

## On Negative Polarity: the licensing problem revisited

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*A consultation with the leading authority:*

# Polarity item

[http://en.wikipedia.org/wiki/Polarity\\_item](http://en.wikipedia.org/wiki/Polarity_item) (emphasis added)

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... Licensing contexts across languages include the scope of n-words (negative particles, negative quantifiers), the antecedent of conditionals, questions, the restrictor of universal quantifiers, non-affirmative verbs (*doubt*), adversative predicates (*be surprised*), negative conjunctions (*without*), comparatives and superlatives, *too*-phrases, negative predicates (*unlikely*), some subjunctive complements, some disjunctions, imperatives, and others (*finally, only*). **Given this wide range of mostly non-downward entailing environments, the Fauconnier-Ladusaw Hypothesis has gradually been replaced in favor of theories based on the notion of nonveridicality (proposed by Zwarts and Giannakidou).**

Different NPIs may be licensed by different expressions. Thus, while the NPI *anything* is licensed by the downward entailing expression *at most two visitors*, the idiomatic NPI *lift a finger* (known as a 'minimizer') is not licensed by the same expression.

At most two of the visitors had seen anything.

\*At most two of the visitors lifted a finger to help.

While NPIs have been discovered in many languages, their distribution is subject to substantial cross-linguistic variation; this aspect of NPIs is currently the subject of ongoing research in cross-linguistic semantics.<sup>11</sup> [...]

<sup>1</sup> Giannakidou, Anastasia. Negative and positive polarity items: licensing, compositionality and variation. Prepared for Maienborn, Claudia, Klaus von Heusinger, and Paul Portner (eds). *Semantics: An International Handbook of Natural Language Meaning*. Berlin: Mouton de Gruyter.

### **Standard illustrations of the distribution of NPIs** (Ladusaw 1996: 325-28)

- (1) a. The dean **didn't** sign any of the letters before she left.
  - b. I **don't ever** take the train to work.
  - c. They **haven't** found a reliable contractor yet.
  - d. Mark **didn't** contribute a red cent to the relief fund.
  - e. I'm **not all that** anxious to visit them.
- (2) a. The dean **rarely** signs any of the letters before she has lunch.
  - b. **Few** commuters ever take the train to work.
  - c. I **doubt** they have found a reliable contractor yet.
- (3) a. **If anyone** notices anything unusual, it should be reported to the campus police.
  - b. Has anyone already figured out the answer? [both **NPIs** and **PPIs** possible]
  - c. **Every** customer who had ever purchased anything in the store was contacted.  
(cf. \*Everyone who was contacted had ever purchased anything in the store.)

Two formal answers to the “licensor question” for NPIs:

(i) *DE model, Ladusaw* (1980 et seq.), formalizing scalar model of Fauconnier 1975:

Occurrence in a downward entailment (monotone decreasing) context, licensing inferences from sets to subsets, is a necessary (and sufficient?) condition on NPIs.

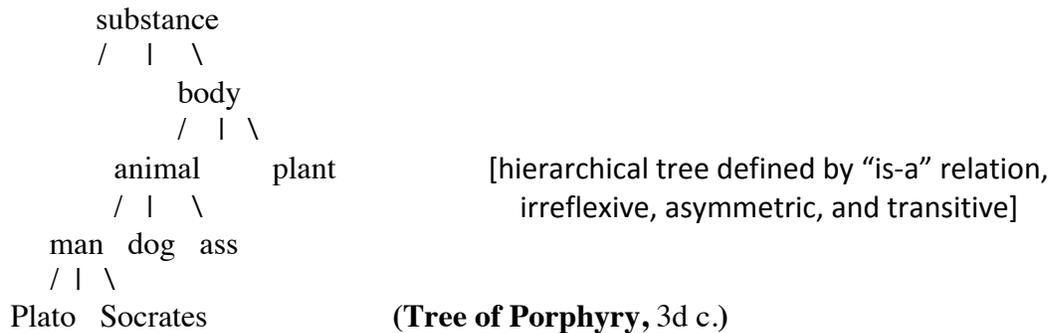
[An expression  $\delta$  is downward entailing iff  $\forall X \forall Y (X \subseteq Y \rightarrow (\delta'(Y) \subseteq \delta'(X)))$ ]

- Problems with NPIs appearing in non-DE contexts ((3a,b), after *only NP*, etc.).
- Attempts to refine, sharpen and generalize DEness: Heim 1984, Kadmon & Landman 1993, Lee & Horn 1994, Krifka 1995, et al.
- Attempts to develop the algebra of anti-additivity, anti-multiplicity, and related notions to distinguish among subclasses of NPIs where downward monotonicity does not suffice to license; cf. van der Wouden (1997), following earlier work by Zwarts
- Foundational critiques by Israel (1996, 2011), Hoeksema (2010), and others

(ii) *NI model, Linebarger* (1981, 1987, 1991), following and extending Baker (1970):

- Direct licensing by *not* in syntax + Indirect licensing by “negative implicature”
- Non- (and a[nti]-)veridicality [Op is nonveridical iff  $Op(p) \rightarrow p$  is not valid] for ordinary licensing + extragrammatical “rescue” operation for weak NPIs appearing in “renegade” veridical environments (Giannakidou 1998, 2006, 2011)
- Note key role of entailment in defining relevant categories (AA, DE, non-V)

The roots of monotonicity in the medieval theory of *suppositio*



Upward and downward inference (as in Billingham’s *Speculum Puerorum* and Alnwick’s *De Veritate et Falsitate Propositionis* in De Rijk 1982, based on earlier models in Ockham and Peter of Spain; see the discussion of VERTICAL RULES in Sánchez 1994 for details) are governed by the following *regulae*:

- There is a valid consequence from an inferior to its superior (*ab inferiori ad suum superius*) in the absence of negation or a term with the force of negation.
  - There is a valid consequence from a superior to its inferior (*a superiori ad suum inferius*) with a preposed negation or distributive term.
- “**preposed negation**”—because it’s only material that falls within the scope of the relevant operator that creates the shift in direction of inference (= scale reversal):

*Non animal currit; ergo non homo currit* vs.  
*Homo non currit; ergo animal non currit.*

(Similarly, see William of Sherwood’s *Syncategoremata*, O’Donnell 1941)

“In general, downward monotonicity is seen as a generalization of properties of negation” (Sánchez 1994: 172), exactly as for Fauconnier and Ladusaw

Terms with the **FORCE OF NEGATION** (*termini habentes vim negationis*) include:

- overt negation
- the comparison clause of a comparative
- restrictors of universals [*Omnis homo currit, ergo omnis homo albus currit*]
- exclusives (*tantum* ‘only’) and exceptives (*praeter* ‘except, but’)

Similar inferential mechanisms are found in Ockham and date back to anonymous authors of the 12th and early 13th centuries

Central idea: expressions that have *vim negationis* block upward inferences and allow downward ones within their scope

**Another historical note:** on minimizers

The canonical effect of NPIs to strengthen the force of negation, often seen as motivating the existence of polarity (Krifka 1995, Chierchia 2004), especially in the case of *any*, *ever*, and minimizers, the ‘partially stereotyped equivalents of *any*’ (Bolinger 1972: 121), traces back not just to Fauconnier (Giannakidou 2011: 1662) but to Pott (1857: 410-11), who depicts an open-ended set of satellites of negation—expressions in Sanskrit, Greek, Latin, German, French, Italian, and English that convey the underlying sense of *nicht einmal das* ‘not even that’, e.g.

*Not a tittle, Not worth a feather’s down/a straw, He does not care a cherry-stone for it; (not) a splinter, a shred, a shiver, an atom.* More generally, for any entity whose extension is small enough to be regarded as atomic in an accessible set of contexts can be used productively in this frame as a means of negative reinforcement, including minimal values from the culinary domain (= ‘not a cherrystone, a chestnut, a crumb, an egg, a fava, a fig, a garlic, a grain, a leek, a lobster, an oyster, a parsnip, a pea,...’), coins of little value (= ‘not a dinero, sou, two deniers’ [cf. *not a red cent, plugged nickel, thin dime*]), animals and body parts (= ‘not a cat’s tail, a hair, a mosquito, a lobster[!], a sparrow’), and other objects of little value and/or salience (= ‘not an accent, an atom, an iota, a jot, a nail, a pinecone, a point’).  
[Pott 1857; see Jespersen 1917, Wagenaar 1930 and other work]

➤Key role of minimizers in Jespersen’s cycle of successive weakening and restrengthening of negative expressions

What else I won’t be focusing on (*inter alia*):

(α) many of the subtle grammatical complexities of licensing NPIs, e.g. the role of c-command, and the possibility of backward licensing, as shown by

- (4) a. That he reads any books at all is {\*(not) obvious/surprising}.
- b. \*A **finger** he wouldn’t lift for his poor old mother. (Ross 1967: 267; Prince 1981)

(β) the fact that polarity can involve not just negation/downward entailment but other collocational restrictions, e.g. free choice (see below) or modality (Horn 1972):

**‘ABLE’ POLARITY:** \*(*can, able to*) {*afford/bear it/tell X from Y/tell X and Y apart*}

**‘UNABLE’ POLARITY:** \*(*can’t, impossible to*) {*fathom/make head or tail of*}

(δ) the “anti-licensing” of positive polarity items. Note that the anti-licensing conditions on PPIs are systematically easier to override, especially in contrastive denials, than are the constraints on corresponding NPIs in contexts of contrastive affirmation:

- (5) a. I DON'T sometimes turn in my assignments late.  
 a'. #I DO SO ever turn in my assignments on time.  
 b. He ISN'T still living in Brussels.  
 b'. #He IS living in Brussels anymore. (# with NPI *anymore*)  
 c. She HASN'T already finished her thesis.  
 c'. #She HAS yet finished her thesis.  
 d. He ISN'T far more capable than you are.  
 d'. #He IS at all capable.

(ε) the fact that (pace Krifka 1995, Chierchia 2004) not all NPIs are reinforcers, some **weaken** rather than **strengthen** *vim negationis* (Israel 1996, 2011):

- (i) EMPHATIC (strengthening) NPIs: *any, ever, minimizers (lift a finger, touch a drop)*  
 (ii) ATTENUATING (non-strengthening) NPIs: *until, in weeks, yet, anymore, much, long, need, Du. hoeven,...*

*He hasn't recovered.* vs. *He hasn't recovered yet.*  
*He doesn't read.* vs. *He doesn't read much.*

### An aside on (D-)any and free choice

In much recent work on polarity (e.g. Giannakidou 2006, 2011), *any* serves as a diagnostic for licensing, but this can be problematic, given the potential for *any* to occur in free choice environments (e.g. in non-episodic  $\diamond$ -modal or generic contexts), a potential available only to **D-any** (*any+CN, anyone, anything*) and not **A-any**, which patterns like *ever* or *at all* (Horn 2000a):

- (6) a. Anything can happen at any time. (D-any: as determiner or quantifier)  
 b. \*Anything can ever happen.  
 (7) a. The movie isn't any good. (A-any: adverbial *any*  $\approx$  *at all*)  
 b. \*The movie might be any good.

Anti-additivity is typically depicted as a subcase of DEness (downward monotonicity), but what if it isn't? What if DEness is defined not (going boolean) as in (8b) but (going medieval) by the set  $\rightarrow$  subset inference, while anti-additivity is determined by the satisfaction of the De Morgan equivalence in (8a)?

- (8) a. **f** is anti-additive iff for all X and Y in **f**'s domain, **f**(X or Y)  $\leftrightarrow$  **f**(X) and **f**(Y)  
 b. **f** is DE (mon $\downarrow$ ) iff [**f**(X or Y)  $\leftrightarrow$  **f**(X)] and [**f**(Y) AND **f**(X) or **f**(Y)  $\leftrightarrow$  **f**(X and Y)]

(See van der Wouden 1997 for more on Boolean categories of negation.) Now consider “conjunctive strengthening” of disjunctions in “free choice permission” and related contexts (epistemic possibility, generics, etc.); cf. Horn 1972, Kamp 1973, Aloni 2007, Nickel 2011.

- (9) Dana dates girls or boys  $\leftrightarrow$  Dana dates girls and Dana dates boys ( $\approx$  *Dana dates anyone*)  
 Lee can eat meat or fish  $\leftrightarrow$  Lee can eat meat and Lee can eat fish ( $\approx$  *Lee can eat either*)

Apparent parallel with negative and conditional contexts:

- (9) a.  $\Diamond(p \vee q) \leftrightarrow \Diamond p \wedge \Diamond q$  (You can choose Door A or Door B)  
 b.  $\neg(p \vee q) \leftrightarrow \neg p \wedge \neg q$  (Ahmed didn't eat pork or drink beer)  
 c.  $(p \vee q) \rightarrow r \leftrightarrow (p \rightarrow r) \wedge (q \rightarrow r)$  (If Lee eats meat or fish,...)

But while (9b,c) constitute **downward** entailing contexts, (9a) is **upward** entailing—from *Dany can eat bivalves* it doesn't follow that *Dany can eat oysters*, but vice versa. And as expected, (9a)-type contexts (unlike those in (9b,c)) permit free choice items but not true NPIs, e.g. *ever*, *so much as*, minimizers; see (6b), (7b) above.

So just maybe... Possibility modals and generics are **anti-additive** without being **DE**.

(10)

**Anti-additive?**

		No	Yes
Downward entailing?	No	(PPIs)  <b>A</b>	"free choice items": free choice D- <i>any</i> conjunctive <i>or</i> conjunctive D- <i>either</i> <b>B</b>
	Yes	"weak", "lenient" NPIs: <i>A-any, ever, at all</i> weak minimizers; <i>yet(?)</i> [Cell <b>B</b> items (in English!)] <b>C</b>	"strong" NPIs: strong minimizers <i>so much as; yet(?)</i> <i>in years, A-either</i> [+ Cell <b>B, C</b> items] <b>D</b>

*Licensers that shouldn't be: exclusives and exceptives*

The puzzle of exclusives as non-DE licensers:

Billingham (*De Termino Exponibili*, in de Rijk 1982: 121):

- (11) a. Only Socrates is running  $\leftrightarrow [(11b) \wedge (11c)]$   
 b. Socrates is running. **PREJACENT**  
 c. No one other than Socrates is running. **EXCLUSION**

➤ But how do we reconcile the conjunctive analysis with the appearance of *tantum* 'only' among the terms with the force of negation?

➤ *Only XP* does indeed establish a "negative" context (cf. Horn 1996, 2002, 2009b and references therein):

*[Only XP] as an inversion trigger*

- (12) a. Only in stories does a dropped glass betray agitation. (Graham Greene)  
 b. \*(Only) on Christmas Eve does he go to Mass.

[*Only XP*], [*Only CN*], [*Only n CN*], as NPI triggers

- (13) a. **Only** young writers ever accept suggestions with any sincerity.  
 b. **Only** his sister will expect him to write any more novels.  
 (Klima 1964: 311, cited as evidence for [+affective] status for *only*)  
 c. You {**only**/\***even**} lift a finger to help anyone when you want something back.  
 d. \*(**Only**) three of the guests drank a drop of the punch.  
 ➤pace Atlas 1993, Progovac 1994, Giannakidou 2006, *only XP* licenses NPIs in its non-focal domain (McCawley 1981; Horn 1996; Beaver & Clark 2008)

What is the relation between an *only XP* clause and its prejacent?

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  $\alpha$  is true. There is in addition an implicature [sic] that  $\alpha$  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. (von Fintel 1994: 133)

(14) **Source** **Analysis of prejacent**

Medievals (Abelard, Peter of Spain, William of Sherwood, Ockham); Atlas (1991 et seq.) et plur. al.	Prejacent is entailed/asserted (pure symmetricalist analysis); (11a) is a simple conjunction of (11b) and (11c)
Geach 1962: 187	entirely disregarded; (11a) = (11c), so 'F ( <i>only a</i> ) is true if F is true of nothing at all'
Horn 1969, 1972; von Fintel 1999 (sort of)	(Semantic) presupposition; (11a) is neither true nor false if (11c) is false
Horn 1979; Rooth 1985	Pragmatic presupposition or conventional implicature; (1a) is inappropriate but true if (1c) is false
McCawley 1981; Horn 1992; Ippolito 2006; van Rooij & Schulz 2007	Conversational (scalar) implicature; (11b) derives from assertion of (11a) by Grice's maxim of Quantity
Horn 1996; von Fintel 1999 (sort of)	Prejacent is not directly presupposed; (11b) follows indirectly from (11a) via presupposition of existential prop.; F ( <i>only a</i> ) presupposes $\exists xFx$
Horn 2002, 2009; Schwenter 2002	Prejacent of <i>only</i> (like polar component of <i>almost</i> , <i>barely</i> ) is an assertorically inert entailment, transparent to NPI licensing and other diagnostics
Roberts 2006	Conventionally presupposed; akin to Horn 2002 analysis
Beaver & Clark 2008	speaker of (11a) presupposes (within discourse-based theory) that (11b) is strongest true answer to current question

**Atlas's quite plausible objections to radical asymmetricalist accounts:**

The idea that simultaneously *I love only you* could be true while *I love you* is false just seems crazy to me...I just have a very hard time with Horn's [1992] theory about the truth-conditions of *I love only you*. (Atlas 1993: 314, 317)

**Entailed status of prejacent** (pace McCawley 1981, Ippolito 2006, van Rooij & Schulz 2007)

- (15) a. I love only you, and indeed I {#don't/?may not} love you either.  
b. I love nobody {other than/#but} you, and/but I don't love you either.  
c. Some linguists find this theory absurd—indeed, all of them do.

(15') Only one man ever understood me, and he didn't understand me.  
[—reputed last words of G. W. F. Hegel]

Atlas (2005): Despite what Horn "incorrectly thinks" and "mistakenly believes", "there is no epistemic cancellation at all". (See also Giannakidou 2006 for an endorsement of the conjunctive analysis.) But...

- (16) a. Only [Hillary]<sub>F</sub> trusts Bill, and perhaps even she does not.  
(van Rooij & Schulz 2007)  
b. Only [Hillary]<sub>F</sub> trusts Bill, and maybe not even she does. (Ippolito 2006)

- (17) 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, 1992, ad nauseam)

**exclusive/exceptive implicature suspenders from Horn (1970):**

- (18) 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.
- (19) 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.

**Exceptives: Connected exceptives (every/no X but Y) unpack into conjunctions, with each conjunct entailed and asserted (as in García-Álvarez 2009):**

- (20) a. Every nurse but Lucy is flirtatious.  
a'. Every non-Lucy nurse is flirtatious  $\wedge$  Lucy is non-flirtatious  
a".  $((\text{nurse}' - \{\text{Lucy}'\}) \subseteq \text{flirtatious}' \wedge \neg \text{flirtatious}' (\text{Lucy}'))$   
b. No nurse but Lucy is flirtatious.  
b'. No non-Lucy nurse is flirtatious  $\wedge$  Lucy is flirtatious  
b".  $((\text{nurse}' - \{\text{Lucy}'\}) \subseteq \neg \text{flirtatious}' \wedge \text{flirtatious}' (\text{Lucy}'))$

But then what explains the licensing differences in (21) and (22)?

- (21) a. Every nurse but Lucy drank (#a drop of the punch).  
b. No nurse but Lucy drank (a drop of the punch).
- (22) a. Every economist but Krugman (\*ever) argued for austerity.  
b. No man but a blockhead ever wrote, except for money. [—Samuel Johnson]

➤ How do we resolve the tension between the positive entailment of exclusives and (negative) exceptives and their negative (and NPI-licensing) behavior?

Two asymmetricalist approaches to non-DE (but “negative”) environments:

(i) **Strawson-entailment**: DE-ness vs. Strawson-DE-ness (von Stechow 1999)

Downward entailment goes through modulo the assumption that the presuppositions of premises/conclusion are satisfied.

A function  $f$  of type  $\langle \sigma, \tau \rangle$  is **Strawson-DE** iff for all  $x, y$  of type  $\sigma$  such that  $x \Rightarrow y$  and  $f(x)$  is defined:  $f(y) \Rightarrow f(x)$

(ii) **Assertoric inertia**: downward assertion vs. downward entailment

☞ Semantically entailed material that is outside the scope of the asserted/at issue (hence potentially controversial) component(s) of utterance meaning counts as **ASSERTORICALLY INERT** and hence is **effectively transparent to NPI-licensing** and related diagnostics of scalar orientation. (Horn 1996, 2002, 2009b)

**Approximative adverbs** (*almost, barely*) (cf. Schwenter 2002, Amaral 2007)

- (23) a. Gore almost won the 2000 election. ➤ a'. Gore didn't win the election.  
 b. Bush barely won the 2000 election. ➤ b'. Bush won the election.

(24) **Conjunctive analysis**: the PROXIMAL component + the POLAR component

- a. Gore almost won.  
 a'. CLOSE-TO [Gore won] (PROXIMAL)  $\wedge$   $\neg$ [Gore won] (POLAR)  
 b. Bush barely won. (= Bush almost didn't win)  
 b'. CLOSE-TO  $\neg$ [Bush won] (PROXIMAL)  $\wedge$  [Bush won] (POLAR)

➤ *barely VP* licenses NPIs, while *almost VP* doesn't:

- (25) a. She barely {budgeted/slept a wink/touched a drop/spoke to anyone}.  
 b. #She almost {budgeted/slept a wink/touched a drop/spoke to anyone}.

➤ But *barely* cannot be a downward entailing operator, given the polar entailment—*I barely passed* entails *I passed*, just as *I almost passed* entails that I didn't [contra claims by Sadock, Ziegeler, and Giannakidou; cf. Horn 2011]

- (26) a. #You barely passed and in fact (it's possible) you didn't.  
 b. #He almost died and in fact (it's possible) he did.

While not DE, both *only* and *barely* induce scale reversal and negative resumption:

- (27) a. **Only** a fool would even consider using the internet for anything important,  
 let alone do so. (web posting)  
 b. PATIENT'S BOYFRIEND: “You can't do this. We lived together. We were going to have kids. You **barely even** know her.”  
 PATIENT'S MOTHER: “Apparently neither did you.” (“House” episode, 9/07)

## Rhetorical support for the quasi-monotonicity of *almost*, *barely*, *only*:

- (28) a. Good news—my laptop is almost working!  
 b. Bad news—my laptop is barely working!
- (29) a. The glass is almost half full—so {no refill needed/#better fill it up}.  
 b. The glass is barely half full—so {better fill it up/#no refill needed}.
- (30) a. Take only photographs, leave only footprints.  
 (can be “obeyed” by someone who takes no photos, leaves no footprints)  
 b. I promise to tell no one but my husband.
- (31) a. I almost (*\*ever*) finish (*\*any*) of my assignments.  
 b. I barely *ever* finish *any* of my assignments. (*barely  $\phi \approx \text{almost } \neg\phi$* )  
 c. I don’t quite (*ever*) finish (*any*) of my assignments.
- (32) *almost* vs. *not quite* (Horn 2002, Schwenter 2002)

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

- (33) a. You were almost killed in the explosion...*[now you’ll have a difficult rehabilitation]*  
 b. You weren’t quite killed in the explosion...*[now I’ll have to finish you off]*

Exclusives, exceptives, and approximatives exhibit a **rhetorical asymmetry**, with the negative or downward asserting operators (*only*, *no...but*, *barely*) licensing NPIs (and exhibiting other “negative” behavior). Could we have been wrong about their status as semantically conjunctive, veridical, and non-downward entailing? Answer: *No*:

## Entailment vs. implicature: drawing the Griceogloss

- (34) a. 20 students tried to solve the problem. *[includes any who solved it]*  
 b. 20 students solved most of the problems. *[includes any who solved all]*  
 c. 20 students don’t drink much. *[includes any teetotalers]*
- (35) a. 20 students almost solved the problem. *[excludes any who solved it]*  
 b. 20 students barely passed the test. *[excludes those who failed]*  
 c. 20 students solved only the first problem. *[excludes those solving none]*  
 d. 20 students solved no problems but the last one. *[excludes those solving none]*  
 e. 20 students solved every problem but No. 6. *[excludes any who solved all]*

☞ But what matters for NPI licensing is not entailment but the POINT  
 (what is asserted, what is at issue)

The problem of veridical environments (Giannakidou 2011: 1679ff.):

only, barely, exceptives (*no...but*), and emotive factives (*regret, be surprising/odd*) seem to have positive entailments (and are “strongly veridical”) but (appear to) license NPIs. For Giannakidou, NPIs in the non-focus domain of *only XP* are not **LICENSED** as such, given the facts of Greek—

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

—but they can sometimes be **RESCUED**:

A [polarity item]  $\alpha$  can be rescued in the scope of a veridical expression  $\beta$  in a sentence S, if

(a) the global context C of S makes a proposition S’ available which contains a nonveridical expression  $\beta$ ; and

(b)  $\alpha$  can be associated with  $\beta$  in S’.

(Giannakidou 2006: 596; 2011: §6; C contains entailments, presuppositions, and implicatures arising from S or its utterance)

*My claim:* The presence or absence of (downward) entailment is not decisive. NPI licensing in languages like English depends crucially not on what is ENTAILED but on what is ASSERTED or AT ISSUE, and hence on the illocutionary point involved in a given utterance. This conclusion can be supported by extending the database to consider ranges of cases in which either

(i) NPIs flourish in the absence of standard licensers if they appear within an assertion with negative force; or

(ii) NPIs are blocked despite the presence of an accessible discourse-salient but non-asserted formally negative proposition that is not “at issue” (despite satisfying the conditions for Giannakidou-style rescue).

### Flaubert polarity and hyponegation

- (37) {**That will/That’ll**} **teach you to...** = ‘That will teach you not to’  
 Lawler (1974: 372, fn. 1): sarcastic *That’ll teach you to* fails to license even weak NPIs (*any, ever*), as in (38) (the **judgment** is Lawler’s):

- (38) That’ll teach you \*(not) to say anything.

But in fact NPI licensing **is** possible in *that’ll teach you* contexts:

- (39)  $\gamma$ Aw, sorry to hear Expatria, but that’ll teach you to ever leave Boston.  
 $\gamma$ That’ll teach you to do anything without a spreadsheet.  
 $\gamma$ That’ll teach you to **ever** come up with anything that doesn’t fit within the status quo of [sic] as defined by the internet community!  
 $\gamma$ That’ll teach him to ever say anything degrading about girls in your presence.

**Could care less (CCL):** According to Postal (2004: 361), both the idiomatic **CCL** and its compositional doppelgänger *couldn’t care less* (**CNCL**) exclude negative polarity items from their scope. (Examples and **judgments** in (40) are Postal’s.)

- (40) a. She **could not** (\*ever) **care less** about their/\*anyone else’s agenda (\*at all).  
 b. She **could care less** about their/\*anyone else’s agenda (\*at all).

But for many speakers, *any*, *ever*, and other NPIs **are** licensed by *could/couldn't care less*:

- (41)  $\gamma$ I couldn't care less about anyone or anything anymore.  
 $\gamma$ I could care less about anyone else's sexual fantasy life  
 $\gamma$ I couldn't care less about ever going back to school.  
 $\gamma$ I could care less about ever having a No. 1 single

CCL and *that'll teach you* function as HYPONEGATION markers (Horn 2009a), like free squatives; cf. **free vs. licensed squatives** ( $\approx$  **n-words** and **NPIs** respectively)  
[an N-WORD is a negative indefinite, with or without obvious negative form, e.g. Eng. *nobody, never*; Fr. *pas, rien, personne*; Ital. *niente, nessuno*]

**SQUATITIVES** (Horn 2001, Postal 2004): a robust subset of scalar least-quantity minimizers

(42) some Gilded Age-rs culled from Google Books (Garson O'Toole, ADS post, 10.27.10):

1865 I don't give a sixpence	1910 I don't give a snap
1887 I don't give a cuss	1910 I don't give a rap
1890 I don't give a farthing	1914 I don't give a whoop-in-blazes
1894 I don't give a continental	1917 I don't give a whoop/single whoop
1904 I don't give a cent	1918 I don't give a dead rat
1908 I don't give a pipeful of rabbit tobacco	1918 I don't give a continental darn
1910 I don't give a hang	1920 I don't give a hoot in hell

*X means/doesn't mean (is/isn't worth, knows/doesn't know, ...)*

**squat, diddly(-squat), doodly(-squat), shit, jack(-shit), bupkes, zilch, (sweet) fuck all/bugger all** (cf. Dundes 2002)

Note: for Postal 2004, free squatives are not n-words; they contain an invisible determiner *zero*, with no negative syntactic or semantic properties.

Like Fr. *rien*, free squatives can freely express 'nothing' in verb-less contexts:



'So, what is seventy-eight percent of doodly-squat?'

(Clay Bennett, Chattanooga Times Free Press)

Free squattives and licensed squattives can be interchangeable:

**Confederacy flap means ‘diddly’**  
BY THE ASSOCIATED PRESS  
The dustup over Virginia’s proclamation for Confederate History month [that didn’t mention slavery] seems like a lot of noise over something that “**doesn’t amount to diddly**”, Mississippi’s governor [Haley Barbour] said in an interview aired Sunday.

(—Yale Daily News April 12, 2010, emphasis added)

### Expressive negation and NPI licensing

Giannakidou & Yoon (2011: 648ff.) on

(43) That bastard Fred said anything!

This sentence is pretty bad because the negativity that comes from the expressive interval of *bastard* is not part of the descriptive content, where truth conditions are calculated. The sentence remains veridical (i.e. positive), hence no licensing. Postal [2004] notes in a similar vein that what he calls “vulgar minimizers”—swearwords like *squat*, *jack*—although very negative, do not suffice to license *any*.

(44) a. \*Hector sent **squat** to any of his ex-wives.

b. Hector sent **zero** presents to any of his ex-wives. [Postal 2004: (35a,b)]

“Semantically antiveridical expressions like *zero NP*”, unlike [free] *squat* and other “negative expressive” minimizers, license NPIs (G&Y 2011: 648, after Postal). But in fact, there is no robust contrast here. First, how good is (44b)? According to Postal (2005), Zeijlstra (2007), and Szabolcsi et al. (2008: 412), *zero* phrases **can’t** license NPIs. They’re wrong about that:

(45) γUnlike alcohol, **zero** people have ever overdosed on cannabis.

γ**ZERO** people have ever died from smoking pot. [*here and below, CAPS in original*]

γthe repubs have **zero** ideas about anything.

γMcCain essentially had **ZERO** ideas about anything. Obama had lots of ideas - and they are almost all bad.

γAdobe [h]as **ZERO** plans to EVER support Vista

γThere is **ZERO** chance of any effective reform at the federal level.

γRon Paul has zero chance at all of getting the Republican nomination.

But free squattives themselves are actually quite good at licensing NPI *any*:

(46) γHe knows **squat** about any scientific theory.

γA friend of mine (knows **squat** about any car)...

γthe fact is that you know **bupkes** about any nation outside of the US

γI’ve got him hooked on college and pro basketball, he knows **jack** about any of it

γShe knows **jack** about any minority experience

His parents, he said, were at the opera, the ballet, the symphony, several nights a week, “while understanding **dogshit** about any of it.”

[Sue Miller, *While I Was Gone* (1999 novel, p. 49):

cf. *They understood {nothing/\*something/\*a lot} about any of it*]

- Postal (p.c.) acknowledges that some speakers do accept examples like (44a) and that the contrast in question “may be an idiosyncrasy of marginal significance”
- But there are **no speakers at all** who allow NPI licensing by the expressive component of *bastard* in (43), so the two phenomena in question are distinct.

**I couldn't care less : I could care less :: It's not worth squat : It's worth squat** (Horn 2009a); note that CCL and CNCL and analogues can also be interchangeable

With a deadpan, [Glenn] Beck insists that he is not political: **“I could give a flying crap about the political process.”** —interview with *Forbes*

—297 google hits a week later, including one under the header

**“Beck admits he doesn't give ‘a flying crap about the political process’”**

- (47) γI could give a crap about ever seeing this movie, on screen or even on cable.  
 γ“could give a crap about anyone else”: 8 separate hits  
 γI could give a shit about any of that. I'm an old white-trash punk rocker in low-income housing that loves comic books and science fiction.  
 γI could give a shit about any of those either. LOL. –  
 Response by barrelmom, Female, 46-55, Indianapolis [“Things I have never done” blog, re: patronizing Starbucks, shopping on eBay, owning an iPod]  
 γI could give a shit, but maybe it'll gain some respect with the art nerds out there... oh wait... I could give a shit about that either.  
 γI don't know much about God, but I'm pretty sure he could give two shits about any highway that led to Duluth.

Nor is this surprising, since (some) ironic or sarcastic contexts regularly trigger NPIs (cf. Horn 1978, 2001):

- (48) **Fat chance** I'd ever open any attachment that didn't come from one of my clients.  
**A fat lot of good** THAT ever did anyone.  
**As if** I give a {damn/shit/flying fuck} about any of that.

...including “strong” NPI either, which is often claimed (e.g. in Giannakidou 2011) to require overt negation or antimorphic triggers (like *without*) that entail negation.

- (49) **Small thanks** you get for THAT, either.  
 γWell I wasn't talking about anecdotal evidence, I **could care less** about that either.  
 γActually I **could care less** about that either, not in the least.  
 γI **could care less** about you either, playa! I could care less about you caring less about me.  
 γI **could give a shit** about any of those either. LOL. –  
 γI could give a shit, but maybe it'll gain some respect with the art nerds out there... oh wait... I **could give a shit** about that either.

And NPIs can be licensed by invisible negation in non-ironic contexts as well (Horn 1978, 2001; cf. also van Dongen 1918: 63-64):

- (50) γI'll be **damned if** I can tell the difference on it either.  
 γI know I made a montage of the look at me and choke me scene, but **I'll be damned if** I can find it either.

I'm **anything but** happy with THAT analysis, either. [J. D. McCawley, p.c.]  
 In **one of the two** conversations that I ever had with Raven McDavid, Jr. (this one  
 in an elevator) he talked about feist dogs... (ADS-L posting)  
 They make it seem like the ratings for the NHL on network television were ever  
 good. They were never good. (Mike Francesa, WFAN sports talk radio)  
 I thought she was a friend of yours. That's [o] why I ever even noticed her."  
 (Dorothy Parker)

(51) "Judge, the [o] reason I know about this at all is by accident."  
 (Michael Connelly, *The Brass Verdict*, 2008, p. 335)

The tone [of Germaine Greer's attack on manufacturers of vaginal deodorants] wasn't  
 light-hearted, which [o] might have justified touching the subject at all."

(S. F. Chronicle columnist Charles McCabe)

So the Second Empire Masquerade was planned and debated a long time before it  
 actually happened. That it happened at all was due to the death of Maurice's great aunt.  
 (example cited by van Dongen 1918)

[T]he fact that the speaker received any money at all is the most important information,  
 and the amount received is secondary. (from Yale linguistics qualifying paper)

The experiment creating these "food oases" [fresh produce section within Walgreens  
 pharmacies in the "food deserts" of inner-city Chicago] is intriguing because it involves a  
 well-known retail brand not typically associated with groceries—and, really, because  
 it involves a well-known retail brand at all. ("Fresh Approach", NYT, 11.14.2010)

**"FLAUBERT LICENSING":**

*L'artiste doit être dans son oeuvre comme Dieu dans la création, invisible  
 et tout-puissant; qu'on le sent partout, mais qu'on ne le voit pas.*

—Gustave Flaubert, letter to Mademoiselle Leroyer de Chantepie, 18 Mar. 1857

('The artist should be in his work like God in Creation, invisible and all-powerful;  
 let him be sensed everywhere, but let him not be seen.')

So too with hyponegation as NPI licenser: *Everywhere present yet nowhere visible.*

*But cases of on-line, unconventionalized sarcasm fail to license NPIs, as  
 do syntactically unflagged yes-no questions and pseudo-conditionals...*

> Sarcasm flagged (= conventionally signaled) and unflagged

- (52) a. \*I'm sure George has any friends in Ulan Bator. (Linebarger 1987, ex. (81))  
 b. \*Yes, I have any free time to listen to your trip to Cleveland. (ex. (83))

(52') **Like** George has any friends in Ulan Bator!

- (53) a. What am I doing? **Like** I'm ever gonna learn to speak Mandarin.  
 —"Parenthood", ABC TV dramedy, 4 Oct. 2011  
 b. I undressed in front of the lot of them, old Lear protesting from time to time, **like**  
anyone gave a hot bootful of piss what he had to say anymore.  
 —Christopher Moore (2009), *Fool*, p. 278

- (54) a. Bill Gates received a huge tax return this year. **Like** he needs any more money!  
 b. (So let me get this straight,) \*he needs any more money.  
 (Bender & Kathol 2001)

- (55) a. {**Like/As if**} I was going to give him any money.  
 b. #I was going to give him any money.  
 (Camp & Hawthorne 2008: 7— (55b) is “terrible, no matter how scornful and drippingly sarcastic the tone in which it is uttered”; see also Camp 2010)

➤ **Sarcastic nasalization** (Cutler 1974, Horn 1978, Haiman 1998) as non-licenser:

- (56) a. **As if** he’s ever gonna call you back for a second date.  
 b. ~[Yeah, he’s really (**#ever**) gonna call you back for a second date]~
- (57) a. **Like** you’ve ever lifted a finger to help me.  
 b. #~[You’ve ever lifted a finger to help me]~

➤ **Retro-NOT, ironic *I don’t think* tags** (Horn 1992) as non-licensors:

- (58) a. Thought I’d go out again tonight with Oggy. That’d be a quiet night in the library—not! I don’t think!  
 —from a 2002 episode of “The Office”, original [Ricky Gervais U.K.] version, cited in OED entry s.v. THINK 11a(c)  
 b. They’re (**#ever**) going to find the real killer—NOT!  
 c. I have (**#any**) more money to lend you, I don’t think.

➤ **Metalinguistic/echoic negation** as non-licenser (Horn 1989: §6.4.2, (77a,b)):

- (59) a. Like hell, I {**still** love you/\*love you **anymore**}. [vs. (55a), (57a) above]  
 b. Like fudge, he’s {**already** washed up/\*washed up **yet**}.

**Pseudo-conditional antecedents** (cf. Davies 1986, Clark 1993)

- (60) a. Touch any of my Chimay Bleu and you’re a dead man. [understood as threat]  
 b. \*Touch any of my Chimay Bleu. (where mass noun rules out free choice reading)
- (61) Work any more \*(and you’ll collapse).

For Davies (1986: 198), (61) is a formal imperative; “the distribution of any [is determined] in terms of its compatibility with the speaker’s communicative intentions rather than by means of syntactic or semantic constraints.”

*But...*NPIs are worse in pseud-conditionals lacking the *and*, in line with the sarcasm pattern—especially with a sentence break mid-threat:

- (62) a. Do that ever again, ?(and) you’ll be sorry.  
 b. Drink so much as two beers ?(and) you shouldn’t drive.
- (63) a. Do that (**#ever**) again. You’ll be sorry.  
 b. #Breathe a word of this to anyone. Go ahead, make my day.

**Polar questions as licensors, where *DEness* seems irrelevant. But:**

➤ Why are only **interrogative** questions and not **rising declaratives** suitable licensors?

- (64) a. (Is) anybody home?                      (64’) a. Did he ever lift a finger to help us?  
 b. #Anybody’s home?                              b. ?\*He ever lifted a finger to help us?
- (65) a. ~~Have you~~ ever seen anything like that before?  
 b. \*You’ve ever seen anything like that before?  
 c. \*You ever saw anything like that before? (vs. *You saw something like that before?*)

Progovac (1994: 77, 135): “Some formal licenser seems to be necessary” in questions; cf. Hirst (1983: 176), Huddleston (1994: 429), Gunlogson (2003: 21; 2008) on the incompatibility of declarative questions and NPIs

Similarly in Swedish V1 vs. V2 questions (Brandtler 2010: 61-62)

- (66) a. Har du *någonsin* varit i Paris? ‘Have you ever been to Paris?’  
*have you ever been to Paris*  
 b. Du har (*\*någonsin*) varit i Paris?

➤ *Two possibilities:*

**(i) questions must be flagged as questions to license NPIs**

(as with sarcasm and pseudo-conditionals)

**(ii) rising declarative questions involve a commitment** attributed to someone other than the speaker; any such commitments rule out NPIs. Or the issue may be whether the speaker has access to evidence supporting the content (Chris Gunlogson, p.c.).

- (67) a. If (*\*as you say*) you’ve ever lived in Paris, you’ll recognize an escargot.  
 b. If (*\*as he claims*) Joe has ever eaten so much as a bite of truffled porcupine...  
 c. If Joe has ever eaten so much as a bite of truffled porcupine (*?as he claims*)...

*When implicature isn’t enough (continued): clefts and definites*

- (68) a. It’s only [Bush]<sub>F</sub> who ever proposed any tax cuts in wartime.  
 b. #It’s [Bush]<sub>F</sub> who ever proposed any tax cuts in wartime.  
 c. #[BUSH]<sub>F</sub> ever proposed any tax cuts in wartime.

Linebarger (1991): NPIs can’t occur in “background portion” of the sentence, but...

- (69) a. \*It was JOHN who contributed a red cent to the ACLU. (Linebarger 1991: (42a))  
 b. It was only JOHN who contributed a red cent to the ACLU.

☞ While *only a* and *it’s only a* **assert** exhaustivity, clefts (and bare focus constructions) assert the assignment of a value for a given variable and only **implicate** exhaustivity. Exhaustivity is part of what is at issue in (*it’s*) *only* statements, but not in (unexhaustivized) clefts,

**adjectival *only*: The Son of a Preacher Man construction**

- (70) a. The **only** one who could ever reach me was the son of a preacher man.  
 [Dusty Springfield, Aretha Franklin]  
 b. #The one who could ever reach me was the son of a preacher man.  
 c. (?)The **one** guy who could ever reach me was the son of a preacher man.  
 d. #The guy who could ever reach me was the son of a preacher man.
- (71) a. You’re the **only** woman I ever loved.  
 b. #You’re the one I ever loved.  
 c. (?)You’re the **one** woman I ever loved.  
 d. #You’re the woman I ever loved.

- (72) That’s the #(only) e-mail address I have for her either.

(73) Press release, Onion News service, 6 October 2011

<http://www.theonion.com/articles/last-american-who-knew-what-the-fuck-he-was-doing,26268/>

CUPERTINO, CA—Steve Jobs, the visionary co-founder of Apple Computers and the **only** American in the country who had any clue what the fuck he was doing, died Wednesday at the age of 56.

Similarly, *always* differs from VP-scope *only* in not asserting exhaustivity, and hence in failing to license NPIs, as seen in (74a-c) from Beaver & Clark (2003: 332):

- (74) a. People here {**only**/\**always*} ever have [cream of mushroom soup]<sub>F</sub>.  
b. People {**only**/?*always*} give a shit for [me]<sub>F</sub>.  
c. I {**only**/?*always*} gave a damn because I thought [you]<sub>F</sub> did.

For Beaver & Clark (2003; 2008: §8.2), these contrasts indicate that unlike *only*, which semantically requires attraction to focus, the focus sensitivity associated with *almost* is derived from context and not from a lexical specification.

>Conventional and conversational implicatures tend not to license/rescue NPIs

- (75) a. #Even Hercules has ever lifted that rock.  
b. #Some of my friends have ever been to California.  
(cf.  $\sqrt{\text{Only some of them have ever been...; } \sqrt{\text{Not all of them have ever been...}}$ )  
c. #It's possible (+> *not certain*) that real financial regulation will ever be enacted.  
d. #Five (+> *no more than 5*) people drank any coke. [Rothschild 2006: (24)]

Rothschild (2006): the blocking of NPIs in contexts like (75d) is problematic for "localist" approaches like those of Fox (2006) and Chierchia et al. (to appear) on which scalar implicatures are grammatically computed in embedded contexts and/or generated by the free insertion of covert exhaustivization (= *only*) operators:

It seems likely that any proposal that adequately captures the non-monotonicity of statements with scalar implicatures will posit an operator in the syntax that has the effect of creating a non-monotonic environment in the semantics.

But similar problems arise even within traditional Gricean accounts of scalar implicatures if such negative implicatures are available to license or salvage NPIs (as on Giannakidou-style rescue operations).

☞ And recall definite descriptions, which don't (usually) yield negative assertions. Thus (70d), (71d), and (76a) are anomalous—although (76b) is marginally OK for some:

- (76) a. The #(**only**) woman who ever proved any of those theorems has a MacArthur grant.  
b. %The man who could ever prove any of those theorems has not yet been born.

But *The F is G* either entails (if you're a Russellian), presupposes (if you're a Strawsonian) or conventionally implicates (if you're me) that there is no more than one F. This uniqueness proposition satisfies Giannakidou's condition given that:

the global context C of S makes a proposition S' available which contains a nonveridical expression  $\beta$ ; and [the NPI]  $\alpha$  can be associated with  $\beta$  in S'

Yet the restrictor of (unexhaustified) definites does not in general license NPIs.

☞ "pretended that DP ever", "pretended to have ever": despite non-veridicality, the only attested examples are embedded within a higher negation (*not, never, no one, without*), polar question, conditional, etc. that actually licenses the NPI

- (77) a. #I'm pretending that I {did anything about it/so much as lifted a finger to help}.  
 b. √I'm surprised that you {did anything about it/so much as lifted a finger to help}.

These cases are problematic for non-veridicality (with or without rescue) as advocated in Giannakidou 2006, 2011. And then there are the old questions about why nonveridical contexts introduced by *or, may/might, or want*-class verbs in English fail to license *ever* or *A-any*, whatever their counterparts do in Greek; nonveridicality appears to be neither necessary nor sufficient for licensing in English—or for inversion.

➤ In sentence-initial position, inversion signals rhetorical negativity or downward assertion. Crucially, the same non-veridical and non-assertive contexts that fail to host NPIs also disallow inversion: *or* (vs. *nor*), *perhaps, maybe,...*

- (78) a. {**Nor**/\*Or} did I.  
 b. {**Rarely**/\*Perhaps} will they win. (cf. *They* {*rarely*/\**perhaps*} ever won.)

Note that disjunctions and *maybe/perhaps* don't even license free-choice D-*any*, let alone true NPIs:

- (79) a. \*Either anybody came in or we left the light on. (pace Giannakidou 2011)  
 b. \*Perhaps he ate any mussels or (any) frites.

☞ The *exactly* problem (note that *exactly n* is neither  $\text{mon}\uparrow$  nor  $\text{mon}\downarrow$ )

- (80) a. **Exactly four** people in the world have ever read that dissertation:  
           Bill, Mary, Tom, and Ed. (Linebarger 1987: 373)  
 b. There are **precisely four** people in the whole world who would so much as  
       consider lifting a finger to help that maniac. (Israel 2011: 244)

For Israel, the key issue is the relevant sentences' "rhetorical function in context", yielding the scale-reversal (negative-like) effect of *exactly n* in such frames; no purely logical account of monotonicity will suffice...

I am proposing a sort of compromise between Ladusaw and Linebarger. Linebarger is right to point to the importance of implicature in licensing the NPIs in [(80)]; however, her account leaves the scalar nature of the implicature conveniently obscure. Ladusaw is right to point to the importance of inferencing as the crucial mechanism of licensing; however, his account leaves no room for the important role pragmatics often plays in creating the appropriate inferences. The scalar approach to polarity licensing seeks to preserve the insights of both Ladusaw's logic and Linebarger's pragmatics.

(Israel 2011: 244)

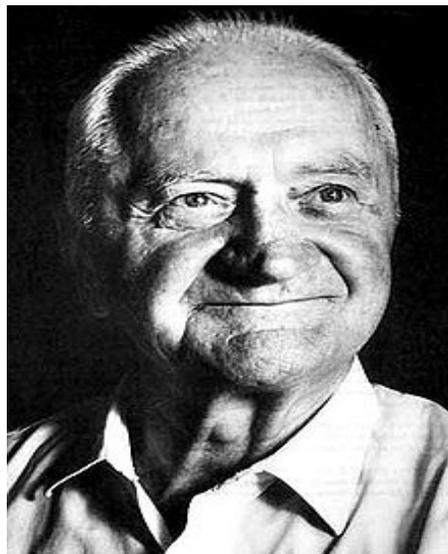
#### CONCLUDING REMARKS:

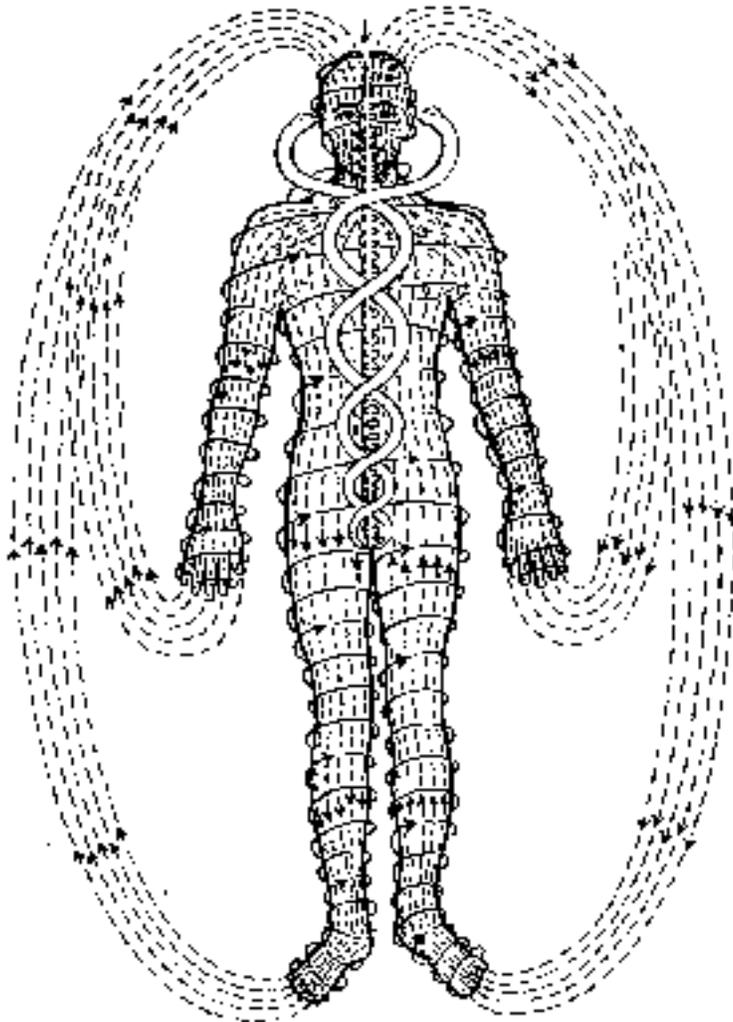
- NPIs are causally linked to negative force as expressed by *termini habentes vim negationis* (regardless of monotonicity status) or implicitly by the dynamic negativity assertorically determined by the **point** (what is **at issue** in the illocution).
- The presence or absence of entailment—a crucial aspect of most formal theories of NPI licensing (DE-based, Boolean, nonveridicality-based)—is not directly criterial for licensing. Monotonicity (and hence scalar structure) is crucial, but it is calculated only on the asserted/at issue component of meaning, with inert material disregarded.
- In structures in which there is a significant difference between directions of inferencing or in the polarity of what is at issue, negative (or non-assertive) force must be overtly flagged.
- The problem with downward entailment is not with the *downward* but with the *entailment*.

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And for inspiration thanks also to Dr. Randolph Stone:





## **Polarity Therapy**

founded by the Austrian-American Dr. Randolph Stone (1890-1981)

Dr. Stone developed a reputation for his willingness to work with “hopeless cases” who often responded to his increasingly unconventional approaches which incorporated techniques from around the world.

He roamed widely often in search of medical insights from other cultures under his motto, “**Whatever works, works!**”

(from [http://en.wikipedia.org/wiki/Randolph\\_Stone](http://en.wikipedia.org/wiki/Randolph_Stone))

[For much more, cf. <http://www.polaritytherapy.org/>]

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