

# An expletive negation unlike any other in Québec French: Exploring a ‘complex NPI’ analysis

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## Abstract

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This paper explores ‘expletive’ uses of the negative marker *pas* in Québec French (QF) (Kemp 1982, Larrivée 1996), which despite checking every diagnostic for expletive negation (ExN), do not pattern with previously documented cases of ExN. We show that most previous accounts of ExN can thus not explain ExN *pas*’s distribution. Building on van der Wouden’s (1994) approach to ExN as negative polarity items (NPIs), and adopting an

alternative-based account of NPIs (Krifka 1995, Lahiri 1998, Chierchia 2013, a.o.), we propose a preliminary analysis of ExN *pas* as part of a ‘complex’ NPI. That is, ExN *pas* realizes one of two pieces in the composition of an NPI: (i) it does not contribute existential quantification of its own, but (ii) requires that the predicative existential expression it co-occurs with activate a set of domain alternatives. Though this analysis stands out in making a number of correct predictions about the distribution of ExN *pas*, it faces an empirical challenge, which we ultimately leave as an issue for future work.

**Keywords:** Expletive negation, negative polarity items, Québec French

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## 1. Introduction

‘Expletive’ uses of negation have received much attention in the last few decades, including most notably in a range of Romance languages (e.g. Jespersen 1917; Muller 1978, 1991; Espinal 1991, 1992, 2000, 2007; van der Wouden 1994; Larrivéé 1996; Tovena 1996; Portner & Zanuttini 2000; Zeijlstra 2004; Yoon 2011; Makri 2013; Greco 2019, 2020; Delfitto 2020). This paper contributes to this literature with data from Québec French (QF).<sup>1</sup> Our goal is to lay out a puzzle related to ‘expletive’ uses of the marker *pas*. We show that despite checking every diagnostic for expletive negation (ExN), ExN *pas* does not pattern with previously documented cases of ExN. As such, most previous accounts cannot explain its distribution. We then propose a preliminary analysis, building on van der Wouden’s (1994) approach to ExN as negative polarity items (NPIs), in which ExN *pas* realizes one of two pieces in the composition of an NPI. Though our analysis stands out in making a number of correct predictions about the distribution of ExN *pas*, it faces a non-trivial empirical difficulty, which we discuss and ultimately leave as an open puzzle. ExN *pas* in QF thereby presents an interesting puzzle for theories of non-canonical uses of negation, and aligns with recent claims that different cases of ExN are best treated as separate phenomena (Zeijlstra 2004; Eilam 2007; Greco 2019; 2020).

In section 2, we establish the distributional properties of ExN *pas*. In section 3, we show that previous accounts of ExN cannot be extended to account for ExN *pas*’s distributional properties. In section 4, we sketch a preliminary account of ExN *pas*. Finally, in section 5 we conclude with a discussion of the remaining puzzle.

## 2. The (very limited) distribution of ‘expletive’ *pas* in Québec French

### 2.1. Distributional constraints on ExN *pas*

The morpheme *pas* in QF is generally used to express sentential negation. In example (1), *pas* denies the truth of the embedded proposition:

- (1) Ça c’est le livre que j’ai **pas** aimé.  
 This it.is the book that I.have NEG liked  
 ‘This is the book that I didn’t like.’

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<sup>1</sup> Unless otherwise specified, the data presented in this paper come from the native-speaker author, and were also checked with 5 consultants (both linguists and non-linguists).

There are special environments, however, in which the presence of *pas* does not seem to contribute canonical negation (Kemp 1982). We show that such uses, described as “expletive uses of *pas*” by Larrivée (1996), are heavily constrained by two factors.

First, ExN *pas* must occur inside a *relative clause*, headed either by (i) the universal quantifier *tout* ‘all’ (2), or (ii) superlative expressions (3). As indicated in the translations, ExN *pas* does not seem to reverse the truth conditions of the embedded proposition.<sup>2</sup>

- (2) a. J’ai fait [ **tout** [ ce que je pouvais **pas** faire ]].  
I.have done all that I could EXN do  
‘I did all I could.’
- b. J’ai lu [ **tous** les livres [ que je pouvais **pas** lire ]].  
I.have read all the books that I could EXN read  
‘I read all the books I could read.’
- (3) a. C’est [ le **pire** livre [ que tu peux **pas** lire ]].  
it.is the worst book that you can EXN read  
‘It’s the worst book you can read.’
- b. Léa m’a donné [le **meilleur** cadeau [ qu’elle pouvait **pas** me donner]].  
Léa me.has given the best gift that she could EXN me give  
‘Léa gave me the best gift she could have given me.’

Note that all of these sentences are ambiguous between a negative use of *pas* and the ‘expletive’ use (see §2.2). Unless otherwise specified, we will ignore negative uses in this paper and only provide acceptability judgments for the ‘expletive’ interpretation. To make this clear, the ‘expletive’ uses of *pas* will be glossed as “EXN”, whereas the negative uses will be glossed as “NEG”.

A second peculiar requirement on ExN *pas* is that it must co-occur with a very limited set of existential predicates inside the relative clause in which it occurs. What unites all of these expressions is that they convey *existential quantification*, be it over worlds or over individuals (Kratzer 1981; Freeze 1992):<sup>3</sup>

- (4) Predicates compatible with ExN *pas*
- a. The modal verb *pouvoir* ‘can’
  - b. The existential predicate *il y a* ‘there is’
  - c. Possessive uses of *avoir* ‘have’

<sup>2</sup> In addition to *le meilleur/pire* ‘the best/worst’, superlative sentences can be headed by several different expressions, including *le premier/dernier* ‘the first/last’, *le plus/moins* ‘the most/least’, *le maximum/minimum* ‘the maximum/minimum’ (see Kemp 1982 for several examples).

<sup>3</sup> An anonymous reviewer suggested an example where ExN *pas* does not co-occur with an existential predicate, but co-occurs with a strong NPI like *de/dans ma vie* ‘in my life’. The relevant sentence they provided is: *C’est la plus belle affaire que j’ai pas vue dans ma vie* ‘It’s the most beautiful thing I’ve EXN seen in my life’. However, all of the native QF speakers we consulted (and the native-speaker author of this work) disagree with this judgment and reject an ExN interpretation of this sentence.

- d. The lexical verb *exister* ‘to exist’ (reported in Kemp 1982)<sup>4</sup>

We illustrate this for the first three kinds of predicates listed in (4) with examples with relative clauses headed by *tout* (5) and superlatives (6). Also shown is the fact that ExN *pas* is incompatible with other lexical predicates, such as *trouver* ‘find’ and *aimer* ‘love’.

- (5) Relative clauses headed by *tout*:

- a. J’ai lu tous les livres {que je pouvais **pas** lire} / {qu’il y a **pas**} /  
I.have read all the books that I could EXN read / that.∃ EXN /  
{qu’on a **pas**}.  
that.we have EXN

‘I read all the books {I could read} / {there is} / {that we have}.’

- b. \*J’ai lu tous les livres que j’ai **pas** trouvés.  
I.have read all the books that I.have EXN found  
(Int.) ‘I read all the books that I found.’

- (6) Superlatives:

- a. C’est les pires bandits {que tu peux **pas** avoir} / {qu’il y a **pas**} /  
it.is the worst bandits that you can EXN have / that.∃ EXN /  
{qu’on a **pas**}.  
that.we have EXN

‘These are the worst bandits {that you can have} / {there are} / {that we have}.’

- b. \*C’est les pires bandits que Lou aime **pas**.  
it.is the worst bandits that Lou likes EXN  
(Int.) ‘It’s the worst bandits that Lou likes.’

In sum, assuming that superlatives encode universal quantification over degrees (Heim 1999), the conditioning environment of ExN *pas* boils down to (7):

- (7) *Conditioning environments for ExN pas* :

ExN *pas* appears inside relative clauses, iff

- i. the head of the relative clause contains a universal quantifier, quantifying either over individuals (2) or sets of degrees (3), and
- ii. the relative clause contains an expression conveying existential quantification, either via an ability modal, plain existential, possessive have or *exister* (5)-(6).

These appear to be the only environments in which ExN *pas* can be used in QF.

Before moving on, it is important to mention that the presence of *pas* in biased questions and exclamatives (e.g., in sentences like *Isn’t he happy?!/!*) has been previously described as an instance of ‘expletive negation’ (Vinet 2000, 2001). However, we assume that these cases are fundamentally distinct, and following Portner & Zanuttini (2000), Han (2002), Romero & Han (2004), and Delfitto (2020), that they constitute special cases of regular, polarity-reversing negation. In fact, the presence of negation in biased questions

<sup>4</sup> Our consultants (and the native-speaker author of this work) all feel like the use of ExN *pas* with *exister* is degraded. We have included it, however, because Kemp (1982) reports instances of ExN *pas* with this verb.

and expletives in QF is not regulated by any of the conditions in (7), suggesting that we can safely treat them as separate phenomena, regardless of what the right analysis might be.

## 2.2. ExN *pas* complies with ExN diagnostics

Apart from hints in translations, we have not yet motivated our labelling of *pas* as ExN, nor have we motivated the fact that it should be differentiated from regular instances of negation in the first place. In this section, we show that ExN *pas* checks all of the previously established diagnostics for identifying ExN. Greco (2019), building on previous work, lists several diagnostics, all of which can be confirmed with ExN *pas*.

A first diagnostic concerns the licensing of polarity sensitive expressions like neg-words and NPIs. NPIs are known to be licensed under the scope of regular negation, as illustrated in (8a) for the NPIs *pantoute* and *du tout* ‘at all’.<sup>5</sup> In contrast to regular negation, ExN *pas* cannot license such expressions (8b). Recall that the sentence in (8b) is ambiguous between a negative use of *pas* and ExN *pas*. As specified in the glosses, the judgments provided for the (b)-sentences in this section are all for ExN *pas*.

- (8) a. J’aime **pas** **pantoute/du tout** ce livre-là. [NEG]  
 I.like NEG at.all this book-DEM  
 ‘I don’t like this book at all.’
- b. \*C’est le pire livre que tu peux **pas** **pantoute/du tout** lire. [ExN]  
 it.is the worst book that you can EXN at.all read

ExN *pas*, on the other hand, readily co-occurs with positive polarity items (PPIs) like *quelqu’un* ‘someone’, in contrast with regular instances of negation. This is shown in (9).

- (9) a. ?J’ai **pas** donné ce livre-là à **quelqu’un**. [NEG]  
 I.have NEG given this book-DEM to someone  
 (Int.) ‘I didn’t give a book to anyone.’
- b. C’est le pire livre que tu peux **pas** donner à **quelqu’un**. [ExN]  
 it.is the worst book that you can EXN give to someone  
 ‘It’s the worst book you can give to someone.’

A second diagnostic is the inability for ExN to appear in negative coordination constructions involving *ni* ‘nor’ and the additive particle *non plus* ‘neither’ (Delfitto & Fiorin 2014). In contrast, regular negation can occur in such constructions (10a). Example (10b) shows that ExN *pas* also complies with this diagnostic:

- (10) a. On a **pas** ce restaurant-là à Québec {**pis/ni**} à Montréal [NEG]  
 we have NEG DEM restaurant-DEM in Quebec and/nor in Montreal  
 {**non plus/\*aussi**}.  
 neither/also  
 ‘We don’t have this restaurant in Quebec nor/and in Montreal (neither).’

5 See Burnett & Tremblay 2012, 2014 for a discussion of the NPI *pantoute*, which translates as ‘at all’.

- b. C'est le meilleur restaurant qu'on a **pas** à Québec {**pis/\*ni**} [ExN]  
 it.is the best restaurant that.we have EXN in Québec and/nor  
 à Montréal {**aussi/\*non plus**}.  
 in Montréal also/neither  
 'It's the best restaurant we have in Québec City and also in Montréal.'

Finally, a third diagnostic concerns the intuitive semantic contribution of ExN: clearly, *pas* in examples like (2) and (3) does not deny the truth of the embedded propositions. One way to see this more clearly is to look at what happens when it combines with a negative operator. Should it contribute regular negation, then the two negative operators should logically cancel each other out and give rise to a positive (i.e., double negation) reading, as shown in (11a). However, as seen in (11b), ExN *pas* – unlike regular negation *pas* – cannot give rise to such a reading (stress marked with capitalization):

- (11) a. J'ai **pas PAS** acheté ce livre-là. [NEG]  
 I.have NEG NEG bought this book-DEM  
 'I didn't not buy this book' (= I bought this book)
- b. C'est le pire livre que tu aurais **pas pu PAS** trouver. [ExN]  
 it.is the worst book that you have EXN could NEG find  
 'It's the worst book you could've ever not found.' (≠ you could've ever found)

In sum, we have shown in this section that ExN *pas* in QF can only occur in a specific set of environments (7), where it does not seem to convey canonical negation. Moreover, this use of *pas* checks every standard diagnostic for identifying ExN. Despite this, we argue in the next section that ExN *pas* diverges in a number of respects from previously described instances of ExN, concluding that it should be treated as a distinct phenomenon.

### 3. On the 'non-uniformity' of expletive negation

#### 3.1. ExN *pas* versus other cases of ExN

Despite complying with standard diagnostics, the distribution of ExN *pas* in QF is clearly distinct from previously described cases of ExN. For one, ExN *pas* is not attested in the environments usually associated with ExN. For instance, a prototypical licensing environment for ExN in Romance and other languages is the scope of so-called "adversative predicates" (van der Wurff 1999). Such predicates include verbs like *deny*, *doubt*, *fear*, and *prevent*. An example with *avoir peur* 'to be afraid' is provided in (12). While ExN *ne* in European French (EF) is licensed by this kind of predicate, ExN *pas* in QF is not:

- (12) a. J'ai peur que ça **ne** puisse se reproduire. [EF]  
 I.have fear that it EXN could REFL happen.again  
 'I am afraid that it could happen again.'
- b. \*J'ai peur que ça puisse **pas** se reproduire. [QF]  
 I.have fear that it could EXN REFL happen.again  
 (Int.) 'I am afraid that it might happen again.'

Comparatives are another commonly-reported environment for ExN (see e.g. Delfitto 2020). Again, ExN *ne* is licensed in this environment, but not *pas*:

- (13) a. Ton livre est plus cher que je **n'**aurais pu l'imaginer. [EF]  
 your book is more expensive than I EXN.have could it.imagine  
 'Your book is more expensive than I could have imagine.'  
 b. \*Ton livre est plus cher que j'**pas** pu l'imaginer. [QF]  
 your book is more expensive than I.have EXN could it.imagine  
 (Int.) 'Your book is more expensive than I could have imagine.'

Moreover, as far as we know, none of the previously described cases of ExN have been reported to appear in the conditioning environments described in (7). For instance, expletive uses of *ne* in EF and *no* in Spanish are not possible in superlative sentences:

- (14) a. \*C'est le pire livre qu'on **ne** pourrait lire. [EF]  
 It.is the worst book that.we EXN could read  
 b. \*Es el peor libro que **no** puedes leer. [Spanish]  
 Is the worst book that EXN can read  
 (Int.) 'It's the worst book you can read.'

The fact that ExN *pas*'s distribution is so different from previously described cases of ExN suggests that the two constitute separate phenomena. In the rest of this section, we nonetheless consider two previous accounts that consider ExN distinct from canonical negation: (i) accounts which tie ExN to negative concord (§3.2); and (ii) accounts which propose that ExN should be analyzed as a mood marker (§3.3). We argue that, indeed, neither kind of approach could be extended to account for the limited distribution of ExN *pas*. In section 4, we then discuss a third type of account, one which ties ExN to negative polarity (van der Wouden 1994). Our analysis of ExN *pas* will build on this analysis.

Before moving on, however, we should stress that there does not need to be *one* unified account of ExN across languages, as has been highlighted in previous work (e.g., Zeijlstra 2004; Eilam 2007; Greco 2019, 2020).<sup>6</sup> That is, it is conceivable that different reported cases of ExN should in fact be characterized in different ways, depending on the syntactic environments in which they occur, and the meanings they get associated with. In addition, it is conceivable that many cases of apparent expletive uses of negation are in fact cases of regular *negative* operators, whose negative force is obscured by the syntactic environment in which they appear (see e.g. Citko 2003, Abels 2005, and Margulis 2019).

### 3.2. Expletive negation as negative concord

A number of scholars have proposed to connect ExN to Negative Concord (e.g., Espinal 1992, 2000; Zeijlstra 2004). The main idea is that both need to be licensed by some higher operator. For instance, Espinal (2000) argues that while neg-words in Catalan and

6 Attempts to unify all cases of ExN have been put forth, most notably in Yoon 2011 and Makri 2013. That being said, such accounts suffer the empirical burden that—despite significant overlap—there is much crosslinguistic variation with respect to the environments in which ExN is licensed. That is, if ExN (i.e., all apparently non-negative uses of negation) has a unified source across languages, then the extensive variation remains a significant empirical puzzle.

Spanish are licensed under the scope of negative operators, ExN is licensed under the scope of *nonveridical* operators. Nonveridicality is defined, roughly, as in (15):

- (15) Rough definition of *nonveridicality* (see Giannakidou 2011)  
 In a context *C*, an operator *OP* is nonveridical iff the truth of *OP + p(roposition)* in *C* does not require that *p* be true in *C*.

To illustrate the potential relation between ExN and nonveridicality, consider the following example from Catalan, which takes a nonveridical complement and licenses ExN *no* (see also example (12a) from EF above):

- (16) Em temo que **no** escullin nou director. [Catalan, Espinal 2000]  
 I fear that ExN elect.SUBJ.3PL new director  
 ‘I’m afraid that a new director would be elected.’

The complements of *fear*-predicates are nonveridical. In (16), if it is true that the speaker is afraid that a new director will be elected, *it does not have to be true* that a new director will be elected. That is, the truth of the matrix proposition does not entail the truth of the embedded proposition, and so the sentence in (16) complies with the definition in (15). Espinal’s proposal thus correctly predicts the presence of ExN in the complements of *fear*-predicates across different Romance languages.

However, this analysis cannot be extended to ExN *pas*, for a number of reasons. For one, we have already seen in (12b) that ExN *pas* in QF, contrary to ExN *ne* in EF (12a), is not licensed under the scope of *fear*-predicates. This means that a nonveridical approach to ExN *pas* would run into undergeneration issues: we would need to explain why ExN *pas* is not licensed under the scope of adversative verbs and other nonveridical operators.

Conversely, we have also seen in (14) that ExN in EF and Spanish is not licensed in the environments that license ExN *pas* in QF. In fact, these environments—namely, relative clauses with existential predicates that are headed by universal or superlative heads, see (7)—are not straightforwardly compatible with a *nonveridical* analysis. For example, it is not clear that the embedded proposition in (17) is nonveridical. If it is true that *Russia is the biggest country there is*, it must also be true that *there is a biggest country*:

- (17) La Russie, c’est le plus grand pays qu’il y a **pas**.  
 The Russia it.is the most big country that.there is ExN  
 ‘Russia is the biggest country there is.’

Therefore, unless further stipulations about nonveridicality are put forth, this approach to ExN *pas* does not straightforwardly account for the presence of ExN *pas* in (17).<sup>7</sup>

Finally, a third—and crucial—issue for a nonveridical approach to ExN *pas* is that it would have little to say about ExN *pas*’s peculiar dependency on existential predicates.

<sup>7</sup> Giannakidou (1998) argues that superlatives can count as (indirect) nonveridical triggers, because of the fact that they induce a negative implicature. She argues that *Russia is the biggest country* triggers the (conventional) implicature that *there is no country bigger than Russia*. This might explain the presence of ExN in EF comparatives like (13). But if this were the right analysis of ExN *pas*, we would still have to explain why it is not licensed under the scope of other nonveridical operators, and why other instances of ExN are not licensed in the environments that license ExN *pas*.



Recall from (7) that ExN *pas* must co-occur with one of four ‘existential’ predicates; it simply does not occur with other predicates in the language:

- (18) \*C’est les pires bandits que Lou aime **pas**.  
 It.is the worst bandits that Lou like EXN  
 (Int.) ‘It’s the worst bandits that Lou likes.’ (repeated from (6b)).

An adequate theory of ExN *pas* should seek to explain this fact, which to our knowledge pertains exclusively to expletive negation in QF (see e.g. (16), where ExN *no* in Catalan co-occurs with *escollir* ‘to elect’).<sup>8</sup>

### 3.3. Expletive negation as a mood marker

In an attempt to offer a unified semantics of ExN across languages, Yoon (2011) argues that ExN, which she refers to as “Evaluative Negation”, should be crosslinguistically construed as a subjunctive mood marker (see also Makri 2013 for a similar modal approach). Just like Espinal (2000), she argues that ExN is licensed under the scope of *nonveridical* operators. However, while Espinal argues that ExN is semantically vacuous, Yoon argues that ExN does have a contribution to meaning: namely, it contributes a conventional implicature to the effect that the proposition embedded under the scope of the relevant nonveridical operator is either *unlikely* or *undesirable*.

A first issue that would arise if we tried to extend this analysis of ExN to ExN *pas* is empirical: ExN *pas* is not associated to likelihood or desirability in any clear way. For instance, the sentence in (17) from the previous subsection does not convey anything about a country’s likelihood to be big, or about whether this is desirable or not.

Second, since this analysis is dependent on nonveridicality, it raises the exact same questions, and runs into the exact same issues, as approaches that tie ExN to negative concord. In particular: (i) why would the conditioning environments for ExN *pas* not also license ExN in other languages?; (ii) why would ExN *pas* not also be licensed under the scope of other *nonveridical* operators?; and (iii) why would ExN *pas* mandatorily co-occur with an existential predicate? Since the modal approach to ExN does not provide us with straightforward answers to these questions, we are led to the conclusion that another analysis must be sought.

## 4. A preliminary account: ExN *pas* forms a ‘complex’ NPI

In the previous section, we detailed two accounts of ExN, and argued that neither can be extended to capture the limited distribution of QF *pas*. We now provide a preliminary, alternative account, which builds on van der Wouden’s (1994) observation that ExN tends to pattern with NPIs. Adopting an alternative-based approach to NPIs (Krifka 1995, Lahiri 1998, Chierchia 2013, a.o.), we go one step further in suggesting that ExN *pas* realizes

<sup>8</sup> It should also be noted that ExN *pas* is not a neg-word, as it does not abide by standard diagnostics for neg-words (see e.g., Zeijlstra 2004 and Fălăuş & Nicolae 2016 for a recent overview of these diagnostics). For instance: (i) unlike neg-words, it needs to be c-commanded by its ‘licensor’ (i.e., the universal DP); (ii) unlike neg-words, ExN *pas* is not felicitous as a fragment answer to a positive question; and (iii) unlike neg-words, ExN *pas* cannot give rise to double negation readings (see (11b)).

just one of two ingredients in the composition of an NPI: it does not contribute existential quantification of its own (unlike e.g. English *any*), but requires that the predicative existential expression it co-occurs with activate a set of domain alternatives. In other words, we suggest that ExN *pas* forms a complex NPI with the existential predicate it modifies. We lay out this suggestion in section 4.1. We then show in sections 4.2 and 4.3 how this approach to ExN *pas* (i) can derive many of its peculiar distributional properties, and (ii) makes a number of correct predictions.

#### 4.1. ExN *pas* and alternative-based accounts of negative polarity

On alternative-based accounts of negative polarity (Krifka 1995, Lahiri 1998, Chierchia 2013, a.o.), NPIs are existential items that obligatorily activate alternatives. For instance, English *any* has the same denotation as the plain indefinite *some* (19a), but in addition activates a set of domain alternatives (ALT) which consist of subsets of the relevant quantificational domain (19b).

- (19) a.  $\llbracket any \rrbracket = \lambda P. \lambda Q. \exists x \in D [P(x) \wedge Q(x)]$   
 b. ALT:  $\{\lambda P. \lambda Q. \exists x \in D' [P(x) \wedge Q(x)], D' \subseteq D\}$

Once they are active, alternatives need to be factored into meaning. One way to implement this is through the insertion of an exhaustification operator EXH, akin to silent *only*, defined in (20). Given a sentence  $\phi$  and a set of alternatives (ALT) to  $\phi$ , EXH( $\phi$ ) asserts  $\phi$  and negates the alternatives that are not entailed by the assertion.

- (20)  $\llbracket EXH \rrbracket^{s,w}(\phi) = \phi_w \wedge \forall p \in ALT(\phi) [p_w \rightarrow \phi \subseteq p]$

To illustrate how this works in more detail, let us consider the sentence in (21). This sentence asserts (21a) and comes with the set of ALT in (21b). As previously mentioned, domain alternatives consist of subsets of the relevant quantificational domain. If we assume that the domain  $D$  is the set of things in the kitchen, the set ALT of domain alternatives could then be the following: {there are pastries left on the table, there are pastries left in the oven, there are pastries left in the kitchen, etc.}. All these alternatives are entailed by the assertion in (21a). Thus, exhaustification is vacuous and simply returns the assertion, as in (21c). As a result, the NPI *any* is licensed in (21). More generally, if the insertion of EXH results in a syntactically well-formed structure and gives rise to a semantically coherent meaning, the NPI is licensed. In contrast, if it leads to a contradiction, the sentence is ungrammatical (see § 4.2).

- (21) There aren't any pastries left.  
 a. Assertion: EXH  $[\exists x \in D [\text{pastries}(x) \wedge \text{left}(x)]]$   
 b. ALT:  $\{\exists x \in D' [\text{pastries}(x) \wedge \text{left}(x)], D' \subseteq D\}$   
 c. After exhaustification:  $\exists x \in D [\text{pastries}(x) \wedge \text{left}(x)]$

In the remainder of this paper, we explore the following hypothesis: ExN *pas* is just one of the two ingredients in the composition of an NPI. Unlike regular NPIs (e.g., *any*), ExN *pas* does not contribute existential meaning of its own. Instead, its sole contribution is to force the existential expression it co-occurs with to activate a set of ALT. In other words, we treat *pas* and the existential predicate it co-occurs with as a complex NPI. Note

that this is only a preliminary analysis. Further research is required to understand, for instance, what the exact nature of the syntactic and semantic dependency between *pas* and the existential predicate is, and we will not attempt to provide a full decomposition here. Our current goal is simply to show that a complex NPI account leads us to a number of correct predictions about the distributional properties of ExN *pas*.

To illustrate the hypothesis we are exploring, consider example (22), where ExN *pas* occurs in a relative clause headed by *tout* ‘all’.

- (22) J’ai fait tout ce que je pouvais **pas** faire.  
 I.have done all that I could EXN do  
 ‘I did all I could.’

The sentence in (22) has the LF in (23a), and asserts (23b). ExN *pas* requires that the (existential) ability modal *pouvoir* trigger a set of alternatives (ALT), given in (23c). Given that the first argument of the universal quantifier *tout* is downward-entailing, all the alternatives are entailed by the assertion, and therefore not negated.<sup>9</sup> Exhaustification is vacuous and simply returns the assertion, as shown in (23d).

- (23)  $\llbracket (22) \rrbracket =$
- EXH [tout [  $\lambda x$  [je pouvais pas faire  $x$ ] ] [  $\lambda y$  [j’ai fait  $y$ ] ] ]
  - Assertion: EXH  $\forall x [\exists w \in W [\text{I have done } x \text{ at } w] \rightarrow \text{I have done } x \text{ at } w_0]$   
 with  $W =$  the set of worlds epistemically accessible from  $w_0$
  - ALT:  $\{\forall x [\exists w' \in W' [\text{I have done } x \text{ at } w'] \rightarrow \text{I have done } x \text{ at } w_0], W' \subseteq W\}$
  - After exhaustification:  
 $\forall x [\exists w \in W [\text{I have done } x \text{ at } w] \rightarrow \text{I have done } x \text{ at } w_0]$

In the rest of this section, we first show that this account can explain many facts related to the distribution of ExN *pas*. We then discuss some predictions that follow from the analysis, and argue that they are borne out.

#### 4.2. Deriving the distributional properties of ExN *pas*

Recall the conditioning environment for ExN *pas*, repeated from (7) in a simplified way:

- (24) ExN *pas* appears inside relative clauses (RC), iff
- the head of the RC contains a universal quantifier, and
  - the RC contains an expression conveying existential quantification.

The hypothesis we are exploring here, that ExN *pas* forms a ‘complex’ NPI, can capture these restrictions.

The first restriction, namely (24i), states that the head of the relative clause containing ExN *pas* must contain a universal quantifier. That is, assuming that superlatives encode universal quantification over sets of degrees (Heim 1999, a.o.), both environments in which ExN *pas* occurs yield the following configuration:

<sup>9</sup> Downward-entailing functions are defined as follows: ‘A function  $f$  is downward-entailing iff for any  $A$  and any  $B$ , if  $B \subseteq A$  then  $f(A) \rightarrow f(B)$ .’

(25) EXH [ $\forall$  [ ...  $\exists$  *pas* ... ] [ ... ] ]

This corresponds to the configuration we detailed in section 4.1 (see example (23)). Because the restrictor of a universal quantifier is downward-entailing, on this configuration all of the alternatives are entailed by the assertion. Thus, exhaustification is vacuous and simply returns the assertion.

At this point, we also understand why ExN *pas* cannot appear in relative clauses headed by DPs other than those involving universal quantification. For example, ExN *pas* cannot appear in relative clauses headed by *quelque chose* ‘something’:

(26) \*J’ai fait **quelque chose** [ que je pouvais **pas** faire ].  
 I.have done something that I could EXN do  
 (Int.) ‘I did something I could.’  
 Only means: ‘I did something I wasn’t allowed to.’

In this case, the alternatives given in (27c) are not entailed by the assertion in (27b): the restrictor of *quelque chose* is not downward-entailing. Thus, exhaustification negates all of these alternatives, yielding an inference that contradicts the assertion (indicated with “ $\perp$ ”), as illustrated in (27d).<sup>10</sup>

(27)  $\llbracket$  (26)  $\rrbracket =$   
 a. EXH [quelque chose [  $\lambda x$  [je pouvais pas faire  $x$ ] ] [  $\lambda y$  [ j’ai fait  $y$  ] ] ]  
 b. Assertion: EXH  $\exists x[\exists w \in W$  [I have done  $x$  at  $w$ ]  $\rightarrow$  I have done  $x$  at  $w_0$ ]  
 with  $W =$  the set of worlds epistemically accessible from  $w_0$   
 c. ALT: {  $\exists x[\exists w' \in W'$  [I have done  $x$  at  $w'$ ]  $\rightarrow$  I have done  $x$  at  $w_0$ ],  $W' \subseteq W$  }  
 d. After exhaustification:  $\exists x[\exists w \in W$  [I have done  $x$  at  $w$ ]  $\rightarrow$  I have done  $x$  at  $w_0$ ]  $\wedge$   $\neg \exists x[\exists w' \in W'$  [I have done  $x$  at  $w'$ ]  $\rightarrow$  I have done  $x$  at  $w_0$ ] =  $\perp$

As previously mentioned, if the insertion of the exhaustification operator leads to a contradiction, the NPI is not licensed and the sentence is ungrammatical.

As for the second restriction, namely (24ii), it states that ExN *pas* must co-occur with an existential predicate inside the relative clause (see (4) above). Our preliminary analysis offers an explanation for this restriction: given that ExN *pas* does not contribute existential meaning by itself, it requires the presence of an existential whose set of alternatives will be used by EXH.

And we can further explain why ExN *pas* cannot co-occur with, say, necessity modals like *devoir* ‘must’:

(28) \*J’ai fait tout ce que je **devais pas** faire.  
 I.have done all that I must EXN do  
 (Int.) ‘I did all I was supposed to do.’  
 Only means: ‘I did all I wasn’t allowed to do.’

In this case, the alternatives given in (29c) are, again, not entailed by the assertion in (29b). Thus, exhaustification negates all of these alternatives, yielding an inference that contradicts the assertion, as shown in (29d).

<sup>10</sup> For details on when and why contradictions give rise to ungrammaticality, we refer the reader to Gajewski 2002 and Chierchia 2013.

- (29)  $\llbracket (28) \rrbracket =$
- EXH [tout [  $\lambda x$  [je devais pas faire  $x$ ] ] [  $\lambda y$  [ j'ai fait  $y$ ] ] ]
  - Assertion: EXH  $\forall x[\forall w \in W[\text{I have done } x \text{ at } w] \rightarrow \text{I have done } x \text{ at } w_0]$
  - ALT:  $\{\forall x[\forall w' \in W'[\text{I have done } x \text{ at } w'] \rightarrow \text{I have done } x \text{ at } w_0], W' \subseteq W\}$
  - After exhaustification:  $\forall x[\forall w \in W[\text{I have done } x \text{ at } w] \rightarrow \text{I have done } x \text{ at } w_0] \wedge \neg \forall x[\forall w' \in W'[\text{I have done } x \text{ at } w'] \rightarrow \text{I have done } x \text{ at } w_0] = \perp$

### 4.3. Some predictions: NPI effects and adjacency effects

We now turn to a discussion of some predictions, which we show follow from a complex-NPI approach to ExN *pas*. Three have to do with well-known NPI effects, and one has to do with the ‘dependency’ of ExN *pas* on existential predicates.

It is well-known that certain expressions, such as universal quantifiers or *only*, block NPI licensing when they intervene between an NPI and the downward-entailing operator that would otherwise provide the environment for the NPI to be used (Linebarger 1980). This is shown below for NPIs in English ((30a) is taken from Chierchia 2013, p. 373):

- (30) a. ??I doubt that **every** student of mine will *ever* have *any* problems  
 b. ??If you **only** bring *any* book with you, it should be by James Baldwin.

Both of these examples involve typical licensing environments for NPIs, namely the scope of *dubitative* predicates and the antecedent of a conditional. But in both cases, the presence of *every* or *only* makes the sentences with NPIs considerably degraded.

If ExN *pas* forms a complex NPI, as we suggested, then we might expect to also find intervention effects. In particular, when the universal quantifier *tout* ‘all’ or the focus particle *seulement* ‘only’ intervene between the superlative DP and ExN *pas*, the felicity of ExN *pas* might be affected. Example (31) shows that this prediction is borne out:

- (31) a. C'est le meilleur achat que (?**tout**) le monde peut **pas** faire.  
 It.is the best purchase that all the people can EXN make  
 (Int.) ‘It’s the best purchase that everyone could ever make.’  
 b. C'est le meilleur achat que (\***seulement**) Louise peut **pas** faire.  
 It.is the best purchase that only Louise can EXN make  
 (Int.) ‘It’s the best purchase only Louise could ever make.’

A second well-known effect of NPI licensing is that it is generally subject to *locality* effects, which as Chierchia (2013) argues, can be explained if exhaustivity is projected in the syntax and is therefore subject to independent syntactic locality restrictions (see also Progovac 1993). Locality restrictions are also found with ExN *pas*, as illustrated in (32b):

- (32) a. J'ai fait tout ce que je peux **pas** faire.  
 I.have done everything that I can EXN do.  
 (Int.) ‘I did everything I can do.’  
 b. \*J'ai fait tout ce que Jean pense que je peux **pas** faire.  
 I.have done everything that Jean thinks that I can EXN do.  
 (Int.) ‘I did everything that John thinks I can do.’  
 Only means: ‘I did everything that Jean thinks that I’m not able to do.’

While a reading with ExN *pas* is licensed in (32a), it is not in (32b). The only difference between these two sentences is that the latter features the embedding predicate *penser* ‘think’, which intervenes between ExN *pas* and the relativized DP headed by *tout*. This shows that ExN *pas* is subject to locality restrictions: it must modify the first predicate of the relative clause that is selected by the universal DP. Again, this is expected on an NPI approach to ExN *pas*.

A third commonly-reported property of NPIs is that they tend to be intuitively associated with ‘domain-widening’ effects, or at least stronger meanings compared to their regular indefinite counterparts (see e.g., Kadmon & Landman 1993).<sup>11</sup> If ExN *pas* forms a complex NPI, we might expect to see similar ‘domain widening’ effects when it is used. This is indeed the case, as was already reported in Kemp 1982, pp. 275-276.

- (33) ?Laurent a arrosé toutes les plantes qu’il y a **pas** dans sa maison.  
 Laurent has watered all the plants that.∃ EXN in his house.  
 (Int.) ‘Laurent watered all the plants in his house.’

The sentence in (33) sounds degraded. One potential explanation for this is that widening the domain of individuals in this case would be pragmatically-marked, since Laurent most likely does not have an indefinite number of plants in his house.

Finally, we discuss a prediction that is specifically related to our proposal that ExN forms a ‘complex’ NPI. If ExN *pas* must form a complex NPI with a predicate conveying existential quantification, then we might expect there to be an adjacency requirement between the two. This expectation is indeed borne out. Example (34) shows that although the adverb *vraiment* ‘really’ can occur between the modal *pouvoir* ‘can’ and an infinitive (34a), and between this same modal and a canonical use of negation (34b), ExN *pas* cannot be separated with this adverb from the existential predicate with which it combines.

- (34) a. Tu peux *vraiment* aimer cette personne-là.  
 you can really love this person-DEM  
 ‘You can really love this person.’  
 b. Tu peux *vraiment pas* aimer cette personne-là.  
 you can really NEG love this person-DEM  
 ‘You cannot really love this person.’  
 c. \*C’est la meilleure personne que tu peux *vraiment pas* aimer.  
 It.is the best person that you can really EXN love  
 (Int.) ‘It’s the best person that you could really love.’

As seen in (34c), the presence of the adverb *vraiment* ‘really’ between *pouvoir* and ExN *pas* blocks the ExN interpretation of *pas* (only a negative reading is perceived). This suggests that ExN *pas* must be syntactically adjacent to the existential predicate with which it forms a complex NPI.<sup>12</sup>

11 We use the term ‘domain widening’ only descriptively, and do not assume that NPIs *need* to yield widened domains (see Arregui 2008 on why this cannot be). We assume, following e.g. Krifka (1995) and Chierchia (2006, 2013), that ‘domain widening’ is tied to the activation of sub-domain alternatives.

12 Such adjacency effects are reminiscent of proposals of non-local modification, which also resort to the formation of complex morphemes (Zimmermann 2003; Morzycki 2016). In such proposals, it is argued that determiners and modifiers can combine to form complex determiners.

## 5. Discussion: On the limited distribution of ExN *pas*

This paper has made several contributions. First, we added to the typology of non-canonical uses of negation by providing a description of the very limited distribution of ExN *pas* in QF. Second, we showed that none of the existing accounts of ExN can offer a straightforward explanation of ExN *pas*'s licensing environments, suggesting that ExN does not necessarily form a unified category across languages, as advocated in previous work (Zeijlstra 2004, Eilam 2007; Greco 2019; contra Yoon 2011 and Makri 2013). Third, based on ExN *pas*'s distribution and semantic contribution, we proposed a preliminary analysis of ExN *pas* as part of a 'complex' NPI. In particular, we suggested that ExN *pas* realizes just one of two pieces in the composition of an NPI: it requires that the predicative existential expression it co-occurs with trigger a set of domain alternatives. This proposal captures one of the most peculiar restrictions on ExN *pas*: that it can only arise if it is adjacent to one of four existential predicates in the language. And finally, if this account is on the right track, ExN *pas* contributes to the typology of NPIs, insofar as we may expect to find other instances of 'complex' NPIs across languages.

Our preliminary analysis does, however, face a non-trivial overgeneration issue. The distribution of ExN *pas* is limited and non-standard, in ways that are not necessarily expected if it forms a complex NPI. Therefore, we are left with the following puzzle:

- (35) *Puzzle*: If ExN *pas* forms a complex NPI, why can't it appear in other downward-entailing environments?

All else being equal, if ExN *pas* forms an NPI with an adjacent existential predicate, then we may expect it to be licensed in other prototypical downward-entailing environments, such as the antecedents of conditionals. The following example shows that this prediction is not borne out, even when *pas* is immediately adjacent to an existential predicate:

- (36) \*S'il y a **pas** un coiffeur de disponible, je prendrais rendez-vous.  
if.there.is ExN a hairdresser of available, I would.take appointment  
(Int.) 'If there's an available hairdresser, I'd like to take an appointment.'

Note, however, that not all NPIs are licensed in such environments. In particular, typologies of NPIs generally distinguish between weak NPIs – which are licensed in antecedents of conditionals – and strong NPIs – which are not. Thus, the distribution of strong NPIs is more restricted than that of weak NPIs, the former being only licensed by anti-additive operators (see e.g., Zwarts 1996 and Chierchia 2013). One possibility, then, would be to explain ExN *pas*'s restricted distribution by treating it as a strong NPI.

QF features prototypical weak and strong NPIs (see e.g. Burnett & Tremblay 2012, 2014). As seen in Table 1, while *wh-que ce soit* items can appear in all types of environments, *de la journée* can only appear under the scope of anti-additive operators. Also shown in this table is that ExN *pas* overlaps on the weak/strong NPI divide. This shows that we can unfortunately not have recourse to the traditional weak/strong distinction in order to explain ExN *pas*'s restricted distribution. As pointed out by an anonymous reviewer, perhaps this is not cause for concern: Hoeksema (2008) shows that the licensing of NPIs exhibits much more variation than the one described by the weak/strong divide.

Interestingly, these proposals show that intervening adjectival modifiers also block the formation of complex determiners.

Table 1: *Licensing environments for weak NPIs, strong NPIs, and ExN pas in QF*  
 Based in part on Burnett & Tremblay (2012) (B&T)

		wh que ce soit	de la journée (B&T)	ExN pas
Downward-entailing	first argument of tout/every	✓	✗	✓
	antecedent of conditional	✓	✗	✗
	comparatives	✓	✗	✗
	few/peu	✓	✗	✗
Anti-additive	pas/not	✓	✓	✗
	rien/nothing	✓	✓	✗
	personne/no one	✓	✓	✗
	superlatives	✓	✓	✓

There is one property of ExN *pas* that this table does reiterate, however: the apparent need for a universal quantifier. That is, ExN *pas* must appear in configurations in which a universal DP, be it over individuals (*tout*) or degrees (superlatives), has been relativized. While, as we have shown, this fact is compatible with our complex NPI analysis of *pas*, it does not immediately follow from our analysis, nor any analysis of NPI licensing for that matter. Understanding this important and striking component of the distribution of ExN *pas*, an endeavour we leave for future work, will surely shed light on the semantic underpinnings of this item and the study of polarity more generally.

## References

- Abels, Klaus. 2005. “Expletive negation” in Russian: A conspiracy theory. *Journal of Slavic Linguistics*: 5-74.
- Arregui, Ana. 2008. Some remarks on domain widening. In *Proceedings of the 27th West Coast Conference on Formal Linguistics*, 45-53.
- Burnett, Heather & Mireille Tremblay. 2012. And extra-strong NPI? Pantoute in Québec French. In *Theories of everything: In honor of Ed Keenan. UCLA Working papers in linguistics*, 1-8.
- Burnett, Heather & Mireille Tremblay. 2014. L’expression de la négation en français québécois: pantoute, polarité et mots-N. In Wim Remysen (ed.) *Les français d’ici: du discours de l’autorité à la description des normes et des usages*. Presses universitaires de Laval, 261-290.
- Chierchia, Gennaro. 2006. Broaden your views: Implicatures of domain widening and the “logicality” of language. *Linguistic Inquiry* 37.4: 535-590.
- Chierchia, Gennaro. 2013. *Logic in Grammar*. Oxford University Press.



- Citko, Barbara. 2003. On the syntax and semantics of Polish concessive conditionals. *Journal of Slavic Linguistics* 11.1: 37-54.
- Delfitto, Denis. 2020. Expletive negation. In Viviane Déprez & M. Teresa Espinal (eds.) *The Oxford handbook of Negation*, 255-268.
- Delfitto, Denis & Gaetano Fiorin. 2014. Negation in exclamatives. *Studia Linguistica* 68.3: 284-327.
- Eilam, Aviad. 2007. The crosslinguistic realization of *-ever*: Evidence from Modern Hebrew. In *Proceedings from the Annual Meeting of the Chicago Linguistic Society*. Vol. 43, 39-53.
- Espinal, M. Teresa. 2007. Licensing expletive negation and negative concord in Catalan and Spanish. In Franck Floricic (ed.) *La négation dans les langues romanes*, 49-74.
- Espinal, Maria Teresa. 1991. On expletive negation: Some remarks with regard to Catalan. *Linguisticae Investigation* 15: 41-65.
- Espinal, Maria Teresa. 1992. Expletive negation and logical absorption. *The linguistic review* 9.4: 333-358.
- Espinal, Maria Teresa. 2000. Expletive negation, negative concord and feature checking. *Catalan working papers in linguistics*: 47-69.
- Fălăuş, Anamaria & Andreea Nicolae. 2016. Fragment answers and double negation in strict negative concord languages. In *Semantics and Linguistic Theory*. Vol. 26, 584-600.
- Freeze, Ray. 1992. Existential and other locatives. *Language*: 553-595.
- Gajewski, Jon. 2002. *L-Analyticity and natural language*. Ms, MIT.
- Giannakidou, Anastasia. 1998. *Polarity sensitivity as (non)veridical dependency*. John Benjamins Publishing Company.
- Giannakidou, Anastasia. 2011. Negative and positive polarity items: Variation, licensing, and compositionality. In Klaus von Stechow, Claudia Maienborn, & Paul Portner (eds.) *Semantics: An international handbook of natural language meaning, volume 3*, 1660-1712.
- Greco, Matteo. 2019. Is Expletive Negation a unitary phenomenon? *Lingue e linguaggio* 18.1: 25-58.
- Greco, Matteo. 2020. On the syntax of surprise negation sentences: A case study on expletive negation. *Natural language & Linguistic Theory* 38: 775-825.

- Han, Chung-hye. 2002. Interpreting interrogatives as rhetorical questions. *Lingua* 112: 201-229.
- Heim, Irene. 1999. "Notes on superlatives". Ms., MIT.
- Hoeksema, Jack. 2008. On the natural history of negative polarity items. *Linguistic Analysis* 38.
- Jespersen, Otto. 1917. *Negation in English and other languages*. Kobenhavn: Host.
- Kadmon, Nirit & Fred Landman. 1993. Any. *Linguistics and philosophy* 16.4: 343-422.
- Kemp, William. 1982. Les superlatives les plus expressives que tu peux pas avoir: *pas* explétif dans la subordonnée superlative. In Claire Lefebvre (ed.) *La syntaxe comparée du français standard et populaire: approches formelle et fonctionnelle*, 247-294.
- Kratzer, Angelika. 1981. The notional category of modality. In H.J. Eikmeyer & H. Rieser (eds.) *Words, worlds, and contexts*. Walter de Gruyter, 38-74.
- Krifka, Manfred. 1995. The semantics and pragmatics of polarity items. *Linguistic analysis* 25: 209-257.
- Lahiri, Utpal. 1998. Focus and Negative Polarity in Hindi.
- Larrivée, Pierre. 1996. *Pas* explétif. *Revue romane*.
- Linebarger, Marcia Christine. 1980. *The grammar of negative polarity*. PhD thesis. Massachusetts Institute of Technology.
- Makri, Maria-Margarita. 2013. *Expletive Negation beyond Romance: Clausal complementation and epistemic modality*. MA thesis. University of York.
- Margulis, Daniel. 2019. *Expletive Negation and the decomposition of only*. MA thesis. Massachusetts Institute of Technology.
- Morzycki, Marcin. 2016. Toward a general theory of nonlocal readings of adjectives. In N. Bade, B. Polina, & A Scholle (eds.) *Proceedings of Sinn und Bedeutung* 20, 512-532.
- Muller, Claude. 1978. La négation explétive dans les constructions complétives. *Langue Française* 39: 76-103.
- Muller, Claude. 1991. *La négation en Français*. Genève: Droz.
- Portner, Paul & Raffaella Zanuttini. 2000. The force of negation in wh-exclamatives and interrogatives. In *Negation and polarity: Syntactic and semantic perspectives*, 201-239.

- Progovac, Ljiljana. 1993. Negative polarity: Entailment and binding. *Linguistics and Philosophy* 16.2: 149-180.
- Romero, Maribel & Chung-hye Han. 2004. On negative yes/no questions. *Linguistics and philosophy* 27.5: 609-658.
- Tovena, Lucia M. 1996. An expletive negation which is not so redundant. In Karen Zagona (ed.) *Grammatical theory and Romance Languages*, 263-274.
- van der Wouden, Ton. 1994. Polarity and illogical negation. *Dynamics, Polarity and Quantification* 17: 16-45.
- van der Wurff, Wim. 1999. On expletive negation with adversative predicates in the history of English. In Ingrid Tieken-Boon van Ostade, Gunnel Tottie, & Wim van der Wurff (eds.) *Negation in the history of English*, 295-328.
- Vinet, Marie-Thérèse. 2000. La polarité pos/nég, -tu (pas) et les questions oui/non. *Revue québécoise de linguistique* 28.1: 137-149.
- Vinet, Marie-Thérèse. 2001. *D'un français à l'autre: La syntaxe de la microvariation*. Montréal: Fides.
- Yoon, Suwon. 2011. *'Not' in the mood: The syntax, semantics, and pragmatics of evaluative negation*. PhD thesis. University of Chicago.
- Zeijlstra, Hedde. 2004. *Sentential negation and negative concord*. PhD thesis. University of Amsterdam.
- Zimmermann, Malter. 2003. Pluractionality and complex quantifier formation. *Natural Language Semantics* 11.3: 249-287.
- Zwarts, Frans. 1996. Three types of polarity. In F. Hamm & E. Hinrichs (eds.) *Plural Quantification*. Dordrecht: Kluwer.