

Exclusive Company: *Only* and the Dynamics of Vertical Inference

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The semantics for *only* says this: it asserts that no proposition from the set of relevant contrasts C other than the one expressed by its sister sentence α is true. There is in addition an implicature that α is in fact true. There is an industry devoted to the issue of whether the latter ingredient is an implicature (conversational or conventional), a presupposition, or part of the truth-conditions...For our purposes, we don't need to decide.

(von Fintel 1994: 133)

The goal of this paper is to find out whether for *our* purposes, we do.

1. Symmetricalism and its discontents

The lion's market share in this industry has always been controlled by the conjunctionalists. For Peter of Spain and his fellow scholastics, (1a) entails the conjunction of (1b) and (1c) and thus entails each of them singly.

- (1) a. Only God can make a tree.
- b. God can make a tree.
- c. No one distinct from God can make a tree.

The 'only' particle, *solus* or *tantum*, is an EXPONIBLE to be expounded or unpacked into 'an affirmative copulative proposition whose first part is the same proposition without *only*'—the 'PRAEACENS' or PREJACENT—and whose second part is a negative proposition denying the predicate of all others apart from the subject' (*Tractatus Exponibilium* 21ff., in Mullally 1945: 106-7).

Peter's analysis has been co-sponsored or endorsed by a wide range of twelfth-, thirteenth-, fourteenth-, and twentieth-century scholars, from Burley (cf. Pinborg 1981, De Ryck 1985), William of Sherwood (cf. O'Donnell 1941, Kretzmann 1968), Ockham (1980: 133), Billingham and Alnwick (cf. De Ryck 1982) to Kuroda (1969: 348), Lakoff (1970), Taglicht (1984), van der Auwera (1985), Keenan & Stavi (1986), Krifka (1992), Moser (1992), Burton-Roberts (1993), and von Fintel (1993). A related proposal is elaborated in two papers in this journal by Jay Atlas (1991, 1993); on Atlas's account, (2a) unpacks not simply into the Petrine conjunction in (2b), but into the more complex representation of (2c).

- (2) a. Only Muriel voted for Hubert.
- b. $Fa \ \& \ \sim\exists y(y \neq a \ \& \ Fy)$
 e.g. "Muriel voted for Hubert and nobody other than Muriel did"
- c. $\exists x\forall y[(x=y \leftrightarrow Fy) \ \& \ (Fy \rightarrow y=a)]$
 e.g. "Exactly one individual, and no one other than Muriel, voted for Hubert"

Since it is a consequent of his account, one he regards as a virtue, that (1a) entails (1b) as well as (1c), I'll regard it for now as a variant species of the same symmetricalist genus.

But if *only* sentences have positive entailments, how do we account for the data in (3)-(5), which seem to demand an asymmetric theory on which the negative exponent of (1c) is somehow more equal than its positive counterpart (1b)? Note for starters that the pattern in (3) (see Horn 1969, 1970, 1972) shows that the prejacent can be suspended with the help of an epistemic rider, while the exclusionary clause—like any true god-fearing entailment—cannot be.

- (3) a. Only Kim can pass the test, and it's possible even she can't.
b. #Only Kim can pass the test, {and/but} it's possible that someone else can.
c. #Everyone passed, but {for all I know/it's possible that} someone didn't.
d. All the world is queer save thee and me, and even thou art a little queer.
(attributed to Robert Owen on separating from his business partner in 1828)
e. All the world is queer save me and thee, and sometimes I think thee is a little queer. (attributed to 'an unidentified Quaker speaking to his wife')
f. —Only Kim can pass. [vs. #Kim and only Kim can pass.]
—Yes, that's true. %And {what's more/in fact}, maybe even she can't.

Notice the epistemic qualifier that must in general be present when suspending the prejacent: we can't normally say that only Kim can pass the test, and perhaps she can't. But the contrast between (3a,b) is undeniable, the latter as anomalous as any attempt to remove an entailment recognized by the speaker, as in (3c). Further, there are attested citations in which an exception is canceled without benefit of an epistemic rider, such as that in (3d), a variant of the Bartlett's familiar quotation in (3e). The exclusive counterpart of these exceptives would be something like 'Only you and I are sane and sometimes I wonder about you'. I find the exchange in (3f) imaginable as well, although intuitions apparently differ here.

As we will see in more detail below, *only* subjects license negative polarity items (such as those boldfaced below) in the predicate, as in a classic example cited by Klima (1964: 311) as evidence for the [+affective] status of *only*.

- (4) Only young writers **ever** accept suggestions with **any** sincerity.

Further, fronted *only* phrases (with an adverbial, PP, or NP object in focus) trigger inversion, a property that in modern English is confined to phrases of negative character. The examples in (5c-f) are lifted from Jacobsson (1951: 50-55), Jacobson (1964: 309-10), and Visser (1969: §1436).

- (5) a. Only in Montreal can die-hard film buffs expect to see not only one but three films from Mongolia (*New York Times* article on the Montreal Festival des films du monde, 13 August 1995)

- b. Only in New York can one seek shelter from a storm under takeout mussels in white wine sauce. (New York Times Metropolitan Diary, 20 July 1994)
- c. Only in stories does a dropped glass betray agitation. (Graham Greene)
- d. Only thus can the corruption of society be checked.
- e. Only one new feature did I notice in the landscape, a large, white villa...
- f. Only a year before he had built himself a mansion in Kensington.

Smith (1922) notes the minimal pair in (5e-f), where narrow-scope *only* fails to license inversion in the latter case, but this is the same point made by Klima (1964) and others with respect to the classic pairs in (5’):

- (5’) a. Not even two years ago could you swim there.
(=you couldn’t swim there even 2 years ago)
- a’. Not even two years ago, you could swim there.
(=you could swim there not even 2 years ago)
(Klima 1964: 300)
- b. In not many years will Christmas fall on Sunday.
- b’. In not many years Christmas will fall on Sunday.
(Klima 1964: 301)
- c. In no clothes does Robin look attractive.
- c’. In no clothes, Robin looks attractive.
(sex-neutral adaptation of examples from C. Bird cited by Jackendoff 1972: 364)

Further, inversion in the wide-scope contexts exemplified in (5a-e) is obligatory: ‘In the course of fairly extensive reading in more recent literature, I have not come across a single example of straight order after *only* modifying a whole clause’ (Jacobsson 1951: 54).

In exhibiting the behavioral symptoms of downward monotonic expressions, *only* α phrases are for most speakers differentiated from the corresponding non-monotonic α and *only* α conjunctions. Thus compare:

- (5’’) a. Tonight and only tonight, the opalescent squid will mate. In a frenzy they seize each other, coupling again and again ...
(Voice-over from 3-D IMAX movie *Into the Deep*)
- b. %Tonight and only tonight will the opalescent squid mate.

In the light of these diagnostics, we might consider casting aside the symmetric conjunctive theory in favor of one of a range of asymmetric analyses which agree that the relation of (1a) to (1b) is *not* logical entailment while differing on just what if anything it *is*. On the analysis in (6),

- (6) Horn (1969): only (x=a, Fx)
Presupposes: Fa
Asserts: $\sim\exists y(y\neq a \ \& \ Fy)$

whose silver anniversary the world recently celebrated, (7a) presupposes rather than entailing (7b), thus preserving the distinction between the negative-asserting *only Muriel* sentence and its truly conjunctive *Muriel and only Muriel* counterpart in (7d).

- (7) a. Only Muriel voted for Hubert.
b. Muriel voted for Hubert.
c. Nobody distinct from Muriel voted for Hubert.
d. Muriel and only Muriel voted for Hubert.

On this view, the suspension, polarity, and inversion facts of (3)-(5) would follow from the premise that these properties are associated with the negative assertion or entailment of the *only* sentence. A number of subsequent analyses (e.g. König 1991, Barker 1993) have essentially followed the same line, which is also echoed in the otherwise rather divergent analyses of negative polarity phenomena in Ladusaw (1980) and Linebarger (1981, 1987).

Some asymmetricalists have pushed the presuppositional envelope further into the pragmatics, deriving (7b) as a non-truth-conditional aspect of conventional meaning—a conventional implicature or pragmatic presupposition—or even as a conversational implicature. On such accounts, the positive component of *only* is not part of what is *said* but part of what is *implicated* in an utterance like (7a). Thus in Horn (1979), the positive component of meaning contributed by *only* is taken to be a non-truth-conditional constraint on the appropriate assertion of (7a); the notion appealed to (with some reservations) is that of conventional implicature, à la Grice (1975) and Karttunen & Peters (1979). The same position is endorsed in Rooth (1985), Krifka (1993) and Fretheim (1995).

More radically, the positive component can be taken to represent not a conventional but a conversational implicature. McCawley (1981: 227) is the first to argue explicitly that the use of (7a) conversationally implicates (7b): if the speaker knew that nobody voted for Hubert, it would be a violation of the Quantity maxim (Grice 1975) to assert (7a) (cf. Horn 1992 in defense of this view and Atlas 1993 in opposition).

The most asymmetric theory of all would of course be one on which the logical form of (7a) is simply that of (7c), with the positive component excised. This is in fact Theory G, the line urged by Geach (1962: 187) in *Reference and Generality* on which no relation whatever obtains between the *only* expression and its positive counterpart. Thus 'F (some α)' is not deducible from 'F (only α)' either as an entailment or as a non-truth-conditional aspect of conventional force; nor is there any pragmatic inference involved. Geach's argument from logical convenience—'It is formally much more convenient to treat the exclusive proposition as having precisely the exclusive force of its supposed second [negative] component'—appears to fly in the face of intuition, entailing as it does that "'F (only Θ)" will thus be true when "F()" is true of nothing at all', rendering *Only Hillary could reform health care* vacuously true.