

Handout for “Semantics versus Pragmatics: The Case of Free-Choice ‘or’”

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- (1)
- a. Socrates was taller than Plato or Aristotle (+CF, i.e., has conjunctive force)
 - b. *Socrates was taller than Plato and taller than Aristotle*
 - c. Socrates could have been a lawyer or a banker (+CF)
 - d. *Socrates could have been a lawyer and could have been a banker*
 - e. If Socrates had been a lawyer or a banker, he'd have lived longer (+CF)
 - f. *If Socrates had been a lawyer he'd have lived longer and if he'd been a banker he'd have lived longer* (note: from (e) to (f) is *valid* for material and strict conditionals)
 - g. Socrates might speak in Doric or Ionic (you can never predict) (+CF)
 - h. *Socrates might speak in Doric and might speak in Ionic*
 - i. Socrates may speak in Doric or Ionic (the permitted conference dialects) (+CF)
 - j. *Socrates may speak in Doric and may speak in Ionic*

Note that conjunctive force can be dispelled by ‘which’-riders, e.g., *Socrates was taller than Plato or Aristotle, but I forget which one.*

A semantic account of (+cf) interpretations

There are a few. The one in (2) below goes back to Makinson 1984 (alas!). We posit a free choice operator, ‘for each identical to’, of variable degree and type:

- (2)
- a. (for each x : $x = \text{Plato} \vee x = \text{Aristotle}$)[Socrates was taller than x]
 - b. (for each φ : $\varphi = \text{being a lawyer} \vee \varphi = \text{being a banker}$)[$\diamond\varphi(\text{Socrates})$]
 - c. (for each φ : $\varphi = \text{being a lawyer} \vee \varphi = \text{being a banker}$)[$\varphi(\text{Socrates}) \square\rightarrow \text{lives longer}(\text{Socrates})$]

and so on. The effect of a ‘which’-rider compels a pure disjunctive reading of the utterance (see (4)) by indicating that the speaker is not committed to the truth of both disjuncts.

A pragmatic approach to (+CF) readings

The main idea is that the italicized statements in (1) are *pragmatic enrichments* of their counterpart non-italicized statements. The mechanism that generates the pragmatic enrichment is sometimes said to be like the one that produces *scalar implicatures*. A scalar implicature is a kind of *conversational implicature* (Grice). This latter is a proposition that is not literally expressed by the statement made, but is naturally taken to be conveyed by the statement or the manner of making it. Conversational implicatures can be *worked out* by audiences if they make certain assumptions about the speaker, primarily (R) that the speaker is rational, and (C) that the speaker is *co-operative*. Grice breaks down co-operativeness into the observance of various *maxims*, of which the two most relevant here are

Quality, ‘say only what you have good grounds for and believe to be true’, and *Quantity*, ‘do not omit information which would usefully serve the purpose of the conversation, do not include information which does not usefully serve the purpose of the conversation’.

Example of scalar implicature: ‘Some of my friends still smoke’ \rightsquigarrow ‘Not all my friends still smoke’. The idea is that some words are arranged in scales, such as $\langle \textit{some}, \textit{all} \rangle$. A co-operative speaker who uses a term lower in some scale implicates the negations of the stronger statements resulting from substituting any term higher on the scale for the lower term actually used. For by *Quantity*, the co-operative speaker in a position to assert a stronger statement would do so. So if that statement is not made, the speaker lacks the corresponding belief. Consequently(???), the audience enriches the literal meaning of the statement with the negation of the stronger statement that wasn’t made.

Derivation of conjunctive force for (1g), i.e., how an audience might work ‘ $\diamond\text{Psd} \wedge \diamond\text{Psi}$ ’ out (this is just an example to get the flavor – it’s meant only for epistemic possibility). Suppose

(C) S is co-operative

(R) S is rational

(M) if S asserts $\diamond p$, S speaks truly iff p is consistent with what S believes

(A) S asserts (1g), $\diamond(\text{Psd} \vee \text{Psi})$, and asserts nothing else.

(a) Assume for *reductio* that $\neg\diamond\text{Psd}$ for S .

(b) The subject-matter is mundane, so S will detect the inconsistency given by (M) from (a) and come to believe $\neg\diamond\text{Psd}$ (rather than abandon some other belief, suffer a nervous breakdown, etc).

(c) By (C), specifically *Quality*, and (A), S believes (1g), $\diamond(\text{Psd} \vee \text{Psi})$.

(d) By (R), S infers and comes to believe $\diamond\text{Psi}$ (using $\diamond(p \vee q), \neg\diamond p \models \diamond q$)

(e) By (A), S asserts only something weaker than $\diamond\text{Psi}$ [note $\diamond\text{Psi} \not\models \diamond(\text{Psd} \vee \text{Psi})$].

(f) So (C) is false (by (e), S violates of *Quantity*)

(g) By this contradiction we reject the assumption $\neg\diamond\text{Psd}$. This gives us our first conjunct.

(h) Now assume for *reductio* that $\neg\diamond\text{Psi}$.

(i) $\diamond\text{Psi}$ by the same steps as led to (g).

$\therefore \diamond\text{Psd} \wedge \diamond\text{Psi}$, the implicature of (1g) and also its conjunctive-force enrichment.

Characteristic features of conversational implicatures: (I) CB, *cancellability* (‘some of my friends still smoke, indeed all of them’ is consistent and lacks the ‘not all’ scalar implicature of ‘some of my friends still smoke’). Cancellability has no exceptions (according to HPG). ‘Which’-riders cancel CF. Also, (II) ND, *non-detachability* (of conversational implicature under substitution of synonyms). Non-detachability may have *Manner* exceptions (e.g., pronouncing the same or a synonymous sentence with weird intonation *versus* without).

Counterexamples to non-detachability of conjunctive force:

- (3) a. Socrates was taller than Plato or Aristotle (+CF)
 b. Socrates was taller than Plato or taller than Aristotle (-CF)
 c. Socrates was taller than Plato or was taller than Aristotle (-CF)
 d. Socrates was taller than Plato or he was taller than Aristotle (-CF)

If (3a) is semantically unambiguous, all four examples in (3) express the same proposition, namely,

- (4) **((taller-than(plato))(socrates)) or ((taller-than(aristotle))(socrates))**

and plausibly the only difference between the four is how much material is elided from the second disjunct. Since conjunctive force is detached after (3a), there must be something special about the *manner* in which (4) is expressed by (3a) that generates (3a)'s (+CF) feature, if the latter is a conversational implicature. Candidates? Why should repetitiousness be associated with (-CF)?

[The problem for Makinson's *semantic* approach to CF is to explain why there aren't parallel (+CF) readings of (3b)–(3d) in the style of (2a). For example, why can't we interpret (3b) as

- (5) (for each φ : $\varphi =$ being taller than Plato $\vee \varphi =$ being taller than Aristotle)[φ (Socrates)]?

One structural difference between (2a) and (5) is that in (5), the expression which licenses a (+CF) reading, namely, the comparative adjective *taller*, is distributed across the disjuncts of the free-choice operator. Perhaps this is disallowed.]

- (6) a. It's consistent with the laws of metaphysics that Socrates be a lawyer or a banker (+CF)
 b. It's consistent with the laws of metaphysics that Socrates be a lawyer or consistent with the laws of metaphysics that he be a banker (-CF)
 c. It's consistent with the conference rules that Socrates speak in Doric or Ionic (+CF)
 d. It's consistent with the conference rules that Socrates speak in Doric or consistent with them that he speak in Ionic. (-CF)

(6a) and (6b) may express different structured propositions, but the propositions are logically equivalent by Gricean lights, and similar in the language used to express them (ditto (6c) and (6d)). So we have another counterexample to non-detachability, which, if CF is a pragmatic phenomenon, would have to be explained in terms of *Manner*-violation. Again, it's hard to see how this is to be done.

[The examples in (6) confirm the hypothesis that the licensing expression for introduction of the free-choice operator, in this case 'it is consistent with....that...', cannot be distributed across the disjuncts of the operator.]

- (7) a. Socrates might speak in Doric or he might speak in Ionic (+CF)
 b. It’s consistent with what I believe that Socrates will speak in Doric or consistent with what I believe that he will speak in Ionic. (–CF)

Someone who understands both examples will treat the corresponding disjuncts as roughly synonymous (or if you have a more realistic consistency analysis of epistemic ‘might’, substitute it in (7b); the result will still be –CF). So again there is a counterexample to non-detachability, only this time mere repetitiousness cannot be the crux of the explanation. [*But*: the semantic account also has a problem, since (7a) appears to distribute ‘might’ across the disjuncts of the operator:

(each($\lambda p.p = \Diamond \text{speaks-in(doric)(socrates)}$ or $p = \Diamond \text{(speaks-in(ionic)(socrates))}$)) $\lambda q.q]$

- (8) a. Socrates could become a lawyer or [Socrates could become] a banker (+cf)
 b. Socrates will become a lawyer or [Socrates will become] a banker (–cf)

This isn’t really a counterexample to non-detachability, since (8a) and (8b) are hardly synonymous, but they are similar enough in relevant respects for it to be a puzzle that (8b) is –CF. One explanation: (8b) has an overriding ‘but not both’ conversational implicature. Question: does the ‘but not both’ implicature arise simply from *S*’s failure to assert the conjunction, or must there also be some appearance of incompatibility between the disjuncts? If the former, then (8a) and (8b) are on the same footing. If the latter, then when there is no such appearance, CF should be detected, but it isn’t (‘Socrates will become an educator or an educational administrator’). [For the semantic approach, the contrast in (8) is hard to accommodate non-stipulatively.]

Advantages and disadvantages of the respective approaches

Other than issues about how well each approach accounts for the details of the cases, the Gricean approach has a very substantial attraction. According to Grice, a conversation isn’t just a disconnected series of remarks, but a co-operative enterprise governed by norms of rationality. The emergence of free-choice ‘or’ is therefore *inevitable*, since CF conversational implicatures are generated by these norms. By contrast, the best the semantic approach can do to explain why CF exists, I think, is to see it as an evolved solution to an ambiguity problem. In the +CF examples, replacing ‘or’ with ‘and’ would typically generate an individual/collective ambiguity, e.g., ‘A is heavier than B and C’ prompts the question whether or not we mean heavier than the *combined* weights of B and C. Even in (7a), substitution of ‘and’ can suggest that we are postulating a single epistemically possible future in which Socrates speaks both in Doric and Ionic, while (7b) doesn’t seem to raise such a question. It’s far from clear, however, that we get a good enough match between cases in which substitution of ‘and’ produces an ambiguity and cases where a ‘free-choice operator’ is licensed.