

## Abstract

This paper presents Dutch and English predicates that behave as positive polarity items and provides a partial, semantically-grounded classification of this group of PPIs. The items are studied from the perspective of anti-licensing behavior (by negation, either locally or long-distance, in questions, and by weakly negative quantifiers such as *little* and *few*). Predicates, unlike quantifiers, do not have wide scope readings (which allow quantificational PPIs such as *somebody* to appear in the syntactic scope of negation). Using a mixture of corpus data and introspective judgments, we show that anti-licensing among PPIs is not uniform (mirroring earlier results on NPIs which likewise show considerable variation). Rescuing contexts are likewise shown to differ among PPIs. Some of the PPI predicates show complex interaction with illocutionary force (especially mandative force), and others with differences between presupposed and asserted propositions. High degree predicates, finally, point toward the existence of connections between the marking of degree and positive polarity. PPI status is argued to be the result of a complex interaction between the effects of negation and other nonveridical operators, and other semantic factors, which differ among subclasses of PPIs. Anti-licensing by weak negation correlates fairly well with anti-licensing by long-distance negation, a finding which is (partly) in line with a recent proposal by Spector (2014) concerning global PPIs. However, we find there to be more variation among the PPIs studied here than the classification of Spector (2014) or any binary classification stipulates.

## Keywords

Anti-licensing, global PPI, high degree, illocutionary force, Dutch, English

# Positive polarity predicates

---

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

While positive polarity items<sup>2</sup> (PPIs) have been studied in linguistics since the 1960s (e.g. Klima 1964, Baker 1970), their properties are less well-known than those of negative polarity items (NPIs), and the literature on them is accordingly less extensive. The claim may be ventured that most positive polarity items have not been discovered yet (much less analyzed), and that claims based on the ones that have been studied are therefore far from secure. From what has been done so far, especially in the last several years, we begin to note a great variety of types of PPIs, from many semantic domains, including quantifiers (Seuren 1985, Hasegawa 1992, Progovac 1994, Szabolcsi 2004, Giannakidou 2011, Larrivee 2012, Zeijlstra 2013), connectives (Spector 2014), predicates (Seuren 1976, Hoeksema 2010), adverbs of various kinds (Baker 1970, Van der Wouden 1994, 1997, Klein 1998, Liu 2012, Spector 2014, Ruppenhofer and Michaelis 2016, Larrivee 2017, Kellert, this issue), modal expressions (Homer 2011, Iatridou and Zeijlstra 2013, Giannakidou and Mari 2016), measure constructions (Israel 2011), verbal idioms, etc. Much like NPIs (cf. e.g. van der Wouden 1997), PPIs not only come from a variety of sources, but they also show variation in their behavior as PPIs, that is to say, in their interaction with negation, and related operators.

To illustrate this point, let's consider an old observation from Ladusaw (1979: 134, ex. (141)). While *no*, *few*, *hardly* and *at most 3 N* may each trigger NPIs, only *no* anti-triggers the PPI *would rather*:

- (1)
- a. \**No one would rather be in Cleveland.*
  - b. *Few people would rather be in Cleveland.*
  - c. *Hardly anyone would rather be in Cleveland.*
  - d. *At most three people would rather be in Cleveland.*

Ladusaw (ibidem) concludes from these and similar data: "This suggests that not all triggers anti-trigger [PPIs], but only "true" negatives (or overt negatives) like *not*, *no*, and *never* do." However, other PPIs than the ones considered by Ladusaw may show a different pattern, such as the predicate *have had it with*. My informants not only reject (2a), but also the other sentences in (2), which involve downward-entailing subjects which are not true negatives in the sense of being n-words.

- (2)
- a. \**No one has had it with this guy.*
  - b. \**Few people have had it with the Lakers.*
  - c. \**Hardly anyone has had it with Pepsi Light.*
  - d. \**At most three people have had it with him.*

---

<sup>1</sup> I thank two anonymous reviewers, Mingya Liu and Gianina Iordăchioaia and the audience at the workshop on *Varieties of positive polarity items* (held at the 37th Annual Meeting of the Deutsche Gesellschaft für Sprachwissenschaft (DGfS), March 4-6, 2015 at the University of Leipzig) for their useful remarks, queries and suggestions. I am, however, solely responsible for the final result.

<sup>2</sup> Some linguists use the term Affirmative Polarity Item (API) instead.

This might lead one to think that *have had it with* is illicit in all contexts where NPIs are licit, but this would not be correct either. While the downward entailing subjects in (2) all appear to be incompatible with the PPI *have had it with*, other familiar contexts of NPIs are fine as hosts of this PPI, such as the antecedent of a conditional or the restriction of a universal quantifier:

- (3) a. *If you have truly had it with this guy, you should get a divorce.*  
 b. *Don't drink the stuff, if you have had it with Pepsi Light.*  
 c. *Everybody who has had it with this guy should complain to the principal.*

Note that another account of PPIs also founders here. Van der Wouden (1997) presents a ternary partition among PPIs, analogous to the more familiar Zwarts' hierarchy of NPIs (cf. Zwarts 1998), in terms of the notions *antimorphic*, *anti-additive* and *downward-entailing*. These notions can be defined as follows (where  $a, b$  are arbitrary items from the domain of  $f$ )

- (4) A function  $f$  is antimorphic iff  $f(a \vee b) = f(a) \wedge f(b)$  and  $f(-a) = -f(a)$   
 A function  $f$  is anti-additive iff  $f(a \vee b) = f(a) \wedge f(b)$   
 A function  $f$  is downward-entailing iff  $f(a \vee b) \leq f(a)$

As Zwarts (1998) shows, if  $f$  is anti-morphic, it is also anti-additive and downward-entailing, and if  $f$  is anti-additive, it is downward-entailing. So the three requirements form an implicational hierarchy. Strong PPIs, in Van der Wouden's classification, are anti-triggered by any downward-entailing context. Medium strength PPIs are anti-triggered only by anti-additive contexts. Weak PPIs are anti-triggered by anti-morphic contexts.

The examples in (2) show that *have had it with* does not combine with downward-entailing subjects of any stripe, and so this PPI should be among the strong PPIs. However, the examples in (3) are not compatible with this conclusion. To see this, note that the restriction of a universal quantifier such as *every* is an anti-additive context. In particular *every A or B* is equivalent to *every A and every B*, showing that *every* behaves like an anti-additive function, on the standard assumption that the English connectives *or* and *and* correspond to the Boolean connectives  $\vee$  and  $\wedge$ , respectively, in the definition in (4). This observation forces us to conclude that *have had it with* does not belong to any of the classes of PPIs identified by Van der Wouden (1997). Similar differences can be found among downward entailing functors that are not anti-additive, such as *few* and *not every* (cf. the examples in (66) in section 2.6. below), contrary to what one would expect under the Zwarts/van der Wouden account. However, it is worth stressing that van der Wouden's work stands out in being the first to consider variation among positive polarity items. It also pursues many similarities between the licensing of NPIs and the anti-licensing of PPIs, a line of research that is bound to yield more insights as we find out more about the distribution of NPIs and PPIs. Many of the research questions raised in the present paper first came up by thinking about NPIs, such as the role of NEG-raising or the possibility of PPIs in questions.

Next, consider the phenomenon of *rescuing* (Szabolcsi 2004). A PPI that is illicit in the scope of negation becomes acceptable when this negation is itself in the scope of another NPI-licensing operator, or embedded in a question, or a conditional, cf.:

- (5) a. \**Mary did not say something.* [\* on the  $\neg\exists$  reading]  
 b. *John regretted that Mary did not say something.* [OK on  $\neg\exists$  reading]  
 c. *Aren't you going to do something about it?*  
 d. *If you don't do something about it, I will.*

Now let's try to do the same with *have had it with*:

- (6) a. \**Mary has not had it with John.*  
 b. \**I regret that Mary has not had it with John.*  
 c. *Haven't you had it with these clowns?*  
 d. *If you haven't had it with this guy, I have.*

In other words, the rescuing contexts for *some* are not identical to the ones for *have had it with*.

Appearance in questions is not usually something that is studied in connection with positive polarity items, even though there is a growing literature on negative polarity items in questions (cf. Borkin 1971, Fauconnier 1980, Han and Siegel 1997, Lahiri 2002, den Dikken and Giannakidou 2002, van Rooy 2003, Guerzoni 2004, Guerzoni and Sharvit 2007, Nicolae 2013, 2015). Many NPIs are acceptable in questions as well, though not all (cf. Giannakidou 1998, Hoeksema 2012). One of the things I will do in this paper is to check for each PPI discussed if it may occur in (nonnegative) questions. Occurrence in negative questions will be studied in connection with the phenomenon of rescuing, see above.

Finally, consider long-distance anti-licensing. Spector (2014) has presented a case for two types of PPI, namely local PPIs which are anti-licensed by clause-mate negation, and global PPIs, which can also be anti-licensed by negation in a higher clause (except when the matrix predicate is factive). As examples (7a,b) show, *some* is not a global PPI, but *have had it with* is. Note in particular the difference in (7d) between *aware* (a factive predicate) and *sure* (a nonfactive, but also non-NEG-raising predicate). This mirrors observations regarding the central role of factivity, rather than NEG-raising, in the case of long-distance NPI-licensing in Hoeksema (2017).

- (7) a. *The cops don't think they did something wrong.*  
 b. \**I don't think I've had it with her snoring.*  
 c. *She was not sure he had done something wrong.*  
 d. *She was not aware/\*sure I had had it with her snoring.*

One interesting aspect of Spector's analysis is that it predicts that global PPIs are anti-licensed by weak negation, such as *few*, or French *peu*, in addition to being subject to long-distance anti-licensing. We have already seen above that this observation also holds for *have had it with*.

Having illustrated the unusual behavior of *have had it with*, at least from the point of view of the best-studied positive polarity item, *some*, the question arises to what extent predicative PPIs are different from determiner-like PPIs, such as *some*, *somebody*, *sometimes* etc., and if they are different, whether they fall within the category of global PPIs. In the remainder of this paper I will discuss a number of PPIs that are semantically predicates, such as verb phrases and predicate nominals. They all have in common that they are scopally inert, precisely because they are predicates. That means that they do not engage in scope ambiguity with respect to negation, unlike *some*, which is acceptable in negative sentences if it takes wide scope:

(8) *The enemy did not kill some of the captured soldiers.* [OK on  $\exists\neg$  reading]

Another property that sets the PPIs discussed here apart from the more commonly studied elements *some*, *already*, *still* etc. is that they do not all have NPI counterparts. While *some* is often said to alternate with *any*, *already* with *yet* and *still* with *anymore*, many other PPIs do not have an NPI counterpart. This means that one type of explanation for the distribution of PPIs (namely, in terms of the *Elsewhere condition* – cf. Kiparsky 1973 – as the set of environments where the NPI counterpart is not licensed), is not available. Such an account has been proposed by Jäger (2010), but it requires the presence of competing forms with NPI status, and this is not something we may suppose for every PPI. In addition, it should be noted that the overlapping distribution of *some* and *any* (e.g. both may appear in questions and conditionals) makes an account along these lines problematic even for these two items (cf. Lakoff 1969 for an early discussion of this point).

In the literature, PPIs are commonly defined as elements that cannot be negated (except when negation is echoic (Seuren 1985), metalinguistic (Horn 1989), non-clausemate (Ladusaw 1979) or part of a double negation pattern (Baker 1970)). I subscribe to this general definition as well, but want to stress that this kind of characterization gives us only a partial account of PPIs, in terms of what they minimally have in common. We also need to look at variation among PPIs, their interaction with other contextual elements than negation, and ultimately we need a theory of what makes an expression a PPI. This paper is primarily a contribution to the former goal, but in describing and analyzing a number of unusual types of PPIs, it may present a small step toward a better understanding of PPI-hood in general.

The structure of the paper is as follows. Section 2 contains the bulk of this paper. In it, I discuss a series of subgroups of PPI predicates, some taken from English and some from Dutch, and review their main properties as PPIs, as well as properties characteristic of the subgroup. For each item or set of items, nonoccurrence under direct (clausemate) negation will be taken for granted (being a minimal requirement for PPI status), but occurrence with weakly negative quantifiers, acceptability in questions, under higher negation, and rescuing properties will be discussed. Section 3 contains a summary and discussion of the main findings. Section 4 presents my conclusions.

## 2 Predicate PPIs

### 2.1 *have his N*

A large and relatively frequently occurring set of PPIs are instances of the construction *have his N*, where N is a noun, and *his* is a possessive pronoun, bound to the subject of the phrase (hence the reflexive may be said to be reflexive), and so it may take the form *my*, *your*, *his*, *her*, *its*, *one's*, *our*, or *their*, depending on the number and person features of the subject. Depending on the noun, there may also be variants with *his own*, *her own*, etc. The co-occurrence of the possessive verb *have* and the possessive pronoun make this a somewhat unusual type of expression. Normally, *have* combines with an indefinite direct object (cf. e.g. Partee 1999), although the data are more complicated than this simple statement suggests. In particular, combinations with a possessive pronoun are sometimes acceptable in a somewhat idiomatic interpretation:

- (9)
- a. *Jones has his problems with the law.*
  - b. *Smith had his share of setbacks.*
  - c. *I have my reservations about the plan.*
  - d. *The neighbors have their reasons to stay off my property.*
  - e. *Mary had her moments with the pinball machine.*
  - f. *Each day has its own challenges.*

The direct objects involved typically denote abstract entities. Their interpretation seems to be indefinite, not definite. That is to say, the sentences in (9) roughly convey the contents of the sentences in (10):

- (10)
- a. *Jones has some problems with the law.*
  - b. *Smith had some setbacks.*
  - c. *I have some reservations about the plan.*
  - d. *The neighbors have reasons to stay off my property.*
  - e. *Mary had some (good) moments with the pinball machine.*
  - f. *Each day has challenges.*

In particular, the direct objects in (9) do not denote entities that were mentioned before, or whose existence may be assumed to be known to the hearer by the speaker. Rather, as the rough paraphrases in (10) suggest, they may convey new information. Let's assume, in spite of this, that the definite objects in (9) have existential presuppositions (triggered by their definite form) that are easily accommodated. In that case these sentences assert what they presuppose. If we were to negate them, they would deny what they presuppose, clearly an undesirable state of affairs.

Related constructions can be found in Dutch, German and French:

- (11)
- |   |          |
|---|----------|
| <ol style="list-style-type: none"> <li>a. <i>Ik heb mijn bedenkingen bij het voorstel.</i></li> <li style="padding-left: 2em;">I have my reservations with the proposal</li> <li style="padding-left: 2em;">"I have my reservations about the proposal."</li> </ol> | [Dutch]  |
| <ol style="list-style-type: none"> <li>b. <i>Er hat wohl seine Gründe.</i></li> <li style="padding-left: 2em;">he has surely his reasons</li> <li style="padding-left: 2em;">"No doubt, he has his reasons"</li> </ol>  | [German] |
| <ol style="list-style-type: none"> <li>c. <i>Il a sûrement ses raisons.</i></li> <li style="padding-left: 2em;">He has surely his raisons</li> <li style="padding-left: 2em;">'Surely, he has his raisons'</li> </ol>   | [French] |

Negation is no good for this construction.

- (12)
- a. *\*Jones does not have his problems with the law.<sup>3</sup>*
  - b. *\*Jones never had his problems with the law.*
  - c. *\*Nobody/No citizens from our town had their problems with the law.*
  - d. *\*Neither the men nor the women have their problems with the mayor.*

---

<sup>3</sup> Recall that the construction at hand involves binding of the possessive pronoun to the subject. If there is no binding, and *his problems* refers to those of a different person, say Smith, then negation is acceptable.

Even weakly negative items are ruled out, such as *few* and *seldom*:

- (13) a. *Many/\*Few soldiers had their problems with the war.*  
b. *Sergeant Jones often/\*seldom had his problems with the war.*  
c. *Some/\*hardly any soldiers had their problems with the army.*  
d. *Many/\*not many soldiers had their problems with the army.*

Occurrences in questions appear to be ruled out:

- (14) a. *\*Did the soldiers have their problems with the war?*  
b. *\*Did Jones have his reasons to stop paying taxes?*  
c. *\*Did the neighbors have their reservations about the plans?*

This is a fairly unusual property for positive polarity items. Certainly the better-known PPIs such as *some*, *already* or *rather* may appear in questions. The Dutch counterparts to the sentences in (14) are degraded as well:

- (15) *\*Hadden de soldaten hun problemen met de oorlog?*  
Had .plur the soldiers their problems with the war?  
“Did the soldiers have their problems with the war?”

Just like it is infelicitous to deny the existence of something that is presupposed, it may be infelicitous to question it. This does not hold for negated questions, since these, on one reading (cf. Ladd 1981, Romero and Han 2004) do not question anything, but ask for confirmation of a presupposed fact. Consequently, it should come as no surprise that negated questions are better than either negated assertions or non-negated questions (cf. 16a,b). The same is true for the complements of factive verbs in regular yes/no questions (cf. 16c):

- (16) a. *Didn't the soldiers have their problems with the war?*  
b. *Didn't Jones have his reasons to stop paying taxes?*  
c. *Does the boss know that Jones has his reservations about the plan?*

This is not all that surprising. Since Baker (1970), negated questions, together with negated conditionals and doubly negated sentences have been singled out as rescuing contexts. Note however, that the question does not just rescue the PPI from the ill effects of negation, but also vice versa: Negation makes the PPI impervious to the ill effects of the question. Double negation also serves as a rescuing context, cf. example (17) below, taken from the Internet:

- (17) *But that's not to say that I don't think he has his delicate traits or moments because he's human, so he can't possibly be all manly-man and 0 sensitivity.*<sup>4</sup>

Higher negation (apart from double negation contexts such as the above) appears to be incompatible with *have his N*, both in English and in Dutch:

---

<sup>4</sup> <http://lethallergic.tumblr.com/post/140906021963/would-you-describe-hoseok-as-femininedelicate>

- (18) a. *\*I don't think I have my moments.*  
 b. *\*I am not sure Mary has her problems.*  
 c. *\*Ik denk niet dat ik zo mijn voorkeuren heb.* [Dutch]  
 I think not that I so my preferences have  
 "I don't think I have my preferences."

PPIs that are structurally and semantically similar are Dutch *zijn vruchten afwerpen* 'to produce its fruits', *zijn tol eisen* 'to demand its toll', *zijn conclusies trekken* 'to draw one's conclusions', and *zijn N kennen* 'to know one's N' (where N stands for a variety of nouns). English also has variants in which *have* is replaced by another verb, such as *make* (Jones has/\*hasn't made his mistakes) and *bring* (every day brings/\*doesn't bring its own problems). It seems reasonable to assume that these are like the basic case with *have*, with similar existential presuppositions.

## 2.2 can hear a pin drop: a minimizer PPI

The predicate *can hear a pin drop* belongs to a small group of positive polarity minimizers. Minimizers are more commonly negative polarity items, compare e.g. *budge an inch*, *turn a hair*, *move a muscle*, *understand an iota*, *say a syllable*, *bat an eyelid* etc. (Schmerling 1971, Israel 1996, 2011, Hoeksema 2002, Eckardt 2006). Fauconnier (1975a) already noted for superlatives that they may or may not receive what he calls a quantificational reading, depending on the predicate of the sentence and the presence or absence of negation. Two of his examples are:

- (19) a. *The simplest problem baffles Alex.*  
 b. *Alex can't solve the simplest problem.*

Both sentences have a straightforward reading in which *the simplest problem* refers to a particular problem which happens to be the simplest and to baffle Alex, and another reading, based on scalar inferences, such that Alex can't solve and is baffled by any problem whatsoever. This latter reading, Fauconnier shows, is sensitive to the presence of negation. To see this, compare (19a,b) with (20a,b):

- (20) a. *The simplest problem doesn't baffle Alex.*  
 b. *Alex can solve the simplest problem.*

In the context of (19a), *the simplest problem*, on the quantificational reading where it is equivalent to *any problem*, is a positive polarity item. If negated, as in (20a), only the non-quantificational reading survives. Conversely, in (19b), *the simplest problem* acts like a negative polarity item on the quantificational reading. Without negation (cf. (20b)), the sentence merely means that Alex can solve the simplest problem. So superlatives can behave like NPIs and PPIs at the same time, depending on scalar inferences that are connected with the predicates (this seems to apply for a wide variety of language, including Dutch and Swedish (for Swedish, see Coppock and Engdahl 2016)). Ability to solve a problem is usually such that if a hard problem can be solved, easier problems can also be solved, but not vice versa. Baffle, on the other hand, is associated with the inverse scale. If a simple problem baffles X, then more complicated problems should baffle X as well.



Such scales are pragmatic in nature, and depend on defeasible common sense assumptions: after all, it is not impossible to solve a hard problem and to fail to solve an easier one. Scales such as those associated with *can solve* are ‘reversed’ by negation, and more generally any downward entailing element (Ladusaw 1979). So if the scales associated with *can solve* and *baffle* are each other’s reverses, then *can’t solve* should be associated with the same scale as *baffle*, and vice versa *can solve* and *doesn’t baffle* share the same pragmatic scale. For the pair of predicates *baffle/can’t solve*, the minimizing superlative *the simplest problem* yields the quantificational reading, and for *doesn’t baffle/can solve* the quantificational reading is yielded by *the hardest problem*.

Minimizing predicates are akin to superlatives and give rise to a similar quantificational reading. Thus (21a) may be interpreted as implying the more general statement in (21b). The same is not true for (21c), which does not ordinarily imply (21d).

- (21) a. *I can hear a pin drop.*  
 b. *I can hear anything (because it is very quiet).*  
 c. *I can’t hear a pin drop.*  
 d. *I can’t hear anything.*

If I can hear a pin drop (because it is so quiet), then I could hear louder sounds as well. Ergo, I could hear any sound. Here, negation needs to be absent for the scalar implicature to work. If I can’t hear a pin drop (due to noise), it does not follow that I can’t hear louder sounds either. The converse reasoning holds for minimizing NPI predicates. If I don’t understand a word of what you are saying, then a fortiori I won’t understand longer stretches either. In other words, I understand nothing: the quantificational reading. If, conversely, I understand one word, nothing follows about the rest. *Hear a pin drop*, in other words, requires the absence of negation for much the same reasons that *say a word* or *budge an inch* require it.

The scalar nature of *can hear a pin drop* is relevant for an issue raised by Szabolcsi (2004), namely whether PPIs derive their properties from scalarity. She argues against this possibility, but on the basis of PPIs such as *some*. I believe, on the basis of the evidence presented here, that scalarity plays a role for some PPIs, just as it does for some NPIs, but it cannot be the basis for a theory of all PPIs or NPIs. (See also Rullmann 1996 for an early statement of this position with regard to NPIs.)

There are some additional aspects to *can hear a pin drop* which are special and unusual. The choice of subjects is severely limited, to judge from the following corpus data, taken from the Corpus of Contemporary American English (COCA), cf. Davies (2010). An occurrence without *can* or *could* was removed from the 69 occurrences of *hear a pin drop*, as well as three negative occurrences (more about these below). Note the strong presence of (generic) *you* here.

Table 1: Subjects of *can hear a pin drop*

Subject	N	%
You	60	92
One	1	1.5
They	1	1.5
I	1	1.5
other	2	3
Total	65	100

I interpret this as evidence that *can hear a pin drop* is used to indicate that a certain area is quiet, allowing anyone to be able to hear a pin drop. The identity of the experiencer subject is largely irrelevant. If I could hear a pin drop, due to a low level of noise, then so could anyone else. If instead the import of the predicate was to say something about my superior hearing abilities, such a distribution would not be expected. Let us call this 'subject indiscriminacy.' I state it as follows:

(22) *Subject indiscriminacy of a predicate P*

For P, the identity of the subject is irrelevant. Whenever P is predicated of an individual within the relevant local context, it applies to all other individuals in that context.

Given positive polarity and subject indiscriminacy, we predict the following pattern:

- (23)
- a. *I could hear a pin drop.*
  - b. *One could hear a pin drop.*
  - c. *#Nobody could hear a pin drop.*
  - d. *#Few people could hear a pin drop.*
  - e. *#Some of us/ a few people could hear a pin drop.*
  - f. *#Many people could hear a pin drop.*
  - g. *#Only I could hear a pin drop.*
  - h. *An audience member could hear a pin drop whenever she spoke.*
  - i. *The audience could hear a pin drop.*

In (23), cases c and d are in violation of the positive polarity status of the predicate, since they contain the negative quantifiers *nobody* and *few*, respectively. Cases e and f, on the other hand, have a different source. Their deviance stems from subject indiscriminacy of *can hear a pin drop*. *Some of us* typically suggests a partition of the local individuals, such that the predicate applies to one part and not to its complement. But this is at odds with subject indiscriminacy. Similarly with *many people* and *only I*. We do not say *many tigers are striped* if in fact all tigers are striped, even though it is obviously true. Examples similar to (23g) are OK if the predicate is used to say something about excellent hearing, rather than general silence, for example:

(24) *Only Superman could hear a pin drop in the middle of the busiest intersection of Metropolis.*

For this understanding of the predicate, the property of subject indiscriminacy does not hold. The same is true for the other sentences marked as # in (23).

As I mentioned in connection with Table 1, there are some negative occurrences of *can hear a pin drop* in COCA. How is that possible? Here is one of those rare cases, from a TV show:

(25) *And it's just unbelievable. I'm telling you, when that movie ended you couldn't hear a pin drop. It's just silent.*

Clearly, the user treats the expression as an NPI, with the same meaning as the PPI. That is to say, the relevant part of (25) is equivalent to:

(26) *You couldn't hear a thing.*

Minimizing PPIs are rare, and minimizing NPIs are common. It seems that this may lead to some confusion and reinterpretation. Fauconnier (1975b) mentions similar cases with superlatives, e.g. (27a) which is to be interpreted as (27b):

- (27) a. *Mary didn't hear even the faintest noise.*  
b. *Mary didn't hear any noise.*

Yet if Mary does not hear a very faint noise, it does not follow that she doesn't hear louder noises either. The scale that seems to be involved here is not the scale associated with *Mary heard X*, but rather the one associated with *there is X*, Fauconnier suggests. If there isn't the faintest noise, then Mary did not hear any noise. Note that, paradoxically, (28) below may imply the same thing as (26), namely (27b):

- (28) *Mary didn't hear the loudest noise.*

Here the relevant scale is the one associated with *Mary heard X*. If Mary did not hear the loudest noise (maybe for reasons of deafness, or wearing headphones, or sleeping soundly), then any noise lower in the decibel scale was not heard by Mary either. As Fauconnier notes, the switch from the scale expressed by the sentence to a quantity-based scale is only attested for minimizers. With 3 negative occurrences out of 69, the NPI use of *can hear a pin drop* is clearly a minority usage. For most speakers, it is a PPI. The Dutch counterpart *een speld kunnen horen vallen* 'can hear a pin fall' is likewise a PPI, with similar properties. The judgments regarding the sentences in (20) apply equally well to their Dutch counterparts.<sup>5</sup>

As regards questions and other nonassertive contexts, these are fine as contexts for *can hear a pin drop*. The following little dialogue is from an interview in O'Steen (2009):

- (29) Q: *How did the audience react to this scene when you previewed it? Could you hear a pin drop?*  
A: *Absolutely. They just gasped.*

Long distance negation is mildly off for this item, at least for people who do not use sentences like (25) above. What makes it difficult to judge is the availability of a literal reading, cf.:

- (30) Q: *Was it very quiet?*  
A: *Well, I don't think you could hear a pin drop.*

Rescuing contexts are likewise problematic. The Internet does not provide cases, and intuitively, sentences such as (31a,b,c) are hard to judge, but seem off if the intent is to describe a situation of silence, hence I mark them with a '#' for semantic/pragmatic infelicity (on the relevant readings). Example (31c) shows that *hear a pin drop* reacts differently to a context such as *Why can't you* than *do something*, with the PPI *something*.

---

<sup>5</sup> Note that Dutch has a way to distinguish generic *you* from ordinary second person *you*. Generic *you* corresponds to a weak pronoun *je* in Dutch, while the latter is either weak *je* or strong *jij* (cf. Broekhuis & den Dikken 2012: 788). As one would expect from the account given here, there is a clear difference in acceptability between the two pronouns when they are the subject of *een speld kunnen horen vallen* 'can hear a pin drop':  
(i) *Je/#jij kon een speld horen vallen.*

- (31) a. #That does not mean that you can't hear a pin drop.  
 b. #Can't you hear a pin drop?  
 c. Why can't you do something/#hear a pin drop?

The property of subject indiscriminacy, which we have linked to the observation that *can hear a pin drop* is not so much about the hearing abilities of individuals, but calls attention to a property of the ambiance (quietness), is shared by another idiomatic expression: *can fire a canon (without hitting anyone)*. Here is a typical example:

- (32) *Most days after 5 p.m., you could fire a canon off in any direction and not hit anyone.*<sup>6</sup>

Again, the predicate makes a claim about an area, not so much about the person doing the firing. The subject will typically be generic.

Dutch has an expression *over de hoofden kunnen lopen* 'can walk over the heads', typically with a generic subject, to indicate that a place is very crowded. Just like the other predicates discussed in this section, it acts as a PPI, with limited possibilities for subjects. Compare:

- (33) *Je kon er (\*niet) over de hoofden lopen als het markt was.*  
 youcould there (\*not) over the heads walk when it market was  
 "You could walk over the heads (of people) on market days"

### 2.3 Inherently negative predicates

Inherently negative expressions are often PPIs. For example, Dutch *allerminst* (literally, it means 'least of all', but it is used more like English *by no means*) is both an emphatic negative adverb and a prime example of a PPI (Van der Wouden 1997):

- (34) *Jan/\*Niemand was allerminst tevreden.*  
 Jan/\*nobody was least-of-all satisfied  
 "Jan/\*nobody was by no means satisfied."

In the following subsections, I discuss some cases of predicates with inherently negative meaning that are PPIs. In the 2.3.1., I discuss two Dutch expressions that introduce infinitival complements, meaning *to refuse*, and in 2.3.2. four expressions that combine with DPs, meaning *can forget about*. For more discussion of negative predicates and their properties, cf. Hoeksema and Klein (1995).

#### 2.3.1 het verdommen / het vertikken

Dutch has an inherently negative predicate *het verdommen* 'to damn it' meaning: to refuse, to intend not to. The variant *het vertikken* means the same thing, and is the polite alternative for the "swear

---

<sup>6</sup> *Edmonton Sun*, March 24, 2014.

word” *verdommen*.<sup>7</sup> Everything we note for *het verdommen* below, applies equally well to *het vertikken*. A typical example is given in (35):

- (35) *Ik verdom het om haar te helpen.*<sup>8</sup>  
 I damn it for her to help  
 “I’ll be damned if I help her”

As the English translation shows, English has a somewhat similar construction, involving a conditional clause, whereas the Dutch example has a subordinate infinitival clause. German *den Teufel tun* (Sailer, this issue) is similar in being likewise an inherently negative predicate with taboo origins.

The inherent negativity of the predicate *het verdommen* is evident from the fact that it may trigger negative polarity items such as *ook maar iets* (cf. van der Wouden 1997, Zwarts 1981, 1998 for discussion of this item), cf. (36a) below. Like *allerminst*, *het verdommen* is a strong PPI (cf. 36b).

- (36) a. *Ik verdom het om ook maar iets te zeggen.*  
 I damn it for even anything to say  
 “I’ll be damned if I say even one word”  
 b. *\*Ik verdom het niet om te werken.*  
 I damn it not for to work  
 “\*I won’t be damned if I work”

Regular negation is no good with this expression, and neither is the weaker sort of negation associated with downward entailing quantifiers such as *zelden* ‘seldom’ or *weinig* ‘few/little’; in questions and conditional clauses, the expression is acceptable:

- (37) a. *\*Zelden verdomt hij het om te werken.*  
 Seldom damns he it for to work  
 “\*Seldom will he be damned if he works”  
 b. *\*Weinig studenten verdommen het om op college te verschijnen.*  
 Few students damn it for on class to appear  
 “\*Few students will be damned if they show up in class”<sup>9</sup>  
 c. *Verdomt hij het om haar te helpen?*  
 Damns he it for her to help  
 “Will he be damned if he helps her? / Does he refuse to help her?”  
 d. *Als hij het verdomt om haar te helpen, verdient hij haar niet.*  
 if he it damns for her to help deserves he her not  
 “If he refuses to help her, he does not deserve her”

<sup>7</sup> *Het verdommen* should not be confused with *kunnen verdommen* ‘give a damn (about)’, which is actually an NPI. Apart from the presence of the modal *kunnen* ‘can’, the two expressions are easily distinguished syntactically: *het verdommen* is a control predicate, combining with infinitival complements, whereas *kunnen verdommen* takes *dat*-clauses (finite clausal complements) and DPs as its complement.

<sup>8</sup> The reader should bear in mind that Dutch subordinate clauses have Subject-Object-Verb order, and so *haar* in (35) is a direct object, not a subject, as the English glosses might suggest. Unlike English *for*-infinitivals, Dutch *om*-clauses do not have overt subjects.

<sup>9</sup> The English translations of (36b, 37a,b) are ungrammatical in the intended reading. There is a literal reading which is fine.

Negation from a higher clause is not attested in my data. With NEG-raising predicates such as *denken* ‘think’ and nonfactive matrix verbs such as *betekenen* ‘mean’ (cf. 37e and f, respectively) the result is less than perfect but does not sound impossible. With factive verbs, such as *weten* ‘know’, higher negation is fine (cf. 37g).

- (37) e. *?Ik denk niet dat hij het zal vertikken om te stemmen.*  
 I think not that he it will darn for to vote  
 ‘I don’t think he will refuse to vote’
- f. *?Dat betekent niet dat ik het vertik om te stemmen.*  
 That means not that I it darn for to vote  
 “That doesn’t mean I refuse to vote”
- g. *Ik wist niet dat hij het vertikte om te stemmen.*  
 I knew not that he it darned for to vote  
 “I did not know he refused to vote”

Whether *het verdommen/het vertikken* are global PPIs is therefore debatable.

Finally, *het verdommen* may be rescued in double negation contexts or negated questions, as the following two sentences illustrate. I am using *hopen + negation* in (38a) as an instance of rescuing, since it seemed better than actual double negation. Verbs such as *hope* are nonveridical in the sense of Zwarts (1995), Giannakidou (1998), and may serve as the first element in a ‘double negation’-type rescuing context, as already suggested, but not pursued, in Szabolcsi (2004: 418). Sentence (38b) is a rhetorical question, commenting on the large number of people that neglect to call.

- (38) a. *Ik hoop maar dat hij het niet verdomt om haar te bellen.*  
 I hope only that he it not damns for her to call  
 ‘I only hope that he won’t refuse to call her.’
- b. *Hoeveel mensen verdommen het niet om te bellen?*  
 How-many people damn it not for to call  
 ‘How many people don’t refuse to call?’

### 2.3.2 op zijn buik kunnen schrijven / kunnen fluiten naar / can whistle for / can forget about / pfeifen auf

Dutch and English have a number of complex transitive predicates with PPI status, all meaning roughly the same thing, namely that something that is desired by the subject will not happen or be received. In this section, I discuss four such predicates, two of which are literal translations: *can whistle for* – *kunnen fluiten naar* (compare the examples in (39) below. German has a very similar idiom *pfeifen auf* ‘whistle for’, but with a different meaning, which I exemplify in (40). It appears to be a positive polarity item as well, but I will not discuss it in detail here.<sup>10</sup>

<sup>10</sup> It is not listed in the extensive list of PPIs in the *Collection of Distributionally Idiosyncratic Items* (CoDII), collected at the University of Tübingen, cf. <http://www.english-linguistics.de/codii/>. Cf. Soehn et al. (2010).

- (39) a. *You can forget about that pay raise.*  
 b. *The last time Mary came over for dinner, she was downright rude. If she wants dinner at my house again, she can just whistle for it!*<sup>11</sup>  
 c. *Je kunt wel fluiten naar die loonsverhoging.* [Dutch]  
 You can AFF whistle for that pay raise  
 “You can forget about that pay raise”  
 d. *Je kunt die loonsverhoging op je buik schrijven.* [Dutch]  
 You can that pay\_raise on your belly write  
 “You can forget about that pay raise”
- (40) a. *Da pfeif ich drauf.* [German]  
 There whistle I thereon  
 “I could care less about that”  
 b. *Pfui! Skandal-Starlet Lindsay Lohan pfeift wohl auf die Mundhygiene.*<sup>12</sup>  
 Fy! Scandal-Starlet Lindsay Lohan whistles AFF for the oral\_hygiene  
 “Fy! Scandalous starlet Lindsay Lohan could care less about oral hygiene”

When negation is added, the sentence does not become ungrammatical, but the idiomatic reading disappears. If *you can forget about X* means that X is not going to happen, then *you can't forget about X* should mean that X is going to happen. Instead, the latter sentence only means that the addressee is unable to, or should not, forget about X. This is the literal, compositional interpretation.

In questions and the antecedents of conditional clauses, the idiomatic reading is still available, as the following examples attest:

- (41) a. *You think we can forget about that reward money, then?*  
 b. *Makes you wonder whether we can whistle for that vacation as well.*  
 c. *If it is true we can forget about that pay raise, I will quit.*  
 d. *Kunnenwe nu wel fluiten naar dat geld?* [d-f: Dutch]  
 can we now AFF whistle for that money  
 “Can we forget about that money, now?”  
 e. *Ze vroegen zich af of ze die vakantie op hun buik konden schrijven.*  
 They asked refl off,if they that vacation on their belly could write  
 “They wondered if they could whistle for that vacation”  
 f. *Als het waar is dat we ernaar kunnen fluiten, neem ik ontslag.*  
 if it true is that we for\_it can whistle, take I resignation  
 “If it is true that we can forget about it, I will resign”

Unlike many other PPIs, these 4 items do not seem to accept negation in a higher clause, double negation, negation in questions or conditionals, as the examples listed in (42-43, a-d) show. Factive

<sup>11</sup> McGraw-Hill Dictionary of American Idioms and Phrasal Verbs. (2002). Retrieved February 9 2016 from <http://idioms.thefreedictionary.com/can+whistle+for> .

<sup>12</sup> <http://www.bunte.de/beauty/lindsay-lohan-sie-schockt-mit-ekligen-zaehnen-25721.html>

verbs, however, which presuppose the truth of their complement, may be negated while one of these predicates appears in the subordinate clause (cf. 42e, 43e below):

- (42) a. *\*I don't think that you can forget about that pay raise.* [literal reading only] [id]  
 b. *\*I can't believe that you can't forget about that pay raise.* [id]  
 c. *\*If you can't forget about that pay raise, you can afford a bigger car.* [id]  
 d. *\*Can't you forget about that pay raise?* [id]  
 e. *We did not realize that we could forget about that pay raise.*
- (43) a. *\*Ik denk niet dat je naar die beloning kunt fluiten.* [a-e: Dutch]  
 I think not that you for that reward can whistle  
 "I don't think you can whistle for that reward"  
 b. *\*Ik kanniet geloven dat je niet naar die beloning kunt fluiten.*  
 I can\_not believe that younot for that reward can whistle  
 "I can't believe that you cannot whistle for that reward"  
 c. *\*Als je niet naar die beloning kunt fluiten, bel me dan.*  
 if younot for that reward can whistle call me then  
 "If you cannot whistle for that reward, you can afford a bigger car"  
 d. *\*Kun je niet fluiten naar die beloning?*  
 Can younot whistle for that reward?  
 "Can't you whistle for that reward?"  
 e. *We beseften niet dat we konden fluiten naar die beloning.*  
 We realized not that we could whistle for that reward  
 "We did not realize that we could forget about that reward"

Sentences such as (42a) and (43a) look like grist for the mill of the classical NEG-raising theory, recently put on the research agenda again by Collins and Postal (2014). According to that account, the NEG-raising reading of these sentences is the result of syntactic movement of negation from the subordinate clause to the higher clause. The ungrammatical status of (42a) or (43a) would then be explained as originating from clause-mate negation, which is illicit by virtue of the PPI status of *can forget*, *can whistle for*, etc. However, such an explanation would fail for global PPIs, which are OK with higher negation, even when the matrix predicate is a NEG-raising predicate. Compare:

- (44) a. *Marie komt niet meer/\*nog.* [Dutch]  
 Marie comes not anymore/\*still  
 "Marie is not coming anymore/\*still"  
 b. *Ik geloof niet dat Marie nog/%meer komt.*<sup>13</sup>  
 I believe not that Marie still/%anymore comes  
 "I don't believe Marie is still coming."

We see a difference here between higher negation and clause-mate negation. Note that (44b) has the usual NEG-raising reading, which can be paraphrased as *I believe Marie is not coming anymore*.

<sup>13</sup> The % sign indicates variation in usage. For me, *meer* is degraded in (44b), whereas *nog* is impeccable.



Weak negation is not acceptable for these predicates. This means that subjects with determiners such as *few*, *less than 5*, *only a couple of* and adverbs such as *seldom*, *rarely*, *barely* do not appear to be compatible. As Van der Wouden (1995) has noted, in Dutch the adverb *moelijk* ‘difficultly’ may serve as a negative element in combinations with the modal *kunnen* and in such cases it may trigger NPIs. In (45e) we see how it may also anti-trigger PPIs. This is one of the many ways in which PPIs and NPIs show mirror image behavior.

- (45) a. \**Few employees could whistle for that promotion.*  
 b. \**Rarely can you forget about that vacation.* [OK on nonidiomatic reading]  
 c. \**Weinig medewerkers konden fluiten naar die promotie.* [Dutch]  
 Few employees could whistle for that promotion  
 “\*Few employees could whistle for that promotion”  
 d. \**Nauwelijks kon ik die vakantie op mijn buik schrijven.* [Dutch]  
 hardly could I that vacation on my belly write  
 “\*I could hardly whistle for that vacation”  
 e. \**Ik kon die vakantie moeilijk op mijn buik schrijven.*  
 I could that vacation difficultly on my belly write  
 “I could not whistle for that vacation”

The four predicates discussed above share an important property, the modal auxiliary *can/kunnen*. In the next section we will encounter another set of verbal idioms with this modal element. They exhibit the same aversion to the “rescuing” contexts listed above.

#### 2.4 maledictory predicates

Maledictions are combinations of a specialized negatively evaluated predicate, such as *drop dead* or *go to hell*, with a context that expresses a command, wish, or exhortation. Some typical examples from English are given in (46):

- (46) a. *Drop dead!*  
 b. *You can drop dead for all I care.*  
 c. *Let them drop dead.*  
 d. *Tell him to drop dead.*  
 e. *May they all drop dead.*

When the predicate is negated, the maledictory reading disappears. While (46a) is a typical, if hyperbolic, way of expressing one’s discontent with the addressee, its negation *Don’t drop dead* only seems to have a literal interpretation. More idiomatic maledictory cases, where a literal reading makes little or no sense, sound bad when negated, e.g. *fuck yourself*:

- (47) a. *Go fuck yourself!*  
 b. \**Don’t go fuck yourself.*  
 c. *You can go fuck yourself.*  
 d. \**You can’t go fuck yourself.*  
 e. *Let him go fuck himself.*  
 f. \**Don’t let him go fuck himself.*

- g. *She told him to go fuck himself.*
- h. *\*She did not tell him to go fuck himself.*<sup>14</sup>

An exception to this generalization is the acceptability of the maledictory predicate embedded under the negation-containing exhortation *why don't you*:

- (48) a. *Why don't you go fuck yourself.*  
 b. *Eat shit, why don't you.*  
 c. *Why don't you go to hell with your whining.*

In spite of the negation element in this expression, *why don't you* has the idiomatic force of a positive exhortation, and hence (48a) is more or less equivalent to (47a). It has been noted frequently that *why don't you* on its most common reading is not the beginning of a question, but of an invitation to do something. It is an idiomatic chunk, that may be reduced to the contracted form *wyncha* (Chao 1968, Green 1975, Field 2004).

Dutch maledictions can be very similar to their English counterparts (e.g. *doodvallen* = drop dead), but quite frequently take the form of an invitation to develop a horrible disease (Napoli and Hoeksema 2009), to seek a toilet, or to visit a place far removed from the speaker:

- (49) a. *Krijg de tering!* [Dutch]  
 get the tuberculosis  
 "Get TB"  
 b. *Je kunt de pot op!*<sup>15</sup>  
 You can the pot on  
 "You can go sit on the potty/toilet"  
 c. *Loop naar de maan!*  
 walk to the moon  
 "Go to hell!"

Similar to the negative predicates in 2.3.3., the usual "rescuing" contexts, such as double negation, or negation in questions or antecedents of conditionals, are no good for maledictory predicates. The following examples are all bad on the idiomatic interpretations:

- (50) a. *\*There is no way you can't drop dead.*  
 b. *\*You can't convince me he can't go fuck himself.*
- (51) *\*Het zou me verbazen als je niet de pot op kon.* [Dutch]  
 It would me surprise if younot the pot on could  
 "It would surprise me if you can't sit on the potty"

<sup>14</sup> Example 47h is acceptable as a denial, but does not constitute a malediction.

<sup>15</sup> In Dutch, verbs of motion can be implicit in constructions with modal verbs (cf. e.g. Aelbrecht 2010), provided there is a directional modifier. Compare:

- (i) *Ik moet naar de tandarts*  
 I must to the dentist  
 "I have to go to the dentist"

- (52) \**Kun je niet de tering krijgen?* [Dutch]  
 Can you not the tuberculosis get  
 “Can’t you get tuberculosis?”

However, it is possible to rescue maledictory predicates in directive subordinate clauses:

- (53) a. *You can’t convince me that she did not tell him to drop dead.*  
 b. *If she did not tell him to go screw himself, I will.*

The relevant difference here appears to be that the negation in (50) concerns an assertion. The subordinate clause has an indirect mandative interpretation, but the higher clause may be negated. In (50) and (51) above we have *drop dead* etc. in contexts that are not directive, hence not acceptable for maledictory idioms. Sentences such as (47c, 49b) look like assertions, but are really exhortations or statements of wishes. In this use, *can* may not be in the scope of negation. This seems to hold true for some related non-maledictory uses as well, such as in *can whistle for*, discussed in the previous section. Unlike these earlier-mentioned PPIs, *can go to hell* etc. does not even allow embedding in a positive context:

- (54) a. *She knows we can whistle for a pay raise.*  
 b. \**She knows we can go to hell.*<sup>16</sup>

In this respect, such maledictions are like imperatives, which cannot be embedded either.

Weak negation is not acceptable, much like strongly negative quantifiers:

- (55) a. \**Few people can go to hell, for all I care.*  
 b. \**Nobody can go to hell, for all I care.*  
 c. \**Rarely can you go to hell, for all I care.*

The same observation applies to Dutch maledictions:

- (56) a. \**Weinig mensen kunnen de pot op.*  
 Few people can the pot on  
 “Few people can go sit on the toilet”  
 b. \**Niemand kande tering krijgen!* [OK as nonmaledictory claim]  
 nobody can the tuberculosis get  
 “Nobody can get tuberculosis”  
 c. \**Zelden kun je naar de maan lopen.*  
 seldom can you to the moon walk  
 “Rarely can you go to hell”

Certain types of rude invitations to leave, such as *Get the hell off my property!* have in common with maledictions that they behave as PPIs and show up primarily in directive clauses (Hoeksema and Napoli 2008). However, the directive nature of their contexts seems to be less strict, allowing them to appear in negated conditionals, unlike maledictions:

<sup>16</sup> The star concerns only the maledictory reading, which is entirely absent.

- (57) a. *If you don't get the hell off my property, I'll shoot!*  
 b. *\*If you don't go to hell, I'll shoot.*

At the global level of the entire conditional sentence, (57a) may well be interpreted as a directive, but at the level of the antecedent clause, it clearly is not. It may be well worth the effort to study the properties of rude invitations and maledictions in a wider variety of languages from the perspective of PPI anti-licensing and clausal embedding, as well as that of expressive meaning (cf. Potts 2007, Grosz 2011), an avenue of research that has great potential value for the formal understanding of maledictions.

## 2.5 high degree predicates

Someone who is pretty is more than average on a scale of attractiveness. Someone who is drop dead gorgeous is located near the extreme end of an attractiveness scale. High degree predicates such as *gorgeous* or *delicious* resist attenuating modifiers and negation:

- (58) a. *??The actor was slightly gorgeous.*  
 b. *\*The meal was not delicious.*

Sentence (55b) may not sound all that bad, but tends to be used either as a denial of an earlier positive assessment, or contrastive (*the meal was not delicious, but wholesome and copious*). Corpus data also suggest a difference between high degree predicates and regular predicates. The following data are from COCA. To make things simple, I only looked for occurrences following either a finite form of BE or negation.

Table 2: Positive and negative occurrences of two adjectives

	gorgeous	delicious	attractive	tasty
was / is	437	518	560	70
n't / not	25	9	133	5

We see that the high-degree predicates *gorgeous* and *delicious* have far fewer negated occurrences than the non-high degree predicates *attractive* and *tasty*. The difference between *gorgeous* and *attractive* is statistically significant according to a Fisher's exact test, 2-tailed,  $p < 0.0001$ , just like that between *delicious* and *tasty* ( $p = 0.0213$ ).

Morzycki (2012) has called attention to the fact that adjectives such as *gorgeous* or *delicious* ("extreme adjectives") are frequently modified by special degree modifiers such as *downright*, *flat-out* and *positively*, which tend to be avoided by more middle-of-the-road predicates (cf. *Fred was downright fantastic/??OK*). He also notes (2012: 596) that extreme adjectives are degraded in negative sentences, antecedents of conditionals and questions. This ties in with an earlier observation made in Klein (1998), namely that adverbs of degree expressing an extreme value, such as *utterly*, pattern like PPIs.

In Dutch, the predicates *prachtig* 'wonderful, gorgeous' and *heerlijk* 'wonderful, delicious' are positive polarity items (cf. Seuren 1976). Seuren appears to share Morzycki's judgment that extreme adjectives are odd not just in the context of negation, but also in questions and antecedents of conditionals. However, he notes that an echoic use may be acceptable, even in conditionals. I am not

sure I share this delicate intuition, presumably because there are a great many types of conditionals, not all of which pattern alike with regard to the possibility of extreme adjectives. Certainly a sentence such as the following, from the Internet, is fine without any kind of echo (and the text preceding it does not have any occurrences of *prachtig*). Note, however, that this is an unusual type of conditional that seems to presuppose the truth of the antecedent.

- (59) *Als de Borobudur prachtig is, dan is Angkor daarvan de overtreffende trap.*<sup>17</sup>  
 If the Borobudur gorgeous is, then is Angkor thereof the superlative degree  
 “If the Borobudur is gorgeous, Angkor is the superlative of it”

To study the PPI character of *prachtig*, I queried this word in the Dutch NLCOW14-corpus (a corpus of Dutch web-based texts, cf. Schäfer 2015). When queried, it gives you 408,314 occurrences, of which only 712 are directly preceded by the negation marker *niet*. Note that this is an even stronger effect than the one seen for *gorgeous* and *delicious* in the COCA data. Of these 712, I manually checked the first 100 occurrences, and broke them down as in Table 3. Note that the category *regular negation* includes cases of contrastive negation, but it is somewhat difficult, without intonation, to pinpoint these exactly. A distribution such as that in Table 3, where 80% of negated occurrences are in negated questions, is a very strong sign that we are dealing with a positive polarity item.

Table 3: Negated occurrences of Dutch *prachtig*

negated question	80
double negation	6
negated conditional	2
regular negation	12

*Prachtig* does not show up in yes/no questions, except negated ones, which presuppose, rather than query, the truth of the proposition:

- (60) a. *??Is het schilderij prachtig?* [Dutch]  
 Is the painting gorgeous?  
 “Is the painting gorgeous?”  
 b. *Is het schilderij niet prachtig?*  
 Is the painting not gorgeous  
 “Isn’t the painting gorgeous?”

Note that wh-questions are somewhat better than yes/no questions, as are occurrences in subordinate clauses with factive predicates:

- (61) a. *Welke schilderijen vind je prachtig?* [Dutch]  
 which paintings find you gorgeous  
 “Which paintings do you find gorgeous?”  
 b. *Wist hij dat het schilderij prachtig was?*  
 Knew he that the painting gorgeous was  
 “Did he know that the painting was gorgeous?”

<sup>17</sup> <https://www.talisman.nl/onze-experts/evelyn-oostveen/> [accessed Feb 15, 2016]

I interpret these observations as follows. When the applicability of the predicate *prachtig* is at issue (in the sense of Roberts 1996), it must be affirmed. When it is not at issue, as it would be in presupposed material, conditions are less stringent. In (60a), the speaker asks about the applicability of the predicate *prachtig*, which is therefore at issue. In (61a), on the other hand, the applicability is assumed, and all the speaker wants to know is to which paintings it applies. In particular, (61a) presupposes that the addressee finds some painting gorgeous (cf. Rullmann and Beck 1998 for details on a presuppositional analysis of *which*-questions).

Combinations with weakly negative quantifiers such as *rarely* or *few* are difficult to check. Intuitive judgments are a bit muddled, due in part, I believe, to the possibility of shielding by intervening elements, e.g.

- (62) a. *?Het eten was zelden heerlijk.* [Dutch]  
 The food was rarely delicious  
 ‘The food was rarely delicious’  
 b. *Het eten was zelden zo heerlijk.*  
 The food was seldom so delicious  
 ‘The food was rarely this delicious’

Using the above-mentioned NLCOW14-corpus, I checked for occurrences of *heerlijk* and *prachtig* preceded by one of the temporal adverbs *zelden* ‘seldom’, *vaak* ‘often’, *nooit* ‘never’ and *altijd* ‘always’. The results are in Table 4:

Table 4: 4 temporal adverbs preceding *heerlijk* ‘delicious’

	before <i>heerlijk</i>	before <i>prachtig</i>	total
<i>zelden</i> ‘seldom’	1	2	137398
<i>nooit</i> ‘never’	6	4	1752422
<i>vaak</i> ‘often’	227	398	2062605
<i>altijd</i> ‘always’	1858	900	2881496

While the negative adverbs are not completely absent, there is a significant difference with the positive adverbs ( $p < 0.0001$ ), precisely as expected for PPIs. Note that the effect appears to be just as strong for the weakly negative element *zelden* as it is for the strongly negative element *nooit*.

*Prachtig* and *heerlijk* are global PPIs, because they are anti-licensed by higher negation (63a,b), except when shielded by factive verbs or adjectives (cf. 63c):

- (63) a. *\*?Ik vind niet dat het weer prachtig is.*<sup>18</sup>  
 I find not that the weather superb is  
 ‘I do not find the weather superb’  
 b. *\*?Ik denk niet dat het brood heerlijk is.*  
 I think not that the bread delicious is  
 ‘I don’t think the bread is delicious’  
 c. *Ik vind het niet erg dat het weer prachtig is.*  
 I find it not bad that the weather superb is

<sup>18</sup> One of my reviewers accepts both (63a) and (63b). The judgments given are mine.

'I don't mind that the weather is superb'

The NLCOW14-corpus gives 102 cases of the subordinate clause *dat het prachtig is* 'that it is gorgeous', and 248 cases of *dat het heerlijk is* 'that it is delicious', none of which is embedded under negation.<sup>19</sup>

High degree PPIs are not restricted to a small subset of adjectives. There are also verbal predicates with similar behavior, such as the Dutch idiom *op rozen zitten* 'to sit on roses', meaning to be in a very good position. The *swarm*-construction (exemplified by *The garden was swarming with bees*, *The river is teeming with fish*, *The hills are alive with the sound of music*, etc., cf. Salkoff 1983, Dowty 2000, Hoeksema 2009) can be viewed as a set of high degree predicates with PPI behavior (cf. Seuren 1976, van der Wouden 1997). In a database with some 1300 occurrences of the Dutch *swarm*-construction, collected for Hoeksema (2009), the only occurrences of negation involved local, non-sentential negation (similar to e.g. *Not long after, the place was crawling with cops*). The same can presumably be observed for English.<sup>20</sup> The *swarm*-construction always indicates a high degree, and does not like attenuating modifiers (*\*The river was somewhat crawling with fish*, *\*The garden is swarming a bit with bees*).

## 2.6 in een lastig parket / in a tough spot

The predicate *in een lastig parket* 'in a tough spot' has a lot of variants in which the adjective is replaced by a similar one: *in een moeilijk parket* 'in a difficult situation' and *in een vervelend parket* 'in an unpleasant situation' being the most common ones. In each case the adjective denotes a non-desirable property of a situation one may find oneself in. The word *parket* originally meant a confined space, but in these idioms it simply seems to mean *situation* or *position*.

An interesting feature of these predicates is that they do not combine with the copula *zijn* 'be'<sup>21</sup>, but have to combine with the semi-copula *zitten* 'sit', or an equivalent verb (*verkeren* 'to be located', *zich bevinden* 'to find oneself'), the verbs *komen* 'come' or its transitive counterpart *brengen* 'bring', *plaatsen* 'place'. Note that in each case the meaning of the verb is bleached in these combinations. For instance *ik zit in een moeilijk parket* 'I am in a difficult position' does not in any way suggest that the speaker is sitting. All these verbs are well-known 'light verbs' in Dutch and appear in a host of complex predicates.

---

<sup>19</sup> The following example from NLCOW14 seems to contradict this claim, but it contains a negated negative matrix predicate, making the context a rescuing context with double negation:

(i) *Daarnaast zal ik niet ontkennen dat het heerlijk is te vrijen in de natuur [...]*  
additionally will I not deny that it wonderful is to make-love in the nature  
'Also, I won't deny that making love in nature is wonderful'

<sup>20</sup> I checked this for one case (*swarming with*) in the COCA corpus. Out of 181 occurrences, only 1 was in the scope of sentential negation. This turned out to be a case of double negation, as one would predict for a PPI:

(i) *Not that the Atchafalaya isn't still swarming with critters.*

<sup>21</sup> For me, combinations with *zijn* 'be' are not possible, but I found 3 occurrences in older texts, suggesting that the restriction to light verbs such as *zitten* 'sit' was not absolute originally. Hengeveld (1992: 238) notes some cases where *zitten* either replaces *zijn*, or alternates with it, as is the case with locative predicates:

(i) *Jan zit/is in Frankrijk.*  
Jan sits/is in France  
"Jan is in France"

The precise factors controlling the variation between *zitten* 'sit' and *zijn* 'be' deserve to be studied in more detail.

We can divide the verbs along a number of dimensions, but for our purposes the most important one is the division between static and dynamic. From the Internet and online newspaper corpora (*delpher.nl*, *lexisnexis*), I collected a total of 320 occurrences, and divided them into static and dynamic combinations, as well as negative and positive occurrences. The result is shown in Table 4:

Table 4: Static and dynamic occurrences of Dutch *in a tough spot*

	positive	negative
static	110	2
dynamic	182	26

The difference between static and dynamic combinations is statistically significant according to Fisher's exact test, 2-tailed ( $p < 0.001$ ). The negative occurrences can be further broken down in subgroups:

Table 5: Negated static and dynamic occurrences of Dutch *in a tough spot*

	regular negation	negation + modal	negated imperative	negated question	negated purpose clause	double negation
static	-	1	-	-	-	1
dynamic	3	12	1	6	2	2

The PPI nature of *in een lastig parket* (and variants) is clearly much more prominent in the static combinations. Nonetheless, the distribution of the dynamic cases is quite unusual, and should be studied more thoroughly. While there are a few cases of simple negation in the corpus material, these are outnumbered by cases of shielded negation, such as negation with modals and negation in rescuing contexts such as negated questions and negated purpose clauses (purpose clauses are nonveridical contexts, and for rescuing we need a negative operator in a nonveridical context, according to the hypothesis in Szabolcsi (2004). In the subgroup with negated modal contexts, the most prominent modal is *willen* 'want'. This appears to shield the PPI off from the adverse effects of negation, just as it does with English *some* (cf. Kroch 1979, Szabolcsi 2004):

(64) *I don't want to do something for somebody else.*<sup>22</sup>

So it may well be that the difference between static and dynamic combinations is primarily due to the fact that the dynamic combinations are more likely to be found in contexts with shielding elements. Note that I have not found any cases where static combinations and *willen* were clause-mates. I judge such combinations as marginal at best:

- (65) a. *Ik wil u niet in een lastig parket brengen.*  
 I want you not in a tough spot bring  
 "I do not want to put you in an awkward position"
- b. *?Ik wil niet in een lastig parket zitten.*  
 I want not in a tough spot sit  
 "I don't want to be in an awkward position"

<sup>22</sup> <http://www.popsugar.com/fitness/Khloe-Kardashian-Yahoo-Style-Interview-38968834>



Why sentences such as (65b) are less acceptable than (65a), I do not know.

Negative quantifiers such as *few* or *seldom* are no good with these predicates, but shielded negation, such as the scope of *not every*, is fine:

- (66) a. \**Weinig studenten zaten in een lastig parket.*  
Few students sat in a tough spot  
“Few students were in an awkward position”
- b. \**We zitten zelden in een moeilijk parket.*  
we sit seldom in a difficult spot  
“We are seldom in a difficult position”
- c. *Niet elke student zit in een lastig parket.*<sup>23</sup>  
Not every student sits in a tough spot  
“Not every student is in an awkward position”

Occurrences in questions are acceptable:

- (67) a. *Zit U misschien in een lastig parket?*  
Sit you perhaps in a tough spot  
‘Are you perhaps in an awkward position?’
- b. *Brengt dit U in een moeilijk parket?*  
brings this you in a tough spot  
‘Does this bring you in a difficult position?’

Higher negation is not acceptable (cf. 68a), except when a negative verb cancels out the negation, yielding a type of rescuing (68b), or when it is factive, yielding a case of shielding (68c):

- (68) a. \**Ik denk niet dat we in een lastig parket zitten.*  
I think not that we in a tough spot sit  
‘I don’t think we are in a difficult situation’
- b. *Dat neemt niet weg dat we in een lastig parket zitten.*  
that takes not away that we in a tough spot sit  
‘That does not take away from the fact that we are in a difficult situation’
- c. *Je kon niet weten dat we in een lastig parket zaten.*  
You could not know that we in a tough spot sat  
‘You could not know we were in a tough spot.’

### 3 Discussion

PPI-hood and NPI-hood should not be viewed as arbitrary properties of words or phrases, but ought to be derived from the interaction of global requirements and local (compositional) properties. Kadmon and Landman (1993) famously argued for *any* that its distribution can be derived from the interaction of two requirements: widening and strengthening. Widening is the local property, and

---

<sup>23</sup> One of the anonymous reviewers finds this example marginal.

strengthening is the global requirement that can only be met if a widening element appears in a downward-entailing context. We could argue something like it for PPIs. High degree predicates such as *prachtig* become PPIs when their lexical property of denoting a very high degree must also be a global property of the entire clause. In that case, negation is ruled out (negating a high degree results in a statement that some object has the property in question to a lower extent or not at all), and so are attenuating adverbs such as *een beetje* ‘a bit’, which we have seen to be incompatible as well. Maledictory predicates show a similar effect. They are inherently negative (in the evaluative sense of denoting some undesirable activity) and have the idiomatic property of being maledictory (a global property at the level of the utterance, requiring additional clausal elements such as imperative mood, or permission-giving modals). Again, adding negation would destroy the maledictory reading, and this is what happens. Sentences such as (69) don’t have the over-the-top maledictory reading of their positive counterparts, but can only be interpreted literally.

(69) *Don't drop dead!*

Not all PPIs depend on high degree-readings and/or speaker attitude. In the case of the *have his N*-construction, I have argued that PPI-hood stems from the need to avoid a clash between assertions and presuppositions. Whether deeper generalizations covering all PPIs or even all predicate PPIs can be established, remains to be seen. One of my reviewers suggests that all PPI predicates involve extreme speaker attitudes, but I do not see how this could be true of the *have his N*-construction, or of the Dutch ‘tough spot’-construction, which may be attenuated without any loss of acceptability:

(70) *Hij zit een beetje in een lastig parket*  
He sits a bit in a tough spot  
“He is in a bit of a fix”

Recent theoretical proposals such as Nicolae (2012), Spector (2014), Fălăuș (this issue) and others, working within the framework of Chierchia (2013) or variants thereof, try to account for the distribution of PPIs and NPIs in terms of covert exhaustification operators which are required by syntactic features on these items to be present in specified syntactic positions. In combination with the contextual properties of the sentence this will lead to either acceptable or semantically anomalous occurrences. Such an account will need to be evaluated not just merely on the basis of how well it predicts the distribution of *some*, as well as the usual theoretical concerns such as simplicity and falsifiability, but also in part on whether it can be generalized to a wider range of PPIs with different distributional properties, something that remains to be demonstrated.

The same is true, *mutatis mutandis*, of the more syntactically oriented studies by Szabolcsi (2004) and Postal (2005). Their approach as well is fine-tuned for a small set of items, but a vast set of PPIs is still waiting to be incorporated in theoretical or even descriptive work.

My data are mostly from Dutch and English, but it is to be expected that other languages will have similar PPIs. I have studied them on the basis of native speaker intuitions (my own in particular) and in part by using corpus data. It is desirable that these methods are supplemented by experimental work. Some ERP and eye-tracking studies of PPIs are available (Saddy et al. 2004, Vasishth et al. 2008, Yurchenko et al. 2013) but more studies are needed, given the variety of PPIs and potential contexts, and the subtle nature of some of the data.

Another huge area for research, now largely unexplored, is the acquisition of positive polarity items. There have been some studies in specific areas, such as disjunction (e.g. Goro and Akiba 2004),

but much more remains to be done. It is clearly a serious puzzle how children can learn that an expression which they have learned from positive sentences may not be used in negative sentences in the absence of negative evidence.

In the study of cross-linguistic variation, one type of variation is identified as parametric (or microparametric), namely when it involves systematic differences between languages (or dialects in the case of microparametric variation) (see Rizzi 1982 for some of the groundbreaking work on parameters in syntactic theory). The type of variation we see in the case of PPIs (and NPIs, for that matter) does not seem to be parametric in that sense. That is to say, we do not see differences in PPIs between languages (e.g. Dutch versus English), or their grammars, but between individual items. Hence the variation that we noted above is lexical, not parametric.

## 4 Conclusions

In this paper, I have studied a set of PPIs which have in common that they are all predicates. There are plenty more predicates with PPI characteristics, not to mention PPIs that are not predicates. I restricted myself to the above cases because of the space limitations on this article precluded a full presentation. The distributional characteristics discussed above are summarized in Table 6. For the sake of comparison, I include the PPIs *some*, *already* and *still*, not discussed in any length above, since they are central items in much of the literature on positive polarity items. The only column in Table 6 where all PPIs behave alike is the one called ‘Negation’, by which I mean the possibility of occurring within the scope of (clausemate) negation. This is obviously a definitional matter, since PPIs are primarily defined by their nonoccurrence in negated clauses. Many details have to be skipped in this table, such as the type of question (yes/no, WH, direct, indirect, etc.), possibilities of shielding, and the type of rescuing context. Note that from the perspective of predicate PPIs, the classical PPIs *some*, *already* and *still* are outliers. Aversion to interrogative contexts, the scope of weak negation and higher negation are much more important than one would suppose on the basis of these classical PPIs.

Table 6: Comparison of PPI predicates and *some etc.*

Item	Section	Negation	Questions	Weak neg.	Higher neg.	Rescuing
some, already, still		-	+	+	+	+
have had it with	2.1	-	-	-	-	+/-
have his N	2.1	-	-	-	-	+
can hear a pin drop	2.2	-	+	-	-	-
het verdommen	2.3.1	-	+	-	?	+
can forget about	2.3.2	-	+	-	-	-
malediction	2.4	-	-	-	-	- <sup>24</sup>
high degree predicates	2.5	-	-/+ <sup>25</sup>	-	-	+
Dutch “in a tough spot”	2.6	-	+	-	-	+

One striking finding in Table 6 is the correlation between anti-licensing by higher negation and anti-licensing by weak negation. This fits with the findings in Spector (2014) for global PPIs. However, occurrence in questions and in rescuing contexts do not line up exactly with the local-global

<sup>24</sup> Except for maledictions in the complement of mandative verbs, cf. section 2.4 above.

<sup>25</sup> Depending on type of question, see section 2.5.

dichotomy advanced in that paper. This means that the class of PPIs is more heterogeneous than a two-way partition would suggest.

The main conclusions of this paper can be summarized as follows:

- Positive polarity items do not form a unified class of items with identical distribution, nor does a binary division do justice to the amount of variation found.
- Some positive polarity items are not only unacceptable when negated, but also stay away from other clause types, such as yes/no questions (e.g. *have his N*, Dutch *prachtig* ‘gorgeous, wonderful’).
- The notion of *subject indiscriminacy* was introduced for some predicates (such as *can hear a pin drop*) and was argued to be associated with predominantly generic subjects.
- Some predicative PPIs (such as *can forget about* or Dutch *op zijn buik kunnen schrijven* ‘can write on one’s belly’) are anti-licensed by negation in a higher clause and also by weak negation (‘global PPIs’ in the terminology of Spector 2014).
- Maledictory idioms such as *drop dead* or *go to hell* are PPIs which require a directive context, and don’t appear in rescuing contexts.
- High degree predicates are PPIs (here we are in agreement with Morzycki 2012). This group includes high degree adjectives, but also verbal idioms and the *swarm*-construction.
- Some predicates (the members of the class of ‘in a tough spot’ predicates in Dutch, such as *in een lastig parket*, *in een moeilijk parket*) are positive polarity items with differing distributional characteristics depending on whether the accompanying verb is stative or dynamic. The stative combinations are stricter PPIs.
- Rescuing requires a negative operator within the scope of a nonveridical operator
- Any classification of PPIs which does not include variation in rescuing contexts and acceptability in interrogative contexts, is incomplete.

Of course, much remains to be worked out, before all the observations made above can be accounted for theoretically.

## References

- Aelbrecht, Lobke. 2010. *The Syntactic Licensing of Ellipsis*. Amsterdam: John Benjamins.
- Baker, C. Lee. 1970. Double Negatives. *Linguistic Inquiry* 1(2), 169-186.
- Borkin, Ann. 1971. Polarity items in question. *Papers from the 7<sup>th</sup> Regional Meeting of the Chicago Linguistic Society*, 53-62. Chicago: Chicago Linguistic Society.
- Broekhuis, Hans & Marcel den Dikken. 2012. *Syntax of Dutch. Nouns and Noun Phrases*, vol. 2. Amsterdam : Amsterdam University Press.
- Chao, Yuen Ren. 1968. *Language and Symbolic Systems*. Cambridge: Cambridge University Press.
- Chierchia, Gennaro. 2013. *Logic in grammar: Polarity, free choice, and intervention*. Oxford: Oxford University Press.
- Collins, Chris & Paul M. Postal. 2014. *Classical Neg-Raising. An essay on the syntax of negation*. Cambridge MA: MIT-Press.
- Coppock, Elizabeth & Elisabet Engdahl. 2016. Quasi-definites in Swedish: Elative Superlatives and Emphatic Assertion. *Natural Language & Linguistic Theory* 34(4), 1181–1243.

- Davies, Mark. 2010. The Corpus of Contemporary American English as the first reliable monitor corpus of English. *Literary and Linguistic Computing* 25 (4): 447-464.
- den Dikken, Marcel & Anastasia Giannakidou. 2002. From *hell* to polarity: “Aggressively non-D-linked” wh-phrases as polarity items. *Linguistic Inquiry* 33(1), 31-61.
- Dowty, David. 2000. ‘The Garden Swarms with Bees’ and the Fallacy of ‘Argument Alternation’. In Y. Ravin and C. Leacock (eds.), *Polysemy. Theoretical and Computational Approaches*, 111–128. Oxford: Oxford University Press.
- Eckardt, Regine. 2006. *Meaning Change in Grammaticalization: An Enquiry into Semantic Reanalysis*. Oxford: Oxford University Press.
- Fauconnier, Gilles. 1975a. Polarity and the Scale Principle. *Papers from the Eleventh Regional Meeting of the Chicago Linguistic Society*, 188-199. Chicago: Chicago Linguistic Society.
- Fauconnier, Gilles. 1975b. Pragmatic scales and logical structures. *Linguistic Inquiry* 6(3), 353-375.
- Fauconnier, Gilles. 1980. Pragmatic entailment and questions. In John Searle, Ferenc Kiefer & Manfred Bierwisch (eds.), *Speech Act Theory and Pragmatics*, 57-69. Dordrecht: D. Reidel.
- Field, John. 2004. *Psycholinguistics. The key concepts*. London: Routledge.
- Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: John Benjamins.
- Giannakidou, Anastasia. 2011. Negative polarity items and positive polarity items: Licensing, variation, and compositionality. In Klaus von Stechow, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, 1660-1712. Berlin: De Gruyter.
- Giannakidou, Anastasia & Alda Mari. 2016. The semantic roots of positive polarity: epistemic modal verbs and adverbs in Greek and Italian. MS, University of Chicago & Institut Jean Nicot, Paris.
- Goro, Takuya & Sachie Akiba. 2004. The acquisition of disjunction and positive polarity in Japanese. *Proceedings of the 23rd West Coast Conference on Formal Linguistics*, 251-264. Sommerville, MA: Cascadia Press.
- Green, Georgia. 1975. How to get people to do things with words: The whimperative question. In Peter Cole & Jerry L. Morgan (eds), *Syntax and semantics* 3, 30-50. New York: Academic Press.
- Grosz, Patrick. 2011. *On the grammar of optative constructions*. Cambridge MA: MIT dissertation.
- Guerzoni, Elena. 2004. Even-NPIs in yes/no Questions. *Natural Language Semantics* 12(4): 319-343.
- Guerzoni, Elena & Yael Sharvit. 2007. A question of strength: On NPIs in interrogative clauses. *Linguistics and Philosophy* 30 (3): 361 - 391.
- Han, Ching-Hye & Laura Siegel. 1997. Syntactic and semantic conditions on NPI licensing in questions. *Proceedings of the 15th West Coast Conference on Formal Linguistics*, 177-191. Stanford: CSLI.
- Hasegawa, Nobuko. 1991. Affirmative polarity items and negation in Japanese. In Carol Georgopoulos & Roberta Ishihara (eds.), *Interdisciplinary Approaches to Language. Essays in Honor of S.-Y. Kuroda*, 271-285. Dordrecht: Kluwer.
- Hengeveld, Kees. 1992. *Non-verbal predication: theory, typology, diachrony*. Berlin: Walter de Gruyter.
- Hoeksema, Jack. 1986. Monotonicity phenomena in natural language. *Linguistic Analysis* 16 (1-2), 235-250.
- Hoeksema, Jack. 2002. Minimaliseerders in het standaard-Nederlands. *Tabu* 32(3/4), 105-174.

- Hoeksema, Jack. 2009. The swarm alternation revisited. In Erhard Hinrichs & John Nerbonne (eds.), *Theory and Evidence in Semantics*, 53-80. Stanford: CSLI.
- Hoeksema, Jack. 2010. Negative and Positive Polarity Items: An Investigation of the Interplay of Lexical Meaning and Global Conditions on Expression. In Laurence R. Horn (ed.), *The Expression of Negation*, 187-224. Berlin: Mouton de Gruyter.
- Hoeksema, Jack. 2012. On the natural history of negative polarity items. *Linguistic Analysis* 38(1/2), 3-33.
- Hoeksema, Jack. 2017. NEG-raising and long-distance licensing of negative polarity items. In Debra Ziegeler & Zhiming Bao (eds.), *Negation and Contact: With special focus on Singapore English*, 33-61. Amsterdam: John Benjamins.
- Hoeksema, Jack & Henny Klein. 1995. Negative Predicates and their Arguments. *Linguistic Analysis* 25(3/4), 146-180.
- Hoeksema, Jack & Donna Jo Napoli. 2008. Just for the hell of it: A comparison of two taboo-term constructions. *Journal of Linguistics*, 44(2), 347-378.
- Homer, Vincent. 2011. *Polarity and Modality*. Los Angeles: UCLA dissertation.
- Horn, Laurence R. 1989. *A natural history of negation*. Chicago: University of Chicago Press.
- Iatridou, Sabine & Hedde Zeijlstra. 2013. Negation, Polarity, and Deontic Modals. *Linguistic Inquiry*, 44(4), 529-568.
- Israel, Michael. 1996. Polarity sensitivity as lexical semantics. *Linguistics and Philosophy*, 19(6), 619-666.
- Israel, Michael. 2011. *The Grammar of Polarity: Pragmatics, Sensitivity, and the Logic of Scales*. Cambridge: Cambridge University Press.
- Jäger, Agnes. 2010. *Anything is nothing is something*. *Natural Language and Linguistic Theory* 28(4), 787-822.
- Kadmon, Nirit and Fred Landman 1993. Any. *Linguistics and Philosophy* 16, 353-422.
- Kiparsky, Paul. 1973. Elsewhere in phonology. In Stephen R. Anderson & Paul Kiparsky (eds.), *A festschrift for Morris Halle*, 93-106. New York: Holt, Rinehart and Winston.
- Klein, Henny, 1998. *Adverbs of Degree in Dutch and related languages*. Amsterdam/Philadelphia: John Benjamins.
- Klima, Edward, 1964. Negation in English. In J.A. Fodor & J.J. Katz (eds.), *The Structure of Language. Readings in the Philosophy of Language*, 246-323. Englewood Cliffs N.J.: Prentice Hall.
- Kroch, Anthony S. 1979. *The semantics of scope in English*. New York: Garland.
- Ladd, D. Robert. 1981. A First Look at the Semantics and Pragmatics of Negative Questions and Tag Questions. *Papers from the 17<sup>th</sup> Regional Meeting of the Chicago Linguistic Society*, Chicago, 164-171.
- Ladusaw, William A. 1979. *Polarity Sensitivity as Inherent Scope Relations*. Dissertation, University of Texas at Austin.
- Lahiri, Utpal. 2002. *Questions and Answers in Embedded Contexts*. Oxford: Oxford University Press.
- Lakoff, Robin. 1969. Some reasons why there can't be any *some-any* rule. *Language* 45(3), 608-615.
- Larrivee, Pierre. 2012. Positive polarity, negation, activated propositions. *Linguistics* 50(4), 869-900.
- Larrivee, Pierre. 2017. A positive polarity focus particle under negation: *Not also* and the impact of pragmatic activation. In Debra Ziegeler & Zhiming Bao (eds.) *Negation and Contact: With special focus on Singapore English*, 63-80. Amsterdam: John Benjamins.
- Liu, Mingya, 2012. *Multidimensional Semantics of Evaluative Adverbs*. Current Research in the Semantics/Pragmatics Interface, vol. 26. Leiden: Brill.

- Morzycki, Marcin, 2012. Adjectival extremeness: Degree modification and contextually restricted scales. *Natural Language & Linguistic Theory*, 30(2), 567-609.
- Napoli, Donna Jo & Jack Hoeksema. 2009. The grammatical versatility of taboo terms. *Studies in language* 33(3), 612-643.
- Nicolae, Andreea. 2012. Positive polarity items: an alternative-based account. *Proceedings of Sinn und Bedeutung* 16, 475-488.
- Nicolae, Andreea C. 2013. *Any questions? Polarity as a window into the structure of questions*. Cambridge MA: Harvard dissertation.
- Nicolae, Andreea C. 2015. Questions with NPIs. *Natural Language Semantics*, 23(1), 21-76.
- O'Steen, Bobbie. 2009. *The invisible cut*. Studio City: Michael Wiese Productions.
- Partee, Barbara H. 1999. Weak NP's in HAVE sentences. In Jelle Gerbrandy, Maarten de Rijke, and Yde Venema (eds.), *JFAK: Essays dedicated to Johan van Benthem on the Occasion of his 50th Birthday*. Vossiuspers: Amsterdam.
- Postal, Paul M. 2005. Suppose (if only for an hour) that negative polarity items are negation-containing phrases. New York: New York University manuscript.
- Potts, Christopher. 2007. The expressive dimension. *Theoretical linguistics*, 33(2), 165-198.
- Progovac, Ljiljana. 1994. *Negative and Positive Polarity: A Binding Approach*. Cambridge: Cambridge University Press.
- Rizzi, Luigi. 1982. *Issues in Italian syntax*. Dordrecht: Foris.
- Roberts, Craige. 1996. Information structure in discourse: Towards an integrated formal theory of pragmatics. *OSU Working Papers in Linguistics*, 91-136. Columbus: The Ohio State University Department of Linguistics.
- Romero, Maribel & Chung-hye Han. 2004. On negative yes/no questions. *Linguistics and Philosophy*, 27(5), 609-658.
- Rooy, Robert van. 2003. Negative Polarity Items in Questions: Strength as Relevance. *Journal of Semantics*, 20 (3): 239-273
- Rullmann, Hotze. 1996. Two types of negative polarity items. *Proceedings of NELS* 26, 335-350. Amherst, MA : GLSA.
- Rullmann, Hotze & Sigrid Beck. 1998, Presupposition Projection and the Interpretation of *Which*-Questions. In D. Strolovich and A. Lawson (eds.), *Proceedings of Semantics and Linguistic Theory* 8, 215–232. Ithaca, N.Y.: CLC.
- Ruppenhofer, Josef & Laura A. Michaelis. 2016. Frames, Polarity and Causation. *Corpora* 11: 259-290.
- Saddy, Douglas, Heiner Drenhaus, and Stefan Frisch, 2004. Processing polarity items: Contrastive licensing costs. *Brain and language*, 90(1), 495-502.
- Salkoff, Morris. 1983. Bees are Swarming in the Garden. A systematic study of productivity. *Language* 59(2): 288–346.
- Schäfer, Roland. 2015. Processing and querying large web corpora with the COW14 architecture. In Piotr Bański, Hanno Biber, Evelyn Breiteneder, Marc Kupietz, Harald Lungen & Andreas Witt (eds.), *Proceedings of Challenges in the Management of Large Corpora (CMLC-3)*, 28-34. Mannheim: Institut für Deutsche Sprache.
- Schmerling, Sue. 1971. A Note on Negative Polarity. *Papers in Linguistics* 4(1), 200-206.
- Seuren, Pieter A.M. 1976. Echo: Een studie in negatie. In Geert Koefoed et al. (eds.), *Lijnen van taaltheoretisch onderzoek*, 160-184. Groningen: H.D. Tjeenk Willink.
- Seuren, Pieter A. M. 1985. *Discourse Semantics*. London: Routledge.

- Spector, Benjamin. 2014. Global positive polarity items and obligatory exhaustivity. *Semantics and Pragmatics* 7(11), 1-61.
- Soehn, Jan-Philipp, Mingya Liu, Beata Trawiński & Gianina Iordăchioaia. 2010. Nicht sonderlich oder doch satzartig bekannt? Positive und Negative Polaritätselemente als lexikalische Einheiten mit Distributionsidiosynkrasien. In Jarmo Korhonen, Wolfgang Mieder, Elisabeth Piirainen & Rosa Piñel (eds.), *EUROPHRAS 2008 Beiträge zur internationalen Phraseologiekonferenz vom 13.-16.8.2008 in Helsinki*, 273-281. Tübingen: Narr.
- Szabolcsi, Anna. 2004. Positive polarity—negative polarity. *Natural Language and Linguistic Theory* 22, 409-452.
- Vasishth, Shrvan, Sven Brüssow, Richard L. Lewis & Heiner Drenhaus. 2008. Processing Polarity: How the Ungrammatical Intrudes on the Grammatical. *Cognitive Science* 32: 685–712.
- van der Wouden, Ton. 1994. *Negative Contexts*. Groningen: University of Groningen dissertation.
- van der Wouden, Ton. 1995. Moeilijk is (not) difficult. In Marcel den Dikken & Kees Hengeveld (eds.) *Linguistics in the Netherlands 1995*, 203-14. Amsterdam: Benjamins.
- van der Wouden, Ton. 1997. *Negative Contexts: Collocation, Polarity and Multiple Negation*. London: Routledge.
- Yurchenko, Ana, Dirk-Bart den Ouden, Jack Hoeksema, Olga Dragoy, John Hoeks & Laurie A. Stowe. 2013. Processing polarity: ERP evidence for differences between positive and negative polarity. *Neuropsychologia*, 51(1), 132-141.
- Zeijlstra, Hedde. 2013. Universal Quantifier PPIs. In Maria Aloni, Michael Franke & Floris Roelofsen (eds.), *Proceedings from the 19th Amsterdam Colloquium*, 273-280. Amsterdam: ILLC.
- Zwarts, Frans. 1981. Negatief Polaire Uitdrukkingen I. *Glott* 4-1, 35-132.
- Zwarts, Frans. 1995. Nonveridical contexts. *Linguistic Analysis* 25(3/4), 286–312.
- Zwarts, Frans. 1998. Three types of polarity. In Fritz Hamm & Erhard Hinrichs (eds.), *Plurality and quantification*, 177-238. Dordrecht: Springer.