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Polarity and quantification in English fragments: A discourse-based perspective

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Contents

Abstract

This thesis delves into the intricate relationship between four types of English quantified fragments (QFs), the fragmental realization of a bare-quantifier and its partitive counterparts. The study roots from a critical review of previous analyses, particularly those employing the derivation-based approach to account for the form-function discrepancies. It argues that the derivation-based approach may be able to explain canonical fragments, but QFs are hard to be fully explained. It points out a series of empirical challenges the previous analyses face when its scope gets extended to QFs, with a specific focus on the polarity interaction between QFs and their antecedents. In order to investigate the linguistic patterns of QFs, the thesis conducts extensive corpus investigations. Findings suggest that Positive Polarity Items (PPIs) and Free Choice Items (FCIs) generally adhere to their potential licensing conditions following a positive antecedent even when fragmented, while Negative Polarity Item (NPIs) often deviate their potential licensing conditions under their fragmental realization. In addition, Negative Indefinites (NEG) exhibit negative neutralization when fragmented being licensed by a negative question, which can be challenging to account for under the derivation-based perspectives. Based on the theoretical implications drawn from the corpus investigation, the study advocates for a non-derivational, construction-based perspective rooted in the Sign-Based Construction Grammar (SBCG) frameworks in analyzing QFs.

Key words: fragments, corpus-based, quantification, polarity, a non-derivation based perspective

List of Abbreviations

The following is the list of abbreviations used in glossing examples and data:

Abbreviation	**Meaning**
AVM	attribute value matrix
ARG-ST	argument-structure
BNC	The British National Corpus
C	complementizer
CAT	category
CNXT	context
COCA	The Corpus of Contemporary American English
COMP	complement
CP	complementizer phrase
CxG	Construction Grammar
DE	downward entailment
DGB	Dialogue Game Board
DN	double negation
FEC	focus estimating constituent
FCI	free choice item
FCI-QF	free choice item quantified fragment
FocP	focus phrase
FORM	phonological form
HPSG	Head-Driven Phrase Structure Grammar
IND	index
IP	inflectional phrase
LF	logical form

Abbreviation	**Meaning**
MAX-QUD	Maximal Question-Under-Discussion
NPI	negative polarity item
NC	negative concord
NEG	negative indefinite
NEG-QF	negative indefinite quantified fragment
[(i/u)NEG]	(interpretable/uninterpretable) negation (feature)
NegP	negation phrase
NN	negative neutralization
NP	noun phrase
NPI	negative polarity item
NPI-QF	negative polarity item quantified fragment
NUCL	nucleus
OBJ	object
PARAMS	parameters
PF	phonological form
PPI	positive polarity item
PPI	positive polarity item quantified fragment
PRESUP	presupposition
PROP	proposition
PSI	polarity sensitive item
rel	relation
PP	preposition phrase
Q-A pair	question and answer pair
QUANTS	quantification
QF	quantified fragment
QUD	Question Under Discussion

Abbreviation	**Meaning**
SAL-UTT	salient utterance
SEM	semantics
SBCG	Sign-Based Construction Grammar
SPEC	specifier
SPR	specifier
SUBJ	subject
SYN	syntax
s	situation
VP	verb phrase

List of Tables

List of Figures

Chapter 1

Introduction

Fragments, also known as short or fragment answers, refer to a non-verbal elliptical phenomenon in which a constituent is solely licensed in a clause (among many others. Merchant 2004; Weir 2014; Nykiel and Kim 2021; Abeillé and Kim 2022).

(1) A: Who did she see?
B: *John*. (Merchant 2004: 673)

The NP *John* in (1) is defined as a fragment in that it is solely licensed with no verbal expression. The function of the NP *John* is similar to a sentence like *She saw John*, even if its form is a simple phrase. In this regard, the elliptical construction of fragments exhibits the form-function discrepancy (Merchant 2013a; Kim 2015a; Weir 2020; Nykiel and Kim 2022; Abeillé and Kim 2022). The realization of a fragment, meanwhile, is not limited to canonical NPs; quantified expressions such as bare-quantifiers (i.e., *nothing*, *something*, and the like) can be licensed as a fragment as well:

(2) A: Who did you interview?
B: *Everybody*. (Weir 2014: 173)

The quantified expression *everybody* stands alone, receiving a sentential interpretation akin to a sentence *I interviewed everybody*. The current thesis focuses on English quantified fragments (QFs): the fragmental realization of bare-quantifiers (also known as generalized quantifiers, Jacobson 2016), including negative indefinites (NEGs; i.e., *nothing*, *nobody*, ...), polarity sensitive items

(PSIs; i.e., *something* and *anything*, ...), and free choice items (FCIs; i.e., *anything*, ...), and their partitive counterparts (i.e., *none*/*some*/*any* of NP).

The mainstream account of ellipsis, the derivation-based approach, is categorized into two subdivisions based on their assumptions: the LF-copying analysis and the PF-deletion analysis (Chung et al. 1995; Merchant 2013a). Both analyses presuppose that an elliptical expression has an unpronounced syntactic source whose structure parallels that of its antecedent. The underlying structure for the fragment *John* in (1) in the derivation-based perspective will be similar to the following, respectively:

(3) A: Who did she see?

B: $[_{CP}$ John $[_{C}\ e_i\ \langle[_{IP}$ she saw $t]_i\rangle]]$ (LF-copying)

C: $[_{FocP}\ John\ [_{CP}\ t\ [_{C[E]}\ \sout{[_{IP}\ \text{she saw}\ t]}]]]$ (PF-deletion)

By and large, the sentential source of the NP *John* syntactically parallels the structure of the question. The LF-copying analysis assumes that there is a null anaphora *e* in the ellipsis site, whose meaning is defined by its sister, the IP structure. The IP structure is 'recycled' as its structure parallels the IP structure of the antecedent (Chung et al. 1995). On the other hand, the PF-deletion analysis, or the 'move-and-delete' analysis, assumes that a fragment takes a fully grammatical syntactic structure in its ellipsis site. Generated in the sentential source, a constituent that will be be fragmented undergoes a series of movement operations followed by deletion at the PF-level (Merchant 2001, 2004; Weir 2014, 2020).

However, it is questionable whether the derivation-based approach can properly account for QFs, and there are at least two reasons. First, while canonical fragments "inherit" their polarity from their antecedent, such polarity inheritance may not be guaranteed in some cases of QFs (cf., Merchant 2013a; Kim 2024):

(4) A: Who didn't you invite?

B: Well... *Mark*. (Merchant 2013a: 455)

The fragment *Mark* inherits its polarity from its antecedent in that its interpretation is felicitous only if it is negative (i.e., *I did #(not) invite Mark*.). It can be explained by assuming structure parallelism; as its antecedent is a negative question, the fragment, whose structure parallels that of antecedent, can be negative as well. Now, consider the following Q-A pair:

(5) A: Who didn't come to the party?
B: *Nobody*. (Fălăuş and Nicolae 2016: 586, adapted)

The fragmented NEG-type bare-quantifier (NEG-QF) *nobody* can be ambiguous; it can be interpreted similarly to the sentence *Nobody didn't come to the party*, but it can take another interpretation similar to the sentence *Nobody came* (cf, de Swart 2010; Fălăuş and Nicolae 2016). If an underlying structure of a QF shows syntactic parallelism with preserved polarity, how can we explain the second meaning? In addition, some bare-quantifiers are sensitive to their licensing conditions. Assuming the lexical properties, we can take it for granted that such licensing condition would be preserved even when fragmented. However, it may be unclear in some cases:

(6) A: It isn't going to work.
B: What isn't going to work?
A: *Any of it*. (TV 2012 UK/IE)

The derivation-based approach may assume the QF *any of it* retrieves its sentential meaning by taking a hidden syntactic structure that parallels that of that antecedent. However, it is not likely that this syntactic parallelism strategy can assume a grammatical underlying source structure; an NPI *any of it* violates its licensing condition under such assumption (e.g., **Any of it isn't going to work.*).[1]

The theoretical challenges raise three main research questions for this study. First, if the fragment inherits its the polarity from its antecedent, how can a negation be neutralized? Second,

[1] There are many sentences where a subject NPI is followed by a negative marker that you can find on websites. Although their frequency is not so small, the thesis will follow the traditional grammar claiming that subject NPIs should not be followed by a negative marker, ruling out such cases as '*Any of it* isn't ...' (Kim 1999; Giannakidou 2002, 2011).

Or, is the case in (6) peculiar or typical; are there not many cases where a PSI is licensed violating its licensing condition in its underlying structure? If typical, how can we explain the theoretical issues regarding the licensing conditions of polarity sensitive items? Lastly, would it be plausible to assume any syntactic structure in an ellipsis site for QFs? If not, how can we retrieve the sentential interpretation of QFs? In order to answer the three research questions, this study performs a comprehensive corpus investigation. The result implies that the syntactic parallelism between an underlying structure of QFs and their antecedent can be overridden, and the problematic cases can be a major type on some occasions. Based on the theoretical implications, the thesis proposes a non-derivational analysis of English QFs, the analysis adopts SBCG (Sign-Based Construction Grammar) as its framework, addressing more focus on the discourse-semantic rather than strict syntactic parallelism.

In what follows, the thesis first introduces morphological, syntactic, semantic, and pragmatic properties of bare-quantifiers (and their partitives) and fragments, and whether the linguistic properties of bare-quantifiers can be realized in a fragmental environment. The following section briefly describes the mainstream approach to QFs as well as canonical fragments and points out some empirical issues caused by syntactic parallelism. The thesis then describes the corpus investigation, demonstrating the distributional properties with a brief collocational analysis. The report will be discussed in the following section, providing theoretical implications from the corpus investigation. Based on the discussion, the thesis tries to analyse QFs focusing more on discourse-semantics rather than syntax, departing from the derivation-based approach. The thesis will be summarized and concluded in the last chapter.

Chapter 2

Key properties

2.1 Morphological properties of bare-quantifiers

In this study, the term 'bare-quantifiers' refers to lexical compounds where a nominal head is morphologically compounded with a quantificational determiner head, following the definition by Huddleston and Pullum (2002). Thus, bare-quantifiers include lexical items such as *anybody*, *someone*, and *nowhere*, in which the quantificational determiner heads *any*, *some*, and *no* are respectively compounded with a nominal head *body*, *one*, or *where* (Huddleston and Pullum 2002: 423). The bare-quantifiers can be grouped as given below, based on the quantificational determiner heads:

(7)
a. Negative indefinites (NEGs): nobody; nothing; nowhere
b. Positive Polarity Items (PPIs): somebody; someone; something; somewhere
c. Negative Polarity Items (NPIs): anybody; anyone; anything; anywhere
d. Free Choice Items (FCIs): anybody; anyone; anything; anywhere

The *no*-type lexical items including *nobody* and *nothing* are negative indefinites (NEGs).[2] The *some*-type and the first *any*-type lexical items like *something* and *anything* are polarity sensitive items (PPIs), and each of them is positive polarity item (PPI) and negative polarity item (NPI). The last lexical items, the other *any*-type lexical items are free choice items (FCIs). Although they

[2] The generalized quantifier *no one* is excluded from the list even if it is a negative indefinite. It is because it is an NP with similar properties to the others, but not a lexical compound.

are isomorphic to NPIs, FCIs are distinctive in that they show different lexical properties from NPIs. The four types of bare-quantifiers commonly induce indefinite meaning with quantification; NEGs induce negation, PSIs trigger existential quantification, and FCIs induce either existential or universal quantification (Huddleston and Pullum 2002; de Swart and Sag 2002; de Swart 2010; Giannakidou 2011; Weir 2014). Nonetheless, they have their own distinctive properties. As this thesis focuses on the fragmental realization of bare-quantifiers, it is obvious that we have to think about not only the properties of bare-quantifiers but also that of fragments. In what follows, the thesis introduces the general properties of fragments first. Then it shows how those properties change. when a bare-quantifier is realized as a fragment.

2.2 Key properties of fragments and quantified fragments

2.2.1 Syntactic properties

In general, canonical fragments consist of three major factors:

(8) A: Who did she see? B: *John*. (= 'She saw *John*.')
ANTECEDENT; CORRELATE; FRAGMENT

A fragment typically requires a linguistic antecedent that may contain a correlate. A correlate is assumed to match fragments in its linguistic properties, such as its grammatical functions, case, or even its pragmatic status. Note that a correlate can be either overt or covert (Nykiel and Kim 2022: 75, adapted):

(9) a. A: Who did Mimi wait for?
B: *For Harvey*. / *For someone*.

b. A: Did the letter come?
B: Yes, *from John*. / Yes, *from someone*.

The PP fragment *for Harvey* in (9a) corresponds to its correlate *for who*, which matches its syntactic form and grammatical function. On the other hand, the PP fragment *from John* does not take any

overt correlate. If they take an overt correlate, it is called a 'merger' type, and if its correlate is covert, it is a 'sprouting' type fragment (Chung et al. 1995; Chung 2006; Nykiel and Kim 2022). The data above with PPI-QFs *for someone* and *from someone* show that QFs can also be either a merger or sprouting type. Fragments can take various grammatical functions, and so do QFs (Merchant 2013a: 673, adapted):

(10) a. A: Who came?
B: *John*/*Nobody*. (= '*John*/*Nobody* came.')

b. A: Who did she see?
B: *John*/*Nobody*. (= 'She saw *John*/*nobody*.')

c. A: Who did John talk to?
B: *Mary*/*Nobody*. (= 'John talked to *Mary*/*nobody*.')

d. A: What's that?
B: *A dish*/*Nothing*. (= 'That's *a dish*/*nothing*.')

e. A: When did he leave?
B: *After the movie ended*/*After something awful*.
(= 'He left *after the movie ended*/*after something awful*.')

As given, both canonical fragments and QFs can serve as a subject, a direct object, a prepositional object, a predicative complement, and a modifier. Although fragments seem to be freely used in terms of grammatical functions, it does not mean that they can be licensed in any context. They have to do with the identity issues and connectivity effects. The identity effects refer to syntactic restrictions fragments display with respect to their antecedent. To begin with, in P(reposition)-stranding languages including English, a fragment allows a proposition either to be pied-piped or stranded. So the fragments in (11) can be realized either as bare NPs or PP[*with*]s (Weir 2014: 13, adapted):

(11) A: Who was Peter talking with?

B_1: *Mary*. / *Someone*.

B_2: *With Mary*. / *With someone*.

However, it is not the case that every preposition can be dropped; the realization of fragments needs to reflect the argument structure of the predicate inside the antecedent (Nykiel and Kim 2022: 75, adapted):

(12) A: Did the letter come?

B: Yes, *(*from*) *Mimi*. / Yes, *(*from*) *someone*.

The sprouting type fragments in (12) can only be licensed in the PP[*from*] form, but not the bare NP form. The syntactic effect has to do with the argument structure of the verb *come* in the antecedent, which allows the PP[*from*]s to function as its modifier, but not the NPs. In addition, fragments and QFs should match their voice to that of their antecedents (Merchant 2013b: 82, adapted):

(13) A: Who is sending you to Iraq?

B: **By Bush*. / **By someone*. (= 'I am being sent to Iraq by *Bush*/*someone*.')

The fragments in (13) are both ruled out because their voice value does not match that of the antecedent; the antecedent is an active sentence, but the sentential interpretations are passive sentences. In this regard, the fragments cannot be licensed in the PP[*by*] form. Likewise, fragments show various syntactic properties and restrictions to which the properties of QFs seem to parallel.

However, QFs also behave distinctively from canonical fragments due to their morphosyntactic properties. First, some QFs are subject to their licensing conditions:

(14) a. They made *some of the mistakes*.

b. *They didn't make *some of the mistakes*. (Huddleston and Pullum 2002: 829, adapted)

(15) a. Press *any key* to continue.

b. *Do not press *any key* to continue. (Giannakidou 2001: 660, adapted)

As PPIs and FCIs are sensitive to positive polarity, the PPI *some of the mistakes* and the FCI *any key* can only be licensed in positive environments. On the other hand, NPIs are subject to complex licensing conditions where both polarity and grammatical functions have to do with; subject NPIs cannot precede a negation, whereas non-subject NPIs should follow it:

(16) a. *Anyone* was (*not) available. (Weir 2020: 10)

b. Kim did*(n't) do *anything* wrong. (Huddleston and Pullum 2002: 834)

The NPI *anyone* in (16a) functions as a subject, and thus it can be licensed only if there is no negation *not* in its following VP. Whereas, the NPI *anything* in (16b) is a direct object of the verb *do*, and it should follow a negation. Previous studies assume that the licensing conditions of PSIs are preserved even when they are realized as a fragment (de Swart 2010; Weir 2015; Giannakidou and Zeijlstra 2017).

(17) A: Whom did you talk to?
B_1: **Anybody*. (Giannakidou and Zeijlstra 2017: 10)
B_2: *Somebody*. B_3: *Anyone*.

The NPI-QF *anybody* is ruled out because the antecedent is positive, whereas the same antecedent can successfully license the PPI-QF *somebody*. As FCIs also show the positive polarity sensitivity, we can expect the FCI-QF *anyone* in (17c) can follow the positive antecedent. Conversely, a PPI-QF and an FCI-QF are expected to be ruled out if they follow a negative question, whereas an NPI-QF can.[3]

2.2.2 Semantic and pragmatic properties

Lexicosemantically, bare-quantifiers induce indefinite meaning with quantification, which can affect the sentential interpretation of a QF (Huddleston and Pullum 2002; de Swart 2010; Giannakidou

[3] Here, we can find a theoretical issue regarding the licensing condition of QFs. It will be discussed later in Chapter 3.

2011; Weir 2015). PPIs and NPIs contribute to existential quantification, but they do not directly affect negation:

(18) a. *Someone* liked Joe. (Kearns 2011: 48)

b. Daniel did not look at *anyone*. (Tovena 2020: 393)

The PPI *someone* and NPI *anyone* above only contributes to existential quantification. Note that the negative meaning in (18b) is triggered by the negation *not*, not the NPI. The semantic properties seem to be preserved when they are fragmented as well:

(19) a. A: Who liked Joe?

B: *Someone*.

b. A: Who didn't Daniel look at?

B: *Anyone*. (adapted from (19))

Respectively, the PSI-QFs are construed similarly to the sentence in (18). Thus, the PSI-QFs are expected to not directly contribute to negation.[4] Meanwhile, NEGs contribute to negation themselves, in contrast to polarity-neutral PSIs (de Swart 2010: 119).

[4] Besides, there is one more point rooting from the licensing conditions of NPIs. In addition to their licensing conditions, NPIs are affected by another semantic factor, called non-veridical contexts, The non-veridical contexts include downward entailment (DE), interrogative, modal contexts, and so forth (Giannakidou 2002, 2011, 2020). Giannakidou (2002) defines the term (non-)veridicality as given below:

(i) **(Non)veridicality** (Giannakidou 2002: 5)

a. A propositional operator F is veridical *iff* Fp entails p: $Fp \rightarrow p$; otherwise F is non-veridical.

b. A non-veridical operator F is anti-veridical *iff* $F\,p$ entails not p: $Fp \rightarrow \neg\, p$.

The term 'non-veridical context' refers to a context where a proposition entails its negative counterpart. Now, consider the followings:

(ii) a. Few of the bees stung *anyone*. (Huddleston and Pullum 2002: 837)

b. Did John see *any students*?

c. John may talk to *any students*. (Giannakidou 2002: 1)

As given, the non-subject NPIs can be licensed in positive environments. It is because the sentences take non-veridical contexts triggered by DE, interrogatives, and modality, respectively (Rudin 2019). However, it is questionable whether the non-verticality can directly cope with QFs as well since QFs can exhibit mismatches in illocution or modality.

(20) a. *Nobody* laughed.

b. We met *nobody*.

Although there is no overt negation, the sentences in (20) induce negative meaning, showing the semantic property of NEGs. However, NEGs also show the idiosyncratic property of negative neutralization (Kramer and Rawlins 2011):

(21) Maria didn't eat *nothing* today. (Blanchette et al. 2018: 1)

The sentence above can be read ambiguously; on the one hand, the two negations cancel each other, and the whole proposition becomes positive (i.e., Maria ate *something* today.). On the other hand, one of the negations is somehow dropped out, and the combination of two negations induces a negative meaning (i.e., Mary didn't eat *anything*.). The former is called double negation (DN) reading, and the latter meaning is negative neutralization (NN) reading. The semantic properties are preserved in QFs, and thus a NEG-QF can induce sentential interpretation with negation (Fălăuş and Nicolae 2016: 441):

(22) A: What did you eat?

B: *Nothing*.

The NEG-QF *nothing* is construed as a sentence similar to *I ate nothing*, which is negative. On the other hand, a NEG-QF can be read ambiguously when it follows a negative question (Fălăuş and Nicolae 2016: 586):

(23) A: Who didn't come to the party?

B: *Nobody*.

On the one hand, the NEG-QF *nobody* can induce its DN reading (i.e., *Nobody didn't come*... = *Someone came*...), but on the other hand, it can also induce its NN reading (i.e., *Nobody came*...). Likewise, NEG-QFs seem to share their lexicosemantic properties with their non-elliptical counterparts.

Lastly, FCIs contribute to quantification, but not negation. Regarding quantification, they can contribute to not only existential quantification but also universal quantification, unlike PSIs (Giannakidou 2001, 2011). Consider the following examples repeated from (15):

(24) a. Press *any key* to continue. $\exists x[P(x)]$ / $*\forall x[P(x)]$

b. *Any students* can solve this problem. $*\exists x[P(x)]$ / $\forall x[P(x)]$

Although they are both FCIs, the FCI *any key* contributes to existential quantification whereas the FCI *anybody* to universal quantification. Giannakidou (2001) claims that it is doe to the semantic interaction between FCIs and an illocutionary operator (i.e., imperative), the modal *can*. Which is to say, the quantification type the FCIs trigger is related to and affected by surrounding factors. Such interaction regarding quantification seems to be preserved in a fragmental environment:

(25) a. A: Which one should I press to continue?
B: *Anything*.

b. A: Who can solve this problem?
B: *Anyone*. (adapted from (24))

The FCI-QFs above induce similar meaning to the sentences in (24), and each factor differentiating the quantification value functions the same as in their non-elliptical counterpart.

Pragmatically, the form-function discrepancy observed in fragments triggers the parsing of fragments to require a series of pragmatic accommodations. Here, one basic assumption in the semantic resolution of fragments is that they are somehow related to the previous utterance. This assumption is based on Grice's Maxim of relevance (among many others, Weir 2014). Fragments are also related to concepts from the theory of information structure, as they have to do with the concept of pragmatic *focus*, information that is newly introduced (den Dikken et al. 2000). For instance, in *wh*-questions, focus "highlights the part of an answer that corresponds to the *wh*-part of a constituent" (Krifka 2008: 250). It can be demonstrated with the following Q-A pair (Krifka 2008: 250):

(26) A: *Who* stole the cookie?

B: [PETER]$_F$ stole the cookie.

Here, the entity denoted by the *wh*-word *who* corresponds to a portion of the answer, *Peter*, a newly introduced information. In this case, we can assume that *Peter* is the focus of the answer the question in (26). On the other hand, the term 'topic' indicates information already introduced to the discourse, thus old and grounded (Gundel and Fretheim 2006; Krifka 2008; Arnold et al. 2013). Consider the following example (Krifka 2008: 247):

(27) As for *the beans*, John ate them.

The phrase *as for the beans* implies that the entity denoted by *the beans* as it accompanies the definite article *the*. Thus it is counted as information grounded and commonly accepted among speakers.

It is widely assumed that only pragmatically focused materials can be licensed as a fragment (among others, Ginzburg and Sag 2000; Merchant 2001, 2004; Weir 2014; Nykiel and Kim 2022):

(28) a. A: Who did she see?

B: JOHN. (= 'She saw JOHN.')

b. A: Who did she see?

B: ?Mary. (= 'Mary saw John.') (Merchant 2004: 673, adapted)

As given, the sentential interpretation of the fragment in (28a) implicates that the fragment *John* corresponds to the focused *wh*-word *who* in its antecedent question. On the other hand, in (28b), the NP *Mary* cannot be a proper fragment, since it serves as a topic, not a focus.

At this point, we have to think about the lexical properties of bare-quantifiers. Following den Dikken et al. (2000), Weir (2015) asserts that bare-quantifiers are incompatible with topicalization and *it*-clefts:

(29) a. ?*Any wine*, John didn't buy.

b. *It was *any wine* that John didn't buy. (Weir 2015: 177)

The two sentences in (29) show the NPI *any wine* is not allowed to be realized in topicalization and *it*-cleft constructions. Those two constructions are known to be related to the information-structure; topicalization licenses a topic in the sentential initial position, and the *it*-cleft posits a focus between the copula *be* and *that* (among many others, den Dikken et al. 2000; Lambrecht 2001; Kim 2012; Higgins 2015). This is to say, bare-quantifiers cannot serve either as a topic or as a focus in a given discourse.[5]

[5] Weir (2015) explains it implies the unique information status of quantified expressions, including bare-quantifiers, and the nature relies on their lexical properties. Despite of their lexical properties, bare-quantifiers can somehow be licensed as a fragments. In later chapter, there will be a series of explanations proposed in previous studies on how bare-quantifiers can be fragmented.

Chapter 3

Previous analyses

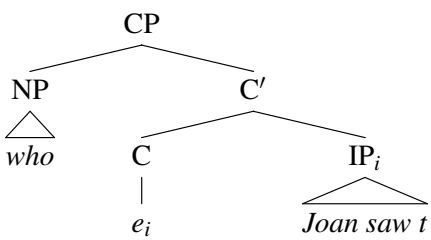
The derivation-based approach, which is a mainstream approach to ellipsis (including QFs as well as canonical fragments) is based on two major assumptions: i) in the ellipsis site, fragments have an underlying source that is syntactically intact, and ii) the realization of fragments accompanies a series of derivation process from the underlying structure (among many others, Chung et al. 1995; Merchant 2001, 2004; Weir 2020). In what follows, the thesis briefly explains how the derivation-based approach tries to account for canonical fragments and QFs. Then, the explanation will be followed by theoretical challenges rooted in the licensing conditions of PSIs and the ambiguous reading of NEGs due to negative neutralization. The theoretical issues provide the reason for this thesis to conduct a usage-based corpus investigation.

3.1 Structural parallelism and the derivation-based approach

As briefly introduced, the derivation-based approach can be sorted into two groups based on their theoretical background for ellipsis: LF-copying analysis and PF-deletion analysis. The LF-copying analysis assumes the nature of ellipsis is similar to null anaphora, which should be replaced at LF by a copy of the preceding IP structure (Chung et al. 1995). On the other hand, the PF-deletion analysis assumes that ellipsis accompanies a full structure, but the reason for only some linguistic materials to be pronounced is they are deleted (or unpronounced) (Merchant 2001, 2019). Although they differ in detail, the two analyses by and large agree that there is an underlying source that structurally parallels its antecedent clause of ellipsis. In the LF-copying analysis, the structural parallelism can be attained by the IP recycling; in the PF-deletion analysis, it can be achieved by assuming the *e*-GIVENness.

As for the LF-copying analysis with the IP recycling hypothesis, the ellipsis site for fragments will retrieve its meaning by phonologically silently reiterating a portion of the structure of the antecedent (Chung et al. 1995). For instance, consider the following analysis for sluicing, an ellipsis phenomenon similar to fragments (Chung et al. 1995: 243-244):

(30) a. Joan saw someone, but I wonder [*who* [~~Joan saw *t*~~]]

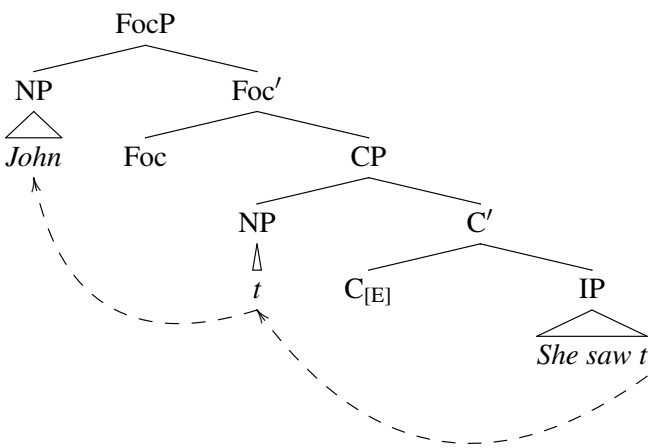
b. 

$e = \lambda p[(\exists x : person(x))[p = [see(Joan, x)]]]$

The null element *e* shares its semantics with its (underlined) antecedent, and the IP structure following the remnant *who* in the sluiced clause parallels that of its antecedent (i.e., *Joan saw someone*). On the other hand, the PF-deletion analysis constructs the structure for an ellipsis by fronting the fragmented material to Spec, CP position, and deleting all the remaining materials with the ellipsis feature [E] in the C head position (Merchant 2001, 2004; Griffiths and Lipták 2014). For example:

(31) a. A: Who did she see?

B: *John*. (Merchant 2004: 673)

b. 

The fragmented NP *John* is first generated in the lower IP, which parallels the IP structure of its antecedent. It first undergoes the A′-movement to Spec, CP position. Then, it undergoes the focus movement to Spec, FocP position. Lastly, the ellipsis licensor head deletes the lower IP structure from the PF-level. Based on the characteristics of the derivation operations, the PF-deletion analysis is also called the 'move-and-delete' analysis (Griffiths and Lipták 2014; Weir 2015). However, it is not the case that any structure can be inside the lower IP that is to be deleted. Merchant (2001) claims that, for a constituent to be elided, its underlying source should satisfy the *e*-GIVENness (Merchant 2019: 44):

(32) **Definition of *e*-GIVEN:**

[[E]] = λP : *e*-GIVEN(*p*).*p*, where an expression *e* is *e*-GIVEN *iff*

– *e* has a salient antecedent A such that ε = F-clo(ε) and

– $[\![\varepsilon]\!]$ = F-clo(A)

Simply put, the *e*-GIVENness ensures a mutual entailment relation between the QF's underlying IP and the IP of the antecedent. For illustration, consider the following sluicing example (Merchant 2013a: 459):

(33) $[_{IP[A]}$ Max has [*five dogs*]$_F$], but I don't know [*how many cats*]$_F$ <$[_{IP[E]}$ he has *t*]>.

The lower IP inside the sluiced clause entails that *Max has something*, and so does the IP in the antecedent clause. If so, the semantic requirement of *e*-GIVENness is fulfilled, and the lower IP can successfully undergo the deletion (Merchant 2001, 2004). It seems the theory can solve the semantic issue derived from the form-function discrepancy of fragments as well.

For both the derivation-based approach, the reason for the existence of syntactic structure in sluicing can be found in many cases. For instance, connectivity effects can fortify the structural analysis:

(34) a. John ate dinner but I don't know *(*with*) *who*(*m*). (Chung et al. 1995: 11)

b. A: Who was Peter talking with?

B: *Mary* / *With Mary* / **To Mary*. (Merchant 2004: 685, adapted)

In (34a), the argument structure for the verb *eat* cannot allow any additional arguments as its argument requirement is already satisfied. Thus, the remnant cannot serve as an argument in its bare NP form, but it should function as a modifier by used in a PP. For the same reason, the NP *Mary* can itself serve as a fragment in its bare NP form or with a stranded preposition. However, it cannot be used in a PP headed with *to*. The derivation-based analyses can explain the polarity inheritance between the interpretation of a fragment and its antecedent as well:

(35) A: Who didn't you invite?

B: Well... *Mark*. (Merchant 2013a: 455)

For the fragment *Mark*, the LF-copying analysis may assume the anaphoric *e* can retrieve its meaning by referring to its local IP, whose structure paralleling its preceding antecedent. Then, the interpretation includes the negation. The move-and-delete analysis can also cover the case since the IP contains the negation, and the ellipsis licensor deletes the lower IP that is *e*-GIVEN. Likewise, it can be beneficiary for them to presume underlying syntactic structure to account for the structural restrictions on sluicing.

3.2 Quantified fragment and theoretical issues

It seems the derivation-based approach can explain fragments and how they are licensed from an underlying syntactic structure. However, the derivation-based approach, especially the move-and-delete analysis, faces a theoretical problem when it comes to QFs. Consider the following examples:

(36) a. It's *their teaching material* that we're using. (Kim 2020: 303)

b. *It was *any wine* that John didn't buy. (Weir 2015: 177)

The NP *their teaching material* can be licensed in an *it*-cleft, receiving focus. However, the NPI *any wine* cannot. Weir (2015) claims that bare-quantifiers cannot receive pragmatic focus, and it is because of the lexical property of bare-quantifiers.[6]. The problem is, that the move-and-delete analysis assumes focus fronting operation of bare-quantifiers. In order to solve this theoretical problem, Weir (2015) claims the movement operation of bare-quantifiers only occurs at the PF-level, not at the LF-level:

(37) a. A: What did you see?
B: *Nothing*. (data from Weir 2020: 445)

b. PF: [$_{\text{FocP}}$ *Nothing* [$_{\text{CP}}$ *t* [$_{\text{C[E]}}$ [$_{\text{IP}}$ I saw *t*]]]]

c. LF: [$_{\text{CP}}$ I saw *nothing*]

The asymmetric movement approach seems to solve the incapability of bare-quantifiers of movement. Nevertheless, there are some issues the derivation-based approach may not solve. The first issue has to do with the licensing conditions of PSI-QFs. For PPI-QFs, it seems plausible to assume that an underlying structure for PPI-QFs inherits its polarity from their antecedent as the licensing condition can be preserved in the underlying structure:

(38) A: Who will you talk to?
B: *Someone*. (Weir 2015: 178)

The PPI-QF *someone* here sounds acceptable, and the underlying structure is grammatical under the structural parallelism strategy (i.e., I will talk to *someone*.). In addition, its acceptability will be lowered if it follows a negative question (i.e., *Who will you not talk to?*); the underlying structure will be ungrammatical, since the PPI *someone* will violate its licensing condition (i.e, *I will not talk to *someone*.). On the other hand, things get complicated when it comes to NPI-QFs.

[6] English *it*-cleft constructions are known to map pragmatic properties including information-structure to syntax; the constituent following *it is/was* receives pragmatic focus (among many others, den Dikken et al. 2000; Kim 2020). See also Chapter 3.

(39) A: The room is still empty.

B: Well... Who didn't come?

A: *Anybody*.

The NPI-QF *anybody* quite sounds natural, but it is rather complex to account for if we assume the derivation-based approaches. In the LF-copying analysis, the NPI *anybody* will be followed by an empty anaphora *e* preceding the IP recycled from the antecedent. Then, the structure with recycled IP gets ungrammatical (i.e., [*Anybody*$_i$ [*e* [*t_i didn't come]]].). The revised move-and-delete analysis cannot cope with the NPI-QF either, since the LF of the underlying source is infelicitous.[7] Then, two questions arise. First, is there any possibility for PPI-QFs to be licensed by a negative question? Second, which is the right licensing condition for subject NPI-QFs – a positive antecedent or a negative antecedent, and how can we account for them?

The other issue is about the negative neutralization in NEG-QF cases. As mentioned, NEG-QFs can be read ambiguously if licensed by a negative question (Fălăuş and Nicolae 2016; Giannakidou and Yoon 2017; Weir 2020):

(40) a. A: Who didn't come?

B: *Nobody*.

b. DN reading: Nobody didn't come. (Everybody's here.)

c. NN reading: Nobody came. (You're the first one here.)

The derivation-based approach can account for the DN reading without difficulties; the LF-copying analysis will copy the IP structure of the antecedent and the null element *e* will retrieve its meaning.

[7] The unacceptability seems to remain even if we reverse the polarity of antecedent:

(iii) a. A: Something missing?
B: *Anything*. We checked everything from the insurer's list. (COCA 1995 MOV)

b. A: The room is still empty.
B: Well... Who came?
A: ?*Anybody*.

As given, the IP structure of. he antecedent can successfully license the subject NPI in terms of syntax. However, it is questionable whether an NPI-QF itself can be licit in any case; the NPI-QF in (iiia) sounds natural, but not that in (iiib) (cf., Kim 1999; Sells and Kim 2006). The thesis will unfold further discussion on this point in the later chapters.

The revised move-and-delete analysis may claim that the NEG *nobody* is generated in an *e*-GIVEN IP structure such as '*Nobody didn't come*,' and the remaining part undergoes deletion. However, it is tricky for both analyses to deal with the NN reading of '*Nobody came*.' Then, the questions are whether the NN reading is pervasive among NEG-QFs following a negative question, and how we can account for the NN reading.

Until now, we have observed how the derivation-based approach has dealt with QFs and what problems can be caused in these analyses, focusing on the structural parallelism between the underlying structure of QFs and their antecedents. Then, how can we account for those issues? One additional empirical question that follows is like this: if NEG-QFs and NPI-QFs share distributional property, and so they can both follow a negative question (e.g., A: Who didn't come? B: *Nobody* / *Anybody*.), what is the difference between the two? In order to answer these questions, a corpus investigation is conducted, whose methodology, variables, and distributional results will be reported in the following chapter.

Chapter 4

A corpus investigation

In order to answer the questions addressed in the last chapter, the thesis performs a comprehensive corpus investigation. The investigation first collects data from COCA (Corpus of Contemporary American English, Davies 2008-) and BNC (British National Corpus, (Davies 2004)). As one of the famous corpora, COCA contains more than one billion words from 1990-2019. Its data is gathered across eight different registers, ACAD (academic texts), NEWS (newspapers), MAG (magazines), FIC (fiction), SPOK (spoken), TV/MOV (TV/movie) subtitles, BLOG and WEB (webpages). On the other hand, BNC contains 100 million words from various genres such as spoken, fiction, magazines, newspapers, and academic, from 1980-1993. However, this initial data collection process yields only a few number of NPI-QFs and FCI-QFs. In order to gather more usage data, the register information was checked. The distribution shows that NPI-QFs are relatively frequently used in spoken registers, including SPOK and TV/MOV. Based on the distributional property, an additional corpus investigation was conducted, and it gathered NPI-QF and FCI-QF tokens from the MOVIE corpus (Davies 2019a) and the TV corpus (Davies 2019b). The MOVIES corpus contains 250 million words from movies released during the 1930s-2018, more than 70% of which is from 1990-2018, spoken in six countries – US (the United States), CA (Canada), UK (the United Kingdom), IE (Ireland), AU (Australia), and NZ (New Zealand). The TV corpus consists of 325 million words from six countries (US, CA, UK, IE, AU, NZ), which are from TV shows aired from 1950-2018. Among them, more than 90% are from 1990-2018. In what follows the thesis demonstrates the methodology such as variable setting and filtering process. Then, it will be followed by a distribution description of the dataset analyzed by the given variables.

4.1 Methodology

4.1.1 Search strings and dataset

For the data collection, the following search string scheme is applied:[8]

(41) **Search string scheme:** `? target *y`

In actual data searches, the following bare-quantifiers and their partitive counterparts in Table 1 are used instead of the phrase '`target`' (cf., Huddleston and Pullum 2002; Werle 2003):

Table 1: Actual lexical items used in the search strings marked as `target`

Items filling the `target` slot			
Forms	***no*-type**	***some*-type**	***any*-type**
-thing type	`nothing`	`something`	`anything`
-body type	`nobody`	`somebody`	`anybody`
-one type	-	`someone`	`anyone`
PP type	`PREP no*`	`PREP some*`	`PREP any*`
Partitive type	`none of (*) (*) *`	`some of (*) (*) *`	`any of (*) (*) *`

As noticeable, NPI-QFs and FCI-QFs do not differ in terms of their search strings. This is due to the isomorphic nature of the two types of QFs.

With the search string and the '`target`' expressions, 200 randomized tokens of NEG-, PSI-, NPI-, and FCI-QFs were collected from the COCA and the BNC each. In doing so, if a search string yields less than 200 hits, all the tokens that corpus search provides are collected. Then for the additional search, another corpus research was conducted using two other corpora: the TV and MOVIES corpora. Since they are supplementary, 100 random examples were collected, and if less than 100 hits, all of them were collected. After building the initial dataset, irrelevant examples such cases given below were manually filtered out:

[8] In the search string in (40), the speech tag '`*y`' refers to the punctuation markers including ',', '.', '!', '?', '(', '),' and so forth.

(42) a. What did this mean **? Anything ?** (COCA 2016 FIC)

b. Location with absolute accuracy **? None of it matters .** (COCA 2018 MAG)

c. Did you understand it **? Some of it ,** I did, and some of it, I didn't. (COCA 1992 MOV)

The token in (42a) is filtered out since it is not a fragment answer but a fragment question. In (42b), the quantified expression is not a fragment but a portion of a complete sentence. Lastly, in (42c), the quantified expression is surrounded by a question mark and a comma, but this is not an example of QFs. After a series of filtering processes, a dataset consisting of 754 tokens of the four types of QFs was built (see Table 2).[9] [10]

Table 2: Distribution of four types of quantified fragments from corpora

Corpus type	**COCA/BNC**					**TV/MOV**			**Total**
QF-Type	NEG-QF	PPI-QF	NPI-QF	FCI-QF	**Subtotal**	NPI-QF	FCI-QF	**Subtotal**	
-thing type	190	41	2	24	257	10	118	128	385
-body type	13	1	1	1	16	1	35	36	52
-one type	-	6	0	2	8	2	14	16	24
PP type	32	5	6	7	50	23	59	82	132
Partitive type	55	48	8	8	119	22	20	42	161
Total	290	101	17	42	450	58	246	304	754

4.1.2 Variables

In analyzing the datasets, the following three variables were assigned:

(43) a. Grammatical functions of QFs

b. Polarity of antecedents

[9] In order to check whether the distribution of NPI- and FCI-QFs in the COCA/BNC dataset and the TV/MOVIES dataset are not statistically different, the Mann-Whitney *U* test, which is the non-parametric counterpart of the *t*-test was conducted (Brezina 2018), via the `R` program (`version 4.3.0`, R Core Team 2020).

The results reveal that there is no statistically significant difference in the distribution of the form of quantified NPI- and FCI-QFs from the two datasets (NPI-QFs: $W = 7.5$, p-value $= .343$, $r_{rb} =$ -.40; FCI-QFs: $W = 4$, p-value $= .095$, $r_{rb} =$ -.68). Note that the index r_{rb} quantifies the effect size of the Mann-Whitney U test, whose value can take on values from -1 to 1. The larger the absolute value is, the bigger the effect size (Brezina 2018: 197).

[10] Even if there might be no statistically meaningful difference between the two datasets in terms of the distribution of fragments' forms, I will not merge them; they are gathered from separate data collection processes.

c. Violation of structural parallelism between QFs and their antecedent

The first variable checks whether QFs can take various grammatical functions. Its levels will be grammatical functions like subject, (direct / indirect) object, predicational complement, prepositional object, and so forth. The second variable examines the distribution of antecedent questions (if overt) in terms of their polarity. The levels will be positive and negative. The last variable assesses how many QF cases the derivation-based approach can and cannot cope with. The evaluation will be based on various sub-variable factors, including [± licensing condition violation], [± negative neutralization], [± island violation], and so forth. The data distribution part will be followed by a collocation analysis (Gries 2022), a trial to explain the differences between NEG-QFs and NPI-QFs.

4.2 Data distribution

4.2.1 General distribution

The first variable applied to the dataset is the grammatical functions of QFs. For the data tagging, the correlate of the QFs was referred to first; if a QF is a merger type so there is an overt linguistic correlate, it is tagged with the grammatical function of the QF same as that of its correlate. If not, a putative source close to its intended meaning was referred to, maximally using its antecedent. For illustration, consider the following examples:

(44) a. A: What are gonna do with it after you've killed him?
B: *Nothing*. We're just gonna leave him. (COCA 2018 MOV)

b. A: Can I count you in?
B: *For anything*, sir. Anything at all. (MOV 2018 US/CA)

In (44a), the NEG-QF *nothing* corresponds to the *wh*-word *what* in the antecedent. Since the correlate *what* functions as a direct object of the verb *do*, the NEG-QF is labeled as a 'VP object' case. In (44b), the FCI-QF *for anything* is a sprouting type, so it lacks in its overt linguistic

correlate. In such case, the intended meaning (i.e., "*You can count me in for anything*.") was reconstructed. Then, an appropriate label for the QF (i.e., VP adjunct tag) is assigned. Nevertheless, there were cases where the putative source itself could not be reconstructed with the antecedents of QFs:

(45) a. A: Um... here. Try it now.
[engine grinding]
A: Anything?
B: *Nothing*. (COCA 2013 MOV)

b. A: Have a good puke?
B: Couldn't.
A: Try the finger thing?
B: *Nothing*.
A: Bummer. (COCA 2010 MOV)

The QFs above refer to an exophoric antecedent, which cannot provide any source for the putative source for QFs; in (45a), the exophoric antecedent is the engine start of speaker A. In (45b), the NEG-QF *nothing* induces a sentential meaning close to *Nothing happened*, of which structure cannot be retrieved by recycling some portion of its antecedent. These cases are labeled with the 'N/A' tag. The result implies that as a subtype of the elliptical phenomenon of fragments, QFs can take various grammatical functions:

(46) a. A: Hey. What's wrong?
B: *Nothing*. Just get in the car. (COCA 2019 MOV)

b. A: I shouldn't have done this.
B: Done what?
A: *Any of it*! (MOV 2011 Misc)

c. A: What exactly are we looking for?

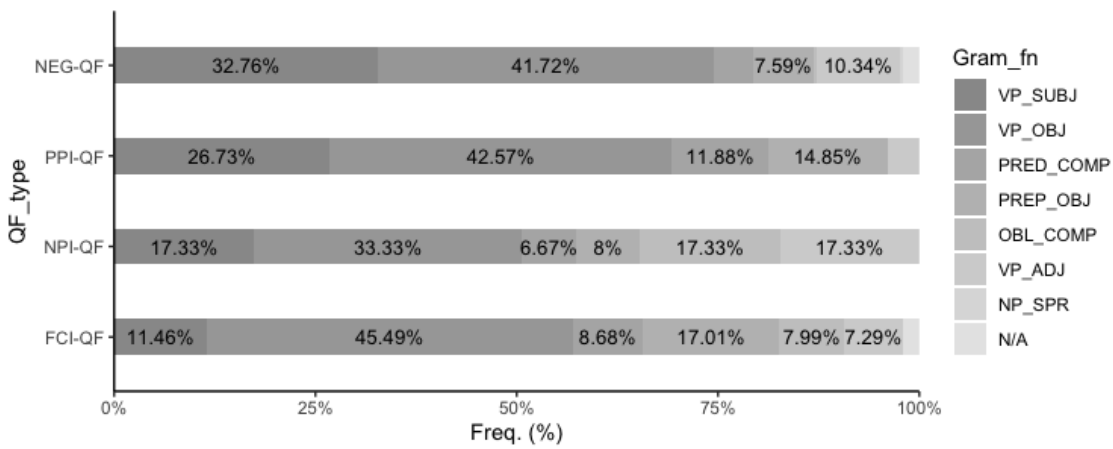
B: *Anything*. Everything. Just keep your eyes open. (MOV 2017 US/CA)

d. A: Where were you last night?

B: With *someone*. (COCA 2002 TV)

As shown, four types of QFs do not show a peculiar restriction in grammatical function while being licensed. A QF can serve as a VP subject (46a), a VP object (46b), an oblique complement (46c), a prepositional object (46d), and so forth. The most frequent case in terms of the grammatical function QFs is the VP object throughout all four types, whose frequencies are followed by VP subject for NEG-QF and PPI-QFs, prepositional object for FCI-QFs. For NPI-QFs, the VP subject, oblique complement, and VP adjunct cases were the second. For FCIs, VP subject cases were the third most frequent case. Although there are some differences, the dataset shows that all the QFs can serve not only as a complement or an adjunct of a verb but also as a subject (see Figure 1).

Figure 1: Distribution of QFs based on their grammatical functions



QF-types	SUBJ	VP_OBJ	PRED_COMP	PREP_OBJ	OBL_COMP	VP_ADJ	NP_SPR	N/A	Total
NEG-QF	95	121	14	22	1	30	1	6	290
PPI-QF	27	43	12	15	0	4	0	0	101
NPI-QF	13	25	5	6	13	13	0	0	75
FCI-QF	33	131	25	49	23	21	0	6	288
Total	168	320	56	92	37	68	1	12	754

Note: SUBJ = VP subject; VP_OBJ = VP (direct/indirect) object; PRED_COMP = predicative complement; OBL_COMP = oblique complement; VP_ADJ = VP adjunct; NP_SPR = NP specifier

The second variable is the polarity of antecedents. The dataset indicates that all the QFs except for PPI-QFs can be licensed by both a positive and negative question. The data below respectively exemplify NEG-, NPI-, and FCI-QFs following a positive and negative question:

(47) a. A: What are you doing?
B: What? *Nothing*. (COCA 2004 TV)

b. A: It just doesn't fit.
B: What doesn't fit?
A: *None of it*. (COCA 2005 MOV)

(48) a. A: Something missing?
B: *Anything*. We checked everything from the insurer's list. (COCA 1995 MOV)

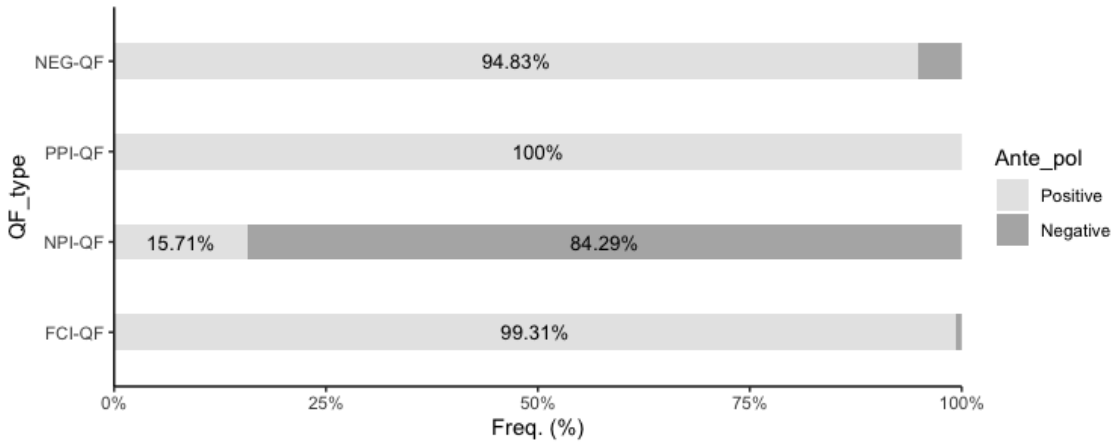
b. A: I just couldn't see a point to it.
B: To the college?
A: *To anything*. (TV 2016 US/CA)

(49) a. A: What exactly are we looking for?
B: *Anything*. Everything. Just keep your eyes open. (MOV 2017 US/CA)

b. A: Why didn't you ask for help?
B: Ask who?
A: *Anyone*. The dean, your professor, someone from your family. (TV 2015 US/CA)

As shown, the examples in (47a), (48a), and (49a) show NEG-, NPI-, and FCI-QFs being licensed by a positive question, whereas the rest are licensed by a negative question. The frequency data indicates that NEG- and FCI-QFs are usually licensed by a positive question, while NPI-QFs are by a negative question (see Figure 2).

Figure 2: Distribution of QFs and their antecedents based on the polarity of the antecedents



Polarity of antecedent	Positive		Negative		Total
NEG-QF	275	(94.83%)	15	(5.17%)	290
PPI-QF	97	(100.00%)	0	(0.00%)	97
NPI-QF	11	(15.71%)	59	(84.29%)	70
FCI-QF	286	(99.31%)	2	(0.29%)	288

The dataset yields 275 among 290 tokens (94.83%) of NEG-QFs and 286 of 288 (99.31%) tokens of FCI-QFs following a positive question. The two types of QFs seem to display a rather strong preference for positive questions. Compared to them, NPI-QFs show a weaker preference for negative questions in that 59 among 70 (84.29%) tokens of them are following a negative question. On the other hand, it is figured out that PPI-QFs can only be licensed by a positive question:

(50) a. A: What exactly do you think you're gonna find in here anyway?
B: *Something*. Anything that's gonna explain what's been going on. (COCA 2014 TV)

b. A: But it wasn't real, right? Is anything we do here real?
B: *Some of it*. Grow up, sweetheart. (COCA 2017 TV)

In (50), the PPI-QFs *something* and *some of it* are following a positive question. Likewise, PPI-QFs display the strongest preference for positive antecedents. Meanwhile, the distribution seems to

imply that NEG-QFs are more likely to follow a positive antecedent, whereas NPI-QFs have a negative antecedent.

The last variable tests whether the structural parallelism can be overridden. For this, the dataset was analyzed in terms of four factors: licensing condition violation, negative neutralization, island violation, and the necessity of contextual reconstruction. First of all, the sub-variable of licensing condition violation examines whether a QF violates the licensing condition in the underlying structure reconstructed assuming the structural parallelism. Thus, it targets PSI-QFs and FCI-QFs (cf., de Swart 2010; Giannakidou 2011, 2020; Giannakidou and Zeijlstra 2017). Among three, the violation case can be observed in NPI-QFs:

(51) a. A: It's not your fault, you know?
B: What isn't?
A: *Any of it*. (= '**Any of it* is not your fault.') (COCA 2014 MOV)

b. I don't understand throwing it away. How do you throw all that away?
Any of it. I want it all. (= '*I throw away *any of it*.') (COCA 2001 FIC)[11]

In (51a), the subject NPI-QF following a negative antecedent violates its licensing condition in its underlying structure, and the non-subject NPI-QF in the monologue (51b) serves as an answer the positive question, violating its licensing condition. There were four subject NPI-QFs and eight non-subject NPI-QFs violating its licensing contained in their underlying source.

Next, the second sub-variable, negative neutralization, targets NEG-QFs following a negative antecedent. The dataset yields 15 tokens (5.17%) of such NEG-QF cases. Interestingly, the dataset shows that the negative neutralization reading is the default reading if a NEG-QF follows a negative antecedent:

(52) a. A: What part of "not my problem" did you **not** understand?
B: *None of it*. (COCA 2016 MOV)

[11] In (51b), it might be more natural and acceptable to license a NEG-QF instead of an NPI-QF. Of course, it could be treated as a mere speech error. Nonetheless, I believe the fact that the dataset yields such examples can imply the two types of QFs can function somewhat interchangeably (or, in a radical sense, they serve almost the same roles).

b. A: Actually, that's **not** all true.

B: What part?

A: *None of it*. (COCA 1994 TV)

Although the two NEG-QFs follow a negative sentence, they take a negative reading (i.e., 'I understood *none of it*.'; '*None of it* is true.'). This implies that the structural parallelism is more likely to be violated rather than preserved in the underlying structures of NEG-QFs following a negative question. Further discussion will be given in the later chapter.

The third sub-variable has to do with island violation. The dataset contains three tokens of island violation cases:

(53) a. A: Isn't Fred a guy's name?

B: *None of mine*. (COCA 2002 TV)

b. A: Is this where the history books are?

B: *Some of them*. (COCA 2006 TV)

c. A: I don't want a boyfriend.

B: And if Tom Hardy offered?

A: *Anyone*. (TV 2015 UK/IE)

The three QFs refer to a correlate inside syntactic islands; in (53a), the NEG-QF *none of mine* corresponds to the NP *a guy*, which sits on the left-branch island. In (53b), the PPI-QF *some of them* takes the NP *the history books* as its correlate, and it is inside the *wh*-island. Lastly, in (53c), the NP *Tom Hardy* serves as a correlate of the FCI-QF *anyone*, and the correlate is inside the adjunct island.

The last sub-variable has to do with the necessity of contextual reconstruction. That is, those with no plausible antecedent (simply, 'N/A' type QFs; see Figure 1) will be counted as the case. Thus, six tokens of NEG-QFs and six tokens of FCI-QFs belong to the structural parallelism violation cases:

(54) a. A: Try it now.

[engine_grinding]

Anything?

B: *Nothing*. (= '*Nothing* happened. / *Nothing* changed. / #I tried *nothing*.')

A: Okay. Oh, this is terrible. (COCA 2013 MOV)

b. A: Can you help me?

B: *Anything*! (COCA 2001 MOV)

The NEG-QF *nothing* here does not have a proper antecedent with a fully structured IP; the antecedent seems to be a fragmental question. Thus, although its reading is similar to a sentence like *nothing happened*, there is no way to retrieve such a meaning from preceding sentences. The FCI-QF *anything* cannot retrieve its sentential meaning with the structural parallelism either; it can be read similarly to sentences like *I can do anything*, or *I can help you with anything*. In the former reading, the whole IP relies on context; in the latter, it can be considered as a category mismatch case, violating the argument structure constraint (Nykiel and Kim 2022). As a result, the dataset yields 42 cases of the structure parallelism violation (counted without excluding duplicates; see Table 3.

Table 3: Violation of structural parallelism between underlying structures of QFs and their antecedents

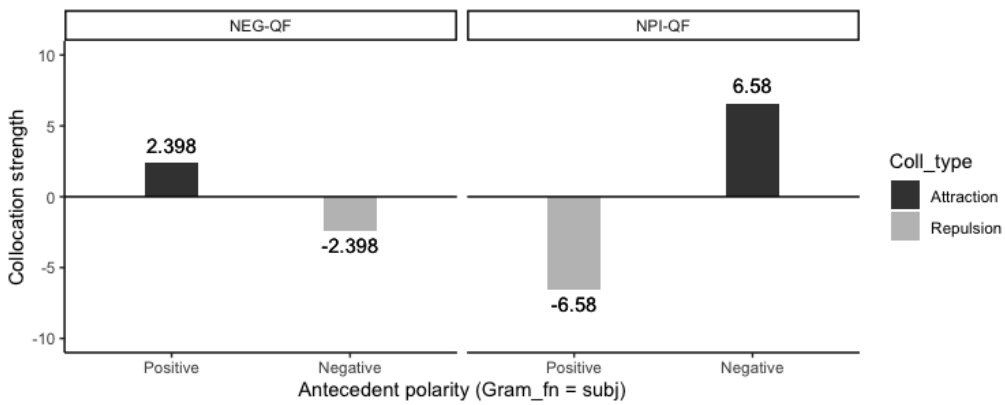
Overridden structural parallelism	**QF-types**	**Frequency (raw)**
Licensing condition violation	NPI-QF (subj)	4
	NPI-QF (non-subj)	8
Negative neutralization	NEG-QF	15
Island violation	NEG-QF	1
	PPI-QF	1
	FCI-QF	1
Contextual reconstruction (N/A type)	NEG-QF	6
	FCI-QF	6

4.2.2 Collocation analysis: NEG-QFs and NPI-QFs

The corpus investigation implies that both NEG-QFs and NPI-QFs can be licensed by both positive and negative antecedents. Then, a question to be asked is about the difference between the two QFs: in what environment do speakers license an NPI-QF rather than a NEG-QF and vice versa? In order to answer the question, the thesis performs a series of multiple distinctive collocation analyses (Gries 2022). As one of the types of collocation/collexeme analyses, the multiple distinctive collocation analysis quantifies "how much words prefer to occur in slots of (more than) two similar constructions (Gries 2019: 386)." In this study, the analysis is to yield a series of collocational strengths that allow comparing speakers' preferences on choosing between the two types of QFs.

The NEG- and NPI-QF data were first organized based on their grammatical function. In order to get clearer results, those NEG- and NPI-QFs tokens with grammatical functions that are less related to verb head (e.g., NP specifier, N/A types) were excluded. The filtering process leaves the two types of QFs to be sorted into either subject QFs or non-subject QFs (i.e., VP object,

Figure 3: Distinctive collocation analysis results: subject NPI-QFs and subject NEG-QFs



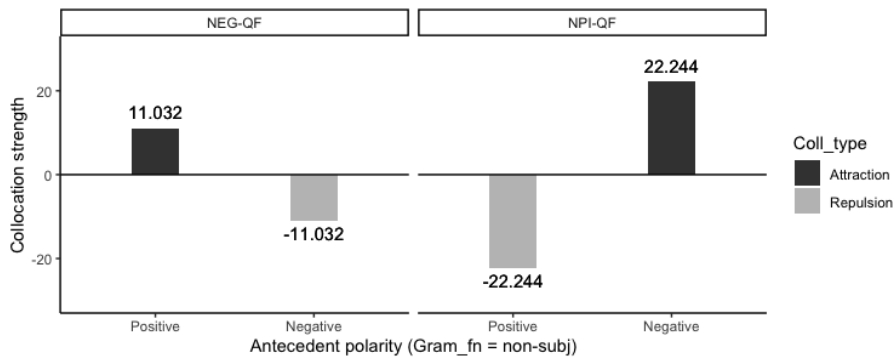
QF-type	Ante_Pol.	Raw freq. : Exp. freq.	Coll_st.	*p*-value	Coll_type
NEG-QF	Positive	91 : 82.685	2.398	.007 **	Attraction
	Negative	4 : 12.315	-2.398	.007 **	Repulsion
NPI-QF	Positive	3 : 11.315	-6.580	.000 ***	Repulsion
	Negative	10 : 1.685	6.580	.000 ***	Attraction

Note: Gram_Fn. = Grammatical function; Ante_Pol. = Antecedent polarity; Exp.freq. = Expected frequency; Coll_st. = Collocate strength; Coll_type. = Collocation type

predicative complement, oblique complement, and VP adjunct). Then, two sub-variables were applied: the type of QFs (NPI-QF or NEG-QF) and the polarity of the antecedent (positive or negative). The statistical analysis is expected to show speakers' preference on the realization of QFs regarding the polarity of antecedent if QFs take the same type of grammatical function. The evaluation is based on the expected frequency numbers of each circumstances, and if it is bigger than the observed frequency number (Raw freq.), its collocation strength value (Coll_st.) gets positive and its collocation type (Coll_type) is attractive. If it is smaller than Raw freq., its Coll_st. value gets negative and its Coll_type is repulsive.

For the subject QF cases (Figure 3), the collocation analysis results indicate that NPI-QFs show a strong preference for negative antecedents (Coll_st. = 6.580), whereas NEG-QFs show a weak preference for positive antecedents (Coll_st. = 2.398), relatively. The results imply that if subject, NEG-QFs are more likely to be attracted by positive antecedent, and NPI-QFs by negative antecedent.

Figure 4: Distinctive collocation analysis results: non-subject NPI-QFs and non-subject NEG-QFs



QF-type	Ante_Pol.	Raw freq. : Exp. freq.	Coll_st.	*p*-value	Coll_type
NEG-QF	Positive	184 : 148.571	11.032	.000 ***	Attraction
	Negative	11 : 46.429	-11.032	.000 ***	Repulsion
NPI-QF	Positive	9 : 43.429	22.244	.000 ***	Repulsion
	Negative	49 : 13.571	-22.244	.000 ***	Attraction

Note: Gram_Fn. = Grammatical function; Ante_Pol. = Antecedent polarity; Exp.freq. = Expected frequency; Coll_st. = Collocate strength; Coll_type. = Collocation type

The non-subject QF cases show the same pattern to the subject QF cases. The results (Figure 4) indicate that NEG-QFs are more likely to be attracted to positive antecedents (Coll_st. =

11.032) while be repelled by negative antecedents (Coll_st. = -11.032). In contrast, NPI-QFs show a relatively strong attraction to negative antecedents (Coll_st. = 22.244), whereas it repels positive antecedents (Coll_st. = -22.244).

Nonetheless, the result may not indicate the absolute restriction on the occurrence of the two QFs. Instead, it provides information that the NEG-QFs and the NPI-QFs show a preference for antecedents. One of the reasons is based on the comparison of the collocation strength values; the collocation strength values of NEG-QFs on positive questions are not as strong as those of NPI-QFs on negative questions. That is, in some occasions, NEG-QFs can follow a negative question, although repelled. And the other reason is, unlike NEG-QFs and NPI-QFs, the absolute preference for the positive antecedent of the PPI-QFs in the dataset. As demonstrated in Figure 2, the PPI-QFs are licensed not by negative questions, but only by positive questions.

Chapter 5

Discussion

5.1 Underlying structures with structural parallelism

One of the aims of the corpus investigation is to see whether it is plausible to assume any underlying syntactic structure in the ellipsis site of QFs that parallels the structure of their antecedent. In order to look into it, the thesis focused on the theoretical issues regarding the idiosyncratic usages of QFs As shown, the corpus investigation yields many QF cases that challenge the assumption of underlying structures with structural parallelism.

5.1.1 Licensing conditions and structural parallelism

Among the four types of QFs, the corpus investigation targeted, PSI-QFs and FCI-QFs are subject to their licensing condition; PPI-QFs and FCI-QFs need to follow a positive antecedent, whereas NPI-QFs take varied licensing conditions based on their subjectivity (Weir 2015; Giannakidou and Zeijlstra 2017). The corpus investigation proved that it is not likely for PPI-QFs to follow a negative question. However, several NPI- and FCI-QF tokens were found to violate their licensing condition. Note that the structural parallelism urges the polarity of the antecedent to be inherited by QFs:

(55) a. A: It's not your fault, you know?
B: What isn't?
A: *Any of it*. (COCA 2014 MOV)

b. I don't understand throwing it away. How do you throw all that away?
Any of it. I want it all. (COCA 2001 FIC)

The NPI-QFs in (55a-b) violate their licensing condition if we assume the structural parallelism. In (55a), the overt negation in the antecedent for the subject NPI-QF causes ungrammaticality for the reconstructed underlying structure (i.e., '**Any of it* isn't your fault.'). In (55b), on the other hand, the polarity of the positive question in (55b) triggers the underlying structure to get illicit (i.e., '*I throw away *any of it*.').

Among these, the collocation analysis showed that such subject NPI-QF cases following a negative question as in (55a) are actually preferred (or, collocationally attracted; see Section 4.2.2). For the purpose of illustration, consider the following examples:

(56) a. A: Something missing?
B: *Anything*. We checked everything from the insurer's list. (MOV 1995 US/CA)

b. A: It isn't going to work.
B: What isn't going to work ?
A: *Any of it*. (TV 2012 UK/IE)

Assuming structural parallelism, the one with a grammatical underlying structure is the NPI-QF in (56a), following a positive antecedent.[12] However, the collocation analysis implies that the one with a negative antecedent as in (56b) is much preferred (see Section 4.2.2). That is to say, the theoretical assumption of the derivation-based approach cannot actually reflect the actual usage of QFs in real life.

5.1.2 Negative neutralization and [NEG] features

The corpus research revealed that negative neutralization (NN) always occurs in NEG-QFs following a negative question (see Figure 3). If a QF inherits its polarity from its antecedent, it is hard to

[12] Of couser, it can also be plausible to assume that the NPI *anything* in (56a) is actually a illicit realization of *nothing*, a NEG. Nonetheless, the thesis will not consider such mistakes of speakers as it sounds acceptable.

account for the NN cases, especially the reason one of the negations is syntactically dropped. A similar behavior of negation can be observed in negative concord (NC). In some NC languages, negation behaves similarly to NN; multiple negations induce readings in which some negations lose their negative meaning. The traditional derivational analysis on NC adopts the concepts of the [iNEG] and the [uNEG] features, where *i* stands for interpretable and *u* for uninterpretable negation. If a lexical item takes the [iNEG] feature, it serves as a true negation, inducing negative meaning. On the other hand, if it takes the [uNEG] feature, it is semantically void in terms of negation. Structurally, the [iNEG] should c-command the [uNEG] because the former needs to check the latter to license (Giannakidou and Zeijlstra 2017; Giannakidou 2020). For example, consider the following sentences in Italian, an NC language (Giannakidou 2020: 472):

(57) a. Non$_{[iNEG]}$ telefona nessuno$_{[uNEG]}$
not call-3SG nobody
'Nobody calls.'

b. *Op*$_{NEG[iNEG]}$ nessuno$_{[uNEG]}$ telefona.
Op nobody call-3SG
'Nobody calls.'

The two sentences yield the same NC interpretation of '*Nobody calles*,' although they have different number of items contributing to negation. In (57a), both *non* 'not' and *nessuno* 'nobody' are negative markers whereas in (57), only *nessuno* triggers negation. According to (Giannakidou and Zeijlstra 2017), Italian *non* carries the [iNEG] feature which is interpretable, but *nessuno* takes [uNEG] feature, which is semantically null. In that sense, the *nessuno* in (57b) also carries the [uNEG]. However, as it requires a licenser with the [iNEG] feature c-commanding it, a covert negation operator *Op* needs to precede carrying the [iNEG] feature. As a result, the sentences take the same propositional meaning with a single negation. However, it is unclear whether this approach can be applied to English NEG-QFs; standard English is commonly considered to be a non-NC language (Ladusaw 1992; Romero and Han 2004; Iordăchioaia 2009; Giannakidou

2020; Romero 2024).[13] If the [NEG] feature analysis cannot be applied to English sentences, the derivation-based approach cannot explain the usage of NEG-QFs always being interpreted in NN reading. Another possibility to account for the NN reading is the [NEG] features interacting with pragmatic bias (Kramer and Rawlins 2011; Romero 2024).

(58) a. Isn't Jane coming?

b. Is Jane not coming? (Romero 2024: 280)

The negation *not* in the questions above takes different [NEG] features; in (58a), it carries the [uNEG] feature, and the same negative marker takes the [iNEG] feature in (58b). The distinction is based on the bias that questions induce. The question in (58a) takes existential bias so the speaker thinks that *Jane is coming*. On the other hand, in (58b), the question induces negative bias, so the speaker presumes *Jane is not coming*. So if a negative question takes existential bias, the negation gets the [uNEG] feature, and if it takes negative bias, then the [iNEG] feature the negation gets (Kramer and Rawlins 2011; Zeijlstra 2022). However, it is unclear whether this approach can be applied to English NEG-QFs; negative *wh*-questions seem to lack existential bias:

(59) a. A: What didn't you eat?

B: *Nothing*. (= 'I ate *nothing*.')

[13] Although it is widely accepted that English is a non-NC language, Blanchette (2015, 2017) claims there can be a micro-syntactic variation in English allowing NC, based on her experimental research:

(iv) a. He did not$_{[iNEG]}$ take nobody$_{[uNEG]}$ on the trip. (Blanchette 2017: 28)

b. *Op*$_{NEG[iNEG]}$ He took nobody$_{[uNEG]}$ on the trip.

In (iva), the negative marker *not* carries the [iNEG] feature whereas *nobody* takes the [uNEG] feature. Then, in (ivb), we can expect there to be a covert *Op* carrying the [iNEG] in the c-commanding position if there is no overt negation *not*, as the Italian sentence (57b) does. Furthermore, this can also be applied to NEG-QFs inducing NN reading, as in (va):

(v) a. A: Who didn't$_{[iNEG]}$ you meet?
B: *Nobody*$_{[uNEG]}$ ⟨[I didn't$_{[iNEG]}$ meet $t_{[uNEG]}$]⟩ (= 'I met nobody.')

b. A: Who didn't$_{[iNEG]}$ you meet?
B: *Nobody*$_{[iNEG]}$ ⟨[I didn't$_{[iNEG]}$ meet $t_{[iNEG]}$]⟩ (= 'I didn't meet nobody.')

However, the thing is, the micro-variation approach may be able to account for NEG-QFs with NN reading, but not DN reading in a cohesive manner, as briefly implied by Blanchette (2017)'s analysis. To account for the DN reading of *nobody* as well, we need to assume two types of *nobody*, one carrying the [iNEG] feature for DN reading, and the other with the [uNEG] feature for NN reading, as given in (vb).

b. A: What did you not eat?

B: *Nothing*. (= 'I ate *nothing*.')

The negation in the two antecedent questions takes a different distribution; the former directly follows an auxiliary *did* similar to (58a), whereas the latter the subject *not*, as (58b). Unlike the polar questions in (58), the *wh*-questions in (59) take the negative bias (i.e., 'You did NOT eat *x*.'), not the existential bias, although the position of the negation is identical. Then, the negative marker *not* in the two questions takes the [iNEG] feature. Nonetheless, the corpus investigation indicates that the two NEG-QFs above are to only induce the negative sentential interpretation. That is to say, the two NEG-QFs induce negative meaning although the negations in the questions can only take the [iNEG] feature, which the pragmatic approach cannot explain either.[14]

5.1.3 Other counterexamples to structural parallelism

The corpus data also yields tokens of QFs whose correlate is inside a syntactic island. Consider the following Q-A pair repeated from (53):

(60) A: Is this where the history books are?

B: *Some of them*.

a. LF-copying: [$_{CP}$ *Some of them*$_i$ [$_C$ e_j [$_{IP}$ (this is [where t_i are]]$_j$)]]

b. PF-deletion: [$_{FocP}$ *Some of them* [$_{CP}$ *t* [$_C$ [$_{IP}$ ⟨*~~this is [where *t* are]~~⟩]]]]

The Q-A pair can be counterexamples for the derivation-based approach. The LF-copying analysis will assume the QF takes a syntactic structure with a null anaphora *e*, whose structure is retrieved by the recycled IP with a trace co-indexed with the PPI, as in (60a). The move-and-delete approach will assume the PPI-QF *some of them* is first base-generated in the *e*-GIVEN clausal source as in the brackets. Then, it undergoes two fronting operations, as in (60b). However, since the observation by Ross (1967), there have been numerous studies claiming that a linguistic unit cannot

[14] In addition, Kramer and Rawlins (2011) also state that the [NEG] feature analysis can only be applied to polar questions, not *wh*-questions.

move outside the syntactic island. If this is true, the underlying source for both analyses will be ungrammatical if the PPI moves outside the *wh*-island.[15]

The other type of counterexample is those requiring a contextual reconstruction due to lack of an antecedent:

(61) A: Try it now.
[engine_grinding]
Anything?
B: *Nothing*. (= '*Nothing* happened. / *Nothing* changed.')
A: Okay. Oh, this is terrible. (repeated from (54))

The NEG-QF *nothing* will receive a sentential interpretation close to sentences like *nothing happened* or *changed*. However, the interpretations cannot retrieve its syntactic structure from its antecedent, a fragment question. If an antecedent itself cannot reconstruct its syntactic structure with its IP structure absent, it gets tricky to retrieve the underlying syntactic structure for the QFs.

5.2 Semantic parallelism

Likewise, the corpus investigation implies that it is challenging to account for QFs under the derivation-based approach. The problems are rooted in the premise of the derivation-based approach, presupposing a hidden syntactic structure in the ellipsis site. The thesis claims such problems can be solved if we assume semantic parallelism instead of syntactic one. In what follows, the thesis first tries to account for QFs, focusing on their semantic properties.

[15] Unlike sluicing, fragments are sensitive to islands (data adapted from Merchant 2004: 673):

(vi) a. John saw someone, but I don't know [$_{CP}$ *who*$_i$ [$_{C[E]}$ ~~John saw t_i~~]] (sluicing)
b. A: Who did you see? B: [$_{FocP}$ *John*$_i$ [$_{CP}$ t_i [$_{C[E]}$ ~~I saw t_i~~]]] (fragment)

In (via), the trace of the remnant *who* in the underlying source is deleted. In contrast, in the structure for the fragment *John* in (vib), the trace outside the lower IP cannot. It explains the different island sensitivity between a sluicing and a fragment; the island repair can only occur when traces are deleted (cf., Griffiths and Lipták 2014).

5.2.1 Semantic parallelism with alteration

Similar to the assumption by Merchant (2001) claiming that fragments have to take a mutual entailment relation with their antecedent, the corpus investigation implies that QFs usually take an interpretation semantically paralleling to their antecedent:

(62) A: Hey, what is it, Mr. Marcus? What is wrong?
B: *Something*. (COCA 2009 MOV)

We can observe a mutual entailment relation between the interpretation of the PPI-QF *something* and its antecedent *What is wrong?*. The two sentences entail that '*there is something x that is wrong*,' constructing the mutual entailment relation. Nonetheless, there are cases violating the relation, but still acceptable:

(63) A: Something missing?
B: *Anything*. (= '*Anything* is missing.')
We checked everything from the insurer's list. (COCA 1995 MOV)

Here, the question entails '*there is something x that is missing*.' whereas the NPI-QF entails '*there is no such thing x that is missing*,' violating the mutual entailment relation. That is to say, the NPI-QF in (63) is licensed the overridden restriction of the *e*-GIVENness, but it is still acceptable. It can be problematic to the derivation-based approach, especially to the PF-deletion analysis.

Nonetheless, in (62-63), we can find a partial semantic parallelism between the QFs and their antecedent (the semantic representation of bare-quantifiers will be revised later in this thesis):

(64) a. $[\![\text{What is wrong}]\!] = \lambda_x[wrong(x)]$
$[\![\text{Something is wrong}]\!] = \exists x[wrong(x)]$

b. $[\![\text{Something is missing}]\!] = p?$ where $p \Rightarrow \exists x[missing(x)]$
$[\![\text{Anything is missing (= Nothing is missing)}]\!] = \neg\exists x[missing(x)] \Rightarrow \neg p$

In (64a), the interpretation of the PPI-QF shares its predicate *wrong* with its antecedent, and the only modification made here is in the quantification part, from the lambda operator to the existential quantifier. Similarly, the interpretation of the NPI-QF and its antecedent in (64b) commonly share the predicate *missing*(x). The difference is the negation newly added to the interpretation of the NPI-QF. The modified semantic parallelism can be observed in other types of QFs as well:

(65) A: He just raised the gun and shot her.
B: What happened next?
A: *Nothing*. (COCA 2006 TV)

a. $[\![\text{What happened next?}]\!] = \lambda_x[happen(x, next)]$

b. $[\![\text{Nothing happened next.}]\!] = \neg\exists x[happen(x, next)]$

Here, the NEG-QF *nothing* is construed similarly to the sentence *Nothing happened next*. We can find the shared predicate here as well. In the NEG-QF case, however, the semantic modification targets both quantification and negation. Likewise, the interpretation of QFs takes semantic parallelism to their antecedent, but the quantification part and the negation part seem to be modifiable. Given this, the study claims QFs receive a sentential interpretation with 'semantic parallelism with alteration' to their antecedent.

5.2.2 Lexical properties of bare-quantifiers and alteration targets

The question that follows is, then, which part the alteration targets. The data shows that the overall predicate part seems to be preserved, but the lexical properties of QFs have to do with the alteration. Thus, we need to consider the lexicosemantic of bare-quantifiers in order to provide a proper analysis focusing on semantics. Bare-quantifiers are lexical compounds where a quantification head and a noun head are conjoined (Huddleston and Pullum 2002; de Swart 2010). It obviously affects the semantic interpretation of bare-quantifiers as well as QFs:

(66) a. A: Is what you saw something you care about?

B: *Someone*, yes. (COCA 2018 TV)

b. A: Do you have anything to say in your own defense?

B: *Nothing*. It's shameful, Uncle Phil. (COCA 1993 TV)

The two Q-A pairs above exemplify the three functions of QFs. In (66a), we can see the PPI-QF corrects the nominal head *-thing* to *-one*, leaving the quantification head *some-*. The semantic representation for the Q-A pair in (66a) would be similar to:[16]

(67) a. $[\![$ ... something you care about?$]\!] = p?$ where $p \Rightarrow$ ... $\exists x[thing(x) \rightarrow care.about(B, x)]$

b. $[\![$... someone I care about.$]\!]$ = ... $\exists x[person(x) \rightarrow care.about(B, x)] \Rightarrow p'$

The PPI-QF *someone* above alters the parameter value in the question, from *thing* to *person*. Given this, we can assume bare-quantifiers contribute to quantification and parameters, semantic sets of entities with certain properties (cf., Cann 1993; Pollard and Sag 1995; de Swart 2010). On the other hand, in (65b), the NEG-QF, interpreted similarly to the sentence *I have nothing to say...*, alters the negation part:

(68) a. $[\![$Do you have anything to say?$]\!] = p?$ where $p \Rightarrow \exists x[thing(x) \rightarrow have(B, x)]$

b. $[\![$I have nothing to say.$]\!] = \neg\exists x[thing(x) \rightarrow have(B, x)] \Rightarrow \neg p$

The question $p?$ implying an existential proposition in (68a) is answered by a simple NEG-QF, implying $\neg p$. Here, the two implied propositions semantically parallel in general, and the only difference is the negation. Given this, we can assume NEG-QFs contribute to negation. The semantic representations can be transcribed as given below (cf., Barwise and Cooper 1981; Cann 1993; de Swart 2010):

[16] The truth condition for polar questions can be defined as given below (Ginzburg and Sag 2000: 102):

(vii) **Resolution of a polar interrogative $\lambda p[p]$ (or $p?$):**
For a fact f, f entails p if p is true; otherwise f entails $\neg p$.

Given this, the thesis assumes that, if a polar question is answered by a linguistic entity that is not the polarity particles *yes* or *no*, the truth value for the question $p?$ may be determined by the relation between the proposition entailed by $p?$ and the proposition the answer entails.

(69) a. $[\![\text{someone}]\!] = \lambda P \exists x[person(x) \rightarrow P(x)]$

b. $[\![\text{anything}]\!] = \lambda P \exists x[thing(x) \rightarrow P(x)]$ (canonical)

c. $[\![\text{nowhere}]\!] = \lambda P \neg \exists x[place(x) \rightarrow P(x)]$ (canonical)

d. $[\![\text{anytime}]\!] = \lambda P \exists x[time(x) \rightarrow P(x)]$ or $\lambda P \forall x[time(x) \rightarrow P(x)]$

The bare-quantifiers above can consist of three factors: quantification, negation, and parameter parts. For the PPI and (canonical) NPI in (69a-b), the lexical items take the existential quantification binding a variable *x*, and the variable serves as an argument of the parameter. On the other hand, the (canonical) NEG in (69c) contributes to the existential quantification, the parameter part, and the negation part. Lastly, in (69d), the FCI contributes to the quantification and parameter parts. Note that the quantification value can either be existential or universal. It can be determined by the interaction with other factors, such as modals (cf., Giannakidou 2011).

The semantic alteration can be exemplified with the following Q-A pair:

(70) A: Jack, what are you doing?

B: *Nothing*. Just a little late-night skateboarding. (COCA 1995 MOV)

a. $[\![\text{What happened with us?}]\!] = \lambda_x[do(B, x)]$

b. $[\![\text{I am doing nothing.}]\!] = \neg \exists x[thing(x) \rightarrow do(B, x)]$

The NEG-QF *nothing* takes a sentential interpretation similar to *I am doing nothing*. As shown, the NEG-QF can alter the polarity with its negation factor, the quantification with its existential quantification value, and the predicate *thing* with its parameter. One thing to note is the fact that the theoretical description of NPI-QFs benefits from the semantic analysis. The collocation analysis showed that NPI-QFs are more likely to be attracted by a negative sentence, regardless of their grammatical functions. Under the syntactic analysis, however, subject NPI-QFs following a negative question would suffer from the ungrammaticality in its underlying structure with its antecedent recycled:

(71) A: Nothing there.

B: I don't understand. What wasn't there?

A: *Anything*. (TV 2014 UK/IE)

a. [$_{\text{FocP}}$ *Anything* [$_{\text{CP}}$ *t* [$_{\text{C[E]}}$ ⟨~~[$_{\text{IP}}$ *t wasn't there]~~]⟩]]

b. ⟦What wasn't there?⟧ = $\neg\lambda_x[be(x, there)]$

⟦Anything was there. (= Nothing was there.)⟧ = $\neg\exists x[thing(x) \rightarrow be(x, there)]$

The NPI-QF above takes a sentential interpretation similar to *Anything was there*, where the overt negation of the antecedent is dropped. Unlike the ungrammatical sentence reconstructed by the structural analysis in (71a), the semantic analysis in (71b) can properly capture the interpretation of the NPI-QF.

5.2.3 Idiosyncratic quantified fragments

Nonetheless, we still have some cases to look into a bit more. There are idiosyncratic cases where the lexical properties do not show their influence on the semantic alteration properly:

(72) A: I don't get a kiss?

B: Huh? *Nothing*. I'll see you tonight, or whenever. (COCA 2006 TV)

a. ⟦I don't get a kiss?⟧ = $\neg p?$ where $\neg p \Rightarrow \neg get(A, kiss)$

b. ⟦You get nothing.⟧ = $\neg\exists x[thing(x) \rightarrow get(A, x)] \Rightarrow \neg p$

The NEG-QF is construed as a sentence like *You get nothing*, with negative neutralization. In this case, the negation of the NEG-QF does not alter anything, and the proposition is still in negative polarity. Conversely, there are NPI-QF cases where a negation is newly introduced:

(73) A: Something missing?

B: *Anything*. We checked everything from the insurer's list. (MOV 1995 US/CA)

a. ⟦Something missing?⟧ = $p?$ where $p \Rightarrow \exists x[thing(x) \rightarrow missing(x)]$

b. ⟦Anything is missing (= Nothing is missing.).⟧ = $\neg\exists x[thing(x) \rightarrow missing(x)] \Rightarrow \neg p$

The interpretation of the NPI-QF *anything* is the polarity reversal of its antecedent. The problem is, NPI-QFs are mere indefinites without polarity value. Given the observation and theoretical implication drawn from the corpus investigation, the thesis tries to provide a non-derivational approach focusing on the semantic parallelism with alteration.

Chapter 6

A direct-interpretation perspective

Departing from the theoretical explanation claimed by previous literature, the thesis tried to observe the linguistic properties of QFs in a more descriptive way. In doing so, it argued that the sentential interpretation of QFs can be explained by the concept of 'semantic parallelism with alteration.' In what follows, the thesis tries to provide a non-derivational analysis that can account for wider properties of QFs, without assuming any underlying syntactic sources in ellipsis sites.

6.1 Theoretical backgrounds: A non-derivational approach

Unlike the derivation-based one, the non-derivational perspective assumes that elliptical phenomena neither posit any underlying syntactic units in ellipsis sites nor assume any derivational processes in ellipsis. Rather, it adopts the WYSIWYG (What You See is What You Get) perspective in analyzing ellipsis, focusing on the surface of linguistic expressions (among many others, Ginzburg and Sag 2000; Ginzburg and Miller 2019; Nykiel and Kim 2021, 2022; Abeillé and Kim 2022). In this section, the thesis first introduces the theoretical backgrounds from the non-derivational perspective. The introduction includes terminologies like the QUD (Question-under-Discussion) and the DGB (Dialogue Game Board). It further introduces how they can be applied with respect to the concept of constructions from the Construction Grammar (CxG). Then, the thesis provides an analysis accounting for the QFs and their linguistic properties.

6.1.1 Dialogue Game Board and fragments

The non-derivational perspective on ellipsis constructions, also called the direct-interpretation perspective, attempts to resolve the form-function discrepancy in elliptical constructions, focusing on the surface level rather than assuming any derivation operations. It is supported by frameworks like HPSG (Head-Driven Phrase Structure Grammar), SBCG (Sign-Based Construction Grammar), and CxG (Construction Grammar). It highlights not only with respect to the syntactic and semantic properties but also with various factors, like pragmatic or discourse properties. In this regard, it is widely assumed by the non-derivational perspective that ellipsis is resolved in terms of a dialogue monitored by the DGB (Dialogue Game Board). The DGB records the contextual parameters in the discourse, such as turn-taking between interlocutors, and topic and focus information of a given discourse. Dialogual factors are updated constantly as the dialogue precedes, and information like who asked what to whom is recorded as a QUD (Question-under-Discussion) in the DGB (among many others, Ginzburg and Sag 2000; Kim 2015b; Ginzburg and Miller 2019; Abeillé and Kim 2022; Nykiel and Kim 2022).[17]

The DGB takes two key attributes, SAL-UTT (salient-utterance) and MAX-QUD (Maximal-QUD) (among others, Ginzburg and Sag 2000):

(74) **Dialogue Game Board**:

$$\begin{bmatrix} \text{DGB} & \begin{bmatrix} \text{SAL-UTT} & \ldots \\ \text{MAX-QUD} & \ldots \end{bmatrix} \end{bmatrix}$$

The MAX-QUD is a question that is the most salient provided in the given discourse. The SAL-UTT, also known as FEC (Focus Establishing Constituent), is the linguistic expression denoted by a

[17] A question can be recorded as a value of the QUD attribute under the following constraint:

(viii) **Question Introduction Condition (QIC)**:
A question q can be introduced into QUE by A, only if there does not exist a fact t such that $t \in$ FACTS and t resolves q.

According to the QIC, a proposition q can be encoded as a value of the QUD attribute when asking a fact t, which can resolve the question itself. Thus, those questions querying a fact t are eligible to be recorded as a value for the QUD attribute.

question. The SAL-UTT usually serves as a filler to the variable of the MAX-QUD. For example, a semantic variable licensed by an open question can serve as a SAL-UTT in the DGB (Ginzburg and Miller 2019; Abeillé and Kim 2022):

(75) a. Q: Who does Kim love?

A: Lee. (Kim 2015b: 435)

b.
$$\begin{bmatrix} \text{FORM} & \langle \text{Who does Kim love?} \rangle \\ \text{SYN} & \text{S} \\ \text{SEM} & \lambda_x \left[love(k, x) \right] \\ \text{DGB} & \begin{bmatrix} \text{SAL-UTT} & \begin{bmatrix} \text{SYN} \mid \text{CAT} & \text{NP} \\ \text{SEM} & \begin{bmatrix} \text{PARAMS} & \pi \\ \text{IND} & x \end{bmatrix} \end{bmatrix} \\ \text{MAX-QUD} & \lambda \{ \pi_i \} \left[love(k, x) \right] \end{bmatrix} \end{bmatrix}$$

In (75a), the question licenses a semantic variable denoted by *who*, which serves as a SAL-UTT in the given discourse. Then, the question itself is recorded under the MAX-QUD attribute, functioning as the salient question of the discourse. Finally, the fragment answer *Lee*, the answer to the question, fills the semantic variable. Meanwhile, closed questions are slightly different from open questions. Consider the following example (Kim 2015a: 715, adapted):

(76) a. Q: Does Kim love Lee?

A: Yes.

b.
$$\begin{bmatrix} \text{FORM} & \langle \text{Does Kim love Lee?} \rangle \\ \text{SYN} & \text{S} \\ \text{SEM} & \lambda p[p] \\ \text{DGB} & \begin{bmatrix} \text{SAL-UTT} & \begin{bmatrix} \text{SEM} & \begin{bmatrix} \text{PROP} & love(k, l) \\ \text{IND} & p \end{bmatrix} \end{bmatrix} \\ \text{MAX-QUD} & \lambda \{ \quad \} \left[love(k, l) \right] \end{bmatrix} \end{bmatrix}$$

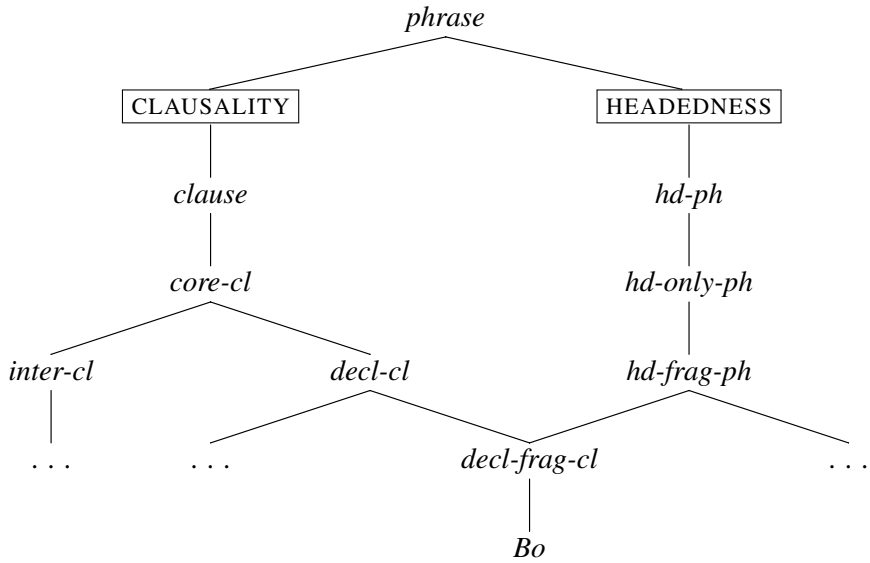
As given, the MAX-QUD takes a proposition without any open PARAMS (parameter) value; instead, it ASSERTS a proposition *p*, a basic assertion of the closed question (Ginzburg and Sag 2000; Ginzburg and Miller 2019). Thus in (76), the MAX-QUD does not contain any open PARAMS value in the proposition *love*(*k*, *l*). Instead, it serves as an assertion and the whole proposition is marked with the index *p*. Finally, the semantic value of the interrogative becomes $\lambda p[p]$ (or *p?*), answered by the polarity particle *yes*, entailing *p* is true.

6.1.2 Head-Fragment Construction

Before introducing the main concepts regarding ellipsis from the non-derivational perspective, the notion of 'constructions' should be defined first. The term construction refers to any linguistic patterns used with a sufficient frequency, regardless of whose form and function mapping relation is transparent. That is to say, it covers from a morpheme level expression to a word, to idiomatic expressions (i.e., '*kick the bucket*' or the '*the X-er, the Y-er*' constructions), and even to a sentence like transitives and ditransitives. Constructions constitute a network with hierarchical relations with other constructions. In the construction network system, the more syntactically abstract a construction is, the higher it posits; the less flexible it gets, the lower position it gets. The most abstract constructions, such as the transitive construction, are called 'macro constructions,' and the actual instantiation of constructions, so less abstracts, are called 'constructs.' In between them, there are meso- and micro-constructions (Goldberg 2006; Traugott and Trousdale 2013; Goldberg 2019; Hilpert 2019; Kim 2020).

An elliptical phenomenon can also be analyzed in the notion of constructions. For instance, the type of declarative fragments (*decl-frag-cl*, mentioned as 'canonical fragments' in this thesis) is a shared subtype of the declarative phrase (*decl-cl*) and the head-fragment-phrases (*hd-frag-cl*) types. The two supertypes are also subtypes of their supertypes (Ginzburg and Sag 2000; Nykiel and Kim 2022). The hierarchical relations regarding fragments can be schematized as in Figure 5 (See Ginzburg and Sag 2000 for further detail).

Figure 5: Clausal hierarchy for fragments (Ginzburg and Sag 2000: 333)



The non-derivational perspective on fragments assumes that fragmented materials are licensed without any underlying structure. Instead, they assert that there is a construction that promotes a non-sentential constituent to a sentential-level expression (Ginzburg and Sag 2000; Ginzburg and Miller 2019; Nykiel and Kim 2021, 2022). In doing so, they focus on the discourse-embeddedness of fragments. How fragments are related to a given discourse can be captured with the two contextual attributes in the DGB: the SAL-UTT and MAX-QUD. Given below is the head-fragment construction (*hd-frag-cxt*), showing how to account for the pragmatic property of a fragment as a focus (here, the MAX-QUD information is omitted):

(77) **Head-Fragment Construction** (Abeillé and Kim 2022: 20):

$$\left[\begin{array}{ll} \textit{hd-frag-cxt} & \\ \text{SYN} & \text{S} \\ \text{DGB} & \left[\text{SAL-UTT} \quad \left\{\left[\begin{array}{ll} \text{SYN}\,|\,\text{CAT} & \boxed{1}\text{XP} \\ \text{SEM} & \boxed{2}\left[\text{IND} \quad x\right] \end{array}\right]\right\}\right] \end{array}\right] \rightarrow \left[\begin{array}{ll} \text{SYN}\,|\,\text{CAT} & \boxed{1}\text{XP} \\ \text{SEM} & \boxed{2}\left[\text{IND} \quad x\right] \end{array}\right]$$

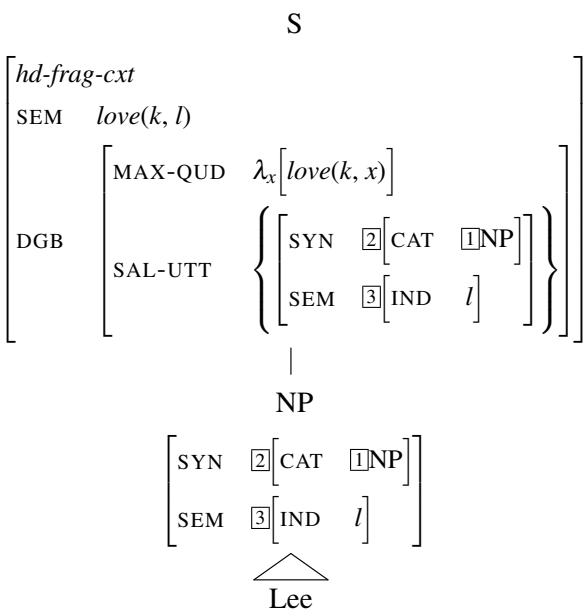
The *hd-frag-cxt* above projects a phrasal level XP to a sentential level expression. The construction ensures the XP to serve as a SAL-UTT in the given discourse. The SEM|IND value indicates the

index value of the XP. The IND value can be used in resolving a MAX-QUD of the given discourse by forming co-indexation:

(78) a. Q: Who does Kim love?

A: Lee. (repeated from (74))

b.



The question here is querying the person x who *Kim loves*. It constitutes the MAX-QUD of '$\lambda_x[love(k, x)]$,' where the person who *Kim loves* is indexed as a semantic variable x. Then, the NP *Lee*, the SAL-UTT with its IND value of l, serves as the entity discharging the variable, being licensed as a fragment answer. The Q-A pair in (74) can be semantically analyzed as follows (Kim 2015b: 435):

(79) a. **Meaning of the question (MAX-QUD)**: $\lambda_x[love(k, x)]$

b. **Meaning of the answer (SAL-UTT)**: l (= 'Lee')

c. **Application (Semantic resolution)**: $\lambda_x[love(k, x)](l) = [love(k, l)]$

As given, the semantic variable in the MAX-QUD of (79) is discharged by addressing the fragment *Lee*. Then, the fragment receives a sentential interpretation of '*love*(*k*, *l*),' whose interpretation is semantically shared by the antecedent.

6.1.3 *parallel-rel* in the non-derivational perspective

We have observed the 'semantic parallelism with alteration' in the Q-A pairs with QFs. A similar concept can be found in the HPSG and SBCG frameworks. Previous literature asserts that elliptical construction, one of the macro-constructions, needs syntactic and semantic parallelism between an elliptical phenomenon and its antecedent. The relationship is called the *parallel relation* (*parallel-rel*), a value for the PRESUP(osition) attribute (Daniel and Romero 2004; Kim and Runner 2022; Lee and Kim 2023):

(80) **Elliptical construction** (Kim and Runner 2022: 475):

$$\textit{elliptical-cxt} \Rightarrow \begin{bmatrix} \text{SEM} & \text{E} \\ \text{FOC} & \textit{nelist} \\ \text{CNXT} \mid \text{PRESUP} & \textit{parallel-rel}(A, E) \end{bmatrix}$$

The construction in (80) sets the semantic relation between an elliptical clause (E) and its antecedent clause (A); the A and E require to in the contextual (CNXT) *parallel-rel*. The *parallel-rel* can be defined as follows:[18]

(81) **Parallelism condition** (Daniel and Romero 2004):

Ellipsis requires that there be some phrase E containing the ellipsis and some antecedent phrase A in the discourse, such that ⟦A⟧ is or contextually implies a member of F(E).

[18] The *parallel-rel* can also be explained in terms of Grice's Maxim of relevance. In ellipsis, the Maxim of relevance ensures that an elliptical phenomenon is somehow related to the antecedent in pragmatic ways (cf., Weir 2014).

The generalization in (80-81) indicates that an E requires a focused material and pragmatic presupposition of the *parallel-rel* between an E and its A, such that the E contextually implies a member (or the whole set of) of A.[19]

6.2 Quantified fragments: A discourse-semantics aspect

In the rest of this chapter, the thesis first explains how to encode the linguistic properties of QFs as a bare-quantifier to the AVM (Attribute Value Matrix). Then, it describes how we can capture the *parallel-rel* in QFs in English, based on the SBCG framework (cf., Ginzburg and Sag 2000; Goldberg 2006; Culicover and Jackendoff 2019).

6.2.1 Bare-quantifiers: QUANTS and PARAMS attributes

The corpus investigation looked into two types of bare-quantifiers. One is canonical bare-quantifiers, such as *something* or *anybody*, which do not take any complements. The other is partitive type bare-quantifiers, whose head is such item as *any* or *none*, taking a PP[*of*] as its complement. One common characteristic that we could find in Chapter 5 was that, in their semantic denotation, bare-quantifiers can contribute to three semantic factors: negation, quantification, and predicate. For the purpose of illustration, we can encode these properties of the PPI-QF *something* into the AVM as follows:

(82)
$$\begin{bmatrix} \text{FORM} & \langle \text{something} \rangle \\ \text{SEM} & \left\{ \begin{bmatrix} \text{PARAMS} & \{ thing \} \\ \text{QUANTS} & exists \\ \text{IND} & x \end{bmatrix} \right\} \end{bmatrix}$$

Here, the existential quantification '*exists*' is recorded as the value for the QUANTS (quantification) attribute as it does not trigger a negative meaning, and the predicate information *thing* is encoded

[19] In (81), the value *nelist* indicates that the value for the attribute FOC is a non-empty list (*nelist*). Thus, it means that in elliptical constructions, at least one entity is required to be focused, and the focused material is to be registered in the FOC attribute. See Kim and Runner (2022) for further discussion.

as a value for the PARAMS attribute.[20] As for partitive bare-quantifiers, the PARAMS information percolates up from their complement PP. For example, the partitive bare-quantifier *none of the students* gets its PARAMS value from the embedded NP and the quantification value from the quantifier *none* itself (Pollard and Sag 1995; de Swart 2010). If we encode the lexical information into the AVM, it would look like the following:

(83)

$$\begin{bmatrix} \text{FORM} & \langle \text{none of the students} \rangle \\ \text{SYN} & \begin{bmatrix} \text{HEAD} \mid \text{CAT} & \textit{noun} \\ \text{COMPS} & \left\langle \text{PP}[\textit{of}] \begin{bmatrix} \text{COMPS} & \left\langle \text{NP} \begin{bmatrix} \text{PARAMS} & \{ \boxed{1}\ \textit{student} \} \\ \text{IND} & x \end{bmatrix} \right\rangle \\ \text{PARAMS} & \boxed{1} \end{bmatrix} \right\rangle \end{bmatrix} \\ \text{SEM} & \left\{ \begin{bmatrix} \text{PARAMS} & \boxed{1} \\ \text{QUANTS} & \textit{no} \end{bmatrix} \right\} \end{bmatrix}$$

As given, the PARAMS value of the whole NP *none of the students* is from the PARAMS value of the embedded NP inside the PP[*of*]. The PARAMS value percolates up to the PP, and then to the whole partitive NP.[21]

6.2.2 Accounting for quantified fragments

We have seen that any bare-quantifier can be fragmented (with proper context provided), and their lexical properties can affect their sentential interpretation. For instance, the NEG-QF *nobody* inherits its QUANTS value of *no* and its PARAMS value of *person* from the lexical property of the canonical NEG counterpart *nobody*. It implies that bare-quantifiers keep their lexical properties even if licensed as a fragment. Keeping this in mind, let us see whether the *hd-frag-cxt* can cope with QFs properly. In general, the construction can explain the properties of PPI-QFs and FCI-QFs with no difficulty. Consider the following Q-A pair with the PPI-QF and its informal description:

[20] The QUANTS attribute can take *exists* (existential quantification), *forall* (universal quantification), and *no* (existential quantification scoped by negation) as its value (Pollard and Sag 1995).

[21] As for the feature percolation process, Pollard and Sag (1995) address the quantifier inheritance principle (QIP). They assume the semantic features of quantifiers can percolate up, and their mother node takes the QUANTS value or the relative complement of the set denoted by the PARAMS value. See Pollard and Sag (1995: 322-323) for further discussion.

(84) A: Who does Kim love?

B: *Someone*.

a. **Meaning of the question**: $\lambda_x[love(k, x)]$

b. **Meaning of the answer**: *someone*

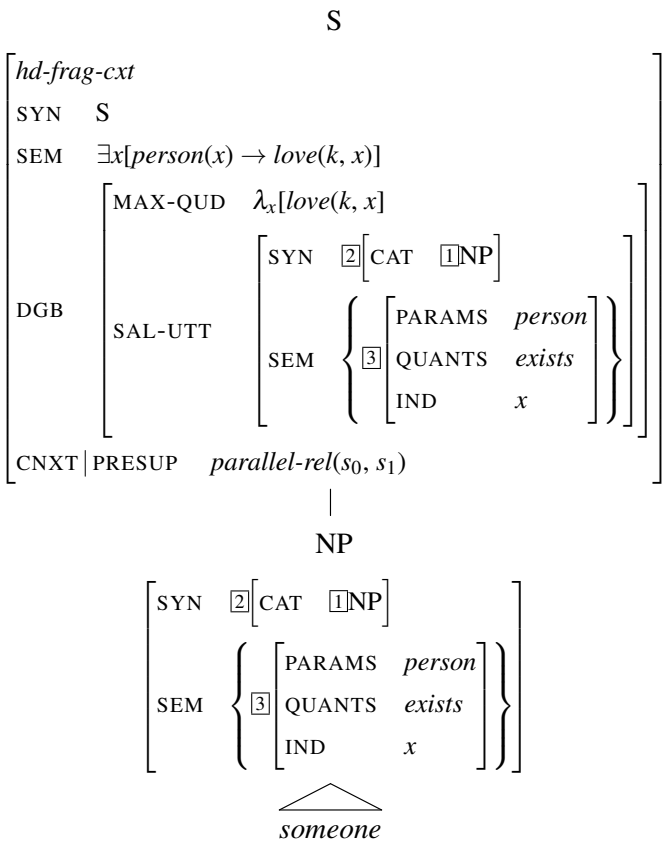
c. **Application**: $\lambda x[love(k, x)](someone)$

$= love(k, someone)$

$= \exists x[person(x) \rightarrow love(k, x)]$

In (84), the question queries who *Kim loves*, so its meaning would be the proposition with a variable as in (84a). The QF *someone* then serves as an answer, functioning as a SAL-UTT discharging the variable *x*. Lastly, the semantic resolution of the QF will be as in (84c). Given below is a formal description of the Q-A pair in (84):

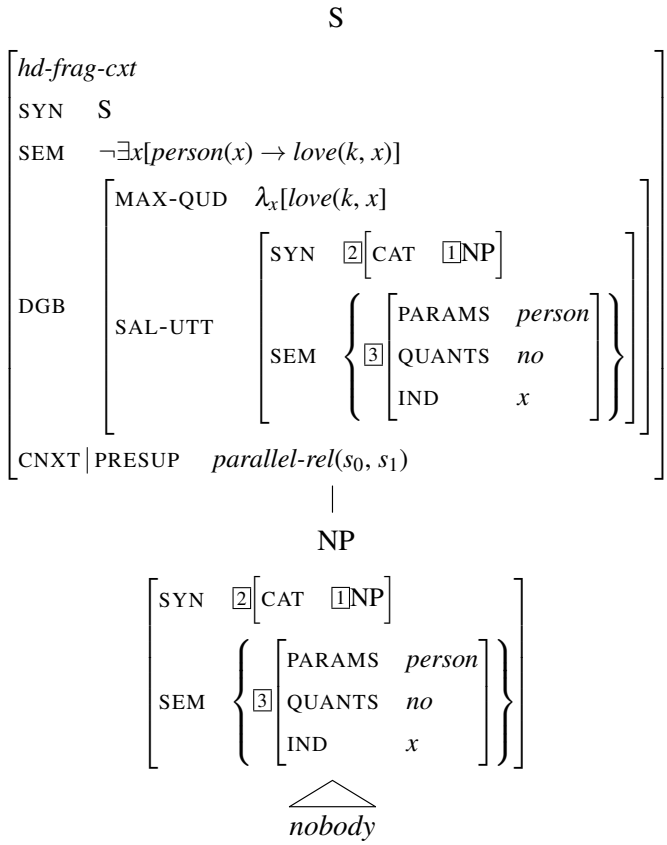
(85)



The PPI-QF *someone* takes the SEM values of *person* for its PARAMS attribute, *exists* (existential) for its QUANTS attribute, and the index of *x*. As a fragment answer, it serves as a SAL-UTT of the dialogue, filling the variable of the meaning of the question, encoded under the MAX-QUD attribute. Then, the sentential interpretation of the QF will be *Kim loves someone.* The *hd-frag-cxt* above can properly account for the PPI-QF as the QF does not exhibit any potential issues with respect to its licensing condition. A similar approach can be applied to FCI-QFs, and the difference would be the value for the QUANTS attribute since they can induce either the existential quantification (*exists*) or the universal quantification (*forall*). In addition, the *hd-frag-cxt* can also describe the properties of the NEG-QFs without the negation neutralization and the NPI-QFs with the preserved licensing condition:

(86) A: Who does Kim love?

B: *Nobody*.



The lexical properties of the NEG-QF in (86) differ from that of the PPI-QF in (85a) in its QUANTS value; since NEGs induce negation itself, the QUANTS attribute takes *no* (equivalent to $\neg\exists$) value instead of *exists*. The QF will then serve as a SAL-UTT, filling the variable in the MAX-QUD. As a result, we can get the sentential meaning of *Kim loves nobody*.

However, unlike the successful description of such 'canonical' QFs, the *hd-frag-cxt* cannot explain the complex interaction between NEG-QFs and NPI-QFs, and their licensors. Consider the following Q-A pair with the NEG-QF exhibiting the negative neutralization:

(87) A: Who doesn't Kim love?

B: *Nobody*. (= 'Kim loves *nobody*.'; $\boxed{\neg\exists x[person(x) \rightarrow love(k, x)]}$)

a. **Meaning of the question**: $\neg\lambda_x[love(k, x)]$

b. **Meaning of the answer**: *nobody*

c. **Application**: $\neg\lambda x[love(k, x)](nobody)$

$= \neg love(k, nobody)$

$= \neg\neg\exists x[person(x) \rightarrow love(k, x)]$

$= \boxed{\exists x[person(x) \rightarrow love(k, x)]}$

The semantic resolution of the NEG-QF in (87c) does not match its sentential interpretation in (87B) with negative neutralization. Now, we have to focus on the polarity values of the two (boxed) propositions, the only difference between the two. The empirical issue seems resolvable if we assume the QF induces a negative meaning regardless of its antecedent. That is, if we add a polarity modification process to the calculation result in (87), the puzzle can be easily solved:

(88) **Polarity modification**: $\neg\exists x[person(x) \rightarrow love(k, x)]$

The modification in (88) adds a negation in the final output of the sentential interpretation process in (87c). Now, the question left is, how we can formally account for the polarity modification process. Following the concept of constructions and their theoretical properties, the thesis postulates the

Negative Quantified Fragment Construction (*neg-qf-cxt*) and argues that polarity reversal is one of its constructional properties. The new construction is assumed to be a substand of the *hd-frag-cxt* (cf., Ginzburg and Sag 2000):

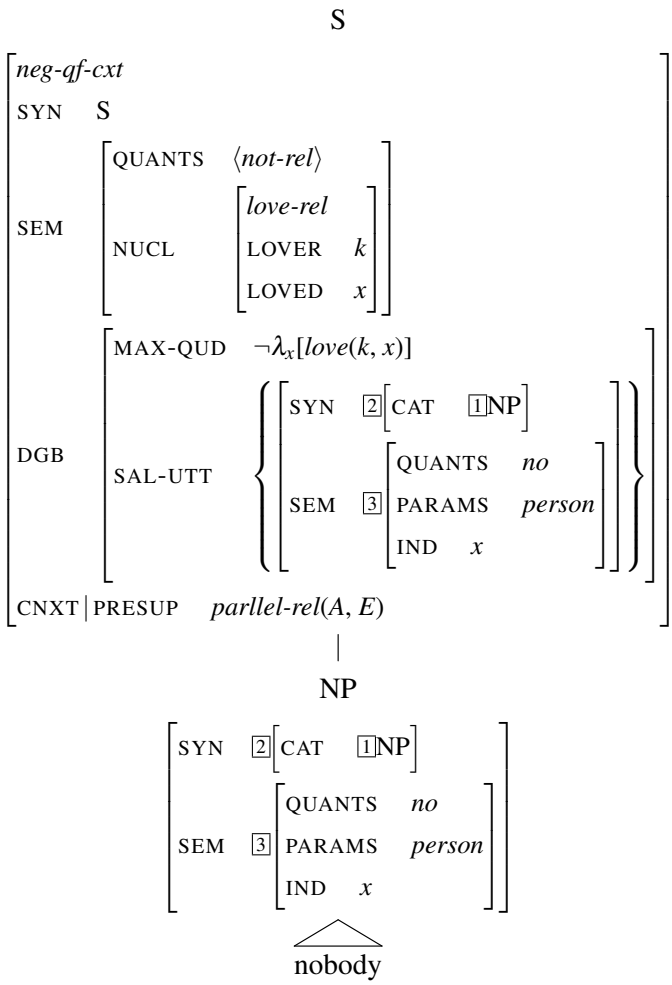
(89) **Negative Quantified Fragment Construction (↑ *hd-frag-cxt*)**:

$$\left[\begin{array}{ll} \textit{neg-qf-cxt} & \\ \text{SYN} & \text{S} \\ \text{SEM} & \left[\begin{array}{ll} \text{QUANTS} & \langle \textit{not-rel} \rangle \\ \text{NUCL} & \boxed{1} \end{array}\right] \\ \text{DGB} & \left[\begin{array}{ll} \text{MAX-QUD}\,|\,\text{NUCL} & \boxed{1} \\ \text{SAL-UTT} & \left\{\left[\begin{array}{ll} \text{SYN} & \boxed{2}\left[\begin{array}{ll} \text{CAT} & \boxed{3}\text{XP} \end{array}\right] \\ \text{SEM} & \left[\begin{array}{ll} \text{PARAMS} & \boxed{4} \\ \text{QUANTS} & \boxed{5} \\ \text{IND} & \boxed{6} \end{array}\right] \end{array}\right]\right\} \end{array}\right] \\ \text{CNXT}\,|\,\text{PRESUP} & \textit{parallel-rel}(s_0, s_1) \end{array}\right] \rightarrow \left[\begin{array}{ll} \text{SYN} & \boxed{2}\left[\begin{array}{ll} \text{CAT} & \boxed{3}\text{XP} \end{array}\right] \\ \text{SEM} & \left[\begin{array}{ll} \text{PARAMS} & \boxed{4} \\ \text{QUANTS} & \boxed{5} \\ \text{IND} & \boxed{6} \end{array}\right] \end{array}\right]$$

In a broader context, the *neg-qf-cxt* in (89) exhibits similarities to the *hd-frag-cxt*; both the constructions directly project a single phrasal level expression (1XP) to a sentential level expression. Differing from the *hd-frag-cxt*, the construction suggested above has to do with two factors: the situational information of the licensors (MAX-QUD|NUCL(eus)) and the sentential interpretation of QFs (SEM). What the construction basically does is extract polarity-neutral propositional information (NUCL) from the MAX-QUD first, and fill the semantic variable with the projected SAL-UTT information. Then, the construction turns the polarity value of the SAL-UTT to negative, using the QUANTS attribute inside the SEM attribute. That is to say, the sentential meaning of QFs stands negative regardless of the polarity of the antecedent. Thus, it formally encodes the solution drawn from the informal description of the Q-A pair in (88), the fixation of the negative meaning of the idiosyncratic QFs. For instance, the NEG-QF in (87) can be formalized as given below:

(90) A: Who doesn't Kim love?

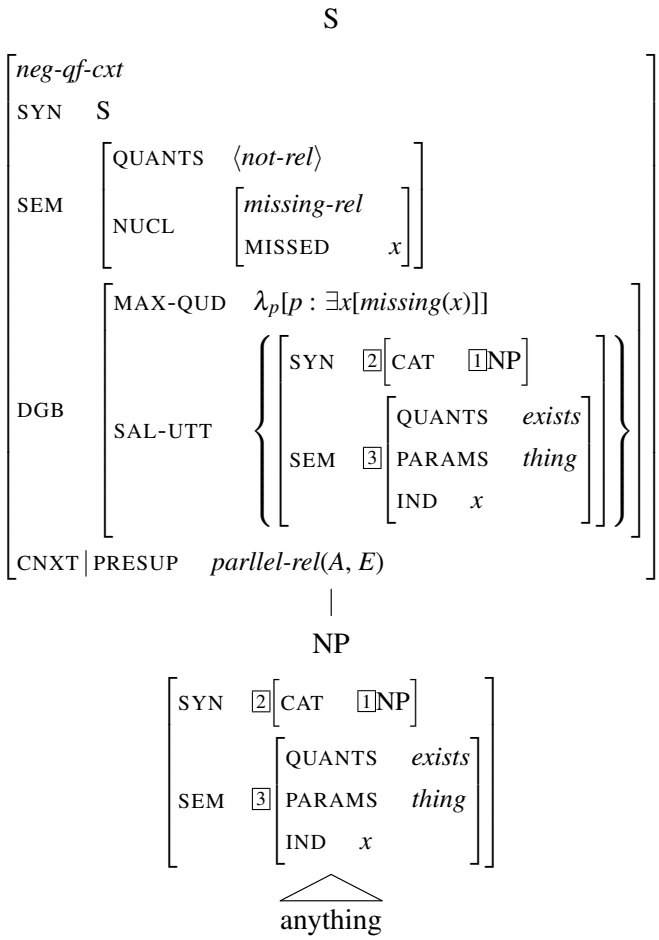
B: *Nobody*. (= 'Kim loves *nobody*.')



The NEG-QF *nobody* serves as a SAL-UTT of the dialogue, and thus, it fills the variable of the MAX-QUD and the semantic variable of the NUCL attribute. Then, the situation of *love-rel* where *k* loves *x*, *nobody*, is encoded in the Although the lexical item itself induces negation, the final interpretation of the QF is negative. It is because the situation denoted by the NUCL value is negated by the QUANTS value of *not-rel*, the constructional property of the *neg-qf-cxt*. As a result, the NEG-QF licensed by the NEG-QF-CXT induces the negative neutralization interpretation (cf., Goldberg 2006; Hilpert 2019). The NPI-QFs with a positive licensor can be predicted and described with the construction:

(91) A: Something missing?

B: *Anything*. We checked everything from the insurer's list. (COCA 1995 MOV)



The NPI-QF *anything* in (91) is to yield a negative interpretation even if its licensor is a positive polar question. As we have seen in (89), the constructional property of the *neg-qf-cxt* participates in the interpretation of the QF, inducing negative meaning. The novel construction suggested here is expected to give a robust analysis of the occurrence of the various types of QFs in a streamlined manner, demonstrating the interaction between related constructions that have to do with the nature of fragments.

Chapter 7

Conclusion

The thesis focused on English QFs interacting with the polarity. It began by illustrating the lexical properties of four types of bare-quantifiers. The thesis first briefly looked into how the previous analyses try to account for the idiosyncratic form-function discrepancy in canonical fragments, especially that of the move-and-delete approaches. Then, it tried to apply the analyses to QFs and suggested empirical issues, focusing on the polarity interaction observed between QFs and their antecedents.

The thesis assumed that the derivation-based perspective, such as the LF-copying and PF-deletion analyses, might not be enough to fully cover the complex linguistic aspects of the QFs and their form-function discrepancy. In order to look into the authentic usage of English QFs and observe the distributional tendency, a series of corpus investigations were performed using the BNC and COCA as well as the TV corpus and the MOVIE corpus. The investigation implies that the PPI-QFs and the FCI-QFs usually obey their potential licensing condition, whereas the NPI-QFs often violate it. Further, the dataset indicates that there is no way to explain the NPI-QFs serving as a VP subject if we assume the move-and-delete approaches toward canonical fragments. In addition, we observed the NEG-QFs display negative neutralization when licensed by a negative antecedent.

Based on the corpus investigation, the thesis drew a series of theoretical implications it provides. First, it applied the derivation-based approach to authentic QF data from the corpus. The results implicate that the derivation-based approach might have issues in analyzing NEG-QFs displaying negative neutralization and NPI-QFs violating the potential licensing condition. Based on the observation and theoretical implications, the thesis described the linguistic patterns of the

QFs departing from the move-and-delete approaches. In doing so, it observed and argued that QFs can be analyzed under the terminology 'semantic parallelism with alteration.' The thesis accounted for the linguistic properties of English QFs in the non-derivational, construction-based, discourse-semantics perspective based on the SBCG frameworks. It argued that as such frameworks do not posit any syntactic structures in the ellipsis site, English QFs do not take any putative source in their ellipsis site either. Then, the thesis postulated that the *neg-qf-cl*, a substrand of the *hd-frag-cxt*, allows QFs to be licensed. The proposed construction is engaged in interpreting the idiosyncratic QFs observed in the corpus investigation, fixing the polarity value of the sentential interpretation to negative polarity. The proposal can capture not only the linguistic properties of QFs and how they interact with polarity but also the similarities between related constructions in a streamlined manner.

Though the thesis is based on quantified data using corpus data and corresponding statistical tests, it still has limitations; it may not be obvious whether such idiosyncratic examples are acceptable for most speakers. In this regard, there still exist possibilities for the results to improve by another experimental research or another corpus-based research using different corpora. Such studies will fortify theoretical and empirical understanding of English QFs.

Bibliography

Abeillé, Anne and Jong-Bok Kim. 2022. *Me too* fragments in English and French: A direct interpretation approach. *The Linguistic Review* 39(3): 495–524.

Arnold, Jennifer, Elsi Kaiser, Jason Kahn and Lucy Kim. 2013. Information structure: linguistic, cognitive, and processing approaches. *WIREs Cogn Sci* 4: 403–413.

Barwise, Jon and Robin Cooper. 1981. Generalized quantifiers and natural language. *Linguistics and Philosophy* 4: 159–219.

Blanchette, Frances. 2015. *English negative concord, negative polarity, and double negation*. New York, NY: City University of New York, Ph.D. dissertation.

Blanchette, Frances. 2017. Micro-syntactic variation in American English negative concord. *Glossa: A journal of general linguistics* 2(1): 1–32.

Blanchette, Frances, Marianna Nadeu, Jeremy Yeaton and Viviane Déprez. 2018. English negative concord and double negation: The division of labor between syntax and semantics. In Patrick Farrell (ed.), *Proceedings of the Linguistic Society of America*, vol. 3, 1–15.

Brezina, Vaclav. 2018. *Statistics in corpus lingusitics*. Cambridge: Cambridge University Press.

Cann, Ronnie. 1993. *Formal semantics: An introduction*. Cambridge: Cambridge University Press.

Chung, Sandra. 2006. Sluicing and the lexicon: The point of no return. In Rebecca T. Cover and Yuni Kim (eds.), *Proeedigs of the annual meeting of the Berkeley Linguistic Society*, vol. 31, 73–91. Berkeley, CA: Berkeley Linguistics Society.

Chung, Sandra, William A. Ladusaw and James Mccloskey. 1995. Sluicing and logical form. *Natural Language Semantics* 3(3): 239–282.

Culicover, Peter W. and Ray Jackendoff. 2019. Ellipsis in simpler syntax. In Jeroen van Craenenbroeck and Tanza Temmerman (eds.), *The Oxford handbook of ellipsis*, 162–187. Oxford: Oxford University Press.

Daniel, Hardt and Maribel Romero. 2004. Ellipsis and the structure of discourse. *Journal of*

Semantics 21(4): 375–414.

Davies, Mark. 2004. *British National Corpus (BNC)*. Available online at https://www.english-corpora.org/bnc/.

Davies, Mark. 2008-. *The Corpus of Contemporary American English (COCA)*. Available online at https://www.english-corpora.org/coca/.

Davies, Mark. 2019a. *The Movie Corpus*. Available online at https://www.english-corpora.org/movies/.

Davies, Mark. 2019b. *The TV Corpus*. Available online at https://www.english-corpora.org/tv/.

den Dikken, Marcel, André Meinunger and Chris Wilder. 2000. Pseudoclefts and ellipsis. *Studia Linguistica* 54(1): 41–89.

Fălăuş, Anamaria and Andreea Nicolae. 2016. Fragment answers and double negation in strict negative concord languages. In Mary Moroney, Carol-Rose Little, Jacob Collard and Dan Burgdorf (eds.), *Semantics and linguistic theory*, 584–600.

Giannakidou, Anastasha and Suwon Yoon. 2017. *Rethinking negative polarity and free choice in comparatives: A crosslinguistic perspective*. Chicago, IL: University of Chicago and Arlington, TX: University of Texas, Arlington. Ms.

Giannakidou, Anastasia. 2001. The meaning of free choice. *Linguistics and Philosophy* 24: 659–735.

Giannakidou, Anastasia. 2002. *Polarity sensitivity as (non)veridical dependency*. Amsterdam: John Benjamins Publishing.

Giannakidou, Anastasia. 2011. *Negative and positive polarity items: Variation, licensing, and compositionality* 1660–1712. Berlin: de Gruyter.

Giannakidou, Anastasia. 2020. Negative concord and the nature of negative concord items. In Viviane Déprez and Maria Espinal (eds.), *The oxford handbook of negation*, 458–478. Oxford: Oxford University Press.

Giannakidou, Anastasia and Hedde Zeijlstra. 2017. The landscape of negative dependencies: Negative concord and n-words. In Martin Everaert and Henk van Riemsdijk (eds.), *The wiley*

blackwell companion to syntax, 1–38. Malden, MA: Blackwell.

Ginzburg, Jonathan and Philip Miller. 2019. Ellipsis in Head-Driven Phrase Structure Grammar. In Jeroen van Craenenebroeck and Tanza Temmerman (eds.), *The Oxford handbook of ellipsis*, 75–121. Oxford University Press.

Ginzburg, Jonathan and Ivan. A. Sag. 2000. *Interrogative investigations: The form, menaing and use of English interrogatives*. Stanford, CA: CSLI Publications.

Goldberg, Adele E. 2006. *Constructions at work: The nature of generalization in language*. Oxford: Oxford University Press.

Goldberg, Adele E. 2019. *Explain me this: Creativity, competition, and the partial productivity of constructions*. Princeton, NJ and Oxford: Princeton University Press.

Gries, Stefan Th. 2019. 15 years of collostructions: Some long overdue additions/corrections (to/of actually all sort of corpus-linguistics measures). *International Journal of Corpus Linguistics* 24(3): 385–412.

Gries, Stefan Th. 2022. *Coll.Anaysis 4.0. A script for R to compute perform collostructional analyses. Available online at https://www.stgries.info/teaching/groningen/index.html*.

Griffiths, James and Anikó Lipták. 2014. Contrast and island sensitivity in clausal ellipsis. *Syntax* 17(3): 189–234.

Gundel, Jeanette and Thorestein Fretheim. 2006. Topic and focus. In Laurence Horn and Gregory Ward (eds.), *The handbook of pragmatics*, 175–196. Malden, MA: Blackwell.

Higgins, Francis Roger. 2015. *The pseudo-cleft construction in English*. New York, NY: Routledge.

Hilpert, Martin. 2019. *Construction grammar and its application to english*. Edinburgh: Edinburgh University Press.

Huddleston, Rodney and Geoffrey Pullum. 2002. *The Cambridge grammar of the English language*. Cambridge: Cambridge University Press.

Iordăchioaia, Gianina. 2009. *Negative Concord with Negative Quantifiers: A Polyadic Quantifier Approach to Romanian Negative Concord*. Tübingen, Germany: University of Tübingen, Ph.D. dissertation.

Jacobson, Pauline. 2016. The short answer: Implications for direct compositionality (and vice versa). *Language* 92(2): 331–375.

Kearns, Kate. 2011. *Semantics*. London: Palgrave Macmillan.

Kim, Jong-Bok. 1999. *The grammar of negation: A constraint-based approach*. Stanford, CA: CSLI Publications.

Kim, Jong-Bok. 2012. On the syntax of the *it*-cleft construction: A construction-based perspective. *Linguistic Research* 29(1): 45–68.

Kim, Jong-Bok. 2015a. Fragments in Korean: A Direct Interpretation approach. *Studies in Generative Grammar* 25(3): 703–733.

Kim, Jong-Bok. 2015b. Syntactic and semantic identity in Korean sluicing: A direct interpretation approach. *Lingua* 166: 260–293.

Kim, Jong-Bok. 2020. Negated fragments: A direct interpretation approach. *Korean Journal of English Language and Linguistics* 20: 427–449.

Kim, Jong-Bok. 2024. Fragment answers with negative dependencies in korean: a direct interpretation approach. *Linguistics* 62(2): 385–419.

Kim, Jong-Bok and Jeferrey T. Runner. 2022. Pseudogapping in English: A direct interpretation approach. *The Linguistic Review* 39(3): 457–494.

Kramer, Ruth and Kyle Rawlins. 2011. Polarity particles: An ellipsis account. In Suzi Lima, Kevin Mullin and Brian Smith (eds.), *NELS 39: Proceedings of the 39th annual meeting of the North East Linguistic Society*, 479–492.

Krifka, Manfred. 2008. Basic notions of information structure. *Acta Linguistica Hungarica* 55(3-4): 243–276.

Ladusaw, William A. 1992. Expressing negation. In Chris Barker and David Dowty (eds.), *Proceedings of semantics and linguistic theory*, vol. 40, 237–260.

Lambrecht, Knud. 2001. A framework for the analysis of cleft constructions. *Linguistics* 39(3): 463–516.

Lee, Geonhee and Jong-Bok Kim. 2023. English exceptive constructions: A corpus-based per-

spective. *Korean Journal of Linguistics* 48(2): 279–313.

Merchant, Jason. 2001. *The syntax of silence*. Oxford: Oxford University Press.

Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27: 661–738.

Merchant, Jason. 2013a. Polarity items under ellipsis. In Lisa Lai shen Cheng and Norbert Corver (eds.), *Diagnosing syntax*, 441–462. Oxford: Oxford University Press.

Merchant, Jason. 2013b. Voice and ellipsis. *Linguistic Inquiry* 44(1): 77–108.

Merchant, Jason. 2019. Ellipsis: A survey of analytical approaches. In Jeroen van Craenebroeck and Tanza Temmerman (eds.), *The Oxford handbook of ellipsis*, 19–45. Oxford University Press.

Nykiel, Joanna and Jong-Bok Kim. 2021. Ellipsis. In Stefan Müller, Anne Abeillé, Robert D. Borsley and Jean-Pierre Koenig (eds.), *Head-Driven Phrase Structure Grammar: The handbook*, 847–888. Berlin: Language Science Press.

Nykiel, Joanna and Jong-Bok Kim. 2022. Fragments and structural identity on a direct interpretation approach. *Journal of Linguistics* 58: 73–109.

Pollard, Carl and Ivan. A Sag. 1995. *Head-Driven Phrase Structure Grammar*. Stanford, CA: CSLI Publications.

R Core Team. 2020. *R: A language and environment for statistical computing*. Vienna: R Foundation for Statistical Computing. *Available online at https://www.R-project.org/*.

Romero, Maribel. 2024. Biased polar questions. *The Annual Review of Linguistics* 10: 279–302.

Romero, Maribel and Chung-Hye Han. 2004. On negative yes/no questions. *Linguistics and Philosophy* 27(5): 609–658.

Ross, John Robert. 1967. *Constraints on variables in syntax*. Cambridge, MA: Massachusetts Institute of Technology, Ph.D. dissertation.

Rudin, Deniz. 2019. Head-based syntactic identity in sluicing. *Linguistic Inquiry* 50(2): 253–283.

Sells, Peter and Shin-Sook Kim. 2006. Korean NPIs scope over negation. *Language Research* 42(2): 275–297.

de Swart, Henriëtte. 2010. *Expression and interpretation of negation*. Dordrecht: Springer.

de Swart, Henriëtte and Ivan. A Sag. 2002. Negation and negative concord in Romance. *Linguistics and Philosophy* 25: 373–417.

Tovena, Lucia. 2020. Negative polarity items. In Viviane Déprez and Maria Espinal (eds.), *The Oxford handbook of negation*, 391–406. Oxford: Oxford University Press.

Traugott, Elizabeth Closs and Graeme Trousdale. 2013. *Constructionalization and constructional changes*. Oxford: Oxford University Press.

Weir, Andrew. 2014. *Fragments and clausal ellipsis*. Amherst, MA: University of Massachusetts Amherst, Ph.D. dissertation.

Weir, Andrew. 2015. Fragment answers and exceptional movement under ellipsis: A PF-movement account. In Thuy Bui and Deniz Özyıldız (eds.), *Proceedings of 45th North East Linguistics Society*, 175–188.

Weir, Andrew. 2020. Negative fragment answers. In Viviane Déprez and Teresa Espinal (eds.), *The Oxford handbook of negation*, 441–457. Oxford: Oxford University Press.

Werle, Adam. 2003. A typology of negative indefinites. In Mary Andronis, Erin Debenport, Anne Pycha and Keiko Yoshimura (eds.), *Papers from the 38th meeting of the Chicago Linguistic Society*, 127–143. Chicago, IL: Chicago Linguistic Society.

Zeijlstra, Hedde. 2022. *Negation and negative dependencies*. Oxford: Oxford University Press.

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본 연구는 영어에 존재하는 네 종류의 양화 조각문(quantified fragments, QF)과 극성(polarity) 간의 상호작용을 중점적으로 탐구한다. 생략구문(elliptical constructions)에 대한 전통적인 관점은 생략구문이 문법적 결함이 없는 기저구조(underlying structure)를 가지며, 일련의 언어학적 파생기재(derivation operation)가 생략구문의 불완전한 문법적 구조를 도출한다고 주장한다. 본 연구는 이와 같은 파생적 접근에 대한 비판적 검토에서 비롯해 QF와 극성 사이의 상호작용에 대한 실증적인 문제에 주목한다. QF의 언어학적 특징을 파악해 이론적 함의를 끌어내기 위해 말뭉치(corpus) 자료 조사를 수행하며, 그 결과 긍정극어(肯定極語, Positive Polarity Item) 조각문과 자유선택어(Free Choice Item) 조각문의 경우, 대체로 긍정선행문(positive antecedent)을 따라야 한다는 허가조건(licensing condition)을 위반하지 않음을 확인한다. 반면, 부정극어(否定極語, Negative Polarity Item) 조각문은 문법적으로 올바른 기저구조를 이끌어낼 수 없는 상황에서도 QF로 사용될 수 있다는 점을 확인하며 파생적 접근을 반증한다. 나아가 부정적 부정어(否定的 否定語, Negative Indefinite) 조각문은 긍정선행문과 부정선행문 모두를 따를 수 있으며, 부정선행문을 따르는 모든 경우에서 부정중성화(negative neutralization)가 발생해 재구성한 기저구조와 QF의 실질적 의미가 서로 반대의 극성을 가짐을 확인한다. 이러한 언어학적 함의를 기반으로, 본 연구는 생략구문이 비파생적(non-derivational)으로 발생하며 문법적인 기저구조를 갖지 않는다는 기호기반구문문법(Sign-Based Construction Grammar)의 관점에서 영어의 QF를 분석하고자 한다.

주제어(Key words): 조각문(fragments), 말뭉치 기반(corpus-based), 양화 현상(quantification), 극성(polarity), 비파생적 관점(a non-derivation based perspective)