

“Only connect.”
—E. M. Forster, *Howards End*

ONLY connect: How to unpack an exclusive proposition

Laurence R. Horn
Yale University
<laurence.horn@yale.edu>

For the ancient Greeks, the greatest of the Titans was Atlas, whose shoulders support the world. On the broad shoulders of our own Atlas stand the twin edifices of neo-Gricean pragmatics (Horn 1989, Levinson 2000) and Relevance Theory (Sperber & Wilson 1986/1995, Carston 2002). The reinterpretation of Grice (1987)’s maxims in Atlas & Levinson 1981 directly inspired the dualistic model of non-logical inference that I have been purveying since Horn 1984 (see also Horn 1989, 1993, to appear, as well as the tripartite variant in Levinson 2000) and it was Atlas’s emphasis on the underdetermination of truth-conditional content by linguistic semantics (Atlas 1977, 1979) that provides a foundation stone of the Relevance-theoretic line on the semantics/pragmatics interface.

We need to begin by sorting out our Atlases. Despite the various burdens shouldered by each, the original Titanic Atlas, Charles Atlas, and Jay David Atlas are all actually distinct individuals, although some confusion seems to have arisen:

<http://www.addisville.org/artdecember2002.htm>

Earlier this month while sitting in a waiting room, I saw in a magazine a picture of Charles Atlas. It was a picture of the statue at 630 Fifth Avenue in New York City. There he was with his body of great muscles, bearing the weight of the entire world on his shoulders...Many times in this life we feel like Charles Atlas. So often we feel like we have the weight of the world on our shoulders. We do not have to bear that weight. Everything is not meant to be on our shoulders.

<http://www.amazingrace.net/NotMyWill.html>

I want you to go with me to New York City and take a walk up Fifth Avenue. Our first stop is going to be the RCA building. Inside [sic] the RCA building, there is a statue of Charles Atlas. Charles Atlas is straining every muscle, and he is carrying the world upon his shoulders. That’s one way that you and I can live. Now let’s walk across the street and let’s go to St. Patrick’s Cathedral. Inside St. Patrick’s Cathedral there is another statue. This statue is of Jesus...

In fact, as shown at <http://www.sculpturegallery.com/sculpture/atlas.html>, the massive 15-foot bronze in question—commissioned by John D. Rockefeller and sculpted in 1937 by Lawrie Lee—depicts not Charles (let alone Jay) Atlas but the eponymous Titan. For more on the immortal body-builder and erstwhile 97-pound weakling Charles Atlas, né

Angelo Siciliano, see http://en.wikipedia.org/wiki/Angelo_Siciliano. It is Charles Atlas, as seen most impressively modeling those sweat socks in the otherwise buff styling at the site <http://www.sandowplus.co.uk/Competition/Atlas/Handsome/handsome.htm>, and not the Pomonan or Titan, who was the recipient of Physical Culture magazine's \$1000 prize as the World's Most Handsome Man. This honor is not to be confused with the \$500 Atlas Prize offered by Jay (Atlas 1996: 307-8) to "the young man or woman who comes up with a good theory [on why the pseudo-anti-additivity of *only John* licenses weak NPIs]"; see von Fintel (1999: 109) and below for why this award is unlikely to be claimed.

My own debt to Atlas arises from his role as a sparring partner on the semantics of *only*. To what can one attribute our respective series of papers on the topic (Atlas 1991, 1993, 1996, 1997, 2002, 2005, 2006; Horn 1969, 1970, 1979, 1989, 1992, 1996, 1997, 2002), much of it devoted to attacks by each of us on the other's most recent formulation? A bit of etymological research may be helpful in understanding this legacy.

The dictionary of Indo-European roots forming an appendix to the American Heritage Dictionary presents the entry for root IE524 abridged in (1) below. Note in particular the zero-grade form in **6** for our world-supporting Titan and its suffixed counterpart in **3** relating to retaliation (we return to *lex talionis* at the end of this study).

(1) *American Heritage Dictionary* entry for root IE524 [@ = schwa; long vowels are upper-cased], downloadable from <http://www.bartleby.com/61/roots/IE524.html>

ENTRY: tel@-

DEFINITION: To lift, support, weigh; with derivatives referring to measured weights and thence to money and payment.

Derivatives include *tolerate*, *retaliate*, *tantalize*, *Atlas*, *translate*, and *extol*.

1. Suffixed form **tel@-mon-*. [telamon](#), from Greek *telamOn*, supporter, bearer.
2. Suffixed form **tel(@)-es-*. **a.** [toll](#); [philately](#), from Greek *telos*, tax, charge; **b.** [tolerate](#), from Latin *tolerAre*, to bear, endure.
3. Suffixed zero-grade form **tl@-i-*. [talion](#); [retaliate](#), from Latin *tAliO*, reciprocal punishment in kind, possibly "something paid out," from **tali-* (influenced by *tAlis*, such).
4. Suffixed variant zero-grade form **tala-nt-*. [talent](#), from Greek *talanton*, balance, weight, any of several specific weights of gold or silver, hence the sum of money represented by such a weight.
5. Perhaps intensive reduplicated form **tantal-*. [tantalize](#), [Tantalus](#), from Greek *Tantalos*, name of a legendary king, "the sufferer."
6. Perhaps zero-grade form **tl@-*. [Atlantic](#), [Atlas](#), from Greek *atlAs* (stem *atlant-*), name of the Titan supporting the world.

(Pokorny 1. *tel-* 1060.)

expounded (unpacked) into “an affirmative copulative proposition whose first part is the same proposition without *only*”—this is the “*PRAEIIACENS*” 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). Similarly, for Ockham (1980: 132-42), “Every exclusive proposition has two exponents: one affirmative and the other negative. For example, ‘Only a man is an animal’ has these exponents: ‘A man is an animal’ and ‘Nothing other than man is an animal’.”

This symmetricalist analysis has been co-sponsored, endorsed, or independently reached by a wide range of medievals and moderns² (see Horn 1996, 2002 for an extensive roster), but no matter how long the petition on its behalf, the petitioners must cope with the evidence for asymmetry that has been accrued over the last several decades (cf. e.g. Horn 1969, 1970, 1992, 1996). This evidence includes the apparent cancellability, or more accurately suspendibility, of the prejacent, as reflected in the contrast between (4a), which is hopelessly bad, and (4b), which is at least marginally acceptable when the epistemic modal is present.

- (5) a. #Only Ann will pay her taxes on time, and/but maybe someone else will.
 b. Only Ann will pay her taxes on time, and #(maybe) even she won’t.

Similarly, negative polarity items are licensed outside the focus of *only XP* and *only CN* phrases; (6a,b) are cited by Klima (1964: 311) as evidence for the “affective” status of *only*, supporting the essentially negative character of *only* contexts.

- (6) a. Only young writers **ever** accept suggestions with **any** sincerity.
 b. Only his sister will expect him to write **any** more novels.

Also diagnostic of negativity is the role of fronted *only XP* phrases as inversion triggers:

- (7) a. Only in stories does a dropped glass betray agitation. (Graham Greene)
 b. {Only on the High Holy Days/*Even on Tuesdays} does he go to shul.

²I am indebted to Victor Sánchez Valencia for directing me to many of the medieval sources. The earliest one we have located in this connection is Abelard (1079-1142), whose analysis of (i) into the conjunction in (ii) appears in *Tractatus III (Topica)* of his *Dialectica* (Abelard 1970: 332-33).

(i) Socrates tantum est Socrates. ‘Only S. is S.’
 (ii) Socrates est Socrates et nulla alia res est Socrates. ‘S. is S. and nothing else is S.’

As the minimal pair in (7b) makes clear (or the substitution of *even* or *also* for *only* in the other examples, the data seem to suggest that the negative commitment of an *only* sentence, e.g. (4c), counts for more than does its positive commitment, e.g. (4b).

Once we start down the asymmetricalist road, we may reach the conclusion that the prejacent of an *only* sentence is not entailed but rather semantically presupposed (Horn 1969, König 1991), or perhaps conventionally implicated or pragmatically presupposed (Horn 1979, Rooth 1985, Krifka 1993), or maybe just conversationally implicated (McCawley 1981: 227, Horn 1996, van Rooij & Schulz 2005, Ippolito 2005/2006)—or perhaps we could simply ignore it altogether (Geach 1962: 187). (See Horn 1996 for a more detailed survey of these approaches.)

While I'm sympathetic to the spirit of such proposals—and not just because I've endorsed most of them at one time or another—I now side with Atlas in finding them fatally flawed in the letter. In particular, asymmetricalist accounts cannot easily explain away Atlas's observation (1991, 1993) that simple (as opposed to epistemic) cancellations of the prejacent in contexts like (8a,b) are unsalvageably bad.

- (8) a. #Only Hillary trusts Bill, and (even) she doesn't.
b. #I love only you, but I don't love you either.

Further, as Atlas has stressed, *only NP* cannot be a standard downward monotone (or, in Ladusaw's sense, downward-entailing [DE]) operator, given the lack of entailment from (9a) to (9b).

- (9) a. Only Socrates entered the race.
b. Only Socrates entered the race early.

Indeed, eight centuries earlier Peter of Spain (*Tractatus Syncategorematum*, in Mullally 1964: 33) had observed a similar lack of entailment either way between (10a) and (10b).

- (10) a. Only Aristotle moves.
b. Only Aristotle runs.

But that leaves us with the polarity licensing properties of *only* to explain, and Atlas's attempts to do so are roughly as persuasive as my own theory of love in (2a,b). Atlas (1993: 313) begins by distinguishing examples like (6) above or (11a) from (11b,c)

to support his position that “*only* is not, in general, a trigger for Negative [Polarity] Items”.³

- (11) a. Only John ever suspected David Alexander.
b. *Only Bill wants Sam to finish the report until Friday.
c. *Only Phil will give Lucy a red cent.

Since then, the debate has raged between the claim that English *only* is in fact a perfectly healthy specimen of an NPI licenser (Horn 1996, 2002), and the claim that intuitions aside, the apparent NPI licensing effects are misleading (Atlas 1996, 2002, 2005; cf. Giannakidou (2006) on the status of *only* as a “renegade” licenser).

More specifically, Horn (1996) argues that given the long-established converse relation between exclusive and universal propositions—

- (12) ONLY (A,B) [i.e. only As are Bs] \leftrightarrow all Bs are As

—the predicate of an *only*-subject predictably licenses NPIs in the same way that the restrictor of \forall does:⁴

- (12') a. Only symmetricalists have ever had any problems with this.
b. Everyone who has ever had any problems with this is a symmetricalist.

Given the interdefinability of *only* and universals in (12), both corresponding to the subset relation $B \subseteq A$, could the status of the prejacent in the former be reduced to that of the restrictor in the latter, i.e. as an instance of existential import? (See Horn 1996, drawing on Walter Burley’s “De exclusivis”, in Pinborg 1981 and de Rijk 1985.) While this seemed like a good idea at the time and does in fact make some successful predictions, as we shall see below, van Rooij & Schulz (2005) and Ippolito (2005) have independently shown that it must be the prejacent and not the existential proposition that is implied or presupposed by an *only* statement with conjoined NP focus. Thus, (13a) presupposes (to

³ Since Horn (1970), the unacceptability of (11b) has been taken to be a fact about restrictions on the distribution of strong NPIs like non-durative *until*, typically treated in the recent literature by distinguishing between simple DE environments like *only* that license *any*, *ever*, and the minimizers and more restrictive—e.g. anti-additive and antimorphic— environments that are required by strong NPIs. (See e.g. van der Wouden 1996.) (11c) contains a minimizer, but it is unclear why Atlas regards this is unacceptable, given that other minimizers (*lift a finger*, *say a word*, *touch a drop*, *sleep a wink*) are widely acknowledged to be acceptable after an *only NP* subject.

use the term pretheoretically) that John and Mary were at the party (not just that someone was), while (13b) commits the speaker to the proposition that both John and Peter smoke, not just that the set of smokers was non-null.

- (13) a. Only [John and Mary]_F were at the party. (van Rooij & Schulz 2005: (38))
b. Only [John and Peter]_F smoke. (Ippolito 2005: (24))

We will thus assume that whatever the status of the positive inference from an *only* sentence may be, it is the prejacent that constitutes the content of that inference. But given the equivalence in (12) (or at least its validity in the left-to-right direction, which is all Atlas (1996) accepts), doesn't this yield a DE status for *only XP* after all?

Atlas (1996: 285-86) is in fact willing to grant that *only CN* is DE, while continuing to maintain that *only* with NP focus (more exactly *only a*, where *a* is an individual constant) is non-monotonic and hence not a polarity licenser (nor a “negative item”): it only SEEMS to license NPI minimizers because it's (i) a focus operator and (ii) a pseudo-anti-additive quantifier. For (i), he cites the (putative) parallel between *only* and its fellow focus-particle *even* in licensing (some?) minimizers:

- (14) {Only Phil/Even Phil/PHIL} would lift a finger to help Lucy. (Atlas 1996: (22k))

To which my response is: Parallel? WHAT parallel? Unlike *only NP*, which licenses a wide range of NPIs (although not those of the strictest variety, e.g. *in weeks, until midnight*), *even NP* and bare-focused subjects come up spectacularly short, even with the most trigger-happy polarity items:

- (15) a. {Only Phil/*Even Phil/PHIL} ate any of the squid.
b. {Only Phil/*Even Phil/PHIL} could sleep a wink with all that racket outside.

To the extent the versions of (14) with *even* or bare focus are acceptable, this is a fact about the liberation of *lift a finger* from its minimizer status. In this sense, we could imagine a command “Lift a finger, for God's sake”, parallel to the old billboard (recently revived by environmental groups in Australia) beseeching readers to “Give a damn!”⁵

⁴ Indeed, Clark (2006) has recently argued that the NPIs licensed by *only* are exactly the same as those licensed by the restrictors of universals, precisely as predicted by conversion principle in (12), viz. *any, ever*, and the minimizers. We return to this point below.

⁵ Along the same lines, compare the title of Davina Kotulski's book *Why You Should Give a Damn About Gay Marriage* or the Jo Dee Messina country song (and T-shirt spinoff) “My Give A Damn's Busted”.

When we disambiguate in favor of only the true minimizer reading, the acceptability of the *even* and bare focus versions is seriously degraded:

(16) {Only Phil/*Even Phil/*PHIL} so much as lifted a finger to help Lucy.

As to why (some) minimizers should develop the capacity to occur in environments like that of (14) or the *Give a damn* billboard, I would suggest that it's easier to liberate an NPI from licensing requirements if it's an unpaired item (like the minimizers or *budge*) than if it's a member of an NPI/PPI polarity couple (*any/some, ever/sometimes, yet/already, %anymore/still*) (cf. Horn 2001: fn. 1). Note along the same lines that liberated minimizers can often appear naturally in direct denials, while coupled NPIs cannot:

(17) a. I did so {lift a finger to help you/eat a bite of my octopus soufflé}.
 b. I have so {(*)ever} taken a course on polarity/eaten (*)any raw squid}.

It appears that like *any* and *ever*, NPI minimizers are licensed by *only* phrases but not by focus per se. How, then, are we reconcile to this property of *only* with its non-DE character? Atlas's other proposal for explaining (away) this apparent licensing property is to invoke an extended sense of partial negativity exhibited by some quantifiers that are not strictly downward entailing, situating this property with respect to other algebraic characterizations of quantifier types in the spirit of Zwarts (1998):

Atlas's hierarchy of NP negativity (1996: 304):
 non-negative (*Only* μN , *Exactly* μN) < pseudo-anti-additive (*Only a*) <
 sub-minimal/simple DE (*Few N*, *At most* μN) < anti-multiplicative (*Not all N*,
not everyone) < minimal/anti-additive (*No N*)

An anti-additive quantifier Q is one such that the entailments in (18a,b) both hold, as exemplified by the *no*-initial NP in (19):

(18) a. QF & QG ||- Q (F or G)
 b. Q (F or G) ||- QF & QG

(19) a. No dog drinks and no dog smokes ||- No dog (drinks or smokes)
 b. No dog (drinks or smokes) ||- No dog drinks and no cat smokes

On the other hand, *only NP* allows the entailment in (16a) but not that in (16b):

(20) a. Only Fido drinks and only Fido smokes ||- Only Fido (drinks or smokes)
 b. Only Fido (drinks or smokes) ||- /- Only Fido drinks and only John smokes

For Atlas (1996, 1997, 2002), a quantifier instantiating the pattern in (16) which is not upward-monotonic⁶ is PSEUDO-ANTI-ADDITIVE (PAA) and it is this property that is responsible for NPI-licensing, inversion, and the other well-established “negative” behavioral symptoms of *only* phrases—to the extent that these symptoms are attested. The claim is that while [*only* CN] is DE; [*only a*], which is not DE but only pseudo-anti-additive, licenses some NPIs but not all of them (Atlas 2002: 2; cf. Atlas 1993, 1996, Gajewski 2005, Giannakidou 2006). Thus, for example, we do not get (21a,b):

- (21) a. *Only Bill wants Sam to [finish the report until Friday].
 b. *Only John has arrived yet.

However, [*only CN*] is not a perfect trigger either, despite its purported DE-ness:

- (22) a. *Only Democrats [want to leave Iraq until the end of the year].
 b. *Only harmless effluvia [have leaked out into the river yet]

Nor is pseudo-anti-additivity always necessary for NPI licensing. While *only a* is PAA, *only μN* (where μ is a cardinal) is non-negative for Atlas—not even pseudo-anti-additive, much less DE—yet it is as adept at licensing as *only NP* or *only CN*:

- (23) a. Only Democrats ever suspected a conspiracy. [DE]
 b. Only Hillary ever suspected a conspiracy. [pseudo-AA, not DE]
 c. Only three people ever suspected a conspiracy. [not pseudo-AA or DE]

Indeed, a recent empirical study of NPI licensing across a variety of triggers and a variety of polarity items (De Dekker et al. 2005) concludes that an instance of *only μN* , *only 5 babies*, matches the competition—*no one, few babies, not every baby, at most 2 babies*—in licensing such NPIs as *ever, slept a wink, much, in ages, at all, and yet*. In addressing this result, Atlas (2006) has recently argued that *only μCN* (pseudo-)licenses weak NPIs for the same reason that *exactly μCN* does (cf. Linebarger 1987, 1991). But is this true? Compare, for example:

- (24) a. #Exactly 48% of the voters ever believed any of that bull.
 b. Only 48% of the voters ever believed any of that bull.

⁶ There has been some confusion over this point, which Atlas (2006) has helped clarify. Quantifiers like *everybody* or *some CN* satisfy (14a) and not (14b) but also satisfy the upward entailment condition $Q(F \text{ and } G) \Vdash QF \vee QG$: *Some dogs (bark and howl)* entails *Some dogs bark* \vee *Some dogs howl*. So, contra von Stechow (1999: 109) and the oral version of the present talk, *some dogs* does not count as pseudo-anti-additive on the definition of Atlas (1996).

- (25) a. #Exactly 68% of eligible U.S. voters ever bother to register to vote.
 b. Only 68% of eligible U.S. voters ever bother to register to vote.

The licensing of polarity items by *exactly n* is highly constrained (requiring, inter alia, relatively small values for *n*) and arguably does involve an allusion to a relevant implicature, as Linebarger plausibly proposes. But there is no evidence that licensing by *only n* is equally constrained; see again De Dekker et al. (2005), where substitution of *exactly 5 babies* for *only 5 babies* in the tested frames would radically alter the results.

In general, a constituent of the form *only* + NP/PP/CN, or one of the form *the only* CN, will license weak and (some) medium NPIs outside its focus.⁷ Thus consider these examples from Horn (1996: 17-18); notice that replacing *only* with *even* rules out the NPIs (in wavy underline; focus of *only* indicated with small caps).

- (26) a. I've only ever gone there ONCE.
 b. I only go there {SOMETIMES/*EVER}.
- (26') There was only ever ONE GLOVE there that I saw. [testimony in OJ case, 3/16/95]
- (27) a. I only eat any meat WHEN I'M DEPRESSED.
 b. I eat meat only WHEN I'M DEPRESSED ABOUT {SOMETHING/?*ANYTHING}.
- (28) a. Only ONCE have I ever been there.
 b. *Only EVER {do I go there/have I been there}.
- (29) a. Only WHEN I'M DEPRESSED do I ever eat any meat.
 b. ?*Only WHEN I'M EVER DEPRESSED ABOUT ANYTHING do I eat meat.
- (30) a. The only one who said a word was CHRIS.
 b. #Chris only SAID A WORD. (literal only; no "NPI idiom" reading)

If *only a* is neither palpably better than the non-PAA *only* + cardinal focus nor palpably worse than the purportedly DE *only* + CN or the other non-proper name focus constructions, it is not clear what work the property of pseudo-anti-additivity is doing for us. It appears, in short, that problems in overcoming symmetricalism can't be cured by visits to pseudo-AA.

So where do we stand? It would be nice if we could return to a DE account for all instances of *only* licensing, but that door is closed and locked behind us, with a familiar figure standing guard:

To establish the DE-ness of *only*, we need to be convinced that in a situation where it is true that only John ate vegetables for breakfast it is also

⁷ On the apparent occurrence of NPIs WITHIN the focus of *only*, cf. Israel (1995), Horn (1996), Geurts & van der Sandt (2004), and Beaver (2004).

strictly speaking true that only he ate kale for breakfast. It may be misleading and odd to actually assert the conclusion but that does not mean that it isn't *true*. The problem with this account is that it is highly controversial that *only*-sentences can in fact be true in situations where their positive component is not satisfied. If one believed that the positive component is a presupposition in any semantically relevant sense, one would not assent to such an assessment. And if one thought that the positive component is in fact an entailment (albeit perhaps 'backgrounded' in some way), one would also decline to accept Ladusaw's pleading [for the DE-ness of *only*]. And there are plenty of people these camps (to appreciate the heat of debate one just has to look at Atlas 1993, 1996).
(von Fintel 1999: 103)

It is hard to imagine I could emulate the incredulity of the reaction by Atlas to the asymmetric analysis of *only*, cf. Atlas (1996: 280), so let me quote a representative passage:

[Assume Socrates saw a mangy dog in the agora, which escaped the notice of his companions.] Then *Socrates saw an animal* is true. On the downward monotonic view, it is **entailed—entailed!!**—that *Only Socrates saw a snow leopard*. That is, in every possible model (world) in which *Only Socrates saw an animal* is true, *Only Socrates saw a snow leopard* is true in that model...So much the worse for downward monotonicity in *only a* sentences.

While there are, of course, valiant attempts to justify a semantics for *only* where the inference that so offends Atlas' sensibility is perfectly truth-preserving, one cannot deny the force of the objection. (von Fintel 1999: 106)

What we seek is a quasi-asymmetricalist approaches that concedes the non-DE status of *only* environments. One such proposal from von Fintel (1999) invokes the notion of Strawson-entailment. Essentially, one proposition Strawson-entails another if the entailment would go through modulo satisfaction of its presuppositions (cf. Hoeksema 1986 for a precursor of this idea). Strawson-downward entailment can be defined derivatively: A function f of type $\langle \sigma, \tau \rangle$ is Strawson-DE iff for all x, y of type σ such that $x \Rightarrow y$ and $f(x)$ is defined, it holds that $f(y) \Rightarrow f(x)$. (The underlined part is what turns this into an instance of Strawson-DEness.) *Only NP* is not DE, since *Only Chris ordered Thai curry* does not entail *Only Chris ordered Thai red curry* (perhaps nobody ordered red curry), but it does entail *Only Chris ordered Thai red curry if anyone did*. Thus, *only NP* is Strawson-DE in that if the presuppositions of *only* are satisfied (and hence the prejacent is true), the set \Rightarrow subset inference is valid.

But a question naturally arises: is *only a Fs* always undefined when a does not F? (31a) seems FALSE, rather than undefined, if only Atlas can lift the rock, and if the Red

Sox win 101 games and no other team is in triple figures, my wager in (31b) is lost, and not just trapped in Strawsonian limbo.

- (31) a. Only Hercules can lift that rock.
b. I bet you that only the Yankees will win over 100 games.

On the other hand, if nobody can lift the rock, or if no team wins more than 99 games, it's less clear how to assess the truth of these statements (see Horn 1996: 16 and Roberts 2005 for discussion of a similar example). Does this suggest that the Strawson-DE approach can be made to work if we take the presupposition to be not the prejacent itself (*Hercules can lift that rock* for (31a)) but rather, following Horn (1996), the existential premise? While von Fintel himself informally accepts this approach (1999: 104), which directly follows from the conversion principle in (12), we have already seen that such existentialist analyses ultimately prove untenable.⁸

A more general question is just what sort of theory of semantic presupposition and presupposition failure we are prepared to accept (see Atlas 1989 for some relevant considerations). While I agree with von Fintel (1999: 107) on the desirability of finding a middle ground between the strongly asymmetric but flawed approaches to the semantics of *only* and the empirically inadequate symmetricalist competition, the Strawson-DE approach is not the only contender for a happy medium.

⁸ The quiz on "Way Weird" e-mail list's Valentine's Day Special, Feb. 14, 2006, sheds interesting light on this dispute. The quiz is given here, together with WayWeird's answer:

Weird Facts! Which one of these three facts are false!

- 1) Swans are the only birds with penises!
- 2) Mountain sheep are the only animals born with horns. Both males and females are born with bony knobs on the forehead.
- 3) Honey is the only food that does not spoil. Honey found in the tombs of Egyptian pharaohs has been tasted by archaeologists and found edible!

Which one of the facts was false?

If you guessed number 1 then you are wrong! The false fact is actually number 2!

Actually, Giraffes are the only animals born with horns! Both males and females are born with bony knobs on the forehead.

According to other internet sources, however, NO birds have penises, yet 1) evidently does not thereby become a false fact like 2), but is presumably just undefined. The commentary by www.WayWeird.com is consistent with von Fintel (1999) only on the existentialist analysis, a point on which the web site is inexplicably silent.

I have been arguing for some time (Horn 1996, 1999, 2002) that even if we grant entailment status to both (4b) and (4c), not all entailments are created equal. Semantically entailed material that is outside the scope of the asserted, and hence potentially controversial, aspect of utterance meaning (Stalnaker 1978) counts as ASSERTORICALLY INERT and is hence effectively transparent to NPI-licensing and related diagnostics of scalar orientation (Horn 2002: (28)). In particular, we can accept that the *only NP* statement does indeed entail both the prejacent and the exclusive propositions, while maintaining that only the latter component is asserted, the prejacent being assertorically inert.

This approach was partially foreshadowed in a remark of the arch-conjunctionalist Jay Atlas himself (1991: 139): “[I]n asserting *Only a is F*, we do not thereby **assert** *a is F* ...What we do assert **entails** *a is F*, but it does not ‘say’ it” (emphasis in original). Perhaps because his account, unlike the current one, stipulates that *Only a is F* does “say” that exactly one thing is F, Atlas does not draw the same conclusions from his assertoric asymmetry⁹, but the parallel is interesting nonetheless.

Given the contrast between assertion and entailment, we can redefine the classic scopal diagnostics Karttunen & Peters (1979) posited for conventional implicature as diagnostics for non-assertion. As seen in (32), material that is presupposed or conventionally implicated—or, on our account, non-asserted—scopes out of factives. The . the prejacent of the *only* clause, i.e. the proposition that the wealthy will benefit from the tax cuts, is outside the assertive scope of the higher factives.

- (32) a. I just discovered that only the wealthy will profit from the tax cuts.
 b. It’s too bad that only the wealthy will profit from the tax cuts.

When the model contains the prejacent, the *only* statement can be asserted or questioned, but when it contains the exclusion, this is ruled out:

- (33) a. I know the wealthy will profit, but will ONLY the wealthy profit?

⁹Indeed, as we have seen, Atlas has maintained a consistent, but to my mind unwarranted, skepticism on the status of *only a* as a licenser of NPIs, so he does not in fact put the asymmetry to work. An additional problem I have had with Atlas’s conjunctive unpacking of (i) as (ii) is my discomfort with the latter, which strikes me as an extremely unnatural thing for an English speaker to try to say.

(i) Only Muriel voted for Hubert.
 (ii) Exactly one individual, and at most Muriel, voted for Hubert

- b. #I know nobody besides the wealthy will profit, but will ONLY the wealthy profit?
- c. I know nobody besides the wealthy will profit, but I just realized (#only) the wealthy will profit.

On the account of Horn 2002, the entailed prejacent is ignored in the calculation of NPI licensing and inversion, since these properties are sensitive to DOWNWARD ASSERTION, not DOWNWARD ENTAILMENT as such. In languages like Greek (cf. Giannakidou 1998) in which the exclusive particle fails to license polarity items, as seen in (34), downward entailment and not just downward assertion is required; the fact that *monon* is strictly non-monotonic is sufficient to block the occurrence of NPIs like *kanenas*.

- (34) *Monon i Theodora idhe {ti Roxani/*kanenan}*.
only the Theodora saw-3SG the Roxanne/anybody
 ‘Only Theodora saw {Roxanne/anybody}’ (Giannakidou 1998: 154)

Giannakidou (2006) has recently gone over to the dark side, concurring with Atlas that is “a renegade licenser” the co-occurrence of *only* with NPIs explained away as an instance of Linebargerian “indirect” licensing. She points out (with Atlas; cf. (21) above) that *only NP* fails to license all NPIs, as seen in her examples in (35):¹⁰

- (35) a. *Only Bill came either.
 b. *Only Bill is all that intelligent.
 c. *Only Bill arrived until Friday.

But licensing is not a binary thing. Even those polarity items like *either*, *all that*, and *until*, which Giannakidou takes to require overt negative licensers, don’t:

- (36) a. Few of MY friends could make it here either.
 b. If he’s all that smart, why isn’t he rich?
 c. I’ll be damned if I’ll quit until I absolutely have to.

Clark (2006)’s response to Atlas implicitly carries over to Giannakidou as well: the NPIs licensed by *only* in English include those licensed by the restrictors of universals—*any*, *ever*, and the minimizers—and Giannakidou herself endorses the legitimacy of

¹⁰ Following previous observations, Giannakidou notes that in examples like those of (35) *Nobody but Bill* can license *either* where *only Bill* does not. I have argued that the distinction between *only a* and *no X but a* are attributable to the morphosyntax, similar to the differences between *few/little* and *not many/not much*, rather than to any semantic factors (Horn 1996: fn. 12, but cf. Gajewski 2005 for a different view).

universals as licensers.¹¹ When languages differ as to whether their exclusive particles co-occur with NPIs, this can be attributed to the parameterization of licensing by downward entailment vs. downward assertion.

2. On the status of “epistemic cancellation”

When Georg Wilhelm Friedrich Hegel reportedly uttered (37),

(37) Only one man ever understood me, and he didn't understand me.

we can forgive him his rather desperate move to cancel the prejacent on the grounds that he was, after all, on his deathbed at the time. For those who are not similarly *in extremis*, cancellation per se is beyond the pale. But what of suspension, or epistemic cancellation? The putative possibility of sentences like (38a,b) constitutes a central argument in the (independent) defenses by van Rooij & Schultz (2005) and Ippolito (2005, 2006) of a conversational implicature analysis of the prejacent.

- (38) a. Only [Hillary]_F trusts Bill, and perhaps even she does not.
(van Rooij & Schulz 2005: (25a))
- b. Only [Hillary]_F trusts Bill, and maybe not even she does.
(Ippolito 2005: (76))

The claim that the prejacent is easier than the exclusive component to cancel (with an epistemic rider) goes back a ways. The examples in (38) are variants of similar ones in Horn (1996), whence also comes the minimal pair in (39):

- (39) a. Only Kim can pass that test, and #(it's possible) even she can't.
b. #Only Kim can pass that test, and/but (it's possible) someone else can.
(Horn 1996: (3); cf. Horn 1970, 1979, 1992, ad nauseam)

Setting our time machine dial a bit farther back—to Horn (1970: 322)—we arrive at the data in (40), fragrantly redolent of their era.

¹¹ Clark (2006) actually maintains that the two sets of NPIs are identical, but there is reason to believe exclusives are actually stronger licensers than universals. In its coverage of the Ryder Cup, the New York Times reported that “Of the four American rookies, only Zach Johnson (1-2-1) did much” (9/25/05, D5). Similarly, a reader’s review of Mary Karr’s *The Liar’s Club* on amazon.com opines that “Only James Ellroy’s ‘My Dark Places’ and Mikal Gilmore’s ‘Shot Through The Heart’ hold a candle to this in my experience, and I’ve read a few.” The corresponding universals are palpably less adept as triggers:

- (i) #Every rookie who did much had flown over early to practice on the unfamiliar course.
(ii) #All the books that hold a candle to *The Liar’s Club* were on display on the front table.

- (40) a. Only John smokes pot, and even he may have quit.
 b. Nobody but Nixon is worthy of contempt, and possibly even he isn't, either.
 c. Everybody but Nixon is worthy of salvation, and possibly even he is, too.

Even if these exclusives and exceptives with suspended prejacent are not impeccable, they contrast favorably with the impossible instances of suspension of the other component:

- (41) a. #Only John smokes pot, and/but Mary may too.
 b. #Nobody but Nixon is worthy of contempt. Agnew possibly is too.
 c. #Everybody but Nixon is worthy of salvation, and possibly Agnew isn't either.

This contrast is especially vivid in cases in which the suspender is distinct from the original utterer; while the acceptability of B₁'s response below may vary (as indicated by the diacritic), B₂'s version is totally out.

- (42) A: —Only Hillary trusts Bill.
 B₁: —You're right. %And what's more, maybe even she doesn't.
 B₂: —You're right. #But maybe Chelsea does too.

Atlas (1996, 2002, 2005) remains unconvinced of the significance of the distinctions drawn here and in the earlier literature. Despite what Horn “incorrectly thinks” and “mistakenly believes”, he maintains, “there is no epistemic cancellation at all.” But on the other side, we have not only the intuitions of pragmatic and semantic asymmetricalists from Horn and von Stechow to van Rooij & Schulz and Ippolito to rely on, but the testimony of the man on the street, or rather the blogger and chatter on the web. (43) collects various instances of epistemic cancellation of the prejacent of a range of *only* phrases with different foci. (Cites are courtesy of Google except where indicated and the emphasis is mine; in the first example, the subject pronoun refers to access lists and category permissions for dealing with computer security, not to what you might have guessed.)

- (43)
 They are not fail-safe—the consequences of making them too permissive is most likely discovered **only** after a penetration, **and possibly not even** then.

all that bullshit that you hear in a nice clean court of law, where the **only** thing the jury sees are the pictures, **and maybe not even** them if the defense counsel can persuade the judge that they're overly inflammatory

we have created an industrial framework that provides the average man with comforts and conveniences previously enjoyed by **only** the most wealthy and pampered, **and perhaps, not even** by them.

assignments which *look* very good, assignments which *seem* to be at a very high level, may actually test knowledge **only** at the lowest level—**and perhaps not even** that!

one of their trax samples martin ljung doing his "fingal olsson" routine, which could **only** make sense to swedes **and possibly not even** then.

Only with a precise moment-by-moment knowledge of what's to come will you manage to come out on top, **and possibly, not even** then.

[re N.Y. State Governor George Pataki's impatience with the state legislature, reflected in...] his suggestion that the Assembly can do **only one** thing at a time, and **possibly not even** that. ("Just Don't Ask the Governor How It's Going In the Capitol", NYT 6/28/04, B1)

Code so arcane, complex, or ill-structured that it cannot be modified or even comprehended by **anyone but** its author, and **possibly not even** by him/her.

But in each case, it's again only the prejacent that can be suspended (if that!), never the exclusion.¹² Thus, when sportscaster Colin Cowherd, who obviously hadn't consulted his Atlas, opined on ESPN on 4/9/06, "I think the only team that can beat those guys [the Pistons] are the Spurs, and I don't think THEY can beat them", he could NOT have instead stated "I think the only team that can beat those guys are the Spurs, {and/but} I think Miami can beat them too"—or at least not without changing his mind mid-prediction.

So what can we conclude from this brief for asymmetry? For van Rooij & Schulz and for Ippolito, the ability to suspend or epistemically cancel the prejacent forces the adoption of an implicature-based analysis of the relation between *only* clauses and the

¹² Similar observations hold for *only if* conditionals, where the possibility of epistemic cancellation (endorsed by Horn 1996: 6 and pooh-poohed by Atlas 1996: 310-11) is supported by googled examples like those below:

The statement will be excluded from evidence **only if** the officers interrogated you in a custodial situation without first reading you your rights—**and perhaps not even then**.

pedophilia is one of those conditions that can be "cured" **only if** the patient desperately wishes to recover from it (**and perhaps not even then**).

The illusion of effective phrasebooks is possible **only if** trivial items are being exchanged, **and possibly not even then**.

only if the one presently not cooperating would make a difference would he or she bear any of the cost (**and maybe not even then**).

Alongside the attested instances of *only if p but maybe not even if p*, we find no instances of *only if p...and/but maybe if not-p*, nor is epistemic cancellation possible in the frame *if p and only if p...and maybe not even if p*.

prejacent, à la McCawley (1981) and Horn (1996). But the neo-McCawleyan analysis, despite its appeal to current and past card-carrying asymmetricalists, cannot account for the fact that prejacent in *only* sentences simply does not behave like clear instances of implicature. This is seen most clearly in exchanges between a speaker whose utterance (at least potentially) unleashes an implicature and a hearer whose response cancels or suspends it. Thus, in (44) the upper-bounding scalar implicature of A's utterance is cancelled by B without an epistemic rider, while in (45) the conventional implicature of the eventuality end-point associated with A's use of (*not*) *yet* is suspended by B. But in (46), the prejacent is entailed rather than merely implicated, and consequently it cannot be cancelled by B₁ or even for some speakers suspended by B₂.

- (44) A: Are some dogs mammals?
 B: Yes, (some dogs are mammals) and indeed all dogs are mammals.
- (45) A: You haven't fully recovered yet.
 B: No, and what's more, (I'm beginning to think) I never will.
- (46) A: Does only Bush trust Cheney?
 B₁: #Yes, and what's more, even he doesn't.
 B₂: %Yes, and indeed it's possible even he doesn't.

3. *almost* and *barely*: semantic asymmetry or inertia?

The position defended here and in Horn 2002 can account for the behavioral asymmetry between the prejacent and the exclusion of *only* constructions without predicting that the former can in fact be directly cancelled. Nor, as we have seen, does it (unlike the neo-Strawsonian account of von Stechow 1999) assume the viability of semantic presupposition. The distribution of *barely* and *almost* provides additional support for the assertoric inertia approach over those of its rivals.

As seen in (47),

- | | | |
|--|---|------------------------------------|
| (47) a. Kerry almost won the election. | © | a'. Kerry didn't win the election. |
| b. Bush barely won the election. | © | b'. Bush won the election. |

almost is in part semantically negative—from (47a) it follows that (47a')—while *barely* (= *almost not*) is correspondingly in part positive—from (47b) we conclude that (47b') is true. As with *only*, the most straightforward account of the meaning contributed by *almost* and *barely* is a conjunctive analysis:

- (48) Conjunctive analysis: PROXIMAL component + POLAR component
 (Sevi 1998; cf. Hitzeman 1992, Atlas 1997 [for (2b)], Rapp & von Stechow 1999)
- a. Kerry almost won.
 - a'. Kerry “came close to” winning & Kerry did not win
 - b. Bush barely won.
 - b'. Bush “came close to” not winning & Bush won

But it's not the approximative with the negative polar component, *almost*, but the one with the positive polar component, *barely*, that licenses NPIs (cf. Horn 1996, 2002):

- (49) a. #She almost {budged/moved a muscle/touched a drop/spoke to anyone}.
 b. She barely {budged/moved a muscle/touched a drop/spoke to anyone}.

This result is problematic for Linebarger's (1987, 1991) theory of indirect polarity licensing, given the fact that (50a) entails, if it is not logically equivalent to, (50b) (though see Atlas 1984 for a different view); as seen in (51), however, the intimate semantic relation between almost doing something and not quite doing it fails to distinguish their behavior with respect to the distribution of NPIs:

- (50) a. I almost complete my assignments.
 b. I didn't quite complete my assignments.
- (51) a. I almost completed {some/*any} of my assignments.
 b. I didn't quite complete any of my assignments.

Nor does the Ladusaw (1980) downward entailment theory fare much better, given that one who has pulled an all-nighter cannot be truthfully described as having barely slept. Atlas (1997) supports the non-monotonicity (non-DE-ness) of *barely VP* by observing that if John is barely six feet tall, it doesn't follow that he's barely [six feet tall and blond], to which we might add the observation that to be totally naked is not to be barely dressed.

But if *barely* is not as positive nor *almost* as negative as the implications in (47) suggest. Even on Sevi's comprehensive account, where *Almost P* entails/asserts *not P* and *Barely P* entails/asserts *P*, these polar assertions are ‘somehow “backgrounded” or less “prominent” than the corresponding proximal assertions: ‘*almost* is “positive” and *barely* is “negative” in some sense’ (Sevi 1998: 32). But in WHAT sense? How can we elucidate Sevi's scare quotes?

Evidence for the positivity of *almost* and the negativity of *barely* (cf. Ducrot 1973, Sadock 1981, Lundquist & Jarvella 1994, Horn 1996, 2002, Sevi 1998) comes from polarity licensing ((49) above), from inversion (*{Barely/*Almost} had we arrived when...*),

and from the role of approximatives in argumentation. I'm delighted if my laptop is almost working and concerned if it's barely working, even though it's in the former case that it actually functions. If the tank is barely half full, we'd better stop to fill it, while if it's almost half full, we can blithely drive on, although it contains less gas in the latter case. And as Ziegeler (2000) points out, the polar component fails to support causal explanation:

- (52) a. I almost withdrew my paper because I had so many other commitments.
 b. I almost withdrew my paper because I didn't want to let Jay down.

Perhaps we might build in the asymmetry of the polar and proximate components semantically, and indeed there is precedent for this. Two classic asymmetric treatments of the semantics of these approximatives are provided by Ducrot (1973), for whom [*presque p*] has a positive assertion (p is 'non loin' from being true) and a negative presupposition (p is false), [*à peine p*] the reverse and Sadock (1981), for whom [almost p] is true iff p is true in a world not very different from the real world; it conversationally implicates (rather than entailing) $\neg p$. The problem is that, as with the parallel McCawley/Horn/Ippolito/van Rooij & Schulz conversational implicature account of *only*, is that the inferences in (47) do act like entailments, especially with respect to (non-)cancellability. Space prevents a full-dress rehearsal of the details here (see Horn 2002 for a summary and references, and Atlas 2005: Appendix 2 for a recent addendum), but we can touch on the oddness of (53a,b) (the former from Sadock 1981),

- (53) a. #Bill almost swam the English Channel, and (in fact) he did swim it.
 b. #Gertrude barely swam the English Channel, and (in fact) she didn't swim it.

and of the role of the nature of the event in determining the cancellability of the polar component (noted by Schwenter 2002). Thus, contrast the viability of the dialogue in (54a) with the implausibility of the parallel exchanges in (54b,c).

- (54) a. A: Is dinner almost ready?
 B: ?Yes, it's ready.
 Yes, (in fact) {it IS ready/it's COMPLETELY ready}
 b. A: Is Fredo almost dead?
 B: #Yes, (in fact) he's TOTALLY dead.
 c. A: Did you almost kill Sollazzo at the restaurant?
 B: #Yes, (in fact) I DID kill hiim.

Thus, *almost P* is sometimes (quasi-)compatible and sometimes incompatible with *P*, depending on the significance of the distinction (to adapt a remark of Paul Grice) between *P*-ing and not *P*-ing.

We are thus confronted with another instance of quasi-asymmetry, where a straightforward conjunctive analysis will not suffice, yet demoting the polar component to a conversational implicature empirically mispredicts. In the spirit of von Stechow (1999), we might be tempted to invoke the middle ground of Strawson entailment. But do we really want *Kerry barely won* to presuppose that Kerry won and to be undefined if Kerry lost? But if (as I would submit) it's FALSE under those conditions rather than undefined, *barely VP* can't be Strawson-DE, and von Stechow's line on *only* fails to generalize to *barely*.

Rather, the polar component of the meaning of *almost VP* and *barely VP* is **entailed but assertorically inert**, predicting the quasi-monotonic behavior of the relevant clauses. A particularly dramatic illustration of the contrast between asserted and non-asserted entailments comes from the contrast between *almost* and *not quite* (cf. Sadock 1981: 264), two approximatives that are equivalent at the level of what they entail while differing as to what they assert, as seen in Table 1.

	Entailed	Asserted
Proximal Component (<i>almost</i>)	+	+
Polar Component (<i>almost</i>)	+	-
Proximal Component (<i>not quite</i>)	+	-
Polar Component (<i>not quite</i>)	+	+

Table 1

Compare for example, the prima facie contrast between the continuations indicated in (55a,b), and the commensurate difference in licensing properties linked to downward assertion as illustrated in (55c).

- (55) a. It's too bad you almost died in the accident [—now you'll need therapy]
 b. It's too bad you didn't quite die in the accident [—now I'll have to finish you off]
 c. I {never quite/*almost} made it all the way through any of your papers.

As part of my argument that the polar component of *almost* and *barely* clauses, like the prejacents of *only* sentences, represents a non-asserted entailment, I argued in Horn (2002) that (56) must be understood as reporting a discovery that my cat came close to proving the theorem, not that she didn't succeed.

(56) I just discovered that my cat almost proved Fermat's Last Theorem.

Atlas (2002: (23a)) responded by proposing that (57),

(57) a. I just discovered that Andrew Wiles almost proved Fermat's Last Theorem.
b. I just discovered that Andrew Wiles didn't quite prove Fermat's Last Theorem.

when "asserted by a mathematician whose speciality is algebraic geometry and who has discovered the subtle error in Wiles's first proposed proof given by him in a colloquium in Cambridge", does indeed foreground the polar component *not VP*, hence equating to the statement in (57b). But I submit that it is precisely under those conditions that (57b), rather than (57a), would be uttered. Is *almost* equivalent to *not quite*, as Atlas (2002) seems here to be suggesting (contra Atlas 1984)? Well, yes, but only in terms of its entailments, not in terms of how those entailments are packaged.¹³ In a sense (modulo the reconstruction of lexical presuppositions as non-asserted entailments), my analysis of *almost* and *not quite* here harks back to Fillmore (1971) on *criticize* vs. *blame*, in which each of these verbs of judging is taken to assert what the other presupposes.

Summarizing, then, I am sponsoring a reanalysis of *only NP*, *almost VP*, *barely VP* (and other quasi-conjunctives¹⁴) as **entailing** both conjuncts, only one of which is, however, **asserted** (the other being **assertorically inert**), thus capturing asymmetries

¹³ Atlas (2002) essentially endorses the *American Heritage Dictionary* gloss of *almost* as 'nearly, not quite', but this equivalence also fails to explain the contrast in (i):

- (i) A: Is dinner {almost/nearly/#not quite} ready?
B: Yes, in fact it IS ready.

¹⁴ Thus, for example *at most 3* as in (i) is an NPI licenser despite unpacking, on the analysis of Geurts & Nouwen (2005), into a conjunction of (ii) & (iii):

- (i) At most 3 people have (ever) solved this problem.
(ii) It is possible that 3 people have (*ever) solved this problem.
(iii) for $n > 3$, \neg It is possible that n people have (ever) solved this problem.

On the present account, this is because the entailment in (ii) is assertorically inert; *at most n* asserts only the negative proposition in (iii) and is thus effectively downward monotonic.

reflected (inter al.) by NPI licensing. Like Atlas (2002: 12), I “remain as unconvinced as ever that downward entailment can explain the distributional data of NPI licensing”, but I place the blame on the “entailment” rather than on the “downward.”

4. Clefts and exhaustivity revisited

We have one more front in the symmetricalist wars to survey. Unlike focus constructions built on *only*, pure focus constructions (clefts, pseudo-clefts, bare focus) do not entail exhaustiveness. I argued in Horn 1981 that while (58a) presupposes or conventionally implicates the existential premise in (58b), the upper bound in (58c) is not a conventional implicature (contra Halvorsen 1978), nor is it—or its counterpart in (58d), as Atlas & Levinson (1981) maintain)—an entailment of (58a), but rather a generalized conversational implicature.

- (58) a. It was [_Fa pizza] that Mary ate.
b. Mary ate something.
c. Mary ate nothing [within a context-inferrable set] other than the pizza.
d. Mary ate at most one thing [within a context-inferrable set].

This conclusion is supported by the cancellability and non-detachability of the upper bound (see also the supporting evidence in Vallduví 1992 and Blok 1993, and a parallel argument in Shibatani 1990 and Heycock 1994 based on the parallel behavior of the so-called “exhaustive listing” particle *-ga* in Japanese).

For Atlas (1992), on the other hand, clefts—at least those with definite foci—are essentially equivalent to overtly exclusive propositions, so that *It was the pizza that Mary ate* unpacks as *Mary ate something and Mary ate at most the pizza*. Crucially, it entails that Mary ate exactly one thing (contrary to the observations in Horn 1981) and essentially asserts that Mary ate only the pizza.

More recently, in Appendix 3 to Atlas 2005, it is made clear that both definite and indefinite clefts entail an *at most* condition. Once again, *it's a that Fs* and *only a Gs* are logically equivalent, though non-synonymous, and both of these are presumably also equivalent to *it's only a that Fs*. But in fact, *only a* and *it's only a* **assert** exhaustivity, while clefts and other focus constructions assert the assignment of a value for a given variable and only **implicate** exhaustivity. Exhaustivity is part of what is “at issue” (cf.

Potts 2005) in *only* statements, but not in (unadorned) clefts, hence the difference in cancellability witnessed in (59) vs. (60)-(62), or the contrast between (63) and (64).

- (59) A: It's President Bush who's responsible for the abuse at Abu Ghraib.
B: Yes, you're right—Bush, and Cheney, and Rumsfeld.
- (60) A: It's only President Bush who's responsible for the abuse at Abu Ghraib.
B: #Yes, you're right—Bush, and Cheney, and Rumsfeld.
- (61) A: Only President Bush is responsible for the abuse at Abu Ghraib.
B: #Damn straight—Bush, and Cheney, and Rumsfeld.
- (62) a. Mary kissed John, but it was only John she kissed.
b. Mary kissed John, but was it only John she kissed?
- (63) a. *Mary kissed John, but it was John she kissed.
b. *Mary kissed John, but was it John she kissed?

Unsurprisingly, we also find that clefts and other (simple) focus constructions fail to license NPIs (absent a dedicated exhaustivity marker):

- (64) a. Of all our presidents, it's (only) Bush who has proposed tax cuts during a war.
b. Of all our presidents, it's *(only) Bush who has ever proposed any tax cuts during a war.
c. *Of all our presidents, BUSH has ever proposed any tax cuts during a war.

The same contrast obtains in *th*-clefts for what we might call, in homage to Dusty Springfield and Aretha Franklin, the SPM construction:¹⁵

- (65) a. The only one who could ever reach me was the son of a preacher man.
b. *The one who could ever reach me was the son of a preacher man.

The phenomenon is quite general; on June 1, 2006, there were 12,900 raw google hits for the sequence “*I'm the only one who*” compared to just two for the sequence “*I'm the one who*” (one for the irrelevant “*I'm the one who ever so graciously...*”). In this case too, as with *it*-clefts, NPIs are permitted only if maximality (and not just identity) is asserted.

5. Goldilocks and *Lex Talionis*

¹⁵ Curiously, it appears that *the one N* succeeds in asserting maximality here, while neither *the one* nor *the N* does:

(i) The { *man/*one/one man } who could ever reach me was the son of a preacher man.

Similarly for these parallel cases:

My goal has been to navigate safely between the symmetricalist Scylla and the conversationalist Charybdis.¹⁶ Switching Greek metaphors, we might invoke the spirit of Aristotle’s Golden Mean—or, updating slightly, the Goldilocks principle. First there is Papa Bear’s bed, symmetrical to a fault, and a bit too hard for particles like *only* or *barely*. Then there is Mama Bear’s bed, attractively asymmetrical but a bit too soft for distributional comfort. Papa Bear can be no other than Jay David Atlas, who not only possesses the appropriate physical characteristics for the role but is also the leading contemporary heir of the symmetricalist lineage of Peter of Spain, who by the 1276 had assumed the pontificate as Pope John XXI—il Papa in letter and spirit.¹⁷ This leaves the Mama Bear role to Michela Ippolito, although she lacks the suitable ursinity of Jay “Papa Bear” Atlas. While I am proud to don the mantle of Goldilocks, I must share Baby Bear’s just-right bed with others—including von Fintel (1999), Herburger (2000), Abbott (2000, 2005), Bezuidenhout (2005), and Roberts (2005)—who have recently converged on variants of what I have termed assertoric inertia by positing effective functional asymmetries between meaning components that are (more or less) entailed.

I conclude by returning to one of the *-tal-* cognates that emerges from the *Atlas/retaliation* family of etyma, indeed the black sheep of that family. Lex Talionis (from subfamily **3** in (1) above) is not, as one might suppose, a mad Latvian scientist from an unsuccessful Superman sequel, but is instead the law of equal and direct repayment inherited by the Torah from Hammurabi’s code:

[T]hou shalt give life for life, eye for eye, tooth for tooth, hand for hand, foot for foot, burning for burning, wound for wound, stripe for stripe
—Exodus 21: 23-25

(ii) You’re the {*woman/*one/one woman/only woman} I ever loved.

(iii) The {*time/one time/only time} she ever slept with a man she got pregnant.

¹⁶ A slightly different approach to the middle path was suggested by William of Sherwood in his *Treatise on Syncategorematic Words XI.6* (Kretzmann 1968: 71-2):

It is asked why ‘alone’ [*solus*] is called an exclusive rather than an inclusive; for when someone says ‘Socrates alone is running’, Socrates is included under running but the others are excluded. It must be said that it is because the inclusion occurs not as a result of the force of the word but as a result of the statement as it is before the ‘alone’ is inserted into it. The exclusion, on the other hand,...does occur as a result of the force of the word [‘alone’].

¹⁷ Peter’s *Summulae Logicales* (Mullally 1945), with its conjunctionalist analysis of exclusive propositions, preceded his election to the papacy, so no issues of infallibility arise.

And if a man cause a blemish in his neighbor; as he hath done, so shall it be done to him; breach for breach, eye for eye, tooth for tooth: as he hath caused a blemish in a man, so shall it be done to him again. —*Leviticus 24: 19-20*

Whence the maxim and bumper sticker variously attributed to Mahatma Gandhi or Kahlil Gibran (cf. also Cohen & Matson 2002): “An eye for an eye makes the whole world blind.” Fortunately, in the intellectual sphere the effect of Lex Talionis can be more salutary. Jay concludes the preface to his new book (Atlas 2005: xi) with these remarks (emphasis mine):

The final version [of Atlas (2005)] was written in the summer of 2001 after the appearance of Levinson’s (2000) *Presumptive Meanings*. Stephen, like Larry Horn in his *Natural History of Negation* (1989), provided essential stimulus and matter for reflection as I reconsidered neo-Gricean views that in concert with, and in reaction to, them I had been developing since the mid-1970s. My admiration for their work is surpassed only by their cosmic patience with my **criticizing, not to say needling**, them.

I hope I’ve demonstrated here the recursive nature of this needling process—or as I prefer to think of it, intellectual acupuncture.

Acknowledgments

Versions of some of this material were presented in Tel Aviv, Berlin, Tokyo, Reading, Amherst, New Haven, Cambridge, Chicago, and Swarthmore, as well as at the Pomona Jayfest. I am indebted to the commentators after those presentations and to Barbara Abbott, Jay Atlas, Kent Bach, Bart Geurts, Anastasia Giannakidou, Elena Herburger, Janet Hitzeman, Jack Hoeksema, Michael Israel, Scott Schwenter, and Debra Ziegeler for comments. Needless to say,...

References

- Abbott, Barbara (2000). Presuppositions as non-assertions. *Journal of Pragmatics* 32:1419-37.
- _____. (2005). Where have some of the presuppositions gone? Ms., Michigan State U.
- Abelard, Peter (1970) *Dialectica*, 2d edition, ed. by L. M. de Rijk. Assen: Van Gorcum.
- Atlas, Jay David (1977).. Negation, ambiguity, and presupposition. *Linguistics and Philosophy* 1: 321-36.
- _____. (1979). How linguistics matters to philosophy: Presupposition, truth, and meaning. In Oh & Dinneen (eds.), 265-81.
- _____. (1984). Comparative adjectives and adverbials of degree. *Linguistics and Philosophy* 7: 347-77.

- _____. (1989). *Philosophy Without Ambiguity*. Oxford: Clarendon Press.
- _____. (1991). Topic/comment, presupposition, logical form and focus stress implicatures: The case of focal particles *only* and *also*. *Journal of Semantics* 8: 127-47.
- Atlas, Jay David (1992). On exhaustiveness and the semantics of clefts: A reply to Horn. Unpublished ms., Pomona College.
- _____. (1993). The importance of being 'only': Testing the neo-Gricean versus neo-entailment paradigms. *Journal of Semantics* 10: 301-18.
- _____. (1996). 'Only' noun phrases, pseudo-negative generalized quantifiers, negative polarity items, and monotonicity. *Journal of Semantics* 13: 265-332.
- _____. (1997). Negative adverbials, prototypical negation, and the De Morgan taxonomy. *Journal of Semantics* 14: 349-68.
- _____. (2002). NPI licensing and overcoming assertoric inertia. Paper presented at One Day Only, Groningen, 8 May 2002. Downloadable at <http://staff.science.uva.nl/~pdekker/Only/Literature/Atlas2.pdf>
- _____. (2005). *Logic, Meaning, and Conversation*. Oxford: Oxford U. Press.
- _____. (2006). Pseudo-anti-additivity, pseudo-anti-multiplicativity, and the future of L.R. Horn's asymmetry: remarks on *only ProperName* and *even ProperName*. Paper presented at Swarthmore Workshop on Negation and Polarity, April 2006.
- Atlas, Jay David & Stephen C. Levinson (1981). It-clefts, informativeness, and logical form. In P. Cole (ed.), *Radical Pragmatics*, 1-51.
- Beaver, David (2004). Five only pieces. *Theoretical Linguistics* 30: 45-64.
- Bezuidenhout, Anne (2005). Presupposition failure and assertoric inertia. Unpublished ms., U. of South Carolina.
- Blok, Peter (1993). The Interpretation of Focus. U. of Groningen dissertation.
- Carston, Robyn (2002). *Thought and Utterances: The Pragmatics of Explicit Communication*. Oxford: Blackwell.
- Clark, Brady (2006). Polarity items and the interdefinability of universals and exclusives. Paper presented at annual meeting, Linguistic Society of America, Albuquerque.
- Cohen, Allen and Clive Matson, eds. (2002). *An Eye for an Eye Makes the Whole World Blind: Poets on 9/11*. Oakland: Regent Press.
- De Decker, Paul, Erik Larson & Andrea Martin (2005). Polarity judgments: an empirical view. Poster for "Polarity from Different Perspectives", NYU, March 2005. At <http://www.nyu.edu/gsas/dept/lingu/events/polarity/posters/dedecker-larsson-martin.pdf>
- Ducrot, Oswald (1973). *La preuve et le dire*. Paris: Maison Mame.
- Fillmore, Charles (1971). Verbs of judging. In C. Fillmore & D. T. Langendoen (eds.), *Studies in Linguistic Semantics*, 273-89. New York: Holt.
- Fillmore, Charles, Paul Kay & Mary O'Connor (1988). Regularity and idiomaticity in grammatical constructions: The case of *let alone*. *Language* 64: 501-38.
- von Stechow, Kai (1999). NPI-licensing, Strawson-entailment, and context-dependency. *Journal of Semantics* 16: 97-148.
- Gajewski, Jon (2005). *Only John* vs. *nobody but John*: A solution. Poster for "Polarity from Different Perspectives", NYU, March 2005. Downloadable at <http://www.nyu.edu/gsas/dept/lingu/events/polarity/index.html>.

- Geach, P. T. (1962). *Reference and Generality*. Ithaca: Cornell U. Press.
- Geurts, Bart & Rick Nouwen (2005). At least *et al.*: The semantics of scalar modifiers. Ms., downloadable at <http://www.phil.kun.nl/tfl/bart/papers/atleast.pdf>.
- Geurts, Bart & Rob van der Sandt (2004). Interpreting focus. *Theoretical Linguistics* 30: 1-44.
- Giannakidou, Anastasia (1998). *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: Benjamins.
- _____. (2006). *Only*, emotive factives, and the dual nature of polarity dependency. *Language* 82: 575-603.
- Grice, H. P. (1989). *Studies in the Way of Words*. Cambridge: Harvard U. Press.
- Halvorsen, Per-Kristian (1978). The Syntax and Semantics of Clefts. U. of Texas dissertation (= TLF [Texas Linguistic Forum] #11).
- Herburger, Elena (2000). *What Counts: Focus and Quantification*. Cambridge: MIT
- Heycock, Caroline (1994). Focus projection in Japanese. *NELS* 24, 157-71.
- Hitzeman, Janet (1992). The selectional properties and entailments of “almost.” *CLS* 28, 225-38.
- Hoeksema, Jacob (1986). Monotonie en superlatieven. In C. Hoppenbrowers et al. (eds), *Proeven van taalwetenschap*, TABU: 38-49.
- Horn, Laurence (1969). A Presuppositional Analysis of *only* and *even*. *CLS* 5, 97-108.
- _____. (1970). Ain’t it hard (anymore). *CLS* 6, 318-27.
- _____. (1972) On the Semantic Properties of Logical Operators in English. UCLA dissertation, reprinted by IULC, 1976.
- _____. (1979). *Only, even*, and conventional implicature. Paper presented at annual meeting of the Linguistic Society of America, Los Angeles.
- _____. (1981). Exhaustiveness and the semantics of clefts. *NELS* 11: 125-42.
- _____. (1989). *A Natural History of Negation*. Chicago: U. of Chicago Press.
- _____. (1991). Given as new: When redundant affirmation isn’t. *Journal of Pragmatics* 15: 305-28.
- _____. (1992). The said and the unsaid. *SALT II*, 163-92.
- _____. (1996). Exclusive company: *Only* and the dynamics of vertical inference. *Journal of Semantics* 13: 1-40.
- _____. (1997). Negative polarity and the dynamics of vertical inference. In D. Forget et al. (eds.), *Negation and Polarity: Syntax and Semantics*, 157-82. Amsterdam: John Benjamins, 1997.
- _____. (1999). Asymmetric conjunction and assertoric inertia. Paper presented at PRAGMA conference, Tel Aviv, July 1999.
- _____. (2001). Flaubert polarity, squative negation, and other quirks of grammar. In J. Hoeksema et al. (eds.), *Perspectives on Negation and Polarity Items*, 173-200. Amsterdam: John Benjamins.
- _____. (2002). Assertoric inertia and NPI licensing. *CLS* 38, Part 2, 55-82.
- _____. (to appear). Neo-Gricean pragmatics: a Manichaeian manifesto. In N. Burton-Roberts (ed.), *Advances in Pragmatics*. London: Palgrave.
- Ippolito, Michela (2005). An implicature analysis of *only*. Unpublished paper, Boston U.
- _____. (2006). On the meaning of *only*. [Handout for] presentation at SALT 16, Tokyo.

- Israel, Michael (1995). Negative polarity and phantom reference. *BLS* 21, 162-73.
- Jarvella, Robert J. & Lita Lundquist (1994). Scales in the interpretation of words, sentences, and texts. *Journal of Semantics* 11: 33-54.
- Karttunen, Lauri & Stanley Peters (1979). Conventional implicature. In Oh & Dinneen (eds.), 1-56.
- Klima, Edward (1964). Negation in English. In J. A. Fodor & J. J. Katz (eds.), *The Structure of Language*, 246-323. Englewood Cliffs: Prentice-Hall.
- König, Ekkehard (1991). *The Meaning of Focus Particles*. London: Routledge.
- Kretzmann, Norman (1968). *William of Sherwood's Treatise on Syncategorematic Words*. Minneapolis: U. of Minnesota Press.
- Krifka, Manfred (1993). Focus and presupposition in dynamic interpretation. *J. of Semantics* 10: 269-300.
- Ladusaw, William (1980). *Polarity Sensitivity as Inherent Scope Relations*. New York: Garland. [Published version of eponymous 1979 U. of Texas dissertation.]
- Levinson, Stephen (2000). *Presumptive Meanings: The Theory of Generalized Conversational Implicature*. Cambridge: MIT Press.
- Linebarger, Marcia (1987). Negative polarity and grammatical representation. *Linguistics and Philosophy* 10: 325-87.
- _____. (1991). Negative polarity as linguistic evidence. *Papers from the Parasession on Negation*. *CLS* 27, 165-88.
- Lundquist, Lita & Robert J. Jarvella (1994). Ups and downs in scalar inferences. *J. of Semantics* 11: 33-54.
- McCawley, James D. (1981). *Everything that Linguists Have Always Wanted to Know About Logic But Were Ashamed to Ask*. Chicago: U. of Chicago Press.
- Mullally, Joseph P. (1945). *The Summulae Logicales of Peter of Spain*. Notre Dame: U. of Notre Dame Press.
- Ockham, William of (1980). *Ockham's Theory of Propositions: Part II of the Summa Logicae*, tr. A. J. Freddoso & H. Schuurman. Notre Dame: U. of Notre Dame Press.
- O'Donnell, J. R. (1941). The Syncategoremata of William of Sherwood. *Medieval Studies* 3: 46-93.
- Oh, C.-K. & D. A. Dinneen, eds. (1979). *Syntax and Semantics 11: Presupposition*. New York: Academic.
- Pinborg, Jan (1981). Walter Burley on exclusives. In H. A. G. Braakhuis et al. (eds.), *English Logic and Semantics*, 305-26. Ingenium: Nijmegen.
- Potts, Christopher (2005). *The Logic of Conventional Implicatures*. Oxford: Oxford U. Press.
- Rapp, Irene & Arnim von Stechow (2000). Fast 'almost' and the visibility parameter for functional adverbs. *Journal of Semantics* 16: 149-204.
- de Rijk, L. M., ed. (1982). *Some 14th Century Tracts on the Probationes Terminorum*. Nijmegen: Ingenium.
- Roberts, Craige (2005). *Only* and conventional presupposition. Unpublished ms., The Ohio State U.
- van Rooij, Robert & Katrin Schulz (2005). *Only*: Meaning and implicatures. Unpublished paper, ILLC/U. of Amsterdam.
- Rooth, Mats (1985). Association with Focus. U. of Massachusetts dissertation.

- Sadock, Jerrold (1981). Almost. In P. Cole, ed., *Radical Pragmatics*, 257-71. New York: Academic.
- Schwenter, Scott (2002). Discourse context and polysemy: Spanish *casi*. In C. Wiltshire & J. Camps, eds., *Selected Papers from the 30th Annual Linguistic Symposium on Romance Languages*, 161-75. Amsterdam: John Benjamins.
- Sevi, Aldo (1998). A semantics for almost and barely. Unpublished M.A. thesis, Tel Aviv U.
- Shibatani, Masayoshi (1990). *The Languages of Japan*. Cambridge: Cambridge U. Press.
- Sperber, Dan & Deirdre Wilson (1986). *Relevance: Communication and Cognition*. Cambridge: Harvard U. Press. (Second edition, 1995. Oxford: Blackwell.)
- Stalnaker, Robert (1978). Assertion. In P. Cole (ed.), *Syntax and Semantics 9: Pragmatics*, 325-32. New York: Academic.
- Strawson, P. F. (1952). *Introduction to Logical Theory*. London: Methuen.
- Vallduví, Enric (1992). *The Informational Component*. New York: Garland.
- van der Wouden, Ton (1996). *Negative Contexts*. London: Routledge.
- Ziegeler, Debra (2000). What *almost* can reveal about counterfactual inferences. *Journal of Pragmatics* 32: 1743-76.
- Zwarts, Frans (1998). Three types of polarity. In E. Hinrichs & F. Hamm (eds.), *Plural Quantification*, 177-238. Dordrecht: Kluwer.