

NEGATIVE AND POSITIVE POLARITY ITEMS:  
AN INVESTIGATION OF THE INTERPLAY OF LEXICAL MEANING  
AND GLOBAL CONDITIONS ON EXPRESSION

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## 1. Introduction<sup>1</sup>

Why do languages have such odd and complicated things as negative and positive polarity items? Surely, life would be much easier without them, and to be entirely frank, I have not yet encountered a single such item that I could not do without, if forced to. They appear to be part of the stylistic icing on the linguistic cake, adding color to texts and speech, making our daily conversations not only more complex than they need to be, but perhaps also a bit more fun. The idea that polarity items are primarily rhetorical devices has been put forward by a number of people, starting with Bolinger (e.g. 1972), and culminating in the work of Michael Israel, who has pursued this idea with great vigor in a long series of publications (Israel 1996, 1998a, 2001, 2004, 2008). Other work, with a somewhat different slant, such as Kadmon and Landman's (1993) study of *any*, also suggests that negative polarity items are primarily intended to add rhetorical spice to a statement ('strengthening').

Much of the work on polarity items has circled around issues of licensing, or triggering as it is often termed. Negative polarity items are licensed in certain environments, such as the scope of negation, and ungrammatical elsewhere, whereas positive polarity items are unwelcome ("anti-licensed" or "anti-triggered") in the scope of (at least) direct negation (cf. Horn 1989, van der Wouden 1994, 1997, Zwarts 1998, Hoeksema 2000, Szabolcsi 2004). Rather less attention has been paid to matters of lexical semantics (what types of expressions, with what kind of lexical semantics, tend to become negative or positive polarity items) and even less to numerous collocation effects that appear to interfere with the licensing of polarity items (but see van der Wouden 1994, 1997, Sailer and Richer 2002). My goal, in this chapter, is to argue that lexical semantics and collocation effects should not be ignored, as they often reveal crucial information about the expressions involved. In particular, I want to make a case for the following claim: The distribution of negative polarity items results from the interplay of lexical meaning with global conditions on the proper use of these items. In addition, I want to argue that some properties of positive and negative polarity items are best understood from the perspective of *expression*, that is, the mapping from intended meaning to meaningful form.

But first let me be a bit more specific about what I mean by global conditions. As a first illustration, let me briefly summarize Kadmon and Landman's (1993) hugely influential analysis of *any*, without any doubt the world's best-known, and most intensively studied polarity item. According to this analysis, the distribution of *any* is due to the interaction of its lexical semantics with a global constraint on acceptability. On the lexical semantic level, Kadmon and Landman view *any* as a domain widener. A combination such as *any potato* denotes roughly the same thing as *a potato*, but with a weaker contextual requirement as to what counts as a (relevant) potato, yielding a wider, larger set as the denotation. Hence *Any potato will do* is a stronger requirement than *A potato will do*, since it generically quantifies over potatoes of any stripe. If you are just a little bit hungry, a potato might do the trick, but

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there are, of course, potatoes too small to do much good: so you might, under these circumstances, say *I'm not very hungry, a potato will do*, but not necessarily *I'm not very hungry, any potato will do*. The global requirement on the proper use of *any* is strengthening: widening the domain, say the set of relevant items counting as potatoes, should lead to a stronger statement. Normally, widening leads to weakening, in the sense of yielding a less informative statement. For instance, *I saw an animal* is less informative than *I saw a cat*, since the latter statement entails the former, but not vice versa. Widening the predicate *cat* to the predicate *animal* makes a statement more informative only in so-called entailment-reversing or downward monotone environments, such as the restriction of a universal quantifier, the scope of negation, the complement of *without*, etc. (cf. Fauconnier 1978, Ladusaw 1979, Zwarts 1981).

The reason for calling the strengthening requirement a global one is clear: Only within the larger context of the item can it be determined whether or not an occurrence leads to strengthening.<sup>2</sup> It is not my intention to weigh the pros and cons of the Kadmon and Landman account here. Especially for weakly stressed occurrences of *any*, the account does not seem all that plausible (cf. Krifka 1995), but perhaps it can be maintained for stressed *any*. Stressed and unstressed occurrences of *any* have different distributions anyway (cf. Sahlin 1979 for a corpus study). For the purposes of this chapter, the interesting thing about the Kadmon and Landman approach is the way it combines lexical semantics (widening) with global properties (strengthening) to derive the distributional properties of *any*.

A rather similar approach could be taken for another type of polarity item, the very weak type identified in Giannakidou (1997, 1998, 1999, 2008), exemplified by Modern Greek *kanenas* (among others). This type of item is acceptable not only in negative contexts, but also in disjunctions, in the scope of modal and other intensional verbs, in subjunctive clauses, in the scope of epistemic adverbs such as *perhaps*, and so on. The generalization that Giannakidou offered was that the very weak items have to be in the scope of a *nonveridical operator*. An operator *Op* is nonveridical just in case *Op(p)* does not entail *p*. *Perhaps it rains* does not entail *it rains*, and so *perhaps* is nonveridical. Disjunction, likewise, is nonveridical:  $p \vee q$  does not entail *p*. The Greek weak polarity items of the *kanenas*-series are all existential pronouns. It is not too far-fetched to assume that the distribution of these items results from the interplay of lexical meaning (existential quantification) and a global requirement of nonreference: the item may not appear in a context permitting existential generalization. Only nonveridical contexts provide the kind of shelter where such items are safe from the onslaught of existential commitment.

In this chapter, I will pursue the general hypothesis that the interaction of global constraints with lexical semantics lies at the root of the often odd-seeming distributional patterns of polarity items. I do not, however, want to suggest that this interaction is the only explanatory factor. Rather, one would have to stress that distribution usually is the complex result of syntagmatic factors (such as the aforementioned type of interaction) and paradigmatic factors, in particular the competition of other items. Quite often, items have odd 'holes' in their distribution, due to the interference of alternative ways of expressing a message (cf. Hoeksema 1999, Pereltsvaig 2004, de Swart 2006). Some kind of blocking account, perhaps in an OT vein, would have to be assumed here. To mention just one case, German *auch nur* 'even' is a polarity item occurring in all the usual environments, except for

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<sup>2</sup> I should point out here that the requirement is actually semi-global, since the strengthening requirement need not hold for the entire sentence. Cases of polarity items embedded under double negation are possible, even though the two negations cancel out (cf. Hoeksema 1986), and English *any* is no exception in this regard, cf. e.g.

(i) I can't believe that you didn't bring any money.

Kadmon and Landman (1993) maintain that it suffices for the acceptability of *any*, that it strengthens an utterance in some intermediate domain, say, in the case of example (i), that of the embedded clause.

one: direct negation (König 1981). Actually, even direct negation is OK, unless the negator *nicht* ‘not’ is strictly adjacent to *auch nur*, as the examples in (1) below show:

- (1) a. Keiner hat es auch nur vermutet.  
 Nobody has it even suspected  
 ‘Nobody even suspected it’
- b. Sie hat es nicht mit auch nur einem Wort erwähnt  
 She has it not with even one word mentioned  
 ‘She did not mention it with so much as one word’
- c. \*Sie hat es nicht auch nur vermuten können.  
 She has it not even suspect can  
 ‘She could not even suspect it’

Instead, German has a dedicated element (*einmal* ‘even’ for use in direct negation contexts:

- (2) Sie hat es nicht einmal vermuten können.  
 She has it not even suspect can  
 ‘She could not even suspect it’

In all other contexts, *einmal* is ruled out, or rather, it reverts to its original meaning ‘once’:

- (3) Keiner hat es einmal vermutet  
 Nobody has it once suspected  
 ‘Nobody has suspected it once’

I assume that a blocking principle such as the Elsewhere Condition (Kiparsky 1973) will have to be invoked here. The item with the more limited distribution and the more specialized use will oust the item with the wider, less specialized distribution from its sphere of influence.

I also assume, furthermore, that polarity items are the product of a process of grammaticalization (Hoeksema 1994, 1998a).<sup>3</sup> Many of the typical properties associated in the literature with the phenomenon of grammaticalization are found here as well:

- (4) • layering (grammaticalized forms next to nongrammaticalized forms)  
 • semantic bleaching  
 • pragmatic strengthening  
 • unidirectionality

Layering, in particular, is extremely prevalent. We have already seen an example of this above: German *einmal* ‘once < one time’ has developed an additional use as a scalar particle meaning ‘even’ under negation. But the original interpretation is still around. For the automatic detection of polarity items from corpora, this is a major problem (cf. Hoeksema 1998b, Lichte and Sailer 2004, Lichte and Soehn, 2007 for some discussion).

Semantic bleaching and pragmatic strengthening are likewise easy to identify. For bleaching, consider e.g. the use of swear words as polarity items, as in *Fred did not do bugger all*. Here the literal meaning has bleached to something like ‘anything’, while pragmatically, it has become a standard marker of affective import on the part of the speaker.

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<sup>3</sup> I also assume that once a certain type of polarity item has been established, further items may be added by a process of lexical replacement or calquing. E.g. early-modern Dutch *wat duivel* ‘what devil’ is based on French *que/qui diable*. Taboo expletives seem especially likely to undergo lexical replacement (Hoeksema and Napoli 2008).

No doubt the most problematic property among the ones in (4), also in grammaticalization circles, is the last one: unidirectionality (cf. Hoeksema 1998a, and for more general discussion of the unidirectionality requirement, e.g. Traugott 1990, Traugott and Heine 1991, Janda 2000, Fischer et al., 2004).

A final assumption I will be making, and partly motivating, in this chapter is that polarity items may take part in larger constructions, and that their distributional behavior should be viewed from the perspective of these larger constructions. This is an assumption in line with much of the work by Michael Israel, and one that needs to be worked out in far more detail than can be done here.

The structure of the remainder of this chapter is as follows: In Section 2, I present some case studies of negative polarity items, instantiating different types of global conditions on acceptability, in Section 3, I discuss a number of positive polarity items from the same general perspective, and in Section 4, I present my conclusions.

## 2. Global constraints on Negative Polarity Items

### 2.1. *The case of ever and any*

The analysis of *any* by Kadmon and Landman (1993) combines global strengthening with local widening. As we have seen above, this yields the result that the item must appear in downward entailing contexts. As noted by Jackson (1995), such an account does not explain the so-called intervention effects on the licensing of *any*, discussed in Linebarger (1981, 1987) and Szabolcsi and Zwarts (1993), among others. When certain operators, such as universal quantifiers, scopally intervene between a polarity item and its trigger, the result may be degraded (cf. example (5a) below). Intervening indefinites, such as *a teacher* in example (5b) below, do not have this effect, however.

- (5) a. ?No student gave every teacher any apples.  
b. No student gave a teacher any apples.

Both occurrences of *any* in the examples in (5) appear in monotone decreasing contexts. To see this, simply note that (5a) and (5b) entail the sentences in (6a) and (6b), respectively:<sup>4</sup>

- (6) a. ?No student gave every teacher any red apples.  
b. No student gave a teacher any red apples.

Hence accounts such as those of Ladusaw (1979) or Kadmon and Landman (1993) have problems in explaining the intervention effects. Linebarger (1981) takes the data to be evidence for an adjacency requirement at Logical Form. Polarity items may not be separated from their negative triggers by intervening quantifiers. However, Linebarger's account does not say much about polarity items that do not suffer from intervention effects, such as the modal auxiliary *need* and the adverb of degree *all that*:

- (7) a. None of us need worry about the police.  
b. Not every student need participate in the presentation.  
c. \*Some of us need worry about the police.

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<sup>4</sup> Note that (5a), while degraded, seems to be interpretable, hence the possibility to draw entailments from it.

- (8) a. None of us were all that pleased with the result.  
 b. Not everybody was all that pleased with the result.  
 c. \*Some of us were all all that pleased with the result.

Also, that account does not explain why the constraint should exist. Adjacency requirements at Logical Form are not exactly a common type of phenomena in the literature on semantic restrictions.

In Jackson's view, the intervention effects follow from the fact that items such as *any* are indefinites with a global requirement, which is that they must appear in *general statements*. General or universal statements are statements with the property that they are easy to falsify. A single counterexample suffices to falsify the statement *Jones does not have any apples*. In combination with the assumption that *any* is essentially an indefinite, interpreted as an existential quantifier, this means that *any* may only be used in negative environments. Otherwise, an existentially-quantified statement would arise, and existentially-quantified statements are easy to verify, but hard to falsify. The sentence *Jones has an apple* requires us to consider all pairs consisting of Jones as its first member and *some apple* as the second member as possible members of the denotation of *have*. The sentence is not falsified until we have considered, and rejected, every such pair. Sentences involving free choice *any*, being universal in nature, are likewise easy to falsify.<sup>5</sup>

More precisely, we require that some subformula of a sentence in which an indefinite polarity item such as *any* or *ever* is embedded, is easily falsified (by a single counterexample, or else by a relatively small set of counterexamples – see below). This subformula may equal the entire sentence, but also a proper subpart of it, in light of the fact that double negation does not generally appear to block the licensing of polarity items (cf. fn. 1 above). Compare e.g.:

- (9) a. I can't believe that nobody has ever heard of this painter.  
 b. Nobody could believe that he did not want any alcohol.

The acceptability of the sentences in (9) is due to the fact that subformula's corresponding to the embedded clauses are general statements. Note, by the way, that the requirement of generality is a global one. Whether an indefinite takes part in a general statement depends on its context. In the scope of negation, an indefinite takes on universal force, but not when there is an intervening universal quantifier. The sentence *Not everybody has a cat* is verified easily: a single non-cat-owning person suffices as a counterexample, but it is hard to falsify: we have to consider every pair of a person and a cat. Only after we have satisfied ourselves that each

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<sup>5</sup> The status of free choice *any* as a universal is not undisputed. In the words of Vendler (1967): 'The meaning of *any* is a many-splendored thing.' In imperatives, there is nonequivalence with regular universal quantifiers: *Take any apple* ≠ *Take every apple*. Yet, as Vendler (1967: 79) states, "there is some generosity left in this offer too: generosity in the sense of generality". The offer holds for each and every apple, and so in a real sense, has a universal flavor. Geach (1962) offers the example *Tom can lawfully marry any sister of Bill's* as clearly differing in truth conditions from *Tom can lawfully marry every sister of Bill's*. Remarks to the same effect are to be found in Jennings (1994), Horn (2000a, b), Giannakidou (2001), as well as van Rooij (2008). Many authors observe that imperatives such as 'Pick any card' are not true commands, but permission-granting statements, equivalent to 'Take a card, no matter which one.' It appears, though, that pragmatic factors may sometimes yield true universal commands: consider an imperative like *Correct any spelling-mistakes before handing in your assignments*. Clearly, this is not a case of free-choice permission, where students may pick their favorite spelling mistake in order to correct it. Most likely, the pragmatic oddness of such a request blocks a free-choice permission reading. Dayal (1998) and van Rooij (2008) explicitly argue that true commands and *must* statements do not contain occurrences of FC *any*. The above example shows that they are wrong about this. Compare also: *You must correct any spelling-mistakes before handing in the assignment*.

and every such pair is in the denotation of the verb *have*, can we be sure that the statement is false.

A slight complication of the account is necessary in order to take care of cases where the sentence is not strictly universal:

- (10) a. Few people ever crossed Antarctica on skis.  
b. Fewer than 5 people have ever climbed Mount Erebus.

Here, we need to weaken the requirement of generality as follows: a statement is a general statement iff it is easily falsified, and a statement is easily falsified iff it is falsified by a small number of counterexamples. What counts as small is of course context-dependent (cf. e.g. Westerståhl 1985 for discussion). If the quantifier *few people* in (10a) is understood as less than  $n$ , where  $n$  is some relatively small number  $n$ , the statement in (10a) is refuted by  $n$  counterexamples, still a relatively small number. In the case of (10b), 5 counterexamples suffice to falsify (10). As supporting evidence for this move, Jackson notes the possibility of using non-downward entailing quantifiers just in case there is an implicature of ‘smallness’ (the observation is originally due to Linebarger 1987):

- (11) ?Exactly four people in the world have ever read that dissertation: Bill, Mary, Tom and Ed.

When, however, the number of counterexamples is not that small, even downward entailing quantifiers become less acceptable (Jackson 1995: 196), as the difference between the following two sentences suggests:

- (12) a. At most one hundred Americans have any children.  
b. ?At most one hundred people in this room have any children.

Like the account in Linebarger (1981), Jackson’s theory makes a principled distinction between triggering by *few* and *less/fewer than 5* and triggering by *not all* or *not everybody*. The former group is acceptable for existential polarity items such as *any* and *ever*, the former is not. This contrasts with the theory of Zwarts (1981, 1986, 1996), which treats *few* and *not all* on a par as being monotone decreasing but not anti-additive quantifiers. A noun phrase  $X$  is monotone decreasing iff for all predicates  $Y, Z$  we have:

- (13)  $X Y \text{ or } Z \rightarrow X Y \text{ and } X Z$  ( $X$  is monotone decreasing)

A noun phrase  $X$  is anti-additive iff

- (14)  $X Y \text{ or } Z \leftrightarrow X Y \text{ and } X Z$  ( $X$  is anti-additive)

Monotone decreasing inferences are indeed generally valid for *few* and *not all*, but anti-additive inferences fail:

- (15) a. Few people have climbed Mount Erebus or have climbed Mount Sidley  $\rightarrow$   
Few people have climbed Mount Erebus and few people have climbed  
Mount Sidley  
b. Not everybody has climbed Mount Erebus or has climbed Mount Sidley  $\rightarrow$   
Not everybody has climbed Mount Erebus and not everybody has climbed  
Mount Sidley.

Why are the implications not valid from right to left? In the case of (15a) it is because it may be the case that the number of people having climbed Mount Erebus is small, and that the number of people having climbed Mount Sidley is likewise small, but that the two sets are disjoint and their combination just large enough to no longer count as small. In the case of (15b), just consider the case where one half of all people in the domain of discussion climbed Mount Erebus and the other half Mount Sidley. Then not everybody climbed Mount Erebus and not everybody climbed Mount Sidley, but everybody climbed either Mount Erebus or Mount Sidley.

In this connection, it is interesting to see which theory makes the better predictions. It is dangerous to rely on introspective judgments alone, since they tend to be fragile and subtle, especially regarding rare combinations of polarity items and triggers. Many years of classroom experience in teaching polarity issues have taught me how easy it is to find disagreement about the acceptability of examples from the literature. Therefore I have made an effort to supplement introspection with corpus data. In the case of English *ever*, I have collected examples of polarity-sensitive uses (excluding non-polarity uses such as *he was ever so smart* or *she was ever the lady* – cf. Israel 1998b for a discussion of the various uses of *ever*). For Dutch, I have a large collection of polarity-sensitive *ooit* (for the distinction between polarity-sensitive and nonsensitive *ooit*, cf. Zwarts 1995, Hoeksema 1998a) and for German *je/jemals* (excluding cases of nonsensitive *je* – that is, occurrences of so-called binominal *je* which functions as a distributive operator in German – cf. *die Mädchen hatten je drei Bücher* ‘the girls had three books each’). The fact that each of these three expressions has other uses besides the polarity-sensitive use in which I am interested indicates that it won’t be easy to mechanically extract data from a corpus such as the British National Corpus. It has therefore been necessary to hand-select the relevant data. I have culled data from newspapers, journals, books, TV, and electronic data sources, and classified each example in a number of ways, such as the kind of context or trigger that licenses the occurrence of the polarity item. In Table 1 below, I provide some data on occurrences of *ever*, *ooit*, *je(mals)* with weak triggers.

TABLE 1: EVER [N=3728], Dutch OOIT [N=17304] and German JE/JEMALS [N=838] in combinations with weak triggers

CONTEXT/TRIGGER	EVER	%	OOIT	%	JE(MALS)	%
Few/little	39	1	46	0.2	6	1
Not much/many	5	0.2	2	0.01	-	-
Seldom	1	0.03	5	0.03	-	-
Neg+universal	3	0.1	-	-	-	-

From this table, it appears that negated universal quantifiers are indeed an extremely rare group of triggers for this set of polarity items, in accordance with Jackson’s account.<sup>6</sup> In fact,

<sup>6</sup> Jackson’s account for *any* and *ever* covers a great deal of ground, but is probably only part of a larger puzzle. There are many expressions involving *any* which have idiomatic status, and a different distribution, such as *at any rate* or *in any event*. The expression *in any way* is a stricter polarity item that *any*, since it lacks a free choice reading. The free choice reading, available for (i) below, is lacking for (iv):

- (i) John is interested in any sport.
- (ii) John is not interested in any sport.
- (iii) John is not in any way interested in sports.
- (iv) \*John is in any way interested in sports.

the three occurrences that were found for English were the result of googling for various strings. It is well-known that Google provides examples for just about anything, including ungrammatical or borderline constructions. For *any*, my data show a similar pattern:

TABLE 2: Weak triggers for ANY

CONTEXT/TRIGGER	ANY N=6302	%
Few/little	19	0.3
Not much/many	3	0.005
Seldom/rarely	11	0.2
Neg+universal	1	0.02

Google data make the point even stronger. The string *not all of us had any* appears once on the World Wide Web, according to Google, whereas there were 10 hits for *not many of us had any* and 220 actual hits (out of an “estimated” 17,900) for *few of us had any*. For the string *not every one of us had any*, no hits were found. The preference for *few* over *not many* that we see here, as well as for *ever*, *ooit*, *je*, is most likely due to the fact that negative antonyms make for stronger statements, pragmatically, than negated forms of positive antonyms (cf. Horn 1989, Levinson 2000, Blutner 2002 for discussion).

At this point, the skeptical reader may object that the difference shown in Table 1 between weak existential environments such as *few/little* on the one hand and negated universals on the other hand could simply be due to the fact that the latter type of environment is less common anyway. While I do not have hard quantitative data to settle the matter once and for all, I doubt that we could explain away the difference along these lines. Negated universal quantifiers are not that rare, and we should find some in the huge sets of data collected for Dutch and German, but none were found. Among other negative polarity items, by contrast, triggering by negated universal quantifiers is by no means a rare phenomenon. In the next section, I will discuss a set of expressions that illustrate this very point.

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Another, more serious, type of problem for Jackson’s account is what I would like to call *noncommittal any*. Unlike free choice *any* (but see fn. 5), this use of *any* does not appear to have universal force, yet it occurs in various nonveridical, but not downward entailing environments:

- (v) I used to stare at this photo for minutes at a time, trying to detect within it any evidence of the trauma of the previous week (Nick Hornby, *Fever Pitch*, Riverhead Books, New York, 1998, p. 28).
- (vi) I’d appreciate any comments on this paper.

Accounts that favor some kind of strengthening, such as Kadmon and Landman (1993), also fail to come to grips with such examples, which are, admittedly, relatively rare, but by no means marginal. The reason I would like to call this ‘noncommittal *any*’ is that the import of *any* seems to be to highlight the fact that no existential commitment is made by the speaker. Of course, if we have to admit something like a special noncommittal use, separate from free choice or negative polarity uses, the prospects for a unified theory of *any*, as advocated in various ways by Quine (1960), Partee (1986), Kadmon and Landman (1993), and Horn (2005), among others, are rather dim. (Some measure of ‘splitting’ will have to be admitted anyway, even by the most generous ‘lumpers’, given the existence of *adverbial any*, exemplified by *Is she any good? Can you be any more insulting? I don’t want to discuss this any further*. Adverbial *any*, for starters, does not have a free choice use. The fact that *any* is used as an adverb of degree is not surprising, given that more indefinite pronouns are used in that way, e.g. *somewhat*, *a bit*, but does not follow from its use as a determiner. Many other determiners/pronouns cannot be used as adverbs of degree, compare e.g. *She was somewhat/\*something annoyed at his suggestions*.)



## 2.2. *Need, hoeven, brauchen*

English, Dutch and German all have a polarity-sensitive modal verb denoting obligation (cf. van der Wouden 2001, van der Auwera and Taeymans, to appear). Although the three verbs are not etymologically related, they have a strikingly similar distribution, as we will see. In English, this modal verb is *need*, as exemplified in (16). Note that main verb *need*, which combines with infinitival *to*, is not a polarity item (cf. 16e).

- (16) a. You need not worry.  
 b. \*You need worry.  
 c. You need worry about nothing.  
 d. \*You need worry about your grades.  
 e. You need to worry about your grades.

In Dutch, the polarity-sensitive modal verb is *hoeven* (in written Dutch also *behoeven*). There is also a main verb *behoeven* which is not polarity sensitive.

- (17) a. Je hoeft niet meedoen.  
 You need not collaborate  
 ‘You don’t have to collaborate’  
 b. Dat behoeft toelichting.  
 That needs explanation  
 ‘That requires explanation’

In German, finally, the polarity-sensitive modal auxiliary verb is *brauchen*. Again, this verb also has a separate use, as a main verb, which is not polarity-sensitive:

- (18) a. Du brauchst nicht anzurufen.  
 You need not call  
 ‘You don’t have to call’  
 b. Wir brauchen mehr Zeit.  
 We need more time  
 ‘We need more time’

In Table 3, I compare corpus data for the three modal verbs. Note that the difference between negated universals and expressions such as *few*, *little*, *seldom* that we found for *ever*, *ooit*, *jemals* in the preceding section, does not show up here: both types of weak triggers are represented about equally well. If we interpret Table 3, as seems reasonable, to show that there is no restriction against the modal verbs in negated universal contexts, we might venture the guess that the two types of weak triggers are roughly equally common. Hence the possibility, raised in section 2.1., that perhaps the asymmetry between negated universal quantifiers and weak existential quantifiers observed for *ever* and its counterparts might be due to a difference in frequency between the two types of triggers, should be rejected.

TABLE 3: Distributional data for English *Need* (N=418), Dutch *hoeven* (N=1576), German *Brauchen* (N=380) [the fixed expression *if need be* was left out of the selection]

Context/trigger	Need	Hoeven	Brauchen
Before-clauses	-	-	-
Comparatives	2%	1%	-
Conditional clauses	-	0,5%	-
Few/Little	1%	2%	1%
Hardly/scarcely	4%	1%	2%
N-word	14%	22%	25%
Not	60%	53%	51%
Negated universal <sup>7</sup>	2%	2%	2%
Negative predicate	-	-	-
Question	3%	2%	1%
Restrictive adverb	13%	14%	17%
Universal	2%	1%	1%
Without	-	3%	1%

What is perhaps most striking about the distributional data in this table is the relative prominence of the category *restrictive adverb*. In English, the main restrictive adverb is *only*, in Dutch the set is larger (*alleen, slechts, maar, alleen maar, enkel, pas, uitsluitend*), while German is intermediate between Dutch and English in this respect (*nur, bloss, lediglich*). Some examples of *need* etc. with restrictive adverbs are:

- (19) You need bring only one thing.
- (20) Je hoeft maar één ding mee te brengen.  
You need but one thing along to bring  
'You need bring only one thing'
- (21) Du brauchst nur eine Sache mitzubringen.  
You need only one thing along-to-bring  
'You need bring only one thing'

For most negative polarity items, restrictive adverbs are not a particularly common type of trigger. So why are these modal verbs different in that respect? It seems that this may be due to the general requirement on the use of the modals: while their lexical semantics is that of a deontic necessity operator, their global requirement appears to be that they are used in the expression of a weak requirement. Negation, of course, yields the weakest requirement. If you are told 'You need not come', then what you are required to do is the absolute minimum: nothing at all. If you are told 'You need do very little', the requirement is still rather minimal. The same is true, arguably, if you are told 'You need bring only one thing'. Here, there is an implicature that you don't have to do much. Various collocations reinforce this point. A

<sup>7</sup> The negated universal context in Table 3 should be understood as the scope, not the restriction, of a negated universal quantifier, as in *Not everybody need be present*. The possibility of negation is clearly due to the presence of negation, since the universal quantifier by itself does not license polarity items in its scope. The universal context in the table, however, has to be understood as the restriction of the quantifier, being a legitimate context for at least some polarity items. Compare examples (25-27) in the main text.

common combination in English and Dutch is ‘one need not look far’/ ‘niet ver hoeven te zoeken.’ Not having to look far leaves only your own vicinity to explore, which is clearly a weaker requirement than having to look far. The notion of a minimal requirement may also be used to explain an otherwise odd fact about universal quantifiers. Ordinarily, *need – hoeven – brauchen* are not acceptable in the restriction of a universal quantifier:

- (22) \*Every student that need worry will be informed.
- (23) \*Elke student die zich zorgen hoeft te maken, wordt geïnformeerd.  
Every student who self worries need to make, become informed  
‘Every student that need worry will be informed’
- (24) \*Jeder Student der sich Sorgen zu machen braucht, wird informiert.  
Every student that self worries to make needs, becomes informed  
‘Every student that need worry will be informed’

However, when the quantifier is *all* or its Dutch or German counterpart, the result is fine:

- (25) All you need know is in this booklet.
- (26) Alles wat je hoeft te weten staat in dit boekje.  
All that you need to know stands in this booklet  
‘All you need know is in this booklet’
- (27) Alles was du zu wissen brauchst, steht in diesem Büchlein.  
All that you to know need stands in this booklet  
‘All you need know is in this booklet’

Sentences such as (25-27) carry an implicature that is absent in (22-24), namely that nothing else is required. Hence the requirement might be considered light. When we add material to eradicate this implicature, the acceptability of (25-27) disappears:

- (28) a. John told me all I have to know, and it’s a lot!  
b. John told me all I need know, #and it’s a lot!

It remains to be seen why negated universal quantifiers may trigger *need* and its counterparts. Clearly a statement such as *Not everybody need come* expresses a requirement which is not necessarily small. However, modal commitments are often given with respect to a background set of assumptions. A statement such as *Not everybody need come* is most natural when content of the statement *Everybody has to come* is under discussion or somehow assumed. Compared to that strong requirement, ‘not everybody need come’ may be interpreted as relatively mild.

Questions involving *need* often involve some rhetorical interpretation involving, once more, some implicature of minimality:

- (29) Need I say more? [implicature: nothing more need be said]

By contrast, a statement such as (30) is decidedly odd:

- (30) Need I speak to all the delegates separately?

Here, there is no suggestion of a minimal requirement, and the more natural way of expressing the meaning of (30) would be something like

(31) Do I need to speak to all the delegates separately?

### 3.3. *Mouse, chicken and dog in Dutch*

Many European languages have polarity-sensitive animal names that refer to humans. For example, French *pas un chat* (lit. ‘not a cat’) means ‘not a living soul, nobody’ (von Bremen 1986), likewise the standard Dutch of Flanders *geen kat* ‘no cat’, standard (northern) Dutch *geen hond* ‘no dog’, German *kein Schwein* ‘no pig’ and Danish *ikke en kat* ‘not a cat’ (Jespersen 1917).

Particularly interesting is the situation in standard Dutch, where besides *geen hond* ‘no dog’, there are two other expressions in use: *geen kip* ‘no chicken’ (cf. the English “Just us (little) chickens” as in a response to “Who’s there?”) and *geen muis* ‘no mouse’. The three expressions are not used interchangeably, but have become, to a very high degree, differentiated. The expression *geen kip* is typically used to indicate the absence of humans from a scene. *Geen muis* has a scalar use in contexts where size plays a role. *Geen hond*, finally, seems to be the default case, for use elsewhere. It is possible, in connection with this three-way division, to distinguish three general kinds of contexts: (1) existential contexts and complements of *see*; (2) scalar contexts (often involving the use of the modal *kunnen* ‘can’, which often adds a scalar flavor to a predicate; and (3) all other contexts.

Existential sentences and complements of *see* have in common that they describe some scene. Typical examples involving *geen kip* ‘no chicken’ are:

- (32) a. Er was geen kip op straat.  
 There was no chicken on street  
 ‘There wasn’t a soul on the street’  
 b. Er was geen kip te bekennen.  
 There was no chicken to discern  
 ‘There wasn’t a soul to be seen’  
 c. Ik heb geen kip gezien.  
 I have no chicken seen  
 ‘I haven’t seen a soul’

At the lexical level, *geen kip* simply means ‘nobody’, but its global requirement forces it to appear in contexts where an entire scene is characterized by the absence of humans. Sentences such as (33), where this is not the case, while not entirely impossible for all speakers, are quite unusual, as we will see:

- (33) %Geen kip sprak met de kinderen.  
 No chicken spoke with the children  
 ‘Not a soul spoke to the children’

Scalar uses typical of *geen muis* involve situations where either a place is so packed, nobody could get in, not even a mouse, or where a barrier is so impenetrable, that nobody could get through, not even a mouse. A typical example would be

- (34) De politie laat vanavond geen muis meer door.  
The police let tonight no mouse anymore through  
'The police won't let anybody through tonight'

Finally, an example involving *geen hond* 'no dog':

- (35) Geen hond gelooft dat jij onschuldig bent  
no dog believes that you innocent are  
'No one believes that you are innocent'

In the following table, some corpus evidence is presented to show the contextual specialization of the three polarity items:

TABLE 4: Mouse, Chicken and Dog

TERM	N	% SCALAR	% EXISTENTIAL	% OTHER
muis	30	94%	3%	3%
kip	109	5%	78%	17%
hond	206	-	33%	67%

The distribution of *geen kip* is strongly reminiscent of that of *pas un chat* in French, as described in von Bremen (1986: 242-3). Von Bremen offers the following examples plus judgments:

- (36) a. Il n'y a pas un chat ici.  
There is not a cat here  
'There's not a soul here'
- b. Je n'ai pas vu un chat dans le magasin.  
I not have seen a cat in the store  
'I haven't seen a soul in the store'
- c. ?Pierre est très gentil. Il ne heurtera pas un chat.  
Pierre is very kind. He not-would-hurt a cat  
'Pierre is very kind. He would not hurt a soul.'
- d. \*Jean est très égoïste. Il n'aide pas un chat.  
Jean is very egotistical. He not-would-help a cat  
'Jean is very much an egotist. He would not help a living soul.'
- e. \*Il n'a pas parlé à un chat.  
He not-has spoken to a cat  
'He has not spoken to a cat'

As von Bremen concludes: "L'emploi le plus naturel d'*un chat* est dans les *propositions existentielles*."

### 3.4. The likes of which

One of the most unusual polarity items is the English expression **the likes of which**. This expression heads relative clauses which express some kind of superlative quality by stating that something or somebody does not have an equal. Some typical examples are given in (37):

- (37) a. a war, the likes of which the world has never known  
 b. a genius, the likes of which we will never see again  
 c. a linguistic oddity, the likes of which we are unlikely to find in any other language

In Table 5 below, my corpus data are presented. As one can see, it looks as if the expression has not yet fully grammaticalized into a polarity item, given the 6% positive occurrences. However, the predominance of negative environments is strong enough to convince us that we are dealing with a polarity-sensitive core in the use of this expression. In the right hand part of the table, the various predicates that cooccur with *the likes of which* are listed. Notice the predominance of verbs of experience, especially verbs of perception (which I take to indicate a subtype of experience) [cf. also “NP’s like(s)”, as in *never saw his like (again)*, also an NPI, usually with *see* or *know*].

TABLE 5: THE LIKES OF WHICH [N=72]

TRIGGERS		PREDICATES	
not	32%	encounter	3%
n-word	56%	experience	7%
negative predicate	1%	hear	4%
restrictive adverb	1%	imagine	3%
rarely/seldom	3%	see	60%
positive occurrences	6%	other	23%

There is some overlap here with the use of *kip* and *chat* discussed in the previous section, but there is also a major difference: while the latter expressions are almost always used to characterize some scene, the use of *the likes of which* is typically for the characterization of larger settings, such as world history, or the combined experience of an entire group of people, etc., in line with its superlative nature. So our general characterization of this expression is that a maximal degree is indicated indirectly through *nonexistence* of an equal. Nonexistence in turn is expressed indirectly by means of predicates of perception/experience. This might be viewed as a collocational effect. Only occasionally did I find existence predicates with this construction, such as *exist* or its fancier counterpart *walk the earth*.

Other examples where superlative degree is expressed by the lack of an equal abound, but usually, these involve some light verb such as *have* or *know*, such as Dutch *zijns gelijke kennen* ‘know one’s equal’, *zijn weerga hebben* ‘have one’s counterpart’, German *seinesgleichen haben* ‘have one’s equal’ or *seinesgleichen suchen* ‘seek one’s equal = not to have an equal’. Notice, by the way, that *seinesgleichen haben* is a negative polarity item, whereas *seinesgleichen suchen* is a positive polarity item. Both items have the same global property of expressing a superlative degree by denying the existence of an equal.

### 3.5. English *in sight*

In section 3.3. we saw some expressions that serve to characterize absence of humans from a scene. Another scene-characterizing expression is *English in sight*. While this prepositional phrase does not appear to be a polarity-item if one looks at the entirety of its uses, some striking correlations emerge when we distinguish three subcases: sentences with definite subjects (not polarity sensitive), sentences with indefinite subjects (polarity sensitive) and use of *in sight* as a nominal modifier. These use are illustrated by the following examples:

- (38) a. The end is (nowhere) in sight.  
 b. There was \*(not) a student in sight.  
 c. Shoot every/\*some opponent in sight.

Besides such sentences, *in sight* is very often used in absolute constructions involving the prepositions *with* and *without*:

- (39) a. The war just went on and on with no end in sight.  
 b. Without an end in sight, the war just went on and on.

Here, too, indefinite subjects are typically associated with negation, but definite subjects are not:

- (40) With the end of the war in sight, it was time to divert the public attention to other matters.

In Table 6, some newspaper data are presented.<sup>8</sup> Sentences with occurrences of *in sight* were classified according to subject type and adjunct status. Indefinite subjects were strongly associated with negation, adjuncts with universal quantifiers.<sup>9</sup> Definite subjects were not associated with negation in a strong way, although we may find some polarity sensitivity here, too, if we distinguish further among subcases. Positive definite subjects are often instantiations of a few highly frequent combinations: the end is in sight, the goal is in sight, the final solution is in sight, etc. With other types of subject, it appears that negation is preferred:

- (41) a. Jones was nowhere in sight.  
 b. ??Jones was in sight.

As for the indefinite subjects, many appeared in absolute constructions such as *with no end in sight*; *with not a living soul in sight*; *without a solution in sight* etc. Especially common is *with no end(ing) in sight*.<sup>10</sup>

<sup>8</sup> The data in Table 6 are from LexisNexis, from the newspapers Los Angeles Times, the Observer, the Sydney Morning Herald and the Toronto Star. I searched for the string “in sight” in all articles from July 20, 2008 – January 20, 2009 (a 6-month period). From the original 406 hits, a fair number had to be discarded, as they contained occurrences of the light-verb combinations *keep in sight*, *have in sight*, or the string “in sight of” (which behaves differently from *in sight* as in (39)), as well as a few hard-to-classify cases in headlines.

<sup>9</sup> The fact that adnominal *in sight* occurs with universally quantified noun phrases might be seen as a consequence of its negative-polarity status. The restriction of a universal quantifier is, after all, one of the familiar contexts of polarity items. Note, however, that adnominal *in sight* appears to be less felicitous in other types of triggering environments:

- (i) \*Jones did not want to shoot a student in sight.  
 (ii) \*Did Jones shoot a student in sight?  
 (iii) \*If Jones shot at a student in sight, he would not have missed him.

This suggests that adnominal *in sight* cannot be simply regarded as a straightforward polarity item.

<sup>10</sup> It is perhaps interesting to note that *without an end in sight* does not block *with no end in sight*, in spite of the fact that phrasal expression is often blocked by lexical expression (cf. Poser 1992). See Ackema and Neeleman (2001) for a different account of blocking, which states that syntax trumps morphology: if all things are equal, use a syntactic construction over a morphological one. What predictions this latter account makes for cases of complex lexical items such as *without*, which are not morphologically regular, versus *with no*, is unclear. The prospects for a general theoretical account of blocking are a bit bleak anyway, given that *with no* is not blocked by *without* (cf. *with no money down* alongside *without any money down*), whereas its Dutch counterpart *met geen* ‘with no’ is blocked by *zonder* ‘without’: cf. \**met geen eind* ‘with no end’ versus *zonder eind* ‘without end.’

TABLE 6: *in sight* (raw numbers, not percentages)

	POSITIVE	NEGATIVE	UNIVERSAL	THE ONLY/ SUPERLATIVE
definite subject	36	15	-	-
indefinite subject	20	191	-	-
adjunct	-	-	19	4

It appears from these data, therefore, that *in sight* should be viewed in the context of the larger constructions it partakes in, before one can establish its polarity-sensitive nature in some of these contexts.

The difference between definite subjects and indefinite subjects may well be linked to veridicality and reference (cf. the work of Giannakidou 1998, Zwarts 1995 for discussion). A sentence like *A solution is in sight* entails that a solution does not (yet) exist. We might render it in predicate logic as  $Op [\exists x [\text{solution}(x)]]$ , where *Op* is some kind of nonveridical operator such as “it is to be expected that”/“it is likely that it will be the case that.” The 20 positive occurrences of *in sight* consist of 7 cases of absolute constructions involving *with* (“with an end in sight, ...”), and 13 finite clauses. Of the 13 finite clauses, 10 had additional nonveridical operators, such *perhaps*, *hope*, *if*, *appear*, *confident that*, etc. This seems rather a lot, and may be a sign that the nonveridicality associated with *in sight* has to be bolstered by the presence of these additional elements. At the same time, the three positive occurrences without additional nonveridical elements suggest that this is merely a tendency, not a rule of grammar.

### 3.6. Litotes constructions

Litotes constructions are a common source of negative polarity items (Horn, 1991, van der Wouden 1996, 1997, Israel 1998). The Dutch examples in (42) show a typical case of a negative member of an antonym pair, employed in a litotes construction of double negation to express something mildly positive:

- (42) (a) Hij schaakt niet onverdienstelijk.  
 He chesses not without-merit  
 “He plays chess rather well”  
 (b) \*Hij schaakt onverdienstelijk.

The lexical meaning of *onverdienstelijk* is ‘without merit, lacking value’, and the global requirement on its use is that it should state something mildly positive. This is possible only in the context of negation. In other types of environment other polarity items may be just fine, but litotes expressions tend to shy away from them. They only appear in contexts that are narrowly negative. For instance, conditionals or questions are out of the question for *onverdienstelijk*. In a set of 82 occurrences of *onverdienstelijk*, 91% cooccurred with *niet* “not,” 9% with *geen* “no”. That means that a full 100% occurred in a negative sentence. This type of distribution is typical for litotes constructions in general. Some English examples of litotes NPIs are *lose sleep over* (example: *Bush lost no sleep over dead soldiers*), *love lost between* (example: *There was no love lost between the generative and the interpretive semanticists*) or *say no to* (example: *I would not say no to a free trip to Murmansk*).

A slightly more complex type of litotic construction is exemplified by the examples in (43) below. The construction can be found, with only minor differences, in English, Dutch and German:



## (43) English

- a. Not a day went by that I did not miss her.  
 b. Not a week went by without new developments.

## German

- c. Kein Tag vergeht ohne neue Entwicklungen.  
 No day passes without new developments  
 ‘Not a day passes without new developments’  
 c. Kaum ein Tag geht vorbei dass ich nicht an sie denke.  
 Hardly a day goes by that I not to her think  
 ‘Hardly a day goes by, that I do not think of her’

## Dutch

- e. Er gaat geen dag voorbij zonder nieuwe ontwikkelingen.  
 There goes no day by without new developments  
 ‘Not a day goes by without new developments’  
 f. Er gaat zelden een week voorbij dat het niet regent  
 there goes seldom a week by that it not rains  
 ‘Rarely a week goes by in which it does not rain’

The construction consists of a temporal indefinite, usually of midsize (so *moments*, *seconds*, *minutes* are not commonly used, nor are *decades*, *centuries*, *eons*), a verb expressing the passing of time (*go by*, *pass*) and either a *without*-PP, or a negated relative clause. When this whole construction is negated, the construction assumes universal force: if not a week went by without new developments, then every week brought new developments. In Table 7 below, Dutch data are compared to English data (German data were too scant to consider). We see the same sets of triggers, but with interesting differences in prominence. English tends to prefer the weaker negative adverbs *barely/hardly/scarcely*, whereas Dutch strongly prefers regular negation. It would seem plausible that this reflects a stylistic difference between the two languages (or rather, their users), and not a difference of semantic nature. Occasionally, we find positive occurrences of the construction (*a year went by without any news from the missionaries*). Slightly different variants, such as *Another year went by without a major hurricane* or *Most of the year went by without any new accidents*, were not included in the data set, since the polarity-sensitive use does not show up with definite subjects, or subjects introduced by *another*.

TABLE 7: Dutch corpus data (N=116) for *not an X goes by* versus English (N=45)

Trigger	N	%	Trigger		
Geen ‘no’	104	90%	Barely/hardly/scarcely	22	49%
Nauwelijks ‘hardly’	7	6%	Negation	20	44%
Zelden ‘seldom’	4	3%	Rarely/seldom	2	4%
Weinig ‘few/little’	1	1%	Positive	1	2%

In Table 8, I summarize the various temporal nouns involved in the construction. As you can see, the similarities between Dutch and English are quite obvious.

TABLE 8: an X goes by – types of nouns

Dutch	%	English	%
Dag ‘day’	73	Day	71
Week ‘week’	14	Week	16
Nacht ‘night’	4	Night	7
Jaar ‘year’	3	Month	2
Avond ‘evening’	3	Year	2
Maand ‘month’	1	Winter	2
Winter ‘winter’	1		
Zomer ‘summer’	1		
Twee dagen ‘two days’	1		

A notable property of litotes constructions in general is that the secondary negation is generally unable to trigger polarity items. Compare:

- (44) a. \*Jones can’t deny he has ever been to the Canary Islands.<sup>11</sup>  
 b. \*Not a day passed by without so much as a wink from the master.

In this respect, litotic constructions differ significantly from other types of double negation, which are generally acceptable with polarity items (cf. the discussion of example (9) above). It would make sense to view litotes as a constructional unit which acts as an upward entailing context, whereas other types of double negation should be treated compositionally, each negative element contributing negative force to its scopal domain.

### 3.7. Adverbs of degree

Adverbs of degree may have a special understating use (cf. Horn 1989). For instance *Jones is not very smart* may be used to convey the information that Jones is actually somewhat dumb. Therefore, this sentence may be used as an understatement, given that its literal meaning only excludes that Jones is very smart, so could well be compatible with a state of affairs in which Jones is smart, but not very smart (e.g., when Jones’ IQ equals, say, 120). Some adverbs of degree seem to have specialized in this understating use, having become negative polarity items. Some cases in point are English *all that*, German *sonderlich*, and Dutch *gek*.

- (45) (a) Frank was not all that happy.  
 (b) The show was not all that bad.  
 (c) The fish did not bite all that often.
- (46) (a) Er war nicht sonderlich geliebt [German]  
 He was not especially well-liked  
 ‘He was not all that well-liked’  
 (b) Hij wist niet zo gek veel. [Dutch]  
 He knew not so crazy much  
 ‘He didn’t know all that much’

<sup>11</sup> <sup>11</sup> As noted by Larry Horn (p.c.), the sentence

- (i) On the stand, Jones didn’t deny he has ever been to the Canary Islands.  
 is somewhat better than (44a). Actually, (44a) is only bad on the reading where Jones can’t deny having ever been to the Canary Islands because that would involve a lie. There is another reading where Jones is for some other reason unable to deny, e.g. because he has lost his voice. This reading is fine for (44a):  
 (ii) I am glad Jones lost his voice. Now he can’t deny he has ever been to the Canary Islands.

The lexical semantics of these adverbs is that of *very*, indicating a high degree, but their global requirement, which makes them negative polarity items, is that they express an understatement, i.e. indicating a fairly low degree. The distribution of the adverbs shows a preponderance of purely negative environments, much like that of litotes constructions, and the rest is of very little quantitative significance.

TABLE 9. ALL THAT, SONDERLICH, GEK

ALL THAT	N=159	SONDERLICH	N=97	GEK	N=209
not	91%	nicht ‘not’	85%	niet ‘not’	97%
n-word	5%	n-word	10%	n-word	1%
as-if	1%	kaum ‘hardly’	1%	positive	1%
neg.predicate	1%	ohne ‘without’	4%	zonder	1%
question	1%				
without	1%				

As Klein (1998), among others, has pointed out, a great many adverbs of degree are positive polarity items. Perhaps the most notable among them are adverbs denoting a middling degree, such as *rather*, *pretty*, *fairly*, *somewhat*, and their counterparts in Dutch *nogal*, *tamelijk*, *vrij* ‘rather, fairly’ and in German *ziemlich*. Cf. also French *assez*, which like *enough* is a PPI when used as a scalar adverb and not when it’s used as a true comparative with an explicit or implicit complement. *Rather* is one of the oldest-known positive polarity items, already showing up in seminal works such as Baker (1970). Since midlevel degree adverbs appear to be generally averse to negation, it seems likely that there is some general semantic reason for it. Here is one possibility: let’s assume that *rather smart* means something like: *smart, but not very smart*. When I assert that X is rather smart, and you disagree, I assume you disagree that the person is smart. Only with the use of metalinguistic negation (cf. Horn 1989: 400ff) can we arrive at another possibility, where not the property *smart* but the property *not very smart* is negated, as in: *Jones is not RATHER SMART, he is EXTREMELY smart*. So I take it that *not rather smart* boils down, in the absence of metalinguistic negation, to *not smart*. This might be the reason why *rather* and similar expressions have turned into positive polarity items, because they are equivalent, under negation, to a shorter, and hence preferable combination (cf. also Grice’s 1975 Maxim of Manner, in particular its submaxim ‘Be brief’). If correct, this would be a general semantic explanation for the fact that cross-linguistically midlevel degree adverbs shy away from negation (excepting, as always, double negation, cf. Baker 1970, Horn 1989, Szabolci 2004, and metalinguistic or ‘radical’ negation, cf. Seuren 1985, Horn 1989).

For high degree modifiers, some of which are also positive polarity items, the above account won’t work. But here, it is important to note that not all high degree modifiers are positive polarity items. Some are, some are not, and some are the opposite: negative polarity items, like *all that*.<sup>12</sup> Consequently, there cannot be a general semantic reason of the positive polarity status of such high degree modifiers as English *highly* or Dutch *hoogst*. Instead, I take it that their lexical semantics makes them markers of a high degree, and that the global condition on their use is simply that they express a high degree. This can be achieved in a positive context only. Compare for instance Dutch *hoogst* ‘highly’ and *erg* ‘terribly, very’. While all 376 occurrences of *hoogst* in my database are positive, *erg* has 334 negative occurrences out of a total of 1776 (19%). One might state the difference between the two items in the following way: while both have the lexical semantics of high degree modifiers,

<sup>12</sup> For English adverbs of degree, cf. also Bolinger (1972: 115-125) and Horn (1989: 353).

only *hoogst* has developed an additional global condition on its use, namely that it always indicate a high degree within the larger sentential context. Hence any use with clause-mate regular negation needs to be ruled out. Of course, with echoic or metalinguistic negation, *hoogst* is fine:

- (47) Het is misschien een beetje ongewoon, het is zeker niet ‘hoogst ongewoon.’  
 It is perhaps a bit unusual it is surely not ‘highly unusual’  
 ‘It is perhaps a bit unusual, it is definitely not ‘highly unusual.’

My main point here is that with minor differences in the global conditions on usage, we can characterize both positive and negative polarity items among the class of degree adverbs. In the following section, I will argue that many other types of positive and negative polarity items may be handled in like manner.

### 3.9 Positive polarity items with negative polarity counterparts

Often, positive polarity items resemble nothing so much as negative polarity items. Consider for instance the two Dutch expressions *op rozen zitten* ‘sitting on roses’ and *over rozen gaan* ‘going over roses.’ The former expression is a positive polarity item, the latter a negative polarity item. To be sure, there are more differences. The first item is static, and the second one dynamic. The first tends to be predicated of people, or groups of people, the latter is typically predicated of path-like expressions such as a life, a career, a journey, a quest, a marriage, all of which have in common that they involve a stretch of time. However, I don’t think those selectional differences matter for the polarity status of the expressions.

- (48) (a) Na de 2-0 zat Feyenoord op rozen.  
 After the 2-0 sat Feyenoord on roses  
 “After the 2-0, Feyenoord was doing just fine”  
 (b) De tocht naar het kampioenschap ging niet over rozen.  
 the journey to the championship went not over roses  
 “The journey to the championship was hard”

In both cases, roses are indicative of a situation ranked highly on an evaluative scale. *Op rozen zitten* ‘sitting on roses’ requires a global context which maintains this high ranking (positive) whereas *over rozen gaan* ‘going over roses’ has the global property of an understater, hence it requires negative contexts. These differences cannot be explained from lexical semantics only (e.g. the distinction static/dynamic does not in any way explain them). Rather, I assume that we are dealing with arbitrary and conventional conditions associated with particular expressions.

A similar type of example is provided by Dutch *kwaad kersen eten* ‘bad cherry-eating’, exemplified in (49):

- (49) Met hem is het kwaad kersen eten  
 with him, it is bad cherry-eating  
 ‘He is a tough person to deal with’

This expression is a positive polarity item, indicating the old-time habit of spitting out the pits of cherries. Somebody who will spit cherry pits in your face, is a tough bastard to deal with, is the idea underlying this expression. German has almost the same expression, but based on

German *gut* ‘good’ rather than Dutch *kwaad* ‘bad’, and not surprisingly, it is a negative polarity item (cf. Van der Wouden 1997):

- (50) Mit ihm ist nicht gut Kirschen essen.  
 With him is not good cherries eat  
 ‘He is a tough person to deal with’

In both cases, the general import is the same, but due to lexical differences, one case requires negation, while the other must shun it.

A final example of this kind can be found in English. In English, the construction consisting of *have* + *possessive pronoun* + *noun*, where the possessive pronoun co-refers to the subject of *have*, is a positive polarity item:

- (51) a. Membership has its advantages.  
 b. The Rolling Stones had their moments.  
 c. Fred has his quirks.  
 d. I have my doubts.

Presumably, the combination of the possessive pronoun and the possessive verb *have* is what makes this a positive polarity construction. Membership may or may not have advantages, but when you add *its* to *advantages*, clearly you are already presupposing the existence of such advantages. Hence it seems natural to use *have its advantages* only in positive contexts:

- (52) a. \*Membership does not have its advantages.  
 b. \*The Rolling Stones did not have their moments.  
 c. \*Fred did not have his quirks.  
 d. \*I don’t have my doubts.

As it happens, there is also a related construction in English, employing not the verb *have*, but the preposition *without*, in combination with the verb *be*:

- (53) a. Membership is not without its privileges.  
 b. The Rolling Stones were not without their moments.  
 c. Fred is not without his quirks.  
 d. I am not without my doubts.

It has been noted many times that the verbs *have* and *be* share many properties (Benveniste 1966, Kayne 1993, among others). As Benveniste noted, sentences such as English *John has a car* are rendered in many languages as *To John is a car*, involving a dative or dative-like preposition to mark the possessor, with the subject corresponding to the object possessed. Copula-constructions using *with* can be viewed denoting the converse relation, where the subject is the possessor and the object of the preposition is the possessed item. Hence *Peace be with you* is equivalent to the wish *You have peace*. (Of course, by pointing out these similarities, I do not want to suggest that any sentence involving the main verb *have* has an equally acceptable counterpart involving *with*.<sup>13</sup>) Given these deep semantic similarities, the

<sup>13</sup> As a case in point, Dutch has the positive-polarity construction involving the verb *hebben* ‘have’, but not the negative-polarity counterpart involving *zijn* ‘be’ + *zonder* ‘without’ cf.:

- (i) Elk land heeft (\*niet) zijn problemen  
 Each country has (\*not) its problems  
 ‘Every country has its problems’

existence of two related constructions in English, one involving, in part, *have*, the other involving *not be+without*, is not entirely unexpected.

Here, we are clearly dealing with a negative polarity construction. When negation is removed from the examples in (53), the result is decidedly odd:

- (54) a. \*Membership is without its privileges.  
 b. \*The Rolling Stones were without their moments.  
 c. \*Fred is without his quirks.

Compare also:

- d. \*Fred is (not) with his quirks

So the two constructions *have + possessive + N* and *be without +possessive+N* have the same global requirement: they must assert existence. In one case, this leads to positive-polarity status, in the other to negative-polarity status.

#### 4. CONCLUSIONS

In this chapter, I have argued that polarity items are more than peculiar expressions with a special licensing requirement. Together with their triggers they play a role in a construction consisting of at least a polarity item and its licenser, but potentially also other material. This construction may have properties of its own, which do not arise from the requirements of the constituting words, but call for the kind of non-atomistic treatment to be found in construction grammar and related approaches. The atomistic outlook of compositional semantics tends to steer away from the kind of global conditions on the expression of meaning which I have argued are at stake here, and therefore needs to be supplemented with a subtler awareness of the constructional properties of both negative and positive polarity items.

Another point I have argued for above is that polarity items are not all alike, but differ greatly, both in their distributional and in their lexical-semantic properties. Current approaches to classification, such as Zwarts's (1998) Boolean approach, fail to provide a satisfactory framework, because they lack an account linking lexical semantics to distributional properties, in addition to various shortcomings vis à vis descriptive adequacy. It is my hope that the framework sketched here, which relies both on lexical semantics and various global conditions on usage, can be developed into a better tool for analyzing the messy facts of negative and positive polarity items.

Given the kind of account provided here, one may well ask the question whether notions such as 'negative polarity item' or 'positive polarity item' are more than descriptive terms for classes of expressions whose distribution is somehow affected by the presence of negation. In the preceding pages I have argued that a unified account of polarity licensing is not forthcoming. Rather, different individual expressions make different demands on their linguistic contexts, and it appears increasingly unlikely that there will ever be a theory that

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- (ii) \*Geen land is zonder zijn problemen.  
 No country is without its problems  
 'No country is without its problems'

Occasionally, variants without the possessive pronoun are acceptable as litotes-combinations, though:

- (iii) De reis is niet zonder gevaar.  
 The trip is not without danger  
 'The trip is not free of danger'

provides a uniform treatment of all polarity items. I believe that 'negative polarity item' may well be a grab bag, similar to, say, 'adverb', that does not directly play a role in the grammar, but serves as a convenient term to refer to a loosely-knit group of expressions with overlapping distributional properties.

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