinformativity where ignorance cannot be the reason, overinformativity, surface irrelevance, ...)

1.2 Neo-Gricean pragmatics

Some issues with the Gricean theory: (see also Davis 2024, *Stanford Encycl. of Philosophy*)

- **Explanatory adequacy (non-cooperativity can be pragmatic).** *Even if the maxims are descriptively adequate*, Grice's theory (specifically, the CP and associated maxims) are derived from an assumption of cooperativity and shared goals: to the extent that pragmatic inferences still arise (and pragmatic behaviour is observed) in uncooperative or non-interactive contexts, a deeper rationale seems warranted
- **Descriptive adequacy.** The maxims may not be descriptively adequate: lacking additional constraints, they may well overgenerate (example: what is an appropriate set of 'stronger' alternatives for scalar implicatures, and what determines whether we get an ignorance inference or a non-epistemic scalar inference)
- **Problems with determinacy.** Determinacy requires that the implicature must be believed to make an utterance consistent with the cooperative principle, but this doesn't square with the idea that multiple possible implicatures may be possible in a maxim-flouting situation
- **Conflict resolution.** How are clashes between maxims resolved? (Which one wins, and how does context affect this?)

Alternatives/refinements:

- **Neo-Gricean approaches** are (broadly) attempts to rectify lacunae in the Gricean theory: to reduce the number of maxims, derive them from deeper behavioural principles, describe a procedure for resolving clashes, etc. (Horn 1984, Levinson 2000, but there are many others: game- and optimality-theoretic pragmatics, RSA/Bayesian approaches seem to me to fall under this umbrella)
- **Alternatives:**
 1. **Relevance theory** (Sperber & Wilson 1986, ff.)
Roughly, attempts to replace the CP with a single cognitive principle of relevance (relevance varies directly with positive cognitive effects/information transmitted and inversely with processing effort); an optimization-based theory (see also distinctions between explicature/implicature; Carston 1988, and implicature; Bach 1994)

2. Intention and convention-based theories. (Davis 2003)

Implicatures are based on speaker intentions, without reference to conversational principles, using more generalized principles of reasoning/induction/abduction about behaviour; sentence (as opposed to speaker) implicatures are based on conventions (scalar inferences, GCIs; these depend on linguistic resources)

2 Horn 1984: Conflict-driven implicature

2.1 Principles of least effort

Overarching goal: Reduce the principles governing communicative behaviour; pragmatic inferences are drawn in the conflict between a speaker and a hearer-based communicative pressure

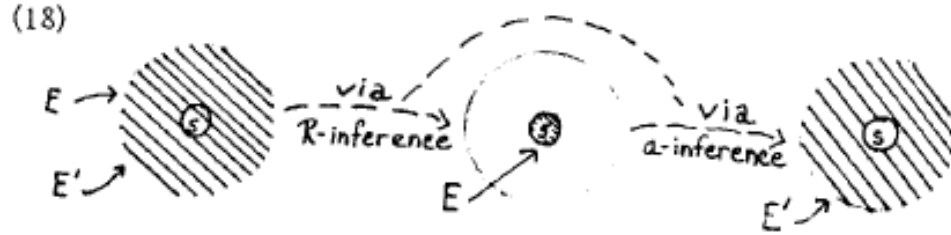
- Q and R principles (below) are based on a general **Principle of Least Effort** (economy; Zipf 1949) as applied to speaker and audience in a communicative exchange (arguably a general principle of human behaviour) (Truthfulness/Quality is given special status)
 1. **Q principle.** (Hearer-driven)
Make your contribution sufficient (cf. Quantity-1), say as much as you can
 2. **R principle.** (Speaker-driven)
Make your contribution necessary (cf. Relation, Quantity-2, Manner), say no more than you must
- *Speaker's economy* would tend towards minimizing production effort (small number of highly ambiguous options), *Hearer's economy* would tend towards maximal specialization (ignoring learnability; principles of this sort are incorporated into the RSA *Speaker's formula*): "It is in the crucible of this conflict ... that language change is formed" (p.11)
- How do we know which principle 'wins' in a given situation?
 - (2) (a) is scalar (Horn 1972), (b) is based on relevance (Karttunen 1970)
 - a. It is possible that John solved the problem.
 \leadsto (For all S knows), John didn't solve the problem. Q
 - b. John was able to solve the problem.
 \leadsto (John solved the problem) R
 - (3) (a) imposes upper bound on information, (b) enriches informativity
 - a. X is meeting a woman today
 \leadsto The woman is not in a canonical relationship to X Q
 - b. I broke a finger yesterday
 \leadsto The finger is mine R
 - (4) Politeness examples (pp.15-16): incl. effects of T- vs. V- address
- **For discussion?** Malagasy (according to Keenan 1976, p.17 of Horn) speakers seem to ignore a Quantity principle, prioritizing avoidance of guilt/offense (R-based, according to Horn)

2.2 Illustrations

1. Atlas & Levinson's (1981) discussion of **quantity vs. informativity** illustrates cases where Q and R clash (pp.17–19)
 - Q (scalar) implicatures enrich what is said by ruling out situations that would be covered by a more informative but roughly comparable lexical item (“an expression of roughly equal length”)
 - R (informativity) inferences precisify what is said (moving in opposition to a Q prediction)
 - Examples: conditional perfection, temporal/causal enrichment of conjunction, indirect speech acts, ...
 - For A&L, we get informativity inferences when the expression used is non-specific with respect to a set of predicates, but one of the predicates is stereotypical
 - How is the clash resolved? With reference to information about availability of suitable Horn scale, stereotypicality
 - Indefinites can go either way (Horn suggests that the use of the genitive in the R cases might suggest that the speaker has only one of the item in question, but this is obviously wrong: *I broke my finger* is a completely normal description)

(9a) Quantity in force:	(9b) Informativeness in force:
I slept on a boat yesterday→ The boat was not mine	I lost a book yesterday→ The book was mine.
I slept in a car yesterday→ The car was not mine	I broke a finger yesterday→ The finger was mine
Mort and David took a shower→ They took separate showers	Mort and David bought a piano→ They bought a piano together

2. **Linguistic consequences:** Q and R inferences behave differently under negation
 - Q-based inferences have both standard and metalinguistic negation readings: Horn describes the metalinguistic readings as ones which target the implicated meaning
 - R-based inferences only have ‘standard’ negation readings; this is supposed to follow from the logical relationship between what is inferred (narrower/more precise) and what is said
 - This discussion is on pp.20–22: worth working through it
3. **Divison of pragmatic labour:**
 - (a) Specialization of marked (more complex) forms for less typical situations (marked messages; see also Levinson): pp.22–23
 - Use of marked expression signals an informational need that might not have been met by the unmarked expression (why not?)



- The result describes an (unstable) *Horn equilibrium*, in which there may be a tendency for the marked form (where frequent) to become lexicalized as specialized
- (b) Avoidance/insertion of pronouns and other deictic expression (pp.23–24): the idea is that ‘missing’ pronouns (in control configurations) are interpreted one way (coreferential; Q), while overt pronouns tend to go another (contrastive; R)
- Deictic temporal reference is supposed to block ‘local’ reference for absolute expressions: how do Q and R conflict here?
- (c) Other examples also related to markedness (pp.25–27): lexical blocking, partial blocking (Kiparsky 1982), (in)directness of causative expressions
- (d) Indirect speech acts (pp.29–30): some modals are associated with ISAs to an extent which allows conventionalization (compatibility with *please*); idea is that periphrastic (supposedly synonymous) constructions come with a markedness inference, which suspends the automatic ISA calculation
- (e) Double negations: weakly interpreted *not unfriendly*, *not infrequent* are longer and thus less stereotypical than their non-negated counterparts (Q-driven)

4. Language change driven by Q-R clash:

- Clipping/truncation/abbreviation driven by R (effort) for frequent expressions, balanced by Q (contextual recoverability)
- Lexical shifts: narrowing to stereotypical instances (R; *liquor*), or to subfield space not covered by a specific alternative (Q; *goose* to specify female goose)
- Lexical shifts: broadening (brand name bleaching; R based) involves a term for a stereotypical example of some class *P* coming to stand for all of *P*

3 References

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