

Exocentric Noun Phrases in English

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Declaration

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

The term ‘exocentric noun phrase’ (ENP) refers to a noun phrase without a head noun. The category of ENPs contains a range of nominal constructions including phrasal ones (e.g. *the rich*, *the dead*, whose head nouns denoting human references are missing) and clausal ones (e.g. *I'll eat what you give me*, in which there seems to be a missing nominal antecedent). Although these constructions have been studied before, there has been very little comprehensive research on ENPs as a category.

This thesis has two aims to accomplish: first, it fully examines ENPs with the support of contemporary and historical corpus data; secondly, based on this direct syntactic examination of ENPs, it critically evaluates the possibility of a unified theory.

The first aim is addressed in Chapters 3 to 8, in which I conduct systematic reviews of four representative kinds of ENPs in English, i.e. Generic Constructions (ENPs with a pattern of ‘determinative + adjective’ such as *the rich* or *the sublime*), referential metonymy (e.g. *Shakespeare is on the bookshelf*, where *Shakespeare* refers to his works), compound pronouns (indefinite pronouns with compounding morphology such as *someone* or *anything*) and free relatives (relative clauses without explicit antecedents, e.g. *She is who I refer to*). Syntactic explanations are proposed for each of these ENPs.

The second aim is addressed in Chapter 9, based on the proposals of the previous chapters. I argue, contra Huddleston & Pullum et al. (2002) and Payne et al. (2007), that there cannot be a unified solution for all ENPs, including their ‘fusion of functions’ theory (FFT): although ENPs share a superficially similar syntactic structure characterised by the lack of head nouns, the forms of the missing head nouns and the mechanisms underlying the absence of these head nouns vary (historical ellipsis, compounding, conjunction of clauses, etc.). As a result, each kind of ENP needs an individual, more specific account that takes into consideration its own syntactic behaviour and historical development.

Impact statement

This thesis provides a comprehensive account for ‘Exocentric Noun Phrases’ (ENPs) in English, which are noun phrases without overt nominal heads. The literature on English noun phrases generally focuses on issues concerning headed noun phrases, which are more ‘normal’ and ‘regular’, but the study of ‘irregular’ noun phrases, often under the guise of other kinds of constructions, has been largely neglected. Grammarians tend to regard ENPs as ‘exceptions’ of established syntactic rules, not paying much attention to how those exceptions differ from the regular noun phrases and why there are the differences. This thesis explores the frequently neglected corners of the hall of English grammar, with many new findings that either improve existing theories on English noun phrases, or help to establish new models which have not been proposed before. For example, in the thesis I put forward a new category of ‘compound phrase’, which I regard as a morphological state distinctive from both ‘word’ and ‘phrase’. These new findings, I believe, will inspire additional future studies, especially relating to ‘irregular’ syntactic constructions in English.

This thesis will make an impact on grammar writing and teaching. Professional grammar books, including comprehensive manuals like *A Comprehensive Grammar of the English Language* (Quirk et al. 1985) and *The Cambridge Grammar of the English Language* (Huddleston & Pullum et al. 2002), just briefly mention ENPs in a few pages without providing details. Outside academia, unprofessional grammar writers, or ‘language mavens’ as Pinker (1994) calls them, often view the English language from a prescriptive perspective. In each chapter I describe the syntactic behaviour of a particular kind of ENP based on corpus data, and quite a few of my findings are directly in conflict with the ‘guidance’ of the prescriptivists. Therefore, the thesis will provide some new insights, which are based on detailed corpus studies, for a more precise account of grammar.

As far as I know, grammar teaching is also significantly influenced by prescriptivism at least in some countries like China. In Chinese schools the teaching of English grammar often involves outdated descriptions and rules or even groundless

assertions. I once heard a teacher discussing how certain relative words can be if the antecedents of the relative clauses are compound pronouns (e.g. *something*, *nobody*), a kind of ENPs – in fact, the simple truth is that there is no difference. I believe that some of the findings of this thesis can be suitable for grammar teaching: not only can they correct the false ideas inculcated in the students, but they will also help the students to gain a deeper understanding of grammar, because ENPs usually have more complex structures and distinctive paths of historical development. After all, the description of grammar should be the result of scientific exploration, rather than the product of subjective assumptions.

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1. Introduction

1.1 Exocentric Noun Phrases: initial observations

1.1.1 Heads, endocentricity and exocentricity

In his renowned book *Language*, Leonard Bloomfield (1933: 195) argues that a ‘head’ represents a structure such that “[i]n subordinative endocentric constructions, the resultant phrase belongs to the same form-class as one of the constituents”. In grammatical theories thereafter, the feature that a head poses some domination of the phrase in which it is contained remains a significant element in the definition of ‘head’. For example, Matthews (2014: 171) defines ‘head’ as “a word or other unit which may stand for, or is seen as, characterising a construction of which it is the part”. The characterisation may be syntactic, semantic and morphological, in which case the head is usually in a determining position. In the phrase *a happy child*, for instance, the word *child* is referred to as the head because it shapes the whole phrase semantically (*a happy child* is a kind of *child*), syntactically (*a happy child* is a noun phrase, based on the word class of *child*, which is a noun), and morphologically (*child* bears the genitive inflection in *a happy child’s toys*). It is therefore considered as the core part of the phrase.

With the introduction of the notion ‘head’ arises the differentiation between endocentric constructions, which have proper heads, and exocentric constructions, which do not. *Poor John*, as Bloomfield argues, is a typical endocentric construction, and so are other English character-substance constructions like *fresh milk*. However, Bloomfield’s way of specifying those two constructions in syntax has been abandoned in modern English grammars, and now exocentricity and endocentricity are mainly used in the study of compounds, in which exocentric compounds are the ones that do not contain semantic heads (e.g. *silverfish* is not a kind of *fish*) (Katamba 2005), perhaps due to “a general assumption that all syntactic categories are endocentric” (Bauer 2016: 461). Nearly all constructions that Bloomfield (1933: 194) recognises as exocentric

constructions, despite the fact that they are “few”, have been regarded as endocentric as grammatical theories developed. The two major categories that Bloomfield believes to be exocentric are preposition phrases (e.g. *beside John*, *with me*) and subordinate clauses (e.g. *if John ran away*), which are now typically deemed to be endocentric. In fact, apart from very few constructions such as coordination (Huddleston & Pullum et al. 2002: 1275), the presence of heads is compulsory in some syntactic theories like Head-Driven Phrase Structure Grammar (HPSG; see e.g. Levine 2017). In X-bar syntax, heads are also indispensable, as a particular phrase is considered the projection of the element X, whether it be a noun, a verb, or a preposition (van Eynde 2006: 140).

This thesis focuses on the head of noun phrases – or to be precise, the lack of a head in noun phrases. The headhood of noun phrases may seem to be a straightforward issue, yet it is problematic when particular constructions are examined. In what follows I will first introduce the criteria that we can use to establish headhood in Section 1.1.2, and then introduce my topic, namely ‘Exocentric Noun Phrases’, in Section 1.1.3.

1.1.2 *The head of noun phrases*

When the notion of ‘head’ has been acknowledged, the next step is to explore which element of a construction is the head. Determining the head of a particular phrase, however, is not always straightforward – the complication of headhood has been revealed by the debate between Zwicky (1985) and Hudson (1987), whereby Zwicky proposes eight criteria for head testing and Hudson reduces them to six (Hudson 1987: 110-117):

- i. *Morphosyntactic locus*: the constituent where any inflections which are relevant to the mother are located. The word *students* is classified as the head of *the students* as it bears the plural *-s*.
- ii. *The subcategorizand*: the constituent which is subcategorized with respect to its sisters, in the familiar sense. *Give*, for example, is the subcategorizand of the corresponding VP as it occurs in both V+NP+NP (*give*

- Kim money) and V+NP+to+NP (give money to Kim) constructions.*
- iii. *The governor*: the constituent which determines the morphosyntactic form of some sister. An instance given by Zwicky (1985: 7-8) is that *control* is the head of *control them* because it licenses the accusative case of its sister *them*.
 - iv. *The distributionally equivalent constituent*: the constituent whose distribution is similar to that of the mother. Under this criterion *write* is the head of *write a letter* as *write a letter* has the same distribution as *write*, not *a letter*, e.g. *John writes/writes a letter/*a letter* (where both *writes* and *writes a letter* function as predicate).
 - v. *The obligatory constituent*: the one which has to be present if the mother is to be categorized as it is. This is also illustrated in *write a letter*, in which *a letter*, instead of *write*, is omitted. The indispensable component (*write*) is therefore the head.
 - vi. *The ruler of dependency theory*: in a dependency-based analysis, the ‘ruler’ is the word on which other words depend.¹

With regard to NPs, Keizer (2007: 10-20, 2020: 342-345) provides a more comprehensive and specific summary of the criteria:

- i. Semantic criteria: Jespersen (1924: 96) believes that the head is the word of “supreme importance”, which is quite vague. Keizer argues that two operational tests, namely ‘distributional equivalence’ (iv above) and ‘obligatoriness’ (v above), are particularly useful. For example, in *the boys* the word *boys* is more important because it has the same distribution as the whole

¹ This is Hudson’s paraphrase. Zwicky calls it a ‘morphological determinant’, which he explains as follows (1985: 18): if X occurs exclusively in ZP and Y occurs in a range of structures including ZP, then X, instead of Y, is the morphological determinant of ZP. For instance, the preposition *in* can only occur in preposition phrases like *in the room*, *in his article*, but the noun *room* may also occur in NPs (e.g. *my room*), VPs (e.g. *enter the room*) or other constructions. Thus *in*, rather than *room*, is the head of *in the room*.

NP (i.e. functioning as subject, object, PP complement, etc.) and cannot be omitted (e.g. *The boys/Boys/*The are waiting there.*).

ii. Syntactic criteria:

- a) Subject-verb agreement: verb agreement is determined by the head noun of the subject (e.g. *The book is mine./The books are mine.*);
- b) Determiner-head agreement: similar to subject-verb agreement, the determiners agree with nouns (e.g. *This book is mine./These books are mine.*);
- c) Morphosyntactic locus: also borrowed from Zwicky (i above). The morphosyntactic locus of an NP is the constituent bearing the nominal inflection, such as the plural -s;
- d) Stress: the stressed word is taken as the head (e.g. *the 'boys*);
- e) Discourse factors: the head of the NP can be replaced by pronouns in anaphora (e.g. *This book is mine, and that one is yours.*)

Nonetheless, these clear and well-formed criteria do not alleviate the complication of determining NP heads; on the contrary, they make this issue more complex because they are “often inconclusive and open to more than one interpretation” (Keizer 2007: 20). No matter which criterion is used, counterexamples are always available. The situation becomes more severe with the introduction of ‘the DP Hypothesis’ – in which many would argue that the head of an NP is in fact its determiner. For example, in *these books*, does *these* agree with *books*, or does *books* agrees with *these*? Also, nouns can be ommissible as in *These books/These are mine*, and in *these are mine* we might also argue that *these* is the morphosyntactic locus. However, as evidence favouring noun heads accumulates, the DP Hypothesis is also under attack. After the criticisms of van Langendonck (1994), Hudson (2004), who has argued for determiners as heads for many years, admits that either determiners or nouns can potentially be heads. Moreover, there are arguments for multiple heads, as proposed in Radford (1993), who proposes that NPs are double-headed. This stance is challenged by Payne (1993), who maintains that NPs are single-headed and the proposed head is a noun.

Of course, the debate on NP heads does not mean that the criteria are meaningless; they just suggest that a “harmonious” analysis which Hudson (1987: 124) claims to achieve is quite impossible. A better treatment may be that we should analyse NPs not as an undifferentiated class, but on a case by case basis; or, as Keizer argues, we can also regard the headhood in NPs as a matter of degree: “Where two elements compete for headedness, the one fulfilling most criteria wins out” (Keizer 2007: 21).

1.1.3 Exocentric noun phrases

Now consider the following examples:

- (1) a. *Rich people* are lazy. (BNC: B20)
- b. *The rich* were, by and large, country gentlemen. (BNC: KAY)

Rich people in (1a) is an NP, and the head of this NP is *people* – this can be confirmed by *people* fulfilling most of Keizer’s (2007) criteria:

- (2) a. Distributional equivalence/obligatoriness: *Rich people/People are lazy*.
- b. Subject-verb agreement: *Rich people are/*is lazy*.
- c. Determiner-head agreement: *These/*This rich people are lazy*.
- d. Morphosyntactic locus: *Rich people are lazy./The rich person is lazy*.
- e. Stress: *'Rich people are lazy*.
- f. Discourse factors: *Rich people are lazy, and I'm sure they are/*he is*.

Apart from the ‘stress’ criterion, which is debatable, *people* ‘wins out’ as it complies with the other criteria. Therefore, *rich people* is an NP in which *people* is the head and *rich* is a modifier.

How about *the rich* in (1b)? On the surface it is a phrase consisting of a determinative *the* and an adjective *rich*, and the head should be one of the two components, i.e. *the rich* is either a determinative phrase or an adjective phrase

(Hypothesis 1).

HYPOTHESIS 1: *The rich* is either a DP or an AdjP.²

We can test this by replacing *the rich* in (1b) with a typical DP or AdjP (3a-b):

- (3) a. **Almost no* were, by and large, country gentlemen.
- b. **Very rich* were, by and large, country gentlemen.

It is, therefore, not feasible to argue that *the rich* is either a determinative phrase or an adjective phrase. Rather, it seems that *the rich* is both semantically and syntactically similar to *rich people* in (1a), as the two constructions can be used interchangeably:

- (4) a. *Rich people/The rich* are lazy.
- b. *The rich/Rich people* were, by and large, country gentlemen.

Moreover, *the rich* has the same syntactic distribution as common NPs. For instance, they can also function as object (5a), or PP complement (5b).

- (5) a. This system tends to benefit *the rich/rich people*.
- b. In some places, ownership of a car is the privilege of *the rich/rich people*.

We may tentatively conclude that *the rich* is an NP like *rich people*, and Hypothesis 1 should be rejected. We next assess Hypothesis 2:

HYPOTHESIS 2: *The rich* is an NP and its head is either *the* or *rich*.

² Note that in this hypothesis DP usually refers to ‘determinative phrase’, a term used in Huddleston & Pullum et al. (2002) (see Section 1.2.1 for a detailed discussion). However, since some theories that presume Abney’s (1987) ‘DP Hypothesis’ will be introduced in later chapters, the term DP (referring to NP) may also be retained. But on those occasions I will signify the meaning of ‘DP’.

Again, Hypothesis 2 can be tested using Keizer's criteria.

- (6) a. Distributional equivalence/obligatoriness: neither *the* nor *rich* fulfils this criterion, as is shown by **The/*Rich were country gentlemen*.
- b. Subject-verb agreement: not applicable, because determinatives and adjectives cannot function as subject.
- c. Determiner-head agreement: there is no agreement between *the* and *rich*.
- d. Morphosyntactic locus: both show some morphosyntactic changes. There are some marginal constructions as *these/those rich*, but not **this/*that rich*; also, *the richer* is possible.
- e. Stress: *the 'rich*.
- f. Discourse factors: neither element can be the antecedent in anaphora.

The results of (6) are not ideal, or at least it is not convincing enough to regard either *the* or *rich* as the head. Hence Hypothesis 2 needs some amendment:

HYPOTHESIS 3: *The rich* is an NP and its head is an invisible extra element.

This hypothesis posits a nominal element which semantically describes a concept equivalent to 'mankind', as is indicated by *gentlemen* in the predicate. Also, *gentlemen* hints that this element could be plural. Suppose this nominal element exists and this plural human-denoting element is the head (we may temporarily term it as 'N-pl.'), and then run the tests again:

- (7) a. Distributional equivalence/obligatoriness: not applicable as it is not phonetically expressed. But if we use a phonetically expressed equivalent *people* instead, then it is obligatory: **The/*Rich/People were country gentlemen*.
- b. Subject-verb agreement: yes, *were* agrees with N-pl.

- c. Determiner-head agreement: in English *the* is number-neutral, so it agrees with N-pl. Also, as discussed in (6d), we marginally have *these/those rich N-pl.*, but not **this/*that rich N-sg.*
- d. Morphosyntactic locus: yes, as *-pl.* stands for the plural inflection.
- e. Stress: N-pl. is not stressed, as it is phonetically null.
- f. Discourse factors: yes, as in *The rich N-pl. were country gentlemen and they were lazy.*

Despite the complications caused by its phonetic emptiness, N-pl. performs quite well with regard to the tests in (7), which prove Hypothesis 3. In conclusion, *the rich* exemplifies a series of constructions that 1) are NPs; and 2) contain no visible noun heads. These constructions are termed ‘Exocentric Noun Phrases’ (henceforth ENPs) in this dissertation.

1.2 The research

1.2.1 Grammatical framework and terminology

This study is based on the conventions of *The Cambridge grammar of the English language* (*CGEL*; Huddleston & Pullum et al. 2002), and the grammatical terms used throughout each chapter are largely adopted from *CGEL*, in which the most important feature related to this study is the distinction between category and function. In *CGEL* Huddleston & Pullum et al. (2002) define *lexical category* similarly as ‘part of speech’ or ‘word class’ in traditional grammars (e.g. nouns, verb, preposition, etc.), and *phrasal category* as the category of constituents consisting of more than one lexical item (e.g. noun phrase, verb phrase, preposition phrase, etc.). On the other hand, the authors also maintain a related but different set of concepts – *grammatical functions*, by which they mean the particular roles constituents play “in the constructions, the larger units, that they belong to” (Huddleston & Pullum et al. 2002: 23). Concepts such as subject, object, predicate and complement are examples of grammatical functions. The relationship

between syntactic categories and grammatical functions is reiterated in Huddleston & Pullum (2020: 204):

Certain other frameworks, however, have taken a third view: that categories and functions, though crucially separate, are both independently needed, and neither is eliminable, or derivable from the other...*CGEL* adopts this notion for indicating functions in syntactic representations.

Based on this notion, the authors “break with the tradition and its terminological practices” (Huddleston & Pullum 2020: 201) and establish their own norms. The ones that are particularly relevant to this study are illustrated in the following example:

- (8) This global university is in London, where I studied English before.

The grammatical terms regarding the categorial analysis of example (8) are summarised in Table 1-1.

Constituent(s)	Syntactic category	Grammatical function
<i>this global university</i>	noun phrase (NP)	subject
<i>this</i>	determinative	determiner
<i>global</i>	adjective ³	modifier
<i>university</i>	noun	head (of an NP)
<i>where</i>	preposition	relative word (prenucleus) /adjunct
<i>before</i>	preposition	adjunct

Table 1-1 Grammatical terms used in analysing example (8), based on the conventions of Huddleston & Pullum et al. (2002).

In Table 1-1 two points need further explanation. First, *this* is a ‘determinative’ in terms of its category and a ‘determiner’ in terms of its function. The former is often confused with the concept of determiner in both traditional grammars and in generative syntax. In this study it is assumed that ‘determinative’ and ‘determiner’ are notions that belong to different grammatical domains; as a result, DP usually refers to ‘determinative

³ Strictly speaking, it is an adjective that heads an adjective phrase.

phrase', a kind of phrase which is headed by determinatives (e.g. *almost all*), unless it is noted otherwise. As I do not presume the DP Hypothesis of generative frameworks, phrases like *the students* are generally regarded as NPs, unless certain generative theories are being discussed.

Second, prepositions without nominal complements, like *before* and *where*⁴ in Table 1-1, are regarded as prepositions, rather than as adverbs. The unification of the class of prepositions is perhaps one of the most striking features of Huddleston & Pullum et al. (2002) compared to traditional grammars, and they provide convincing evidence for doing so, which can be found in Huddleston & Pullum et al. (2002: 606-617, 2005: 128-133, 2020: 209-211). I will not repeat the evidence here, but will rather presume that most temporal and locative adverbs in traditional grammars, which have the same form as corresponding prepositions, retain their prepositional status in this study (e.g. *before* in both *the days before* and *the days before July* is a preposition).

Despite the acceptance of basic conventions and concepts of *CGEL* and its 'category/function distinction', this dissertation remains critical to the theories and accounts derived from the basics. In the following chapters I will discuss 'Fusion of Functions' theory (abbreviated as FFT), an account from Huddleston & Pullum (2002) and Payne et al. (2007) for some ENPs, without the assumption that it is superior to any other syntactic approach. In fact, I will argue that FFT is not sufficiently effective as it seems, and there are more suitable analyses.

1.2.2 *Aims and scope*

This dissertation explores certain kinds of ENPs. I aim to answer to the following research questions:

- i. What are the correct analyses of ENPs?
- ii. What is the nature of ENPs? Is a synthetic theory of ENPs possible?

⁴ In later chapters I will further argue that *where* could even be nominal at least on some occasions.

It is worth noting here that I am not aiming to account for *all* ENPs: it is both impossible to establish the nature of every kind of ENP and impractical to explore them within the word limit of a dissertation. Rather, I will only focus on a few types, namely those which are the most representative (e.g. *the rich*, which I discussed in Section 1.1.3) and others have been largely neglected by previous studies. I will give a short introduction to the types of ENPs involved in this dissertation in Section 1.3.

1.2.3 *Methodology: corpora as sources of grammar research*

1.2.3.1 The corpora

This study is characterised by the intense employment of corpus data as an indispensable source of evidence for syntactic argumentation. The corpora used as sources of attested examples include, but are not confined to, the *British Component of the International Corpus of English* (ICE-GB), the *British National Corpus* (BNC), the *Corpus of Contemporary American English* (COCA), the *iWeb Corpus* (iWeb), *A Representative Corpus of Historical English Registers* (ARCHER), the *Corpus of Historical American English* (COHA) and the *Helsinki Corpus of English Texts* (HC). For a brief introduction to these corpora, see Appendix. They do not share the same status throughout the study; due to their distinctive characteristics such as length, ways of tagging and parsing and types of genres included, they have been employed in different stages of research for various purposes. Apart from professionally constructed corpora, data are also collected from other sources, which I also regard as some kind of ‘corpora’: newspapers, magazines, bulletins, etc., as well as the Internet. They might not fit into the definitions of Leech (1992) and Sinclair (1996) as being real corpora, because they are not deliberately collected and ordered in a scientific way, but I believe those pools of English language data are still representative to some extent, as most of them contain authentic materials and are produced with care. Therefore, examples collected from the above sources, albeit treated with caution, are of the same value as

those from professionally compiled corpora.

1.2.3.2 The stages and purposes of using corpora

Corpus data are mostly used for qualitative discussions in this study, and not for quantitative analyses. Examples from corpora are considered particularly important to introduce particular constructions and for argumentation purposes. In the preparatory phases of writing each chapter, the behaviour of syntactic constructions, such as inflection, distribution and collocation, will be briefly explored as a starting point of actual discussions. ICE-GB has proved to be a powerful tool for this task: as a fully parsed corpus, it facilitates the observation and cataloguing of syntactic structures by providing direct information on not only forms (e.g. word classes), but also functions in clauses. At this stage it is mainly the basic features that are explored in order to pave the way for the following arguments. Corpora such as ICE-GB are crucial here for a researcher, especially a non-native English speaker, as it helps to find more patterns which “intuition alone cannot perceive” (McEnery et al. 2006: 7).

On the other hand, corpora serve a somewhat different function in argumentation: they provide evidence to prove, or disprove, certain theories. While theories can be tested introspectively by linguists creating their own examples, the results are often affected by one’s dialect and sociolect, and the process of introspection and self-monitoring may not represent typical language production (McEnery et al. 2006: 6). It is sometimes impossible for certain patterns to be accepted by all speakers, and the variations of acceptability can make the falsification of some theories extremely difficult: a theory may be considered true as long as a handful of people speak that way. Therefore, a tool that is able to substantially reduce subjectivity (i.e. corpora) is needed. Meyer (2002) observes that some minimalist linguists might argue that the phenomena observed in corpora are ‘peripheral’ to universal grammar and that they can occasionally be attributed to performance errors which do not reflect language competence. Moreover, the limited length of corpora suggests that a structure that is not found in corpora does not mean it cannot exist. My reply is that, first, errors are

inevitable in every discipline (if it calls itself ‘a science’) and there is no evidence indicating that the intuitions of linguists are a more reliable controller of grammatical performance. Second, I consider my research to be a ‘corpus-based’ instead of a ‘corpus-driven’ study, which means that corpora are useful tools that help me with syntactic argumentation, but they are not a replacement of the argumentation process. Of course, the tools are ideally broad and accurate, so that I can make my arguments more convincing. This second point calls for the use of large and trusted corpora, which is exactly why I want to include the BNC and COCA (with more than 100 million words) at this stage: they work to compensate for the short size of ICE-GB. In fact, the BNC and COCA may still be insufficiently large when some rare constructions are tested. We can then use the 14-billion-word *iWeb Corpus* to help. I believe that the data contained in the three corpora is sufficient for me to cast doubts on a theory if examples proving it are not found or are extremely scarce. However, very large corpora like the *iWeb Corpus* are not without disadvantages. This corpus directly extracts data from the Internet, which means that variables such as genre, the length of each sample or sociolinguistic characteristics are not properly controlled. But this is perhaps the cost of being large. There is hardly a better way of making grammaticality judgements, other than consulting authentic examples derived from corpora.

1.2.3.3 Diachronic research

Although the thesis focuses on ENPs in Present-Day English, diachronic research is involved in most chapters, due to my belief that it is not possible to investigate a certain construction by assuming its stability over time. There are two kinds of diachronic research in the thesis: first, data are compared within a particular period of time (i.e. Present-Day English in this dissertation), and such a comparison may be realised by employing corpora which record the same linguistic material in different periods. Second, data are compared across different periods of time, i.e. historical corpus studies. In those studies historical corpora are used, with ARCHER being the primary choice. As supplements, HC and COHA are also resorted to when ARCHER is considered

insufficient: HC provides data up to Old English, and COHA contributes a much larger database between the 19th and 20th centuries. However, it is worth noting here that diachronic corpus investigations are small scale, indicative studies, which are potential for further, more extensive research.

1.2.3.4 The judgement of corpus data

Finally, there is a crucial question that every researcher who employs corpora in their study should answer: how reliable are corpus data? The use of corpus data has been extensively discussed (e.g. Wallis 2020, Sprouse & Schütze 2020). In this thesis two specific questions are more relevant in particular: can we determine that a construction is ungrammatical if it does not occur in corpora? Also, can we determine that a construction is absolutely grammatical if it occurs in corpora?

The standard answer for the first question is ‘no’. As Brezina (2018: 19) argues:

[W]e can derive a general rule: unless the corpus represents the whole population, the absence of evidence is not the evidence of absence. In other words, if an expression does not appear in a corpus, this doesn’t mean that this expression is non-existent.

Although extremely large corpora operated on the World Wide Web may give us some confidence that certain expressions could be unlikely if they do not appear throughout the Internet, I am still cautious about declaring ungrammaticality. My methodological strategy in such cases has been to ask for comments from English informants before I make a decision. If a construction does not exist in corpora and my informants also believe that it does not exist, then the construction in question is deemed to be ungrammatical.

The second question is more difficult, as corpora do not prevent potential grammatical failure. However, my assumption is that most data included in corpora are grammatical, and we should take a random example as a good one by default. Therefore, while I try to avoid examples which only appear once, I will regard a construction as

acceptable when there are at least two examples in a certain corpus.

Another related problem is that sometimes the intuitions of native speakers contradict corpus data. For example, in Chapter 3 I adopt some observations from Larson & Marušić (2004), but there are also some conclusions that I do not share, one of which is their treatment of the semantics of *someone responsible*. Inspired by Bolinger (1967), they argue that while *the responsible individual* means something intrinsic (i.e. ‘a person who is reliable and trustworthy in character’) and *the individual responsible* denotes an episodic reading (i.e. ‘a person who is accountable for particular events’), *someone responsible* has only the latter reading. I found the following example in the *iWeb Corpus* that contradicts these claims,:

- (9) This is great for the buyer who tends to want an owner to stay on. After all, the owner is *someone responsible and conscientious* who understands the business inside and out. (<https://bit.ly/31jJKiH>)

In (9) *someone responsible* undoubtedly has the intrinsic reading, because the coordinated adjective *conscientious* indicates the same reading. However, in this particular case, as there is only one counterexample in the BNC, I take a conservative stance not to argue that Larson & Marušić’s original claim is incorrect. Throughout this dissertation I have found several other cases of examples that contradict claims made in the literature. When this happens, I will cast doubt on the reliability of the theories in question – and sometimes exclude them from discussion.

1.2.3.5 Introducing the corpora used in this dissertation

Most of the examples quoted in this dissertation are retrieved from the following corpora:

The British component of the International Corpus of English (ICE-GB) is a fully parsed corpus consisting of one million words. Its contents are well balanced, as both the spoken part and the written part takes up around 500,000 words. Due to its small

size, ICE-GB is not ideal for studying uncommon constructions, but it has proved useful for comprehensive pilot research as users may directly explore particular grammatical constructions instead of transforming them into lexical strings (Wallis 2020). Although ICE-GB is not a major source of data in any of the following chapters, it is considered an important supplement to the major sources.

The British National Corpus (BNC) contains data from early 1990s. It is a 100 million collection of samples of spoken (10%) and written language (90%) (Burnard 2007). It is a significant source of attested data for all chapters, and it is often the primary tool when a synchronic quantitative study is needed.

The Corpus of Contemporary American English (COCA) contains 20 million words each year from 1990 to 2019, making it a sizeable corpus consisting of more than 600 million words (Davis 2019). As it is six times larger than BNC, it is a good source of uncommon constructions. In this thesis I have used COCA to complement the BNC.

A Representative Corpus of Historical English Registers (ARCHER) is a multi-genre historical corpus of British and American English from 1600 to 1999. The current version (ARCHER 3.2) consists of 3.3 million words, and about 2 million words are British English (Costea 2014). It is used in Chapter 4 and Chapter 5 for historical studies on Modern English.

The Helsinki Corpus of English Texts (HC) is a historical corpus of 1.57 million words. It collects data from the Old English period (c. 730) to Early Modern English period (1710) (Säily 2018). It is used to supplement ARCHER in Chapter 5, because apart from an overlap of 110 years (1600-1710), they cover data from completely different historical periods.

The Corpus of Historical American English (COHA) is “the largest structured corpus of historical English” (Davis 2019), containing more than 400 million words from 1810s to 2000s. It supplements ARCHER in Chapter 4 as it is more than 100 times larger than the latter. However, the use of COHA is restricted because it only covers data in the last two centuries, which could compromise its representativeness. When data from ARCHER is available and sufficient, COHA will not be used.

The iWeb Corpus (iWeb) contains 14 billion words (Davis 2019) of data gathered from the Internet, which makes it useful in finding extremely infrequent constructions. As discussed in the previous section, it is not a systematically compiled corpus but rather a cache of web pages, which could be its downside. IWeb is used in this dissertation as a last resort: when the other corpora do not yield enough data, iWeb is consulted.

The *Oxford English Dictionary* (OED) is “widely regarded as the accepted authority on the English language” (OED, 2020). It documents the history of more than 600,000 words over 1,000 years with 3 million quotations. OED is used thoroughly in this dissertation, mainly as a means of tracing the historical development of certain words (e.g. when did a word first appear in English) and a source of historical examples.

The *Middle English Dictionary* (MED) covers the Middle English period (roughly 1175-1500) and provides over 3 million quotations. Some examples in this dissertation is extracted from MED.

Early English Books Online (EEBO) contains digital copies of more than 146,000 printed works before 1700 (ProQuest, 2020). Apart from the page images, transcribed texts are also available – which is the source of a few examples in this dissertation.

1.3 Plan of the following chapters

A brief introduction to previous studies on ENPs (although not all studies use this term) will be provided in Chapter 2. Then the following chapters are arranged in accordance with the structural complexity of ENPs, i.e. I will first discuss lexical ENPs, and then phrasal and clausal ones.

I will start with a discussion of what I will call compound pronouns like *something*, *nobody* and *anywhere*. In most of the literature they are called ‘indefinite pronouns’, but here I follow the tradition of Quirk et al. (1985) because their category of ‘indefinite pronouns’ may also involve some non-compound words, such as *any* in *He can't convince any of us*. Although traditionally these items are regarded as pronouns, there

is plenty of evidence showing that they are syntactically closer to both determinatives and nouns, which makes some scholars speculate that they may constitute NPs without having a visible noun, i.e. ENPs. However, as I will argue in Chapter 3, despite looking like ENPs, compound pronouns are in fact special types of NPs in syntax.

The next two chapters are devoted to what I will call ‘Generic Constructions’, which mostly have a ‘Determinative + Adjective’ structure. Chapter 4 is on ‘Generic Human Constructions’ (GHCs), which are Generic Constructions with human denotations, such as *the rich*, *the dead* or *the accused*. Chapter 5, by contrast, focuses on less-known Generic Constructions, namely the ones referring to non-human entities (e.g. *the impossible*, *the unknown*) or an abstract concept (e.g. *the full* in *He lived his life to the full*). Those constructions are termed ‘Generic Abstract Constructions’ (GACs). Also in Chapter 5 I will develop a ‘feature assignment’ system to account for both types of Generic Constructions.

Chapter 6 provides a syntactic examination of referential metonymy, a figure of speech which denotes an entity by referring to something associated to it. Often considered as a rhetorical device, referential metonymy poses syntactic issues as well. For example, while we could definitely analyse *The moustache sits down* as a simple ‘Subject + Predicate’ clause, there are semantic problems with this analysis: can ‘moustache’ perform the action of sitting down? How about *The French fries is waiting for her courses*, in which the subject-verb agreement is breached? If *the moustache* and *the French fries* are not real subjects grammatically, then we should assume that they are NPs without proper nominal heads, i.e. ENPs, although they already contain some nouns (*moustache* and *fries*). In Chapter 6 I will examine this dilemma from a syntactic perspective.

In Chapter 7 I will discuss free relative clauses (FRs) such as *I'll eat what you give me*. FRs are confusing and also intriguing for their dual status: while they are clauses, there is also much evidence for them to be seen as phrases – for instance, *what you give me* in the sentence above can be analysed as an NP functioning as object. If so, what is its head? Clearly, FRs are examples of ENPs. In Chapter 7 I will address the syntactic status of FRs. The discussion of FRs will continue in Chapter 8, but I will then focus

on a particular type of FR, namely ‘Conditional Free Relatives’ (CFRs). These are FRs with conditional elements (such as *-ever*) in the relative words, e.g. *I'll eat whatever you give me*. I will investigate the distinctive characteristics of CFRs, especially from a historical perspective.

Finally, in Chapter 9 I will discuss the possibility of a synthetic theory for ENPs , after which a general conclusion will be drawn.

2. Previous studies

In Chapter 1 I introduced four kinds of ENPs which I will explore in this thesis, namely compound pronouns, Generic Constructions, referential metonymy and free relatives. There has been a great deal of literature concerning those constructions before, although many accounts analyse the constructions from other perspectives than syntax. The first section of this chapter provides a concise overview of previous studies of ENPs. I will not go into details, because in later chapters I will offer critical descriptions and evaluations. The second section is devoted to a particular theory – ‘Fusion of Functions Theory’ (FFT) proposed by Huddleston & Pullum et al. (2002). It deserves special attention because FFT claims to provide a unified account for all ENPs. In this section I will discuss the basic ideas of FFT, while the specific analysis of each kind of ENP will be mentioned in the corresponding chapter.

2.1 A brief introduction of previous studies of ENPs

2.1.1 Compound pronouns

Although compound pronouns (often referred to as ‘indefinite pronouns’) generally have a high frequency in Modern English, syntactic studies of compound pronouns in English are incredibly scarce. Instead, linguists are more interested in compound pronouns from a typological perspective – there is research on French (e.g. Gjesdal 2013), Chinese (e.g. Jing 1992), Latvian (e.g. Petit 2012), Hebrew (e.g. Moshavi 2018) and other languages, and cross-linguistic comparisons are made by Weiβ (2002) and Haspelmath (1997). Studies have also focused on indefinite pronouns in the history of English, such as the Old English *man* (e.g. Los 2002, van Bergen 2015).

The most comprehensive exploration of compound pronouns in Modern English is still Jespersen (1909-1949, II: 433-454), who spends about twenty pages on the description and categorisation of various compound pronouns. His contributions are

mainly threefold: first, he provides an extensive review of different meanings, usages and collocations related to compound pronouns, some of which are often overlooked (e.g. he discusses ‘*something of* + NP’ in which *something* means ‘to some extent’, as in *something of a fool* (Jespersen 1909-1949, II: 448). Second, he compares the frequencies of competing compound pronouns, i.e. those with *-body* and *-one*, in a primitive corpus study of authors like Shakespeare and Oscar Wilde, and concludes that despite the lack of a real distinction, personal preferences can be detected. A more systematic comparison between *-body* and *-one* words based on corpus data was not available until Quirk et al. (1985: 378). Third, his study includes *somewhat* and some rare instances such as *someday* and *aught/naught*, which were never researched later.

The discussion of the structure of compound pronouns is initiated by Kishimoto (2000) with a lengthy reply by Larson & Marušić (2004). Kishimoto proposes that 1) compound pronouns are not simple lexical words, but consist of separate lexical items, i.e. *somebody* should be analysed as *some-body*; 2) compound pronouns are formed by a process called N-raising, in which the noun bases are raised and conjoined with the determinative bases, i.e. *some interesting thing* → *some-thing interesting*. The latter proposal is harshly criticised by Larson & Marušić, who focus on the status of compound pronoun modifiers. If N-raising is correct and *something interesting* is really formed from a deep structure *some interesting thing*, we would expect the modifier *interesting* to remain a premodifier. However, Larson & Marušić (2004: 271-278) present plenty of evidence against this prediction:

- i. Adjectival premodifiers may be stacked, as in *large heavy stone*, but modifiers of compound pronouns cannot be (**everything large heavy*);
- ii. Number phrases may be premodifiers when linked by hyphens, as in *a 23-inch-long rope*, but this is not applicable to compound pronouns (not *something 23-inch-long*, but *something 23 inches long*);
- iii. Compound pronouns are not compatible with attributive-only adjectives (*some live thing*, but *something *live/alive*);

- iv. Premodifiers often denote an intrinsic meaning (e.g. *the visible star*), while postmodifiers tend to mean something temporary and episodic (e.g. *the star visible*). Modified compound pronouns only display the latter meaning (e.g. *everything visible, everyone responsible*).
- v. A premodifier may have both non-restrictive and restrictive interpretation. For instance, *every unsuitable word was deleted* could mean ‘every word was deleted; they were unsuitable’ or ‘every word which was unsuitable was deleted’. On the other hand, postmodifiers can only be interpreted restrictively (*every word unsuitable was deleted* means ‘every word which was unsuitable was deleted’). Modified compound pronouns have only the restrictive interpretation (*everything unsuitable was deleted* means ‘everything that was unsuitable was deleted’).
- vi. A premodifier, in the comparative form, selects certain complements: *a taller person than Max* is grammatical but [#]*a taller person than this bookshelf* sounds odd. A postmodifier is not subject to this restriction (both *a person taller than Max* and *a person taller than this bookshelf* is grammatical). Modified compound pronouns are not restricted either, as in *someone taller than Max* and *someone taller than this bookshelf*.
- vii. In Slovenian, compound pronouns modified by postmodifiers do not have an underlying derivation related to corresponding premodifiers.

The evidence clearly suggests that N-raising is not the appropriate process, though it does not argue against the first proposal that compound pronouns are separate lexical items.

Apart from Kishimoto and Larson & Marušič, other proposals include Leu (2005) and Blöhdorn (2009). Leu’s analysis is particularly interesting because he treats compound pronouns in a different way – he argues for an empty noun immediately after a compound pronoun. On the other hand, the nominal-like bases (e.g. *-thing, -one, -body*) are regarded as something purely functional, devoid of meaning. These theories will be revisited with schematic representations in Section 3.1.2.

2.1.2 Generic Constructions

The study of ‘substantivized adjectives’ can be dated back to Jespersen (1909-1949: II), and actually it might have been Jespersen who created this term, because in his framework (and other traditional ones) ‘nouns’ are called ‘substantives’. Jespersen (1909-1949, II: 231-245) has a whole chapter discussing and categorising instances of substantivized adjectives. However, it is worth noting that what Jespersen refers to as ‘substantivized adjectives’ does not only include *the poor* or *the dead*, but also *males* or *commercials*, both of which, as Jespersen argues, have the same derivation. On the other hand, Jespersen (1909-1949, II: 234) is aware of “[t]he difference between adjectives that have become substantives [i.e. *males*] and adjectives merely used as principals [i.e. *the poor*]”, which is shown in the sentence *We moderns are to the ancients what the poor are to the rich*. By saying “adjectives merely used as principals” Jespersen acknowledges that 1) the adjectives like *poor* in *the poor* are not fully nominalised; and 2) they function as heads of NPs. The second point affects many grammarians whose basic assumption is that ENPs such as *the poor* or *the dead* involve the adjectives *poor* or *dead*, with disagreements lying in how to analyse *poor* or *dead*: Quirk et al. (1985: 421) suggest a direct stipulation that adjectives can be the head of NPs, while others, such as Strang (1969: 113), Hernandez (1999: 187) and Balteiro (2007: 40), have suggested the view that adjectives like *poor* or *dead* have been partially converted. These analyses will be discussed in Section 4.3.2.

Another comprehensive early study is Bregner (1928), who divides substantivized adjectives into three categories: total conversion, partial conversion, and hybrids, though the boundaries among those categories can be extremely subtle and subjective. For example, when mentioning the difference between partial conversion and total conversion, he writes that “When the attribute is a common, quality-denoting adjective, this [i.e. total conversion] may perhaps indicate that the headword is *felt* as a real noun” (Bregner 1928: 38, emphasis added). However, the contribution of Bregner is invaluable because of the abundant examples he provides from Old English to Modern

English. It is possible to carry out a meta-analysis based on his data.

In the second half of the 20th century there are quite a few studies about English nationality terms (e.g. Powell 1967, Pullum 1976, Lyons 1991, Jacobsson 1997), a subcategory of substantivized adjectives. But those studies mainly focus on individual differences (e.g. *three Israelis* shows the plural inflection -s but *three Chinese* does not), rather than accounting for the common features of substantivized adjectives, which attract more attention from those who study empty nouns. Kester (1996a, 1996b) may be among the few scholars who explores the issue on a phrasal instead of lexical level. She does not use the term ‘substantivized adjectives’, but instead coins the term ‘the Human Construction’ to refer to both the adjectives and the determinatives preceding them. She argues that there is a null noun *pro* after the adjective, which functions as nominal head (e.g. *The rich pro are lonely*.). Quite a few researchers, especially those who come from a generative background, hold a similar view (e.g. Panagiotidis 2003, Baker 2003, Günther 2018, Saab 2018). For instance, Baker (2003: 121) claims that “there is a phonologically null noun or null phrase in all such cases [i.e. cases such as *the rich* or *the meek*]...This proposal is not very radical, and most generative linguists would probably agree with it”. I will discuss the details of the empty noun proposal and critically evaluate it in Section 4.3.5.

There are also studies which attempt to apply distinctive accounts to different subcategories of Generic Constructions. Although early grammarians such as Jespersen and Bregner already distinguish substantivized adjectives that denote human reference and the ‘neutral’ ones (e.g. *the sublime*, *the unknown*), many later studies like Kester (1996a) and Baker (2003) neglect this difference. A recent thesis that carries on the tradition of Jespersen and Bregner is Aschenbrenner (2014), which carefully distinguishes ‘substantivized adjectives denoting person(s)’ and those denoting abstract entities and gives different accounts to them respectively. Although Aschenbrenner reviews the literature about conversion and zero-derivation at length, she concludes that in Modern English they are results of syntactic rather than morphological/inflectional

operations (i.e. they are not converted adjectives).¹ Moreover, she further argues that ‘human’ substantivized adjectives are characterised by ellipsis (i.e. *the rich [people]*) while ‘neutral’ ones are real nouns (i.e. in *the good*, *good* is a noun rather than a converted or partially converted adjective). Another study which differentiates ‘human’ and ‘neutral’ substantivized adjectives is Glass (2019). The author proposes a semantic ‘type-shifter’ before the adjective, which switches the ‘human’ reading (Glass calls it ‘individuated’) and ‘neutral’ reading (Glass calls it ‘mass’). The details of Aschenbrenner (2014) and Glass (2019), accompanied by a critical evaluation, will be further explored in Section 5.3.

2.1.3 Referential metonymy

Referential metonymy represents a well-researched interdisciplinary topic, which has been studied by researchers from various backgrounds. Cognitive linguistics has been attempting to examine the conceptualization and the mental process of metonymy, starting from as early as Lakoff & Johnson (1980) and Lakoff (1987). Barcelona (2003a), in a comprehensive review of cognitive linguistic theories of metonymy, introduces a few proposals including ‘mapping’ (Fauconnier 1997) and ‘domain highlighting’ (Croft 1993). It is also of great interest for cognitive linguists to compare metaphor and metonymy: although the two concepts are often confused, they are believed to be rather distinctive in terms of underlying cognitive mechanisms. A number of studies can be found in some collections, such as Dirven & Pörings (2002) and Barcelona (2003b). In Dirven & Pörings (2002), emphasis is given to the interaction between metaphor and metonymy (e.g. Goossens 2002, Riemer 2002); while in Barcelona (2003b) scholars discuss the roles of metaphor and metonymy in semantic change (e.g. Haser 2003) or discourse and literature (e.g. Freeman 2003). Recent studies comparing metaphor and metonymy include Barnden (2010) and Denroche (2014). Moreover, metonymy is also explored with regard to typology (Blank 1999) or

¹ However, Aschenbrenner argues that in Old English conversion plays a more important role.

Onomastics (Jäkel 1999).

Another field in which metonymy is extensively studied is language development in children. Researchers are particularly interested in when children acquire the ability to express metonymic meanings and the reasons behind the acquisition (e.g. Nerlich et al. 1999, Rundblad & Annaz 2010). A recent study shows that young children could find it easier to use metonymy than to give a direct description in some contexts, especially when the entity being described lacks a conventional label (Falkum et al. 2017).

Unfortunately, few studies of referential metonymy are carried out from a syntactic perspective. Warren (1999, 2002) proposes that there could be two different heads, i.e. an explicit head and an implicit head, underlying a metonym, with the explicit head modifying the implicit one. For example, in *the moustache sits down*, Warren would argue that beyond the explicit head *the moustache* there is an unexpressed head, say *man*, and *the moustache* serves as a modifier of this implicit head. However, in Warren (2006), the author changes her attitude and believes that the functions of the explicit head and the implicit head are not performed by two separate lexical items, but are concentrated in a single nominal element. Warren terms this syntactic phenomenon Warren ‘double exposure’. In this sense, there will be no additional element found in *the moustache sits down*; rather, we would expect *the moustache* to be the head and the modifier simultaneously. A different analysis comes from Nunberg (2006), who states that the mystery of referential metonymy lies in the predicates rather than the NPs. In other words, Nunberg would argue that it is not *the moustache* but *sits down* that develops a specific meaning, and then it affects the NP through a process called ‘transfer of meanings’. Apart from the studies mentioned, a volume entitled *Metonymy and Metaphor in Grammar* (Panther et al. 2009) consists of some studies on metonymy in grammar. However, those studies mainly focus on metonymic constructions in other languages (e.g. German, Hungarian) rather than on English. Until now, Warren (2006) and Nunberg (2006) are still representative theories of referential metonymy in English. I will discuss them in detail, especially Warren (2006), whose ‘double exposure’ idea needs a formal representation, in Section 6.2, after which I will put forward my own

proposal.

2.1.4 Free relatives

In Section 1.3 I briefly introduced the problem of free relative clauses (FRs): it seems free relatives lack antecedents. Or, if we assume that free relatives have the same underlying structure as headed relative clauses, we may speculate that the *wh*-words in FRs undertake the functions of either the antecedent or the relative pronoun – this choice is based on the assumption that a lexical item can only be filled with one function. If we think that in *I will eat what you give me* the word *what* is the antecedent and the relative pronoun is somehow dropped, then we will be supporting the ‘Head Hypothesis’, while if we believe in the alternative (i.e. *what* is the relative pronoun and the antecedent is elliptical), then we are in favour of the ‘COMP Hypothesis’. For some time every analysis of FRs has adhered to one of these two schools.

The COMP Hypothesis has a long history. Early grammarians such as Onions (1904) and Sonnenschein (1916) proposed the possible ellipsis of antecedents – after all, it would be convenient and straightforward to maintain *what* is in the same category as *which* or *who*. Supporters of the COMP Hypothesis include Groos & van Riemsdijk 1981, Grosu & Landman 1998, Caponigro 2000. The COMP Hypothesis is criticised for its limitation of being able to deal with the relationship between the relative clause and the matrix clause (e.g. Citko 2002, Šimík 2010).

The Head Hypothesis did not appear until the publication of Bresnan & Grimshaw (1978). This comprehensive analysis attracted much approval, and theories such as Larson (1987, 1998), Bury & Neeleman (1999), Iatridou et al. (2001) could all be regarded as developments of the Head Hypothesis. A prominent advantage of the Head Hypothesis is that it successfully addresses the issue that FRs are syntactically phrases (and thus *wh*-words like *what* function as the nominal head).

A problem that both the Head Hypothesis and the COMP Hypothesis are required to resolve is the so-called ‘matching effects’ (e.g. Hirschbühler & Rivero 1983, Bhatt 1997). I will discuss this phenomenon in detail in Section 7.2.1, but, in short, matching

effects describe when the *wh*-words (or the phrases involving *wh*-words) display some syntactic properties of both the matrix clause and the relative clause. Therefore, both hypotheses need to establish a firm link, via the *wh*-words, between the relative clause and the matrix clause. It is also the incapability of fully addressing the matching effects that gives rise to ‘multidimensional theories’. The main variations of multidimensional theories involve ‘Graft Theory’ (van Riemsdijk 2000, 2001, 2006a, 2006b, 2017) and ‘Parallel Merge’ (Citko 2000, 2005). The core characteristic of both theories is the acceptance of multi-dominance: *wh*-words such as *what* are simultaneously dominated by the matrix clause and the relative clause, and thus reflect properties of both parts. A critical review of multidimensional theories can be found in Sections 7.3.3 and 7.4.

A subtype of FR involves conditional relative clauses (CFRs, Baker 1995), exemplified by *I will eat whatever you give me*. Surprisingly, there is not much research on English CFRs, perhaps because CFRs do not show much syntactic difference from standard FRs. Studies of CFRs mainly focus on semantics: scholars are particularly interested in the indefiniteness of CFRs in comparison with the definiteness of standard FRs (e.g. Leuschner 1996, Dayal 1997, Tredinnick 2005, Heller & Wolter 2011). With regard to syntax, there is a literature of synchronic research on CFRs (as a particular type of FRs), such as Jespersen (1909-1949, III), Denison (1999) and Rissanen (2000), although the most comprehensive study is Rydén (1966). Diachronic studies showing the development of CFRs are rare, which is one of the reasons why I will include a historical study of the *wh*-words in CFRs in Chapter 8. Also, in the same chapter I will try to deal with the semantic issues from a syntactic perspective.

2.2 Fusion of functions: a theory for ENPs

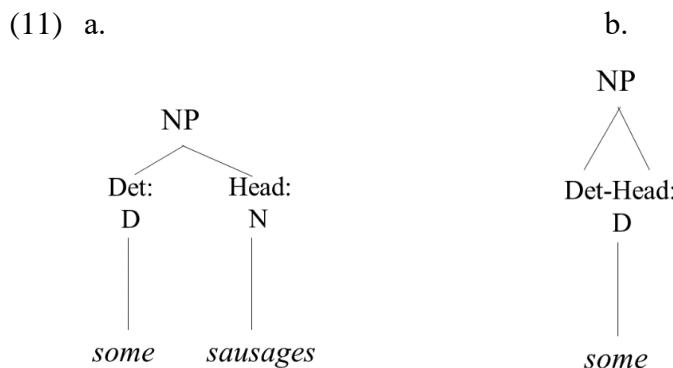
2.2.1 Fused determiner-head and fused modifier-head constructions

While we can see from Section 2.1 that ENPs are analysed by different scholars within various theories, there exists a unified theory which aims to account for all ENPs. The ‘Fusion of Functions Theory’ (henceforth FFT), or ‘function fusion’ in Huddleston &

Pullum (2002), postulates a type of construction in which a single word or lexical item can be the head and its dependent at the same time (this construction is called a ‘fused-head construction’, cf. Huddleston & Pullum 2005: 97). Although theoretically fused-head constructions may involve all word classes, Payne et al. (2007) observe that in English only NPs are capable of fusion.² In Huddleston & Pullum et al. (2002), where the theory is first proposed, the authors define ‘fused-head NPs’ as “those where the head [function] is combined with a dependent function that in ordinary NPs is adjacent to the head, usually a determiner or internal modifier” (Huddleston & Pullum et al. 2002: 410). In these cases the fused heads are used independently. The authors give some examples to contrast the dependent use of *some* with the independent use (examples (1a-b) are taken from Huddleston & Pullum et al. 2002: 410).

- (10) a. Did you buy *some sausages* yesterday?
 b. Did you buy *some* yesterday?

The constructions in italics are represented in tree diagrams as follows:



The two constructions comprise the same functional elements: both are NPs formed by a determiner (Det) and a head (Head). The difference is that in *some sausages* the two functions are realised separately by the determinative *some* and the noun *sausages*, in

² Pullum & Rogers (2008) mention that PPs can also be functionally fused, but no examples are given.

which case the determinative *some* is a dependent of the head *sausages*. In the latter case, however, *some* does not depend on any other constituent (because there is none). Instead, it occurs as the only lexical item in the NP. Therefore, it has to take on both the functions of determiner and head. In other words, the functions ‘determiner’ and ‘head’ are fused as ‘determiner-head’, and are realised by the determinative *some*.

Huddleston & Pullum et al. specify two dimensions of fused constructions. The first dimension considers the function that could be fused with NP heads, therefore we have ‘determiner-head’ and ‘modifier-head’, in which the head function is fused with the determiner function (compare *some sausages* with *some*) or there is fusion of the head with the internal modifier (compare *the rich people* with *the rich*), respectively.³ The second dimension concerns the interpretation of fused constructions, from which perspective there are the ‘simple type’ (e.g. *few* compared with *few students*), the ‘partitive type’ (e.g. *few of the students*; the partitive type is characterised by an *of* phrase), and the ‘special type’ (e.g. *the rich*).⁴ Two more constructions arising out of the two dimensions are also discussed: ‘compound determinatives’ (e.g. *someone*, *anything*) and ‘fused relatives’ (e.g. *I'll eat what you give me*). Table 2-1 summarises all the constructions that Huddleston & Pullum et al. believe to reflect a fusion of functions.

Construction	Classification in FFT	Conventional classification
<i>While Kim had lots of books, Pat had very few.</i>	Simple determiner-head	Indefinite/quantifier pronouns as substitute forms (Quirk et al. 1985: 870)
<i>Few of her friends knew she was ill.</i>	Partitive determiner-head	<i>Of</i> -pronouns (Quirk et al. 1985: 379)

³ Huddleston & Pullum et al. (2002: 418-19) argue that sometimes the NP head may be fused with the predeterminer (i.e. external) modifier, as in *both/both these issues have been discussed*, but this fusion is restricted to just a few constructions.

⁴ It is not clear how the simple type differs from the special type, as the authors mention several constructions that belong to the special type without defining what the ‘special type’ is. This is probably one of the reasons why Pullum & Rogers (2008) combine the simple type and the special type and rename it as the ‘plain type’.

<u>Few</u> would have expected it to turn out so well.	Special determiner-head	Of-pronouns referring to people in general (Quirk et al. 1985: 380)
<u>After having a first child, I didn't want a second.</u>	Simple modifier-head	Elliptical noun phrases (Quirk et al. 1985: 900-01)
<u>The smaller of the bedrooms is for rent.</u>	Partitive modifier-head	N/A
<u>The rich cannot enter the kingdom of Heaven.</u>	Special modifier-head	Adjectives as heads of noun phrases (Quirk et al. 1985: 421-23); the Human Construction (Kester 1996: 60); the Human Construction/the Abstract Construction (Günther 2013: 2)
<u>Nothing sensible will emerge from the meeting.</u>	Compound determinatives	Compound pronouns (Quirk et al. 1985)
<u>I'll eat what you give me.</u>	Fused relatives	Free relatives (e.g. Bresnan & Grimshaw 1978); nominal relatives (e.g. Quirk et al. 1985)

Table 2-1 Grammatical constructions under the classification of Huddleston & Pullum et al. (2002) and in conventional grammars.

An obvious application of the classification in Table 2-1 is that it helps to clarify what kinds of constructions in English are potential ENPs. Originally the theory was designed to expound ENPs, once they are identified. However, because of its richness in description and the claim (by Payne et al.) that it only applies to NPs in English, FFT may be used conversely as an operational criterion in the judgements of ENPs: conventionally the constructions listed in Table 2-1 are treated variously (as shown in the rightmost column), yet FFT subsumes them under a unified ‘fusion’ category. In this category a particular construction will be labelled either as a ‘fused determiner-head’ or a ‘fused modifier-head’.⁵

⁵ However, Table 1 does not cover all ENPs. There are some potential ENPs Huddleston & Pullum et al. do not discuss. An example is the phenomenon of ‘referential metonymy’, which will be explored in Chapter 3.

2.2.2 The formalism underlying the fusion of functions

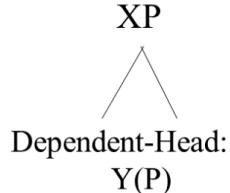
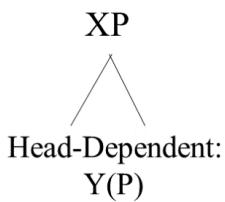
Table 2-1 indicates that FFT is of great taxonomic value, but it is not yet clear in Huddleston & Pullum et al. (2002) exactly how FFT works. As Arnold & Spencer (2015: 49) contend, FFT is “a descriptive, not a formal analysis”. However, efforts to formalise the theory were actually made in Payne et al. (2007) and in Pullum & Rogers (2008), whereby the authors explore the conditions under which a fusion of functions occurs from different perspectives.

Payne et al. (2007) is often overlooked by linguists discussing FFT (including Arnold & Spencer). Two types of fused constructions are specified in this paper, each assimilated to a different kind of ENP. The first type, which is more common, is named ‘Fused Dependent-Head’ or ‘Fused Head-Dependent’, in accordance with the relative position of the head and its dependent (12)-(13):

- (12) a. [XP [Head-Dep Y(P)]]

- b. [XP [Dep-Head Y(P)]]

- (13) a. b.



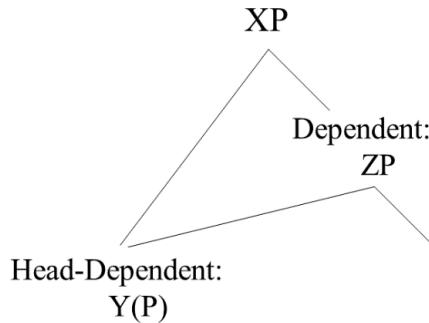
Essentially, (12)-(13) mean that Y (or YP) can be the ‘head-dependent’ or ‘dependent-head’ of XP, where X and Y refer to different lexical categories. If we apply (12b) to the ENP *the rich*, we can say that the adjective *rich* is the ‘modifier-head’ of the noun phrase *the rich*.

Another type, named “Fused Head-IDOID” or “Fused IDOID-Head”, in which IDOID stands for ‘immediate dependent of an immediate dependent’, is shown in (14)-(15):

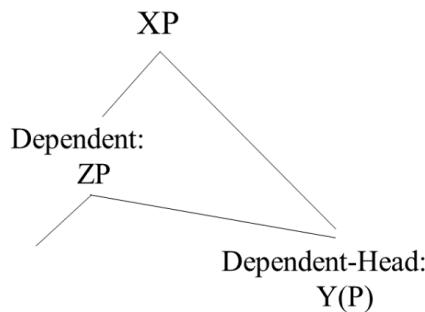
- (14) a. [XP [Head-IDOID Y(P)]]

- b. [XP [IDOID-Head Y(P)]]

- (15) a.



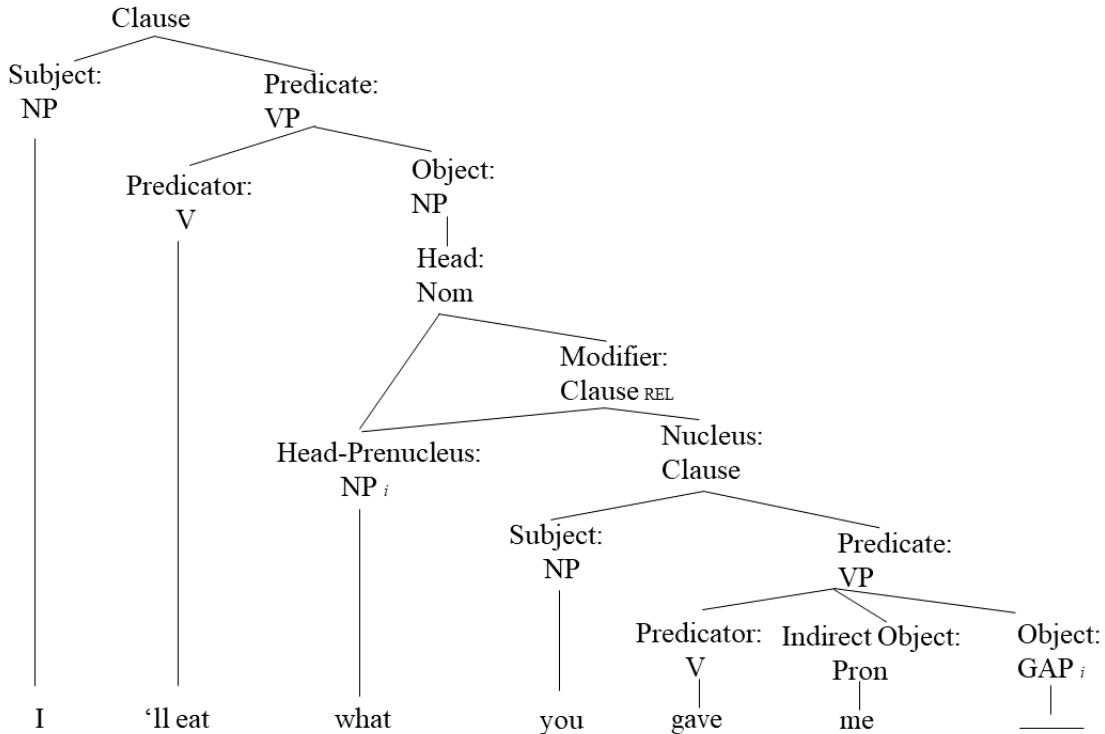
b.



What differentiates the second type from the first type, as tree diagrams (15a-b) show, is that in the IDOID type Y(P) combines a function from XP and ZP (ZP is a daughter of XP), whereas in the simpler type both functions of Y(P) come from XP (13a-b). This type of fused construction can be illustrated by ‘fused relatives’ (usually called ‘free relatives’ in other grammars). In *I'll eat what you give me*, for instance, FFT theory analyses the function of the relative pronoun *what* as a fusion of the function of an antecedent with the function an ordinary relative pronoun (cf. *I'll eat everything which you give me*). However, since the antecedent and the relative pronoun belong to different structures (the antecedent is part of the matrix clause, but the relative pronoun heads the relative clause), Payne et al. devise a special type of fusion of functions that allows a function to be fused into its ‘immediate dependent of an immediate dependent’. Therefore, concerning the clause *I'll eat what you give me*, we can say that *what* is the ‘head-prenucleus’ (‘prenucleus’ is Huddleston & Pullum et al.’s term for ‘relative word’)

of the fused relative (which is also an NP) *what you give me* (15).

(16)



Payne et al. (2007: 571) summarise the properties of fused constructions as follows:

- i. In FFT, a single lexical or phrasal category Y(P) simultaneously realizes two functions.
- ii. FFT is permitted in a category XP only between the head of XP and either an immediate dependent of XP or an immediate dependent of the immediate dependent of XP.
- iii. The fused functions are adjacent.
- iv. The category Y(P) is typically not identical to XP.
- v. The category XP is a projection of the category of the ultimate head in any counterpart (i.e. non-fused) construction.
- vi. The category Y(P) is the category of the dependent in any counterpart construction.

The most prominent feature of fused constructions, of whichever type, is that the fusion only occurs at the function level, and the item that realises the fused function simply does not exist. For example, in the fused determiner-head construction, it is not the case that a head noun is silent, or elided, or moved out of position such that it is not overtly expressed: according to FFT theory, there is no such noun, and all we have is a determiner that, apart from being a determiner, also picks up the function of the head (devoid of any nominal property) of an NP. In other words, Huddleston & Pullum et al. do not think there is an elliptical noun (e_N) in *the rich*; they would rather argue that the adjective *rich*, apart from being a modifier, also functions as the head of *the rich*. Therefore, it seems that FFT refuses a dynamic ‘fusion’ operation, in which one may falsely regard the fused construction as a mutated case of the corresponding non-fused one. In other words, it’s not the case that a dependent gradually ‘absorbs’ the function of the head, which would otherwise stay in position.⁶ On the contrary, the authors “regard constructions with FFT as constructions in their own right, licensed by independent rules governing well-formed structures” (Payne et al. 2007: 569). Therefore, although there is a canonical counterpart of the fused phrase *the second*, namely *the second one*, the two constructions are inherently different. It is not the case, according to FFT theory, that *the second* is formed by *one* being absorbed into *second*. We could compare the two and draw some similarities between them, yet we cannot say that *the second* and *the second one* are two versions of the same basic structure, as an ellipsis analysis does.

The second feature is that fusion in FFT has a direction. It is always the head function that is fused with a dependent, not vice versa. Thus we have *some* (meaning ‘some people’) and *the old* (meaning ‘the old people’) in which *some* and *old* behave as a determiner-head and modifier-head. Moreover, the fusion does not occur across constituents, which means that the fused functions must be adjacent. This indicates that

⁶ There are in fact contradictions within the description of FFT. See Section 9.2.2 for a detailed discussion.

in *the very old* it is only possible for *old*, instead of *very*, to take two functions. A consequence of this directionality is the differentiation between ‘head-dependent’ and ‘dependent-head’, because theoretically a dependent can precede or follow its head (e.g. a noun may take premodifiers and/or postmodifiers). However, it is worth noting here that according to Table 2-1, not every construction proposed in (12a-b) and (14a-b) is realised in English. All simple fused constructions in English are of the ‘Fused Dependent-Head’ type (12b), and the ‘Fused Head-Dependent’ type only exists in theory. Similarly, the only grammatical structure that the ‘IDOID type’ refers to is the free relative clause, which clearly belongs to (14a).

2.2.3 ‘*Fusion of functions’ and ENPs*

Apart from the ambition of creating a generalising theory, Huddleston & Pullum et al. (2002), and especially Payne et al. (2007), consciously apply FFT to some specific nominal constructions, all of which seem to be ENPs. In Chapters 3 to 8 I will continually refer to the way FFT accounts for a particular construction and compare it to other theories in order to judge how effective a synthetic theory like FFT is. A final conclusion concerning the necessity of a synthetic theory of ENPs will be drawn in Chapter 9.

2.3 Syntactic theories and the phenomena

All theories should be derived from explaining phenomena. In each of the following chapters, I will begin with a comprehensive description of certain syntactic phenomena and a summary of my observations based on examples extracted from corpora, which will be followed by a section that reviews current theories. Apart from introducing those theories, I will also critique them in terms of two dimensions, effectiveness and sufficiency: the former deals with the question ‘Does this theory effectively account for the (core) phenomena of a particular ENP?’, while the latter seeks the answer for ‘Does this theory account for all (or most) phenomena of this ENP?’. The theories will

therefore be tested against the corpus data. Where possible, I will also propose some new or revised approaches which I believe provide better solutions in the two dimensions.

This is the same for FFT, a theory which will receive more evaluation in this dissertation. I am particularly interested in the following questions: first, is FFT superior to other syntactic analyses in effectively explaining particular ENPs? Second, can a theory accounting for certain ENPs be used for other ENPs, as in the case of FFT? In answering the first question we would like to see that a theory like FFT suits more features – not just syntactic, but hopefully some semantic or pragmatic ones – which makes it somewhat complex. On the other hand, in the second question we would like the theory to be as simple and universal as possible. How does FFT deal with this dilemma? Is there really a practical solution for it? I will gradually reveal my attitude in the following chapters, and discuss my own answers to the questions above in Section 9.2.

Finally, I would restrict myself in syntactic discussion. Although I will also mention semantic and morphological concepts, the basic approach is syntactic rather than semantic (i.e. functional or cognitive).

In the next chapter I turn to compound pronouns.

3. Compound pronouns¹

3.1 Introduction

3.1.1 *The basics of compound pronouns*

In this chapter I will discuss compound pronouns² (henceforth CoPro) a term which refers to indefinite pronouns derived from combining the determinative morphemes *every-*, *some-*, *any-*, *no-* with nominal ones such as *-body*, *-one*, *-thing*, etc. The notion is proposed in Quirk et al. (1985: 376–7), who also provide a summary of their syntactic behaviour (points ii to iv are illustrated by examples (1)–(3)):

- i. CoPros appear in singular form (i.e. there is no **someones* or **anythings*);
- ii. A postmodifier *else* can be added, making the whole phrase semantically approximate to ‘*some/any/no/every + other + person/thing*’ (1a-b);
- iii. CoPros cannot be premodified by adjectives, but postmodification is allowed (2a, b);
- iv. CoPros can be freely modified by normal restrictive NP postmodifiers such as PPs and relative clauses (3a-b).

- (1) a. someone/something else
- b. some other person/thing
- (2) a. someone special
- b. #special someone³

¹ A version of this chapter (without the current section 3.6) entitled ‘Compound pronouns in English’ has been accepted for publication in *English Language and Linguistics*.

² This term is a descriptive concept rather than a theoretical notion. As I will show later, typical CoPros are NPs (cf. Section 3.3) and a minority are nouns (cf. Section 3.5).

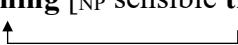
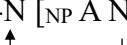
³ In this thesis the asterisk (*) marks ungrammaticality, while the hashtag (#) means a construction is partly accepted as grammatical, and a construction with questionable grammaticality will be marked with

- (3) a. nothing in common
 b. somebody who is dead

The most prominent feature of CoPros is the unavailability of most premodification (usually by adjectives), which distinguishes them from common nouns: while the expression *special things* is permitted, [#]*special something* is often considered colloquial and less common; rather, we would say *something special*, which is marked for common nouns ([#]*things special*). Anyone who wishes to account for the syntax of CoPros must explain these facts. This chapter explores the syntactic behaviour of CoPros as follows: Section 3.1.2 provides a concise introduction of previous studies; Sections 3.2 and 3.3 examine some distinctive patterns of coordination and modification, and put forward a theory of the structure of CoPros; Section 3.4 proposes a comprehensive account of the postmodification of CoPros; and the final section before the Conclusion discusses a special use of CoPros, namely nominal CoPros.

3.1.2 Previous studies

Kishimoto (2000) proposes that CoPros are variations of common noun phrases: the noun bases are raised from the post-adjectival position and join to the determiner bases, as (4b) shows:

- (4) a. [DP no -**thing** [NP sensible **thing**]]

 b. [DP D -N [NP A N]]


Kishimoto argues that CoPros are hardly true lexical items as they can be modified by

the question mark (?). Constructions like *special someone* are marginally possible, but as I will argue in Section 3.5, they are structurally different from typical CoPros.

certain adverbs (e.g. *almost/nearly everyone*), which suggests that the determiner base (i.e. *every-*) and the nominal base (i.e. *-one*) are separated, and what those adverbs modify is the determiner part. The N-raising analysis is criticised by Larson & Marušič (2004), who raise a great deal of evidence against a perceived prerequisite of N-raising, namely that the postmodifiers of CoPros are prenominal attributive adjectives at a ‘deeper’ level. For example, postmodifiers of CoPros cannot freely recur as premodifiers do (**something sensible worthwhile*), and attributive-only adjectives are not eligible for postmodification (**nothing mere*) (for a detailed summary, see Section 2.1.1).

Instead, Larson & Marušič (2004) propose two theories of CoPros, one of which assumes the presence of null nouns after CoPros (considered as single determiners). A somewhat similar analysis is from Leu (2005: 149), where the major difference lies in the attitude towards the internal structure of CoPros. Take *something* as an example. With an empty noun (abbreviated as ec_N) occurring after the CoPro (Leu calls it ‘IPR’, short for ‘indefinite pronouns’), *something* is separated into two functional categories $[_F some]$ and $[_{IPR-R} thing]$, in which ‘IPR-R’ stands for ‘indefinite pronoun restrictor’. Larson & Marušič and Leu’s analyses are shown in (5a-b), respectively.

- (5) a. $[DP D (*AP) [NP \emptyset] AP]$
- b. $[DP [F] [IPR-R] ec_N]$

These null noun analyses are criticised in Payne et al. (2007: 584) who point out that Larson & Marušič’s analysis ‘requires a stipulation that pre-head AdjPs are not permitted when the head is null’. In addition, while Leu criticises Larson & Marušič for not including French and Swiss German data, Payne et al. and Blöhdorn (2009) argue that some characteristics, which make English CoPros distinctive, may not fit into Leu’s unified construction.

Another way of accounting for English CoPros is to claim that they have an inherently different modification pattern from common NPs. For instance, the other theory Larson & Marušič (2004: 284) propose is that instead of displaying the basic

order (6a), CoPros ‘[represent] a derived order in which the noun head has raised leftward’ (6b). Similarly, Blöhdorn (2009: 132) asserts that ‘[a]n AP modifying another syntactic category can occur in two basic positions’. Premodification requires the presence of an NP (7a). Since IPR-Ds (INDEFINITE PRONOUN DETERMINERS, Blöhdorn’s term for CoPros, presumably echoing Leu) are determiners, they do not fulfil the requirement for premodification. This sends them to the other path (7b), in which determiners are intrinsically postmodified.

- (6) a. [DP D AP NP]
b. [DP -N AP [NP ____]
 ↑
 _____]

- (7) a. [DP D AP NP]
b. [DP D AP]

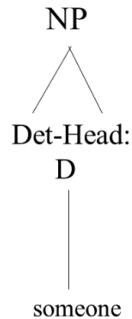
Although an advantage of these analyses is that they are simple and clear, the immediate problem is to admit that CoPros have a completely different syntax, at least in terms of modification, from other NPs. (6a-b) seem to be an attempt to legitimise N-raising, but this process requires a special stipulation that this kind of N-raising is confined to CoPros, and does not apply to common NPs. (7a-b) require more explanation: should we regard IPR-Ds as a peripheral class of determiners? After all, no other determiner is usually postmodified – in fact, it is arguable whether determiners can be modified at all by adjectives. But if we do this, we could be accused of deliberately complicating the syntax by creating a new class without sufficient evidence.

Finally, Huddleston & Pullum et al.(2002) and Payne et al. (2007) refer to CoPros as ‘compound determinatives’. As the name suggests, first, English CoPros are essentially determinatives,⁴ which is similar to Larson & Marušić (2004) and Blöhdorn (2009); second, CoPros are compounds, rather than phrases, contra Sadler & Arnold

⁴ Huddleston & Pullum (2002, 2005) do not use ‘determiner’ to indicate the word class. Determiner, in their framework, is a term for syntactic function.

(1994) and Kishimoto (2000). Nevertheless, they are not common determinatives as Blöhdorn claims but fused determiner-heads, which means that the function of a nominal head is incorporated (or ‘fused’) into the determiner dependent. Their proposal is shown as (8a-b).

- (8) a. [DP Det-Head D]
 b.



The reason for treating CoPros primarily as determinatives, as Huddleston & Pullum et al. (2002: 424) explain, is the same as in Kishimoto (2000): they are able to take pre-head modifiers (e.g. *not everyone*, *hardly anything*). On the other hand, the ‘compound determinative’ resembles Leu (2005) in that while Payne et al. acknowledge that a CoPro morphologically consists of a determinative base and a nominal base, there is only a functional head, instead of a null or overtly expressed noun, in the compound, which receives postmodification.

The fusion of function analysis is theoretically successful in taking into account both facts that CoPros are determinatives which take adverb premodifiers and that they contain nominal elements which could be postmodified by adjectives or other modifiers, if we ignore the difficulty of understanding the notion of ‘fusion’. However, as I will argue later, I dispute that CoPros are compounds. Rather, I propose a construction which lies on the borderline of compounds and phrases.

3.2 New observations

Although the basic properties of CoPros have been thoroughly discussed in previous studies, there are still some syntactic phenomena that have been less attended to. The special characteristics of CoPros revealed in coordination and modification will shed some new light on the analysis of their structure.

3.2.1 Coordination

CoPros may be coordinated by the coordinator *or* with the adjective *other*, as exemplified in attested sentences (9a-b):

- (9) a. Almost all our citizens are indicted for *something or other*.
(bit.ly/2Wu9xky)
- b. Iris is off *somewhere or other* for the next few days. (bit.ly/2Wu9xky)

We may expect noun ellipsis in structures like *or other/another*. For instance, the non-elliptical form of *one way or another* is presumably *one way or another (way)*, with the nominal head *way* of the second immediate constituent deleted for concision. If the same rule is applied to *something or other*, the element being coordinated and then deleted should not be the whole compound, but part of it, i.e. *-thing*. The phenomenon of *-thing* being deleted in coordination is against the ‘expected behaviour’ of compounding⁵ (Giegerich 2004). As Giegerich argues:

Neither elements [of a compound] should be allowed to be deleted in coordination – compare phrasal two red and four yellow roses, and lexical *quick- and thoroughly. (Giegerich 2004:5)

Therefore, (9a-b) suggests that CoPros are essentially phrasal instead of lexical as this

⁵ Although Giegerich’s (2004) main topic is NN compounding, his observations are not confined to NN structures, but also apply to other kinds of compound.

deletion in coordination is allowed, though most instances, except *no one*,⁶ are morphologically single words.

A further problem related to this coordination construction is the categorisation of *somewhere*. In *somewhere or other*, the deleted part *-where* in the second constituent takes *other* as its adjective modifier, which obviously violates the observation that adjectives cannot modify either adverbs or prepositions.⁷ (9b) suggests the possibility that *-where* can in some circumstances be regarded as a nominal base (cf. *some/any/no place*) and *-where* words in these examples are structurally identical to typical CoPros.

3.2.2 *Modification*

3.2.2.1 The function of the determiner and external modifiers

A distinctive feature of CoPros, as Quirk et al. observe, is that they freely take post-head adjectival modifiers. This feature separates them from ordinary pronouns, whose modification is restricted (Huddleston & Pullum et al. 2002: 429–30). It seems that CoPros, unlike what their name suggests, behave more like nouns in their ability of taking adjectives as modifiers. On the other hand, this feature also suggests that CoPros are atypical in the noun class: while most nouns allow premodifiers (e.g. *a tall building*, *long hair*), **tall anybody* is usually deemed ungrammatical. One reason for this postmodification-only characteristic, as many would argue, is that **tall anybody* violates the order of premodifiers in English. I list here two paradigms of the premodification sequence ('M' stands for 'modifier'):

⁶ Algeo (2006) notices that in British English the form *no-one* is also used with considerable frequency, and occasionally there is *noone*. These two variant forms are indicative of the fact that *no one* is also morphologically a unit.

⁷ Most grammars classify *where/somewhere* as adverbs, but for Huddleston and Pullum (2002) they are prepositions.

- (10) a. Det > Precentral M > Central M > Postcentral M > Prehead M > Head
(Quirk et al. 1985: 1138)

b. Pre-head external M > Det > Pre-head internal M > Pre-head complement >
Head > Post-head internal dependents > Post-head external M (Huddleston
& Pullum et al. 2002: 452)

According to scheme (10a), *tall*, as an adjective of length, belongs to the class of ‘central modifiers’, whereas the determiner *any* always occurs in the outmost layer. It is the same for (10b), where the pre-head internal modifier *tall* appears after the determiner. The possibility of **tall anybody* is therefore blocked as *tall* cannot be positioned further from the head than the determiner. However, the premise of applying the order of modifiers here is to acknowledge that CoPros such as *anybody* are semantically and syntactically compositional. In other words, it is then assumed that the compound *anybody* can be divided into two independent parts, with the determinative base *any-* being the determiner of the noun base *-body*, and both parts are essentially functional. This is in contrast to non-compositional compounds like *inmate* or *outcast*:

- (11) a. He met his former *inmate*.
b. He was treated as *an outcast*.
(12) *He was treated as *an anyone*.

The words *inmate* and *outcast* are syntactically cohesive; they cannot be analysed as a preposition plus a noun/verb sequence, otherwise the modifier *former* in (11a) and determiner *an* in (11b) will inappropriately modify PPs. On the other hand, the phenomenon that *an* is not allowed in (12) can only be accounted for by positing a determiner (**an* + *any* + *one*). In this sense, *anyone* is equivalent to [NP *his inmate*] and [NP *an outcast*] in that it is regarded as an NP consisting of D (determiner) + N (noun head).

More evidence of the independence of the determiner part comes from observations

concerning ‘external modifiers’, as (13a-b) show.

- (13) a. [Almost all] (the) students (adapted from Kishimoto (2000: 561))
b. [Not every] supervisor would agree. (Huddleston & Pullum et al. 2002:
424)

In (13a-b) the pre-head adverbs (*almost* and *not*) modify the following determinatives, forming what Huddleston & Pullum et al. (2002: 431) call DETERMINATIVE PHRASES. Considering the fact that external adverb modifiers (e.g. *not*, *hardly*, *almost*, *nearly*) are also permissible for CoPros, analysis (14) is thus proposed by analogy:

- (14) [Not/Hardly any-] -one would agree.

Again, analysis (14) strongly indicates that the determinative bases (*some/any/no/every-*) are syntactically active.

3.2.2.2 Restrictive relative clauses

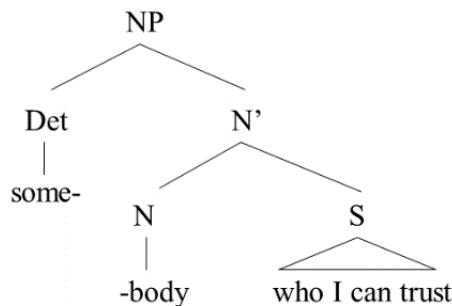
Apart from ellipsis in coordination constructions, restrictive relative clauses following certain CoPros justify the independent status of the nominal bases as well. The following examples (15a-b) are taken from Huddleston (1984: 394), and (15c) is made up:

- (15) a. *Nobody* who knows her could believe her capable of such an act.
b. *Every vehicle* which they had tested had some defect.
c. *Everyone* I asked said she was not at home.

As Huddleston explains, (15a) clearly does not denote a meaning like ‘nobody believes her capable of such an act’, and in (15b) not every vehicle had been tested. Similarly, I did not ask everyone I was able to talk to, but (15c) merely means those who I asked

all gave the same response that she was not at home. Huddleston (1984: 395) calls for a ‘more abstract form’ of analysis such that (15a) should be read as ‘No person x such that x knows her could believe her capable of such an act’. However, considering the later proposal by Huddleston & Pullum et al. (2005: 183) that ‘the antecedent is always the head noun or nominal modified by the relative clause’, I believe a simpler solution is that the antecedents of the relative clause in (15a, c) are the nominal bases *-body* and *-one*, just like in (15b), where the proper element that the relative clause modifies is *vehicle* instead of *every vehicle*. This solution will lead (15c) to denote that ‘I asked some people; every such person said she was not at home,’ which is exactly the intended meaning of (15c). This is what McCawley (1998: 437) has argued, with a structure displayed in (16). Although he does not particularly favour a lexical or phrasal analysis for CoPros, McCawley (1998: 383) agrees that in structures which involve modifying relative clauses ‘syntactic boundaries...clash with word boundaries’.

(16)



A natural deduction of the analysis above is that the scope of modification is within the scope of determination, which is quite plausible if we compare *anyone special* to its alternative *any special person*. This leads to the conclusion that modifiers of CoPros modify the noun bases in lieu of the whole construction.

3.2.3 Historical evidence

Jespersen (1909-1949, II: 443) observes that “[t]hose [CoPros] with *body* and *thing* are

now always, and those with *one* often, written in one word...in the 17th and 18th c. they were very often written separately (*some body, any thing*)". One of the examples Jespersen (1909-1949, II: 444) give is as follows:

- (17) Let *no body* blame him, his scorne I approue.

In fact, almost all CoPros were originally separate words. In Old English and Middle English it is relatively clear that they were phrases with the structure of 'D + N' rather than compounds:

- (18) a. Mæg *ænig bing* godes beon of Nazareth? ('Can anything be good of Nazareth?) (*Oxford English Dictionary*, s.v. *anything*)
b. ...but it be *som body* that cometh from fer contre. ('but it be somebody that comes from far country') (*Middle English Dictionary*, s.v. *som-bodi*)

Although the practice of morphologically combining the determinative base and the nominal base can be dated back quite early (e.g. the compound form of *anything*, as recorded by *Oxford English Dictionary* (OED) already existed in the 16th century), it has not become a convention until the recent centuries (e.g. constructions like *some body* remain attested in the 18th century), which may be indicative that the bases of CoPros are still syntactically separate.

3.3 The compound phrase hypothesis

3.3.1 CoPros and the syntax-lexicon divide

The unusual coordination phenomena in (9a-b) and modification of the determinative bases (14) and the noun bases (15a-c) raise important questions about the status of CoPros. A useful way of addressing this problem, I believe, is to discuss them in the context of the syntax-lexicon debate and to compare them to typical compounds and

phrases.

Although there may never be a clear borderline between words and phrases, linguists have proposed many criteria that serve to classify problematic structures. Perhaps the most obvious reason to regard CoPros as compounds is their orthographic unity: CoPros are morphologically words. Although whether there is space or not between the components does not itself constitute an argument for compounding, it is true that those with the parts glued together (e.g. *watchmaker*) are less open to questions about their status than those with space in between (e.g. *olive oil*, *boy actor*). In other words, ‘constructions consisting of sequences of letters which are not interrupted by a space will generally be interpreted as a single lexeme’ (Sanchez-Stockhammer 2018: 26). Therefore, while *some people* is no doubt phrasal, words like *somebody* or *nothing* (the only exception is *no one*) are less distinguishable in terms of their structure from *inmate* or *outside*, in which two words from different classes form a new one. Related to orthographic unity is the concept ‘structural integrity’ (Bauer et al. 2013, Bauer 2017). Bauer (2017: 7) argues that while ‘the relationship between orthography and word-status is rather more fraught than is generally recognised’, one criterion for structural integrity, namely the test of uninterruptability, could be much stronger. CoPros are uninterruptable just like common compounds (e.g. **baby-student-sitter*, but *red grammar books*), as **any-interesting-body* or **no-sensible-thing* are generally unacceptable. The only exception in English is a situation called ‘expletive infixation’, e.g. *every-bloody-body* (see McCarthy 1982: 576). This, however, has nothing to do with the syntax-lexicon divide, because expletives can also be inserted into non-compounds, e.g. *abso-bloody-lutely*.

Giegerich (2009: 184–6, 2015: 101–10) suggests several other tests (two syntactic, one phonological and one semantic) based on the Lexical Integrity Principle to distinguish words from phrases. A typical compound is fore-stressed (e.g. *'blackbird*, not *black 'bird*), semantically opaque (*blackbird* compared with *black bird*), unable to be independently modified (**very blackbird*), or to undergo coordination using the pro-form one (**a blackbird and a white one*), while a typical phrase does the reverse. A close inspection of the application of those criteria to words like *somebody* yields

interesting results that indicate that those words neither behave as typical ‘words’ nor as ‘phrases’.

First of all, all CoPros are fore-stressed, whereas their phrasal counterparts (e.g. *some people, any place*) tend to receive end-stress or equal stress. This strongly supports the lexical status of CoPros, as Giegerich (2009: 196) claims that ‘fore-stress is confined to compounds’. Moreover, there is some phonemic change within the words (e.g. /ɒ/ in *body* becomes a schwa /ə/ in *somebody*), possibly suggesting a structural cohesion.

On the other hand, CoPros behave rather like phrases on the remaining criteria. They are semantically transparent to some extent⁸ and their subparts can be independently modified (cf. Section 3.2.2). The pro-one test (a test in which the original noun is replaced by the pro-form *one*) seems tricky here, as its application requires countability (Giegerich 2009: 194) and presumably specificity. The noun bases are arguably non-countable (as we do not have **somebodies*⁹) and generic, which blocks them from occurring in structures like **somebody or other one*. However, CoPros can pass a related test called COORDINATION REDUCTION (Giegerich 2015: 101), whereby redundant nouns are elided in NP coordination. The difference between common NPs and CoPros is that while most NPs have their first noun reduced (*red and blue books*), CoPros remove their second nominal element in coordination (*something or other*, cf. Section 3.2.1).

The differences between *somebody*, the typical compound *blackbird* and the typical phrase *red books* are summarised in Table 3-1:

Type	Word	Structural integrity	Fore-stress	Semantic opaqueness	Independent modification	Coordination reduction
Compound	<i>blackbird</i>	+	+	+	-	-
Phrase	<i>red books</i>	-	-	-	+	+

⁸ According to the *Oxford English Dictionary* (OED), *body* can, though rarely, refer to ‘a person’. *One*, as an indefinite pronoun, may apply to both non-human and human references (see Seaton 2005). See also McCawley (1998: 437).

⁹ *Somebodies/nobodies* do exist, but they semantically and syntactically differ from typical CoPros, see Section 3.5.

CoPro	<i>somebody</i>	+	+	±	+	+
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Table 3-1 The behaviour of *somebody* as compared to *blackbird* and *red books*.

It is worth noting that there might be certain mismatches of the above criteria. For example, end-stressed *Common Tern* is semantically less transparent (Common Terns are not that common in Britain), and fore-stressed *man-servant* passes the pro-*one* test (*a woman servant and a man one*) (Giegerich 2015: 103). But while *Common Tern* and *man-servant* may be finally assigned to the class of either compounds or phrases in accordance with other criteria, the distance between CoPros and both compounds and phrases, as Table 3-1 and the discussion of the following sections reveals, is too great for us to assign CoPros to either class. CoPros are both atypical compounds and atypical phrases. If, as Giegerich (2009: 197) concludes, lexicalisation is a ‘gradient phenomenon’, then they should be positioned somewhere between the two extremes.

3.3.2 *CoPros as compound phrases*

Kishimoto (2000), as reviewed in Section 3.1.2, has been advocating that CoPros are structurally phrases, yet his theory is opposed by Larson & Marušič (2004). A critical problem may be that he makes much reference to ‘deep structure’, ignoring the basic fact that CoPros are single orthographic units. N-raising is implausible if we acknowledge that the compounding of CoPros is essentially a morphological, rather than a syntactic, process. In other words, the shapes of CoPros are pre-established (i.e. listed in the lexicon), and any syntactic operation must be implemented on the basis of this pre-establishment. As we can observe from previous sections, the morphology of CoPros is so powerful that it to some extent separates them from typical phrases and endows them with marked postmodification patterns. Therefore, the analysis of CoPros should take into consideration both morphological and syntactic aspects. That is why I do not regard CoPros simply as phrases, but as COMPOUND PHRASES in which there is an obvious morphology/syntax interplay:

THE COMPOUND PHRASE HYPOTHESIS:

CoPros are typically compound phrases: they are morphologically compounds but syntactically phrases (more precisely, NPs). The syntax of CoPros is determined by their pre-established morphology.

3.4 Modification patterns of CoPros

3.4.1 Postmodifiers

In this section I will discuss the modification of CoPros in more detail. Larson & Marušić (2004) have shown that the postmodifiers of CoPros (if they are adjectives) are predicative instead of attributive, with one of the arguments being that ‘attributive-only’ adjectives are not permissible (19)–(21):

- (19) a. *someone future
- b. a future scientist
- (20) a. something tall
- b. a tall building
- (21) a. anyone alone
- b. ?an alone woman

This phenomenon has been accounted for by Quirk et al. (1985: 1294), who analyse CoPro postmodifiers as reduced relative clauses. However, Blöhdorn (2009), following Ferris (1993), criticises this proposal, arguing that although almost all adjectival postmodifiers (with the exception of some ‘postpositive-only’ adjectives such as *galore* in *cards galore*) may expand to relative clauses, a huge number of relative clauses which contain predicative adjectives cannot reduce to postmodifiers. He gives the following examples (Blöhdorn 2009: 109):

- (22) a. That *a writer who is gay* cannot be serious is a common professional illusion...

- b. *That *a writer* gay cannot be serious is a common professional illusion...

It seems that he fails to take CoPros into consideration, yet it is exactly the modification of CoPros that Quirk et al. intend to explain. In the case of CoPros it is easy to establish that the relation between adjectival postmodifiers and relative clauses with predicative adjectives is much closer, as both expansion and reduction are always possible. For example, we can make (22b) grammatical by replacing *a writer* with *someone*:

- (23) a. That *someone who is* gay cannot be serious is a common professional illusion...
- b. That *someone* gay cannot be serious is a common professional illusion...

Then the question becomes more complicated: why does the ‘reduced relative clause’ theory work perfectly well for CoPros, but not for other NPs?

We may begin the discussion by examining the adjectives that are able to freely expand and reduce in both CoPros and common nouns. Such adjectives usually belong to one of the following groups: 1) never-attributive adjectives, e.g. *alone*, *afloat*; 2) some adjectives ending in *-able/-ible*, e.g. *visible*, *navigable*; 3) a few special adjectives such as *present* or *following* (examples (24)–(26) are adapted from Quirk et al. 1985: 419).

- (24) a. the house *ablaze*
b. the house *which is ablaze*
- (25) a. the rivers *navigable*
b. the rivers *which are navigable*
- (26) a. the men *present*
b. the men *who are present*

All adjectives in these three groups share the trait that when they are used as modifiers, they may occur in postposition. Therefore, I argue that the ability of being postpositive

is intrinsic for some adjectives, and the ‘reduced relative clause’ theory presupposes this ability, not vice versa. In other words, the ‘reduced relative clause’ theory is not universal, but only applies to some adjectives that are inherently able to appear in postposition (i.e. those in the above three groups). *Gay* in examples (22a-b), as well as adjectives like *tall* or *old*, cannot be explained by this theory.

Examples (23a-b), by contrast, are special: on the surface, the relation between the two examples in (23) looks the same as those in (24)–(26), but the limitation of the ‘reduced relative clause’ theory disproves such a comparison. I propose that postpositive *gay* in (23b) is not a result of relative clause reduction as *gay* is not intrinsically able to occur postpositively; instead, it is *coerced* to postposition. This situation will be discussed in detail in the next section.

3.4.2 Syntactic coercion¹⁰

As CoPros are syntactically noun phrases, the attributive modifiers can be arranged in accordance with a paradigm proposed in Larson & Marušič (2004: 280), which is cited below with minor changes¹¹ as (27a), and exemplified in (27b).

- (27) a. [DP D α_1 [NP β_1 N] α_2] (α = DP modifier; β = NP modifier¹²)
 b. the delicious house wine available

In paradigm (27a), we can put *some-/any-/no-/every* in position D, and *-body/-one/-thing/-where* in position N. However, this causes a problem: if CoPros were true phrases like *this book*, we should be able to add DP modifiers in position α_1 just after the

¹⁰ I use ‘syntactic coercion’ instead of simply ‘coercion’ to avoid confusion with the well-developed semantic concept (see Lauwers and Willems 2011).

¹¹ Here I distinguish prenominal modifiers from postnominal ones by subscripting prenominal modifiers with the number ‘1’ and postnominal modifiers with the number ‘2’.

¹² By saying ‘NP modifier’ Larson & Marušič mean that modifiers that occur in position β modify the head noun, whereas a ‘DP modifier’ refers to an attributive adjective, which occurs in position α and modifies the noun phrase which consists of the head noun only.

determiner *some-*, *any-*, *no-* or *every-* which modify the noun phrases [-body], [-one], [-thing] and [-where], and NP modifiers in position β_1 just before the nominal heads [-body], [-one], [-thing] and [-where], but this is not possible. In fact, positions α_1 and β_1 are never available because the pre-established morphology of D and N in CoPros being glued together prohibits the insertion of any extra element, except expletives. The consequence is that potential candidates for positions α_1 or β_2 are relocated to nearby positions, either forwards (towards the end of the phrase) or backwards (towards the front of the phrase). In reality, however, only the forwards option is available because of the general constraints on the premodification sequence (i.e. no adjectival modifier can occur before the determiner). Therefore, an alternative modification pattern for CoPros is formed through an operation which I term ‘syntactic coercion’. It can be formulated as follows:

- (28) [_{DP} D [_{NP} N β_2] α_2]¹³

As just discussed, syntactic coercion presupposes the status of compound phrase for CoPros: if morphology does not play a primary role and CoPros are nothing more than common NPs, as Kishimoto (2000) proposes, then attributive modifiers permissible for common NPs (e.g. *a future scientist*) should also fit CoPros. Clearly this is against what has been observed until now.

What are the distinguishing features of syntactic coercion? First, it is triggered by strong stylistic, semantic or morphosyntactic factors which make the default syntactic structure impossible. For CoPros the motivation is their morphology, but in other situations semantic and stylistic reasons may be equally effective as well. For instance, Bolinger (1967: 9) proposes that a ‘temporary adjective’ (i.e. an adjective which ‘names a quality that is too fleeting to characterize anything’) is restricted to predicative or postpositive position, with the adjectives having the prefix *a-* (e.g. *afire*, *asleep*, *alive*)

¹³ There might be a question of whether the position β_2 actually exists or not, because it is not recognised by Larson & Marušić in the original paradigm. This will be explored in Section 3.4.3.2.

being typical examples. He also noticed that some of them ‘are gradually edging their way into attributive position’ (Bolinger 1967: 12), like *away* in *away games* and *aware* in *aware audience*. The author does not discuss the change much, but for me an important motivation lies in semantics: the attributive use of *away* or *aware* weakens the application of ‘temporariness’ and enhances its ‘permanentness’ and ‘genericity’ as a modifier. The contrast is shown in the following examples extracted from the *British National Corpus* (BNC):

- (29) a. ...he's been to the last two or three world cup tournaments, and he goes to all the *matches away*, you know, European cup matches and everything that English teams are playing in, he's all over the world watching it... (BNC: HGH)
- b. Chiefly they are responsible for hiring coaches to *away matches* and for getting occasional petitions signed. (BNC: ECN)

In (29a) *matches away* indicates a few specific matches that are played outside England, i.e. ‘European cup matches and everything that English teams are playing in’. But *away matches* in (29b) has no specific reference; it denotes ‘any match that is played away’, a characteristic that is more generic and intrinsic to the concept ‘match’. Although *away* is syntactically never-attributive, the need of expressing ‘permanentness’ coerces it to the attributive position so that it could mean something slightly different.

Another attested example is cited in Aarts (2007: 107):

- (30) Snow, who lives in Kentish Town, has *an alive presence*, an abiding awareness, a serious desire to seek the truth...

Here prenominal use of *alive* in (30) is more obviously driven by stylistic concerns, as Aarts (2007: 107) reasons that this manipulation serves to ‘create a neat parallelism’ by presenting three NPs with the same ‘numeral + adjective + noun’ structure. On the other hand, it may also have some semantic effect: instead of delivering a sense of

‘temporariness’, *alive* in (30) is closer to ‘active’ or ‘lively’, a characteristic which is considered intrinsic and persistent.

In terms of CoPros, the reason for coercion is purely morphosyntactic: there is no space for prenominal modification as all CoPros are single orthographic units. As a result, all modifiers must be placed in postposition. A semantic side-effect of the forward coercion is that, while using never-attributive adjectives (e.g. *away*, *alive*) in attributive position yields a more ‘permanent’ meaning, the placement of potential attributive adjectives in postposition will restrict them in ‘temporariness’. This is perhaps why Larson & Marušić (2004: 275) observe that although *visible stars* and *stars visible* are semantically different (‘permanent’ and ‘temporary’), *everything visible* has only the ‘temporary’ meaning.

Second, syntactic coercion is different from movement: it is a result rather than a process. We cannot say that when coercion occurs an element is ‘moved’ to the target position from elsewhere, simply because the imaginary original state is impossible. For example, *an alive presence* is not a consequence resulting from the movement of *a presence alive*, as the latter expression is not permitted for stylistic reasons. Similarly, there is no such structure as **some-old-thing*, and the adjective *old*, when modifying *something*, is directly placed in postposition. Therefore, I consider the modification pattern (28) parallel with, but not derived from, the general paradigm (27a).

3.4.3 Challenges for the theory of syntactic coercion

The modification pattern in (28) needs more clarification, especially with regard to the relation between DP modifiers and NP modifiers. There are specifically two potential challenges: first, we need to distinguish NP modifiers β_2 , which are otherwise premodifiers β_1 , from DP modifiers α_2 , but Larson & Marušić, by comparing stage-level interpretations with individual-level interpretations,¹⁴ and also restrictive

¹⁴ A stage-level interpretation is a semantic interpretation where adjectives assign non-intrinsic, temporary features to the referents, and in an individual-level of interpretation intrinsic and persisting features are assigned. For instance, in *Mice are small*, the predicative adjective *small* receives an

interpretations with non-restrictive ones, reject the idea that NP modifiers are able to occur postpositively. In other words, according to them position β_2 should not exist (note that β_2 is absent in the original pattern (27a)). Second, we would need to deal with the potential ability of recursive postmodification, if position β_2 indeed does not exist. I will discuss these issues in the following sections.

3.4.3.1 Common postpositive modifiers of CoPros

Larson (1998: 145) raises the following example in a discussion of the ambiguity between intersective and non-intersective readings of adjectives:

- (31) Olga is a beautiful dancer.

While the intersective reading interprets the above sentence as ‘Olga is beautiful and Olga is a dancer’, the non-intersective reading interprets it as ‘Olga dances beautifully’. Larson & Marušič (2004: 281) relate this ambiguity to the difference between DP and NP modification: the adjective *beautiful* functions as a DP modifier, i.e. α_1 in (27a): [_{DP} *a beautiful* [_{NP} *dancer*]] in the intersective reading, and an NP modifier, i.e. β_1 in (27a): [_{DP} *a* [_{NP} *beautiful dancer*]]) in the non-intersective reading. The analysis of intersective/non-intersective ambiguity can be extended to CoPros:

- (32) a. Olga is a beautiful dancer.
- b. Olga is *someone* beautiful
- (33) a. John is a corporate lawyer.
- b. *John is *someone* corporate.

individual-level interpretation as all mice are (always) small, but *visible* in *Mice are visible* must be interpreted on a stage-level because the sentence implies that ‘at least some mice can be seen at a particular moment (presumably now)’. See Hallman (2004) for a detailed description.

There is an obvious restriction of interpretation in CoPros. (32b) is not ambiguous, allowing only the intersective reading. (33a-b) show that when the premodifier permits only a non-intersective reading (thereby forbidding **John is corporate and John is a lawyer*), it cannot be coerced to the postposition of CoPros. Both examples suggest that the postmodifiers of CoPros receive an exclusively intersective reading, which means, if the theory of Larson & Marušić is valid, that CoPros can only take DP modifiers. This is in accordance with the non-existence of position β_2 , and it therefore seems that all postmodifiers should be placed in position α_2 in (28).

3.4.3.2 *Else*

In the previous section, we saw that β_2 cannot be filled. However, we should not simply do away with it: there is at least one word, namely *else*, which seems to be a true postpositive NP modifier. Its syntactic distinctiveness is summarised below:

- i. *Else* is not an adjective modifier, which means it is not restricted by Larson's distinction between intersective and non-intersective adjectives. Traditionally it is treated as an adverb, although Huddleston & Pullum et al. (2002: 615, fn. 1) argue that *else* is 'arguably a preposition when it postmodifies interrogative heads and compound determinatives'. The reasons for their re-categorisation are that a) *else* only occurs after certain nominal structures (e.g. *wh*-pronouns such as *who*, CoPros and singular *all*, *much*, etc., see Quirk et al. 1985: 454); and b) internal postmodification is a typical function for PPs rather than AdvPs (e.g. *the issues under discussion* but not **the issues so remarkably*).
- ii. *Else* is inherently a postmodifier which can only occur in postposition.
- iii. *Else* immediately follows the nominal head, whether there is another postmodifier or not. That is why Huddleston & Pullum et al. take it as an internal modifier – a modifier that occurs within the NP.

- iv. While *else* can take *than* complements, this is impossible if there is another adjective in between. For example, *nothing else than this* is grammatical, yet **nothing else sensible than this* is not.
- v. *Else* plays a role in word-formation with at least one noun base *-where*, as in *elsewhere*.

All these characteristics suggest that *else* has a very close syntactic relation with the nominal structures it modifies. It is unlikely to be either prenominal or expanded to a relative clause. In consequence, position β_2 should be retained in the CoPro modification pattern (28). Also, the analysis that *else* is an NP modifier positioned in β_2 reflects the phenomenon that *else* can and must precede the adjective (which is positioned in α_2):

- (34) a. nothing *else sensible*
 b. *nothing *sensible else*

The behaviour of *else*, to some extent, resembles that of the ‘postpositive-only’ adjectives (e.g. the President *elect*, the poet *laureate*), which might also be potential NP modifiers that are located in position β_2 . Considering the fact that the ‘postpositive-only’ adjectives are semantically selective, i.e. they modify a very limited number of nouns (e.g. **the student elect*, **the chef laureate*), and are usually incompatible with CoPros, they will not be further explored here. Nevertheless, their status of being intersective-only adjectives (e.g. **He is the president and he is elect*) suggests that they are indeed NP modifiers, which may trigger a need to amend the original paradigm (27a).

3.4.3.3 More

Another interesting case is *more*, as *nothing else* and *nothing more* share more or less the same meaning. Despite the fact that *else* and *more* are often used interchangeably after CoPros, the two words are syntactically quite different. First, *more* does not

always appear in postnominal positions. Together with words like *less* and *fewer*, it occurs after the head only when there is a determiner (Huddleston & Pullum et al. 2002: 445). Therefore we have *one day more* but not **days more*. Second, the complementation of *more* is quite restrictive in that it can hardly be followed by an adjective postmodifier: although *something more fashionable* is possible, it deviates from the meaning of *something else fashionable* and its internal structure is better analysed as *something [more fashionable]*, in which *more* is an adverb modifier of *fashionable*, different from the one in *one day more*.

The restriction on the following modifier suggests *more* may be a DP modifier in position α_2 in (28), and the fact that it occurs both prenominally and postnominally in common NPs reminds us of adjectives like *visible*:

- (35) a. the *visible stars*
- b. the stars *visible*
- (36) a. one *more day*
- b. one day *more*

However, the resemblance of *visible* and *more* is only superficial: in (36a) the word *more* does not modify *day* but the determinative *one* (i.e. [*one more*] *day*), forming a determinative phrase. Also, in (36b), it seems that *more* is outside of the scope of the determiner *one* (i.e. [*one day*] *more*, as **day more* is not a constituent), which is not allowed by Larson & Marušić's modification pattern. The fact that the postmodifying *more* is outside the scope of the determiner is further consolidated by the phrasal structure *once more*, in which there is no doubt that *more* modifies *once*, a special conglomerate of both the determiner and the noun head (see Payne et al. 2007). We can conclude, therefore, that in neither (36a) nor (36b) the adjective *more* is a modifier of the head noun *day*; moreover, the analysis of (36b) suggests that when used postpositively, *more* is neither an NP modifier situated in β_2 or a DP modifier situated in α_2 . Rather, it should belong to a layer that is further out, i.e. one that is outside of the

position D. If we were to apply Larson & Marušič's paradigm to (36b), we need to create a new position, like γ , for the modifier *more*:

(37)	[DP	D	α_1	[NP	β_1	N	$\beta_2]$	$\alpha_2]$	γ_2]
		one			day				more	
		no-			-thing				more	
		some-			-thing	else		fashionable		
		some-			-thing			more	fashionable	

3.4.4 Recursion

3.4.4.1 The restrictor

An important conclusion drawn from paradigm (28) is that CoPros cannot take more than one adjective modifier, which is consistent with Huddleston & Pullum et al. (2002: 423), who label CoPro modifier ‘the restrictor’:

- (38) a. nothing *sensible*
- b. *nothing *sensible new*

Moreover, we are able to explain why *beautiful long hair* is possible and **something beautiful long* is not: it seems that recursive modifiers are only permitted in position α_1 but not α_2 , and it is impossible for *beautiful* or *long* to be in position β_2 since they are DP modifiers in postposition. As a result, they cannot coexist but need to compete for one position. The competition may be cancelled by coordination, though, as *beautiful and long* is considered as a single modifier.

3.4.4.2 Recursive modifiers

Larson & Marušić (2004), contra Huddleston & Pullum et al., are among the few researchers who advocate multiple modifiers under certain conditions. Three patterns of multiple postmodification (39a–c) are workable for them. The conditions of multiple postmodification, as argued by Larson & Marušić (2004: 283), are that adjectives can be followed by other ‘heavy’ adjectives (39a), or adjectives which occur both prenominally and postnominally precede ones occurring exclusively postnominally (39b), or both (39c).

- (39) a. everyone present capable of lifting a horse
- b. everyone tall present
- c. everyone tall present capable of lifting a horse

In reality, however, attested examples are extremely difficult to find even in large corpora such as the BNC. However, with the help of the iWeb Corpus, an allegedly 14 billion word corpus based on the Internet, hundreds of potential candidates are yielded. Unfortunately, a disproportionate majority of them are not of the types suggested by Larson & Marušić:

- (40) a. Will you join your old team or do you think it's time for *something brand new?* (bit.ly/2uAGQ9u)
- b. If you want *something super simple*, Instagram is the way to go. (bit.ly/2Fzn5Ew)
- c. The reviews include...stuff that isn't hard to find if you're a powerhouse school, but may be difficult if you're trying to find information on *someone lesser known.* (bit.ly/2WAHLDb)
- d. Many of the other settings will be specific to your AWS environment, however there's *nothing special required for this function.* (bit.ly/2HYofMC)
- e. Even if you don't have *anything specific planned*, set aside some free time so that you can do something spontaneous. (bit.ly/2Ufn6XK)

f. I'll need to look for *something similar available in the UK*. (bit.ly/2Ub65Ok)

Brand new in (40a), as well as *old fashioned*, should be analysed as lexicalised compounds instead of separate adjective phrases, and there are often hyphens in the alternative forms *brand-new* and *old-fashioned*. In (40b), *super* is used in spoken language as an adverb which modifies *simple*, making *super simple* a single AdjP. Similar instances are *lesser known* in (40c) and *real quick* in colloquial American English. (40d-e) look qualified on their own, but as they occur in sentences featuring existential *there* and verbs like *have* or *make*, Huddleston & Pullum et al. (2002) would rather regard *required for this function* and *planned* as predicative complements. In fact, the majority of ‘CoPros + Adj. + Adj./past participle’ structures appear in sentences containing *there*, *have*, *make* and *keep*, ruling out the possibility for the second adjective to be a modifier. What is then left is (40f), a potentially good example. It looks like a combination of (39a-b), because the first adjective *similar*, as a modifier, is primarily prenominal, and there is a PP complement of *available* in the end. These examples are scarce. Also, as noted by Larson & Marušič (2004: 283, fn. 15), such recursion is subject to some special conditions. The acceptability of combinations like (39b) varies among sentences, and sometimes it is difficult to determine whether the variations are due to syntactic or semantic constraints. Moreover, the first adjective often bears contrastive stress and there is a break between the two adjectives, which seems to suggest that they have distinctive functions. A possible analysis is that the second adjective might function as an adjunct, as breaks are typical between NPs and adjuncts that provide supplementary information. Under this circumstance it is hard to distinguish *Everyone present capable of lifting a horse was offered a ticket* and *Everyone present, capable of lifting a horse, was offered a ticket* in spoken language. Another possibility is that the break can serve as a marker of coordination, in the way a comma does in prenominal modifiers (e.g. *a hard, boring task*). If this is true, then

we will not see recursion, but a coordinated set of modifiers in (39a), which is not different from *everyone present and capable of lifting a horse*.¹⁵

If we acknowledge Larson & Marušič's stance on recursive modifiers, a possibility is that maybe α_1 , the position that is being coerced, does not merge with α_2 but coexists with it. This explanation directly corresponds to the authors' observation that if two adjectives coexist postpositively, the first one must be able to occur both prenominally and postnominally (like *tall*) and the second one must occur exclusively in postposition (like *present*). *Tall* is a coerced adjective which would normally be located in α_1 , while *present* is inherently a postpositive modifier located in position α_2 : they can coexist because they are of different provenance.

Despite its effectiveness in explaining multiple modification, this analysis may face some new problems. We need to clarify why there is coexistence instead of merging. More importantly, Larson & Marušič's observation is challenged by data that seem problematic, like those I found in (41a-b):

- (41) a. I am interested in finding out if there is *anything new available* for migraine treatment. (bit.ly/2FAZQtT)
b. Wait...She is better than *anything available new* today!
(bit.ly/2CHYInn)

Although examples like (41a) are seen more often in formal conversations and articles where the use of language is more casual and examples like (41b) on online forums, I would not dismiss *anything available new* as ungrammatical because there are a few occurrences. As a result, it may be argued that Larson & Marušič's theory on recursive postmodifiers is simply flawed. Alternatively, we can regard such structures as being part of a grammatical change that is truly happening. In any case, it seems that postmodification patterns for CoPros are far more flexible than previously thought.

¹⁵ A British informant reports that although *everyone tall present* in (39b) is possible, *present* sounds like an add-on adjective providing supplementary information, and a more natural utterance is *everyone tall* (short pause) *present*.

3.5 Compound pronouns as compounds

Apart from the common usage discussed in previous sections, there are some residual CoPros used in a quite different manner. Typically, they are deprived of the phrasal properties, which earns them more flexibility than their phrasal counterparts.

3.5.1 *Nobody*

In previous sections I discussed *nobody* (henceforth *nobody*₁), which I classified as a compound phrase consisting of a determiner *no-* and a nominal head *-body*. There is another *nobody*₂, meaning ‘unimportant person’, that behaves quite differently in syntax ((42)–(44); (43b) is extracted from the Corpus of Contemporary American English (COCA)).

- (42) a. *Nobody*₁ gives you better value for money. (BNC: CFR)
- b. The autobiography of a *nobody*₂ must have some sales appeal. (BNC: B25)
- c. A certain percentage are *nobodies*₂ who want to become somebodies on my back. (BNC: CH3)
- (43) a. Mr Stacey was *nobody*₁ important, she tried to convince herself. (BNC: CEY)
- b. For 15 years he was a *political nobody*₂, a *nobody*₂ who repeatedly tried for elected office. (COCA: 2003_MAG_MotherJones)
- (44) a. *Nobody*₁ who brings forward biological causes supposes that they replace social causes. (BNC: ECV)
- b. A *nobody*₂ who brings forward biological causes supposes that they replace social causes.

While *nobody*₁ is generally regarded as singular (42a), *nobody*₂ can be both singular (42b) and plural (42c). *Nobody*₁ is only available for postmodification (43a), but its

counterpart is eligible for premodification (43b). Moreover, when functioning as the antecedent of a relative clause, *nobody*₁ and *nobody*₂ bring distinctive interpretations to the whole clause: (44a) means ‘no person x such that x brings forward biological causes supposes that they replace social causes’, while (44b) denotes the meaning that ‘a person, who is not important, *both* brings forward biological causes *and* supposes that they replace social causes’, which is almost the opposite meaning of (44a).

The syntactic features shown by *nobody*₂ strongly suggest that this item is of a lexical nature. First, while *nobody*₁ does not need an external determinative (because *no-* is fully functional), *nobody*₂ must either be preceded by a determinative (*a* in example (42a)) or bear the plural inflection. Second, the possibility of being premodified indicates that *no-* in *nobody*₂ is not functional, otherwise *a political nobody* would violate the paradigms of premodification sequences (cf. Section 3.2.2.1). Third, the distinctive meaning of (44b) shows that the antecedent of the relative clause is *nobody*, rather than *-body* in (44a), signifying that the components of *nobody*₂ are inseparable. Therefore, both semantic and syntactic evidence leads to the conclusion that *nobody*₂ is a noun (rather than an NP) and a polysemous lexeme of *nobody*₁.¹⁶ It is not a compound phrase.

3.5.2 CoPros as nouns

Some other CoPros, apart from *nobody*₂, may be lexical as well. Consider the following examples (45a–c):

- (45) a. There was *a definite something* about her which marked her out from the others. (BNC: AEB)

¹⁶ When this chapter was submitted as an journal article, an anonymous reviewer pointed out that *nobody*₂ has a synonym *nonentity*, which is a potential object for discussion. It is indeed interesting to observe the similarities between the two words: both are non-compositional (they do not denote the absence of a person, but a person of no importance) and have plural forms (*nobodies*₂ and *nonentities*). The parallels between *nobody*₂ and *nonentity*, therefore, also suggest that *nobody*₂ is syntactically and semantically different from *nobody*₁.

- b. To do that would be an achievement because at present the uncharted wilderness of trees seemed as unstable *a nowhere* as a cloudless sky or as fields under a carpet of snow... (BNC: BMX)
- c. ‘Let me tell you,’ she yelled, ‘Boyd and I are *somebodies* in this town, and mostly because I was smart enough to set to and cultivate the right people.’
(BNC: CDN)

The CoPros in example (45a–c) resemble *nobody*₂ syntactically due to their ability of taking premodifiers (45a), external determinatives (45b), and plural inflections (45c), which qualify them as nouns. Nonetheless, compared with *nobody*₂, being lexical is a marginal use of CoPros. One reason is that the nominal CoPros cannot be completely discriminated from the phrasal ones semantically, except in some instances. *Somebody*, for example, means ‘important person’ in (42c), (45c), and *nothing* can sometimes denote a similar meaning to *nobody*₂ (e.g. You’re *a nothing*!). But there are also many occasions where *somebody* and *nothing* are less distinguishable from their phrasal counterparts in semantics (46a-b).

- (46) a. There’s *a somebody* called Finklehall who’s quite interested in understanding the dynamics of abuse which I’ve quoted from here.
(BNC: KGW)
- b. For example, Goethe wrote of electricity that it is *a nothing*, a zero, a mere point, which, however, dwells in all apparent existences... (BNC: FBE)

Moreover, these nominal CoPros are much more infrequent than *nobody*₂. Table 3-2 shows the ratio between the occurrences of nominal use and total frequencies.¹⁷

¹⁷ The data in Table 3-2 are extracted not by simply using POS tags but rather by searching for distinctive collocations. Since CoPros discussed in this section are nominal, they can be preceded by determinatives (such as *a/an*) and/or adjectives. This means that I can obtain the raw data by searching for collocations

While more than 1% of *nobody* are used as nouns, which helps to establish *nobody*₂ as a polysemous word to *nobody*₁, no other nominal CoPro occurs more frequently than 0.5%. Therefore, despite the recognition of the nominal use, the two observations above suggest that nominal CoPros (apart from *nobody*₂) are marginal in English.

Lemma	Nominal occurrences	Total frequency	Ratio (nominal/total)
<i>something</i>	143	49,652	0.29%
<i>somebody</i>	12	6,961	0.17%
<i>someone</i>	12	17,559	0.07%
<i>somewhere</i>	7	6,581	0.12%
<i>anything</i>	4	27,172	0.04%
<i>nothing</i>	67	31,971	0.24%
<i>nobody</i>	72	5,776	1.25%
<i>nowhere</i>	6	2,234	0.44%
<i>everything</i>	13	17,554	0.07%
<i>anybody, anyone,</i> <i>anywhere, no one,</i> <i>everyone, everybody,</i> <i>everywhere</i>	0	N/A	N/A

Table 3-2 CoPros used as nouns in the BNC.

3.5.3 Reanalysis

Historically, nominal CoPros are a later development.¹⁸ They exemplify the process of reanalysis, in which the two parts are fossilised or ‘morphologised’ (cf. Hopper & Traugott 2003: 140) and their functions disappear. Despite the retention of basic semantics (except for *nobody*₂), reanalysed CoPros have become non-compositional nouns similar to *inmate* in (10a), which freely takes premodifiers or determinatives and inflect for number. This may be driven by a series of pragmatic needs. For example, the use of nominal CoPro *nothing* in (46b) creates another example of neat parallelism (cf.

like ‘D + CoPro’ and ‘A + CoPro’, after which I then manually check possible duplicates and incorrectly tagged examples.

¹⁸ For example, the first instance of the nominal *somebody* recorded in OED is in the 18th century, about 400 years later than the first recording of phrasal *somebody*.

Section 3.4.2). Also, the disappearance of the fully functioning indefinite determinatives weakens the generic readings of CoPros, making them somewhat more specific (47a-b).

- (47) a. You, Jalal Shamlou, are *that very special someone*. And you have had the dream. (BNC: CEC)
- b. Almost all his climbs have *a certain something*: a thinly disguised air of intimidation often allied to a raw brutality. (BNC: ECH)

In (47a-b), *someone* and *something* receive a more specific reading, with their meanings closer to ‘one/person’ and ‘thing’. This is further reinforced by the introduction of *that* in (47a), which is deictic to a particular person/thing.

The most prominent advantage for nominal CoPros, however, may be that they can bypass a number of restrictions on their phrasal counterparts:

- (48) a. ...but it was no *mere something*, void of qualities, but rather a thing which could be grasped...bit.ly/2ZOyzxA
- b. White boys like you make babies and go away to school to nice places where you find some *neat little someone* to marry who's still got her cherry. (COCA: 1992_FIC_VirginiaQRev)

While the modifier of a phrasal CoPro is restricted in kind (predicative) and number (one, excluding *else*), nominal CoPros are not limited in this way. Hence in (48a) *something*, as a noun, can be modified by an attributive-only adjective (*mere*), and *someone* in (48b) freely takes multiple modifiers (cf. **someone neat little*).

Nevertheless, it should also be acknowledged that the distinction between phrasal CoPros and nominal CoPros is often not remarkable in the speaker’s mind. In (49a) I observe the coexistence of both uses in a single sentence, and (49b) can be trickier: the CoPro *something* simultaneously takes an external determinative (which is the property of nominal CoPros) and an adjectival postmodifier (which is a typical characteristic of

phrasal CoPros), rendering the status of *something* indeterminable – although we may tentatively interpret this example as an inadvertent confusion of the two uses.

- (49) a. ...but the reader attends in tragic wonder, for he understands that Marmeladov has indeed *nowhere* to go, *a nowhere* which is the finality of his loose end... (BNC: A18)
- b. Coleridge lamenting that...there was *a something corporeal*, a matter-of-fact-ness, a clinging to the palpable, or often to the petty, in his poetry, in consequence. (BNC: B0R)

3.5.4 *The bases -where and -time*

Finally, I want to address some issues related to compounds with *-where* and *-time*. I argued in Section 3.2.1 that the base *-where* could on some occasions be considered nominal, making *somewhere/anywhere/nowhere* equivalent to *some place/any place/no place*. The situation, however, is far more complicated in (50a-e).

- (50) a. Instead they find *nowhere* to live, nothing to eat and poor health and education. (BNC: JNF)
- b. We've had I think forty-five enquiries and definitely one lady wants seventy from Sussex or *somewhere*... (BNC: J9P)
- c. If he was going *anywhere* I thought he would have come here for Premier League football. (BNC: CH3)
- d. He had seen the lie, but was *nowhere near* the truth. (BNC: FP7)
- e. Sadly, the game is *nowhere near* as polished as the films. (BNC: CEK)

Examples (50a–b) strongly suggest the nominal nature of *-where* compounds, because the grammatical functions of object (50a) and prepositional complement (50b) are usually realised by NPs. In (50c), *anywhere* is better analysed as a locative intransitive

preposition or an adverb, depending on different theoretical frameworks. An anonymous viewer argues that in *nowhere near/close to* the word *nowhere* is an adverb modifier of *near/close*, which is plausible in (50d) but not in (50e): *nowhere near* in the latter case is clearly not an AdjP, but an idiomatic negator equivalent to ‘not’.

The chaos related to the analysis of *-where* compounds is partly due to the confusing nature of *where*. There have been arguments that *where* is intrinsically nominal preceded by an empty preposition (e.g. Caponigro & Pearl 2008, see also Larson 1985), and a result of this fuzzy status is that each of (50a–c) are fully acceptable. On the other hand, *some/any/no place* behave more like NPs as the base *place* is unquestionably nominal: in the BNC there are 79 attestations of *going nowhere* but only one of *going no place*.

Compounds with *-time* are rarely mentioned in grammars. Nonetheless, the distribution of those words is similar to that of *-where* compounds, as (51a–c) show:

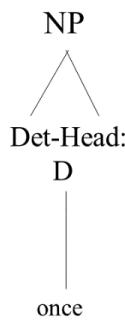
- (51) a. Hong Kong remains almost as uncompetitive as it has been at *anytime* since 1986, and is far less competitive than a year ago. (BNC: CRA)
- b. It started *sometime* in March, not long after Eric’s arrival. (BNC: J1H)
- c. Leon was a stockbroker, a *sometime* Liberal M.P. for North Bucks, and a part-proprietor of the Daily News. (BNC: AMC)

While *anytime*, as prepositional complement in (51a), is most likely nominal, the status of *sometime* in (51b) would be debatable between an NP and an adverb (phrase). Again, it might be argued, following Larson (1985), that before *sometime* there is an empty preposition, but discussing this issue is beyond the scope of this chapter. Finally, *sometime* in (51c) should be considered as polysemous for two reasons: first, it has a different meaning, namely ‘former’; second, unlike the examples in (51a–b), it does not have the form of ‘some time’ (e.g. **a sometime* Liberal M.P.).

3.6 *Once, twice and thrice*

When FFT is formalised in Payne et al. (2007), one of the applications is the explanation of *once*, *twice* and *thrice*: the authors analyse the internal structure of these three words (henceforth referred to as ‘the *once* series’) exactly the same way as CoPros. For instance, *once* is given a syntactic representation as follows:

(52)



As the major argument of this chapter is that CoPros are not compounds but ‘compound phrases’, it is interesting to research the status of the *once* series in this last section: can we regard these items as special types of CoPros? Or should we analyse them in a different manner?

3.6.1 *Once as a determiner-head*

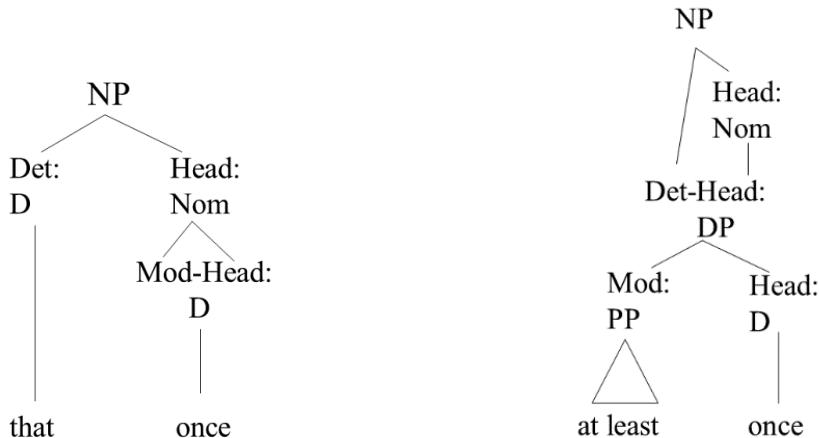
Payne et al. (2007) recognise five uses of *once* and three of *twice* ((53)-(54) are taken from Payne et al. 2007: 584, 590):

- (53) a. I will only say this to you *once*. [numerical]
 b. Not *once* have I seen anything like this. [singulative]
 c. They were *once* respected members of the community. [past]
 d. We were welcomed by the *once* mayor of New York. [term of office]
 e. I will leave *once* you are all ready. [sequential]

- (54) a. I am only going to say this to you *twice*. [numerical]
 b. We were welcomed by the *twice* mayor of New York. [term of office]
 c. They earn *twice* the amount we do. [multiplier]

The numerical and singulative uses of *once* (and also the numerical use of *twice*; *twice* does not have a singulative reading probably because of its inability to occur in negation, cf. *not *twice/*two times*) are particularly relevant to the fusion of functions. Payne et al. (2007: 587-590) analyse the italic part of the following (55a-b) (their (18b), (20a)) as in (56a-b).

- (55) a. I only met her *that once*.
 b. You should really see this film *at least once*.
- (56) a. b.



Again, the analyses of *once* in both the simple (55a) and complex (55b) phrases are identical to those of compound pronouns. While I do not believe complex fusion (i.e. fused NPs instead of nouns, as shown in (56b)) is impossible, the analysis that regards *at least once* as an entire fused construction needs reconsideration, as these examples make clear:

- (57) a. Similarly, Timothy insists that a bishop must have been married only one time, not *the more than once* which would have been permitted upon the

death of a wife. (Payne et al. 2007: 590)

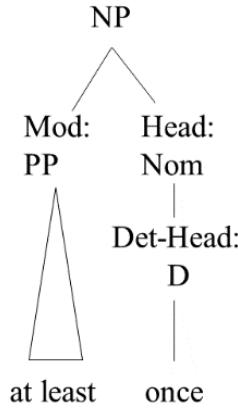
- b. Having said that, doesn't every club turn up for the wrong match on the right day *at least once or twice* a season? (BNC: FR9)
- c. Run through this awesome Pilates workout *at least once* which should take less than 20 minutes. (<https://bit.ly/3cSkKoc>)

(57a) might represent a case of complex fusion, as the following relative clause (*which would have...a wife*) modifies *more than once* as a whole. But I wonder whether it would be simpler to regard *more than once* in this sentence as a compound: for example, we might link the elements with hyphens, i.e. *the more-than-once*, which does not change its interpretation. Even though (57a) is a valid example of complex fusion, *the more than once* may not share the same analysis with *at least once* in (56b). First, while *the more than once* is a relatively firm expression, *at least once* shows flexibility as it could expand by coordinating *once* and other elements, such as *twice* (57b). If we deal with *at least once or twice* or similar constructions the same way as Payne et al. do, we will be at risk of creating more complicated fused constructions and thus proliferating fusion of functions. Second, the meaning of (57c) is potentially ambiguous, but it is more likely to be interpreted as ‘...at least one time, and each time takes less than 20 minutes’ instead of ‘...at least one time, and it takes less than 20 minutes in total’. While the second interpretation favours a complex fusion analysis, the first interpretation indicates that the relative clause *which should take less than 20 minutes* modifies *once*, not *at least once*. In other words, *at least once* should be analysed instead as in (58b), and represented as (59):

- (58) a. [NP [Det-Head *at least once*]] (= (55b))

- b. [NP *at least* [Det-Head *once*]]

- (59)



However, is FFT appropriate to analyse the *once* series at all? In previous sections of this chapter, I argued for another solution to account for compound pronouns: CoPros are atypical NPs whose syntax is determined by their pre-established morphology. If the *once* series are structurally identical to CoPros, as Payne et al. assert, does it follow that *once*, *twice* and *thrice* are also phrasal? In the following sections I will briefly compare CoPros and the *once* series and propose that the two groups are quite different in several respects.

3.6.2 CoPros and the *once* series

3.6.2.1 Morphology

In CoPros, both the determinative part (*some-*, *any-*, *no-*, *every-*) and the nominal part (*-body*, *-one*, *-thing*, *-where*, *-time*) are morphologically independent, which makes them typical compounds. By contrast, there is hardly any possibility of analysing *once*, *twice* and *thrice* as phrases in terms of morphology, as they are even not typical compounds. Payne et al. (2007), as well as Kayne (2015) who I will discuss later, regard the *once* series as blends which comprise the initial parts *on-*, *tw-* and *th-* and the ending *-ce*, and Payne et al. further propose that *-ce* is a nominal base meaning ‘time’.

This proposal, however, is far from convincing, simply because we are not sure what the original word of *-ce* is. Most blends operate by a formula (60), which is

suggested by Bauer et al. (2013: 458):

- (60) AB + CD → AD

Smog, for instance, is formed by combining the beginning of *smoke* (AB → A) and the ending of *fog* (CD → D). Now, suppose that the numerals *one*, *two* and *three* contribute the A parts of *once*, *twice* and *thrice*, which word is clipped into the D (i.e. -*ce*) part? In Modern English this CD word does not exist.

3.6.2.2 Historical development

Historically, CoPros first appeared as phrases in which the determinatives and nouns were separated (cf. Section 3.2.3). The *once* series, on the other hand, underwent a quite different course of development: according to the OED, those words were formed by adding the genitive suffix *-es* to corresponding numerals, e.g. *twiges* (*twige* + *-es*) → *twice*. Payne et al. (2007: 588) are aware of this fact, and defend themselves (i.e. the *once* series is composed of determinative and nominal bases just like CoPros) in a footnote:

This [i.e. their analysis, discussed in the previous section] would represent a reanalysis of the original genitive ending of *one* (modern English *once* < OE *aenes*, *anes*). The compound determinative analysis therefore has relevance for the debate on whether degrammaticalization is a possible mechanism of historical change: the final sibilant in *once*, *twice* and *thrice*, historically an inflectional formant, has plausibly been reanalyzed as a lexical (derivational) formant.

While degrammaticalization is a possible mechanism of lexical change (see Willis 2007 for a thorough review), it is premature to claim that *-ce* has degrammaticalized. First, the genitive inflection *-es* can be interpreted as having the sense of an adverb in Modern English (see OED, s.v. *suffix -s*): for instance, *sōðes* ('of truth') can be translated as 'truly', though its adverbial form is *sōðlice*, in which *-lice* is the ancestor of the modern

suffix *-ly*. This could probably account for the fact that the *once* series are very often used as adjuncts. On the other hand, the ‘time’ meaning is not explicit on the surface, and is likely to be implied. If there is indeed a grammatical change, I would argue that it would be more straightforward for *-ce* to be reanalysed as an adverb-like formative of some kind, and to maintain the ‘time’ meaning as being implicit. Second, quite a few *-s* endings turn into *-ce* in modern English “to indicate the long vowel and the breath sound¹⁹ of *s*” (OED, s.v. *thrice*), e.g. *mice*, *nice*, yet none of these words with *-ce*, except *once*, *twice*, and *thrice*, has the ‘time’ meaning. Therefore, I do not think the internal structures of *once*, *twice* and *thrice* are comparable to CoPros – which means they cannot be phrasal structurally.

3.6.2.3 Distribution

Another difference between CoPros and the *once* series is their syntactic distribution. While CoPros are mostly used as subject, object or complement (61a-c), *once*, *twice* and *thrice* typically function as adjunct (62a).

- (61) a. *Nothing* would ever be the same again. (BNC: CH1) [subject]
- b. If you do not find *someone* to share with you, you will be accommodated in a single room at no extra charge. (BNC: ED0) [object]
- c. They are not direct dispositions in favour of *anybody*. (BNC: B2P) [PP complement]
- (62) a. A man I’d met only *twice*, a bit of a loner, invited me to go with him to the West Indies. (BNC: ARB) [adjunct]
- b. *Once* is a private tragedy, *twice* is bad luck, three times looks like carelessness. (BNC: CJF) [subject]

¹⁹ An odd concept used in the OED: it may refer to ingressive sound, a sound made by the airstream flowing through the mouth or nose.

It is straightforward to analyse CoPros as NPs because subject, object and complement are the typical functions realised by NPs. Nevertheless, it is less obvious to analyse *once*, *twice* and *thrice* in the same way since a disproportionate number of their occurrences perform the function of adjunct. As discussed in the previous section, *once*, *twice* and *thrice* are inflected forms in origin, and the genitive suffix enforces a sense of being adverbial; on the other hand, those words remain nominal, and on rare occasions they can undertake functions which are impossible for adverbs, such as subject (62b). The *once* series, like some other temporal pronouns such as *yesterday* and *tonight*, fall on the borderline of the noun and adverb categories. It seems that they are even less ready than CoPros to be regarded as NPs.

3.6.2.4 Coordination

Payne et al. (2007) discover some peculiar coordination patterns with regard to the *once* series in non-standard English. (63) and (64) below are taken from Payne et al. (2007: 596-597); ! is a mark of ‘non-standard’.

- (63) !You have received this email because at *once or another* you entered the weekly draw at one of our portals or FFA sites.
- (64) !This is *the once and only time* you will use the User Name and password supplied by your instructor.
- (65) More significant is the fact that the actual rhyming words in each first half are repeated *once or more* in each second half, as for instance ‘seen’ in the first stanza, ‘leaves’ in the second, ‘feet’ and ‘roam’ in the third, and so on. (BNC: CDV)

In coordination we see more similarities between CoPros and the *once* series. (63) may remind us of a parallel coordination pattern I introduced in Section 3.2.1, namely ‘CoPro or other’. An example (originally (9a)) is repeated here as (66).

- (66) Almost all our citizens are indicted for *something or other*.

I reasoned in Section 3.2.1 that in *something or other* the CoPro was better treated as an NP as it was coordinated with another elliptical NP *other* (probably reduced from *other thing*). The same reasoning can be applied to (63) and (64): in (63) *another* is likely to be a reduced form of *another time* (an NP), which means that its coordinated element *once* should be an NP (instead of a determinative or a noun) as well. (64) is more obvious, because the coordinated noun *time* is overtly expressed. Another construction which Payne et al. do not mention but is fairly well-established in corpora is ‘*once/twice or more*’, as in (65). Like *once or another*, we expect *more* to be elliptical of the NP *more times* so that *once or more* means ‘[NP *one time*] or [NP *more times*]’ or ‘[NP *one or more*] times’.²⁰ Either way, it seems that *once*, possibly as well as *twice* and *thrice*, can be syntactically divided into the NP *one time*, just like CoPros.

3.6.2.5 Modification

The last and most important factor that differentiate *once*, *twice* and *thrice* from CoPros is that the former group is inert in taking modifiers. In Section 3.3.2 I argued that most adjectives which should occur between the determinative bases (e.g. *some-*, *any-*) and the nominal bases (e.g. *-one*, *-thing*) are postposed through a mechanism called ‘syntactic coercion’ (67). But as Dixon (2008: 198) observes, this mechanism does not work for the once series (68a), with the only exception being *more* (68b).

- (67) So it had to be *some young and supple person/someone young and supple* and only Rachel fitted that description. (BNC: H90)

- (68) a. He kicked the dog *two separate times/*separate twice/*twice separate*.
(Dixon 2008: 198)

²⁰ Another piece of evidence is that the string ‘or more’ frequently collocates with numerical NPs, such as *twenty years or more* or *14 per cent or more*. By analogy, it is reasonable to argue that *once* has the same internal structure as *twenty years* or *14 per cent*.

- b. He kicked the dog *two more times/twice more*.

This casts doubts on whether there is a nominal base in *once*, *twice* or *thrice* as Payne et al. argue: if *-ce* is the nominal base just like *-thing* or *-one*, why can it not be modified?

Below I tabulate the similarities and differences discussed in previous sections.

	Morphology	Historical word-formation	Syntactic distribution	Coordination	Modification
CoPros <i>(e.g. somebody)</i>	Compound phrases	Compounding of determinatives and nouns	More frequently subject, object or preposition complement	Coordination reduction possible	Less restricted
Once, twice, thrice	Not compounds (i.e. derivations)	Relics of nominal inflection	More frequently adjunct	Coordination reduction possible	More restricted

Table 3-3 Comparison between CoPros and the *once* series in five dimensions.

3.6.3 Representing *once*, *twice* and *thrice*

In the previous session I showed that CoPros and the *once* series, regarded by Payne et al. (2007) as being in the same category (fused determiner-heads), are actually more different from each other than similar (Table 3-3). However, Table 3-3 essentially argues for, not against, representation (52) that FFT may account for the *once* series (though not for CoPros). It reveals that the internal structure of *once*, *twice* and *thrice* is much more solid than that of CoPros because their parts (if they can be divided into the *on-/twi-/thri-* base and the *-ce* base at all) are not fully active. Perhaps this can explain why syntactic distribution and modification are so limited for the *once* series. The only syntactic phenomenon that FFT fails to account for is coordination reduction: if we follow FFT and take *once*, *twice* and *thrice* as single words, then coordination reduction, which is usually seen in phrasal constructions, should not be able to happen.

Payne et al. are not the only scholars who try to tackle the mystery of the *once* series.

An alternative analysis comes from Kayne (2015), who proposes an analysis as follows:

(69) *on-TIME-ce*, where

- (i) *On-* (as well as *twi-* and *thri-*) is a numerical base;
- (ii) *-ce* is a postposition (like *of* in *thereof*), and
- (iii) TIME is a silent classifier.

I argue against the second point, simply because a postposition is unnecessary. Although we may assume a prepositional element when the *once* series functions as adjunct, e.g. we interpret *we were young once* as *we were young (at) one time*, such an element is not permitted in examples like *once is a private tragedy* – it of course cannot be understood as **At one time is a private tragedy*.

However, the third point is worth more consideration. Kayne's proposal derives from his observation that while the phrase ‘numeral + time(s)’ can be singular or plural ((70a-b); in COCA *two times is/was* has 11 occurrences and *two times are/were* has 10 – indicating almost a 50-50 chance), the *once* series can only be singular ((62b), repeated here as (71)). A similar situation is (72a), where *year* and *pound* are always singular. These singular uses contrast with both numeral NPs (i.e. [NP Num N] like (72b)) and the so-called ‘English classifier constructions’ (Lehrer 1985, i.e. [NP Num N of N(P)] like (73)), in which the classifier-like elements are nouns.

(70) a. There is a saying “One time is chance, *Two Times is* a coincidence, Three times is suspicious/a conspiracy”... (COCA: 2012_WEB_tvtropes.org)

b. It’s – those *two times were* the best times of my life, really. (COCA: 2000_SPOK_NPR_Saturday)

(71) ...*twice is* a bad luck...

(72) a. a 12-year-old boy/the two-pound pizza
b. The boy is 12 years old./The pizza is two pounds.

(73) a group of these students/two bottles of milk

As *time*, *year* and *pound* are without doubt count nouns, the compulsory singularity in (71) and (72a) is hard to explain, if there is no additional configuration. However, the fact that *year* and *pound* in (72a) are bound morphemes of corresponding compounds (rather than independent words in numeral NPs, like those in (72b)) is potentially inspiring, because in Mandarin Chinese (a classifier-rich language), classifiers must occur with numerals or other determinatives (47):

(74)	(*yi)	/	(*duo)	ci	jihui
	one		several	CL	opportunity
‘one opportunity/several opportunities’					

From a morphological point of view, *year* and *pound* are possible classifiers. In addition, the Chinese classifier *ci* ('time') can function as adjunct of certain verbs and is hardly modified,²¹ which is quite similar to the properties I discussed in Section 3.6.2.3 and 3.6.2.5. This also indicates that *Kayne's* second point might be plausible. As *-ce* is a bound morpheme (cf. Section 3.6.2.1) that is neither likely to be a full noun nor a postposition, and as it behaves syntactically like the Chinese classifier *ci*, why not analyse *-ce* as a classifier, or at least a classifier-like morpheme?

Therefore, *Kayne's* representation of the internal structure of *once*, *twice* and *thrice* (69) can be improved as follows:

(75)	on-/twi-/thri-D -ceCL
------	-----------------------

An obvious strength of analysing *-ce* as a bound classifier is that it maintains the ‘D + N/CL’ structure similar to that of CoPros (so that the *once* series shows the same coordination patterns as CoPros) while addressing the problems of distribution and modification from a different perspective: the reason why *once*, *twice* and *thrice* seldom function as subject or object and *-ce* cannot be freely modified (both characteristics are

²¹ Modification is possible for certain classifiers (see Jin 2013 for detail), but not for *ci*.

dissimilar to those of CoPros) is that *-ce* is not a noun base, but a classifier base. Compared with FF theory which can be hard to conceptualise, this explanation is more straightforward. The disadvantages of it, nonetheless, are also noteworthy: first, we have to acknowledge that there is indeed a reanalysis as Payne et al. surmised (cf. the quote in Section 3.6.2.2), although *-ce* is turned from a genitive suffix into a bound classifier, rather than into a nominal base. Second and more importantly, solid evidence is lacking for the existence of classifiers in English. While the account based on FFT does not require the creation of new categories, (75) assumes a new category ‘classifier’. I have to admit that although what was discussed above ‘looks like’ there is a classifier category, conclusions are drawn based only on cross-language comparisons, whose reliability can be questionable. Unless we are able to make direct observations within the English language, the representation (75) is probably no more than hypothetical.

3.7 Conclusion

This chapter analyses the syntactic behaviour of compound pronouns by examining their coordination and modification patterns. It concludes that CoPros have a dual identity of being morphological compounds, but syntactic phrases, contra both the traditional view of classifying CoPros as compounds and Kishimoto (2000) who takes them as purely phrases. The dual identity results in distinctive modification patterns, for which a paradigm, based on Larson & Marušić (2004), is devised.

An important implication of the proposal of compound phrases is that morphology constantly interacts with syntax and may function as the basis for syntactic operations. The relations between morphology and syntax have been debated for decades (Borer 2013) and this study shows that in the case of CoPros, the morphological shapes cannot be overlooked during the analyses of the syntax.

Furthermore, the modification patterns, especially the possible multiple modification of CoPros, deserves more attention. Although the paradigm I propose successfully accounts for common modifiers, there are still some exceptions, such as *anything available new*. Speakers of English may feel such constructions to be less

acceptable, yet data extracted from corpora indicate that they should not be simply ignored.

In Section 3.5 I discuss the special nominal CoPros. Despite their marginal use, nominal CoPros enrich the CoPro family both in semantics (e.g. *nobody*₂ has a different denotation) and in syntax (e.g. the ability of taking attributive-only modifiers), and it is perhaps this enrichment that continuously motivates grammatical changes.

Finally, I revisited the syntax of *once*, *twice* and *thrice*. These words are regarded by Payne et al. (2007) as fused determiner-heads, by comparing them with CoPros. The conclusion is that although FFT does not suit CoPros, it may provide a reasonable solution for the *once* series, because these words are not fully qualified as compound phrases.

4. Generic Human Constructions

4.1 Introduction

There is a construction in English, usually formed by the determinative *the* and a restricted group of adjectives, as illustrated in (1a-b):

- (1) a. *The absent* are always at fault. (Jespersen 1933: 49).
- b. He went from *the extremely sublime* to *the extremely ridiculous*. (Quirk et al., 1985: 424)

What is special for these ‘*the + Adj.*’ phrases, like the ones in (1a-b), is that they are noun phrases, despite the absence of (explicit) nouns. Their nature of being NPs is proved by their functions in clauses: they suit all positions where common NPs can be situated. In (1a), for example, *the absent* functions as the subject; and *the extremely sublime* and *the extremely ridiculous* in (1b) are preposition complements. Other possible functions of these constructions are summarised in Arnold & Spencer (2015), who give a very comprehensive description of their syntactic behaviour (example (2a-e) are adapted from Arnold & Spencer (2015: 44)):

- (2) a. *the very poor's/John's/the students' main problem...* [possessive marking]
- b. *the very poor/the politicians in the country...* [PP postmodification]
- c. *the very poor/Mr. Smith's parents who live in rural areas...* [restrictive relative]
- d. *the very poor;/the doctors and nurses, who are barely mentioned here... [non-restrictive relative]*
- e. *the very poor and some inhabitants of slum areas...* [coordination]

The ability of ‘*the + Adj.*’ phrases, exemplified here by *the very poor*, to bear genitive

clitics (2a), take PP modifiers (2b), and occur as antecedents of restrictive and non-restrictive relative clauses (2c-d) indicates that these phrases are NPs. Furthermore, as coordinated elements are often in the same category,¹ we may expect that *the very poor* is categorically parallel to *some inhabitants of slum areas*, i.e. an NP (2e). Therefore, phrases with the form ‘*the + Adj.*’ are another instance of Exocentric Noun Phrases (ENPs) – in fact, they may be the most well-known ENPs in English.

We can identify several more characteristics of ‘*the + Adj.*’ phrases from (1)-(2):

- i. Some of these phrases denote human reference (1a), (2a-e), and some abstract ones (1b);
- ii. The references are rather generic, i.e. they refer to a group of people in general who have certain traits in common, or they refer to some abstract entities with certain characteristics;
- iii. They are usually plural in number when referring to humans (e.g. the verb agrees with the subject, and we have *are* in (1a) and *live* in (2c)), but singular when referring to abstract entities.

Although semantically these phrases can be divided into two groups, it is the one denoting human beings that has received much more attention. Jespersen (1933: 49) observes that “[i]n a plural sense adjectives may be used as primaries² to denote a whole class of living beings”, and this is followed by plenty of studies, termed differently as “*people deletion*” (Pullum 1975), “the human construction” (Kester 1996a; Günther 2013, 2018), or “the adjective-as-nominal human construction” (Fillmore et al. 2012; Arnold & Spencer 2015), which approximately refer to the same syntactic phenomenon. On the other hand, the other group, which denotes abstract

¹ But not necessarily so. In fact Arnold & Spencer’s last ‘coordination’ criterion is less persuasive, because according to Huddleston & Pullum et al. (2002), the coordinated elements must be of the same function rather than word class. An example is *He is a mayor and exceptionally rich*, in which *a mayor* and *exceptionally rich* are different categorically (an NP and an AdjP respectively), but the same functionally (predicative complement).

² Jespersen’s term which roughly equates to “heads”.

things, is relatively neglected: Aschenbrenner (2013) and Günther (2018) are among the few studies that pay attention to it. In the following two chapters I will discuss both groups of ‘*the* + Adj.’ phrases. This chapter is dedicated to ‘*the* + Adj.’ constructions with human references. Following Kester (1996a) and Günther (2018), I will use the term ‘Generic Human Constructions’ (GHCs) for those constructions. Chapter 5 is mainly about the other group, similarly termed as ‘Generic Abstract Constructions’ (GACs), but some complicated, structurally opaque constructions denoting both human and non-human references will also be explored. Finally, I will compare GHCs/GACs to some similar concepts, i.e. elliptical NPs and nominalised adjectives, and discuss their relationship to ENPs.

4.2 Generic Human Constructions: structure, semantics and syntax

4.2.1 *The structure of GHCs*

As is easily observed from (1)-(2), GHCs comprise two distinctive parts: a determiner *the*, and an adjective. As typical GHCs – *the rich*, *the dead*, *the ill* – are constructed more or less in the same way, it is often taken for granted that all GHCs must have these two parts. However, GHCs are a rather heterogeneous class in which the internal structure can radically vary, and it is worth some effort to delve into the structure of GHCs.

4.2.1.1 The determinatives

Borer & Roy (2010), as well as Filmore et al. (2012), assume the obligatory presence of the definite article *the*. However, as both Arnold & Spencer (2015) and Quirk et al. (1985) point out, there are far more options. Possessives, for instance, may precede the adjective both in the forms of genitive pronouns (e.g. *his*, *our*) and nouns with genitive

markers (e.g. *Asia's*) (3a-b). So can *those* and *these*, under particular conditions.³ Quirk et al. (1985: 423) note some more marginal uses, such as the adjective preceded by pronouns (3d) or *of*-constructions, and bare adjectives that are conjoined. The latter two uses are attested in corpora (3e-f). Finally, it is often seen in news reports that words like *dead*, *injured* or *wounded* follow numerals (3g):

- (3) a. They had to take care of their sick and wounded. (Jespersen 1933: 49)
- b. Most of *Asia's newly* rich are simply the first winners in a rush to own markets. (Arnold & Spencer 2015: 47)
- c. . . . it must be appreciated that *those poor* who were included in these surveys were those who were deemed to be in need. . . (Arnold & Spencer 2015: 47)
- d. *we rich, you dead* (Quirk et al. 1985: 423)
- e. Given the ageing of the population considerable interest has been expressed in identifying the number of *elderly* in the future who will experience this condition. (BNC: ECE)
- f. They came from *young and old*, from friends and strangers, from church groups, and from families in Cleveland and Rochdale who had been in the same position themselves. (BNC: CAR)
- g. [Headline] 2 *dead*, 1 *injured* in shooting incident on Ballenton Road.
(<https://bit.ly/37Rduq1>)

It seems that adjectives are compatible with various kinds of words (including zero): determinatives, genitives, personal pronouns or even numerals. However, I will not suggest that all examples (3a-g) are GHCs.⁴ Also, some determinatives, like indefinite articles (e.g. *a*, *an*), cannot precede the adjectives. A third point is that apart from

³ Arnold & Spencer (2015) observe that '*these/those + Adj.*' is only possible when followed by a relative clause (3c), which is not correct. See Section 4.4.2.2 for counterexamples and further discussion.

⁴ As the purpose of this section is mainly descriptive, I will not analyse these untypical structures here. See Section 4.4.2.2 for analyses of (3c, g) and Section 5.7 for analyses of the rest.

examples like (3f), where two adjectives are conjoined, adjectives cannot appear alone in Present-Day English. Therefore we will never accept clauses like **They had to take care of sick* or **Most of rich are simply the first winners in a rush to own markets*.

4.2.1.2 The adjectives

The very first point to note about the adjectives is that they must not be confused with nouns which derivatively or coincidentally are spelt the same way. This is what Borer & Roy (2010) do, and where Aschenbrenner makes a mistake by including structures like *their elders* in her corpus of “substantivized adjectives denoting person/s” (see Aschenbrenner 2013: 313).⁵ Borer & Roy distinguish the GHCs (which they name as “adjectives as nominals”) from the so-called “Noms(A)” (e.g. *linguist*, *American*, *communist*), which they define as “nouns...which happen to be homophonous to adjectives” (Borer & Roy 2010: 86).⁶ While they comprehensively describe the differences between adjectives and Noms(A), a set of operational rules seems to be absent. This, nonetheless, is compensated for by Huddleston & Pullum et al. (2002). In *The Cambridge grammar of the English language*, the authors provide rather detailed syntactic rules that help to tell the differences between nouns and adjectives (Huddleston & Pullum et al. 2002: 527-36). Typically, nouns

- i. inflect for number if they are countable,
- ii. take adjectives as pre-head modifiers, and
- iii. take determiner dependents.

⁵ Aschenbrenner asserts, confusingly, that the -s plural does not necessarily suggest a noun status. This is hardly conceivable: we can never find examples like **the wisely elders*.

⁶ There are two issues regarding the concept ‘Nom(A)’ which are unclear, though. First, many Noms(A) obviously do not “happen to be homophonous [sic] to adjectives”, if we define ‘homonymy’ as words with unrelated senses, e.g. bank ‘financial institution’ or ‘ground near a river’. There is a derivational relation between the adjective *communist* and the noun *communist*, as in the case of words of nationality (*American*, *Japanese*, etc.). Second, words like *linguist* or *librarian* simply can be nouns only. It is not the case that any word with the ending *-ist* or *-an* is potentially adjectival.

On the other hand, adjectives

- i. can be gradable and take degree modifiers such as *very* or *too*, and
- ii. take adverbs as modifiers.

It is worth noting that the above qualifications may not rigidly apply to every candidate, since some adjectives, as well as nouns, are more ‘peripheral’ than others. *Dead*, for example, does not have inflections for comparative or superlative, and its adverb modifiers are restricted to just a few, but this does not exclude *the dead* from being a GHC because the word neither inflects for number nor takes an adjectival modifier.⁷ Therefore, it does not require the strict fulfilment of the criteria; rather, for a particular word to be categorised as an adjective or Nom(A), it may partly conform to the criteria, as long as it is devoid of the characteristics of the other category. In this sense, the Nom(A) *American* is a real noun as long as it can inflect for number (*Americans*), take adjectival modifiers (*a polite American*) and determiners (*an American*). The importance of having syntactic rules is that syntactic rules, in determining the status of the candidates for the GHCs, are more reliable and consistent than morphological or semantic rules. For example, we do not have to depend on our judgement of specific ‘adjectival suffixes’, as many adjectives are not morphologically salient. On the other hand, an adjective with a typical suffix might undergo full conversion and become a Nom(A), like *hopeful* in *the Olympic hopefuls*.

The second important point about the adjectives is that not all attributive adjectives are eligible for GHCs. Saab (2018: 540) argues that adjectives in GHCs are “lexically restricted” and “are especially productive with certain types of modifiers but not others”. Adjectives that are commonly used to describe human traits are particularly easy to occur in GHCs, while the more neutral ones are not (4):

⁷ The situation with *the dead* is more complicated in that there is often an intrusive adjective in the construction, e.g. *the living dead*, though the word *dead* itself cannot be modified by an adjective. This will be discussed later in Section 4.4.2.

- (4) Mandeville proposed that...it was *the rich* who were in fact *the useful ones*, because their expenditure provided employment for everyone below them and so helped *the weakest* in society to survive. (De Botton 2004: 75-6)

The useful is not a GHC, as it is followed by the pronoun *ones* (compare [?]*it was the rich who were in fact the useful...*), perhaps because *useful* is a neutral adjective. Interestingly, *weak* is also used for a wide range of entities (e.g. *a weak market/heart/signal...*), yet *the weak*, as in (4), exclusively describes a group of people. It seems, therefore, that there is some randomness in which adjectives can occur in GHCs, although, as Saab concludes, the tendency to describe human traits may affect the likelihood of an adjective to form its own GHC.

4.2.2 *The syntax and semantics of GHCs*

4.2.2.1 Number

The majority of GHCs have plural readings, though they are not morphologically inflected, and this is reflected in subject-verb agreement: in (5) we have the verb *are*, indicating the plurality of *the dead*. However, some structures, such as *the accused* and *the deceased*, can be flexible in number: they are normally singular ((6a), (7a)), but plurality is also possible under some situations ((6b), (7b)).

- (5) *The dead* are impersonal, and so perhaps it is of no especial moment that they should be disturbed.
- (6) a. If *the accused* is not dishonest by those standards he is not guilty. (BNC: HXE)
- b. No evidence was found to lead us...to think that the convictions were unsound or that *the accused* were treated unfairly at the time. (BNC: K5D)
- (7) a. ‘Maintained’ means that *the deceased* was making a substantial

contribution in money or money's worth towards the reasonable needs of the applicant... (BNC: ABP)

- b. *The deceased* looked livid and their necks appeared to have been broken. (BNC: ANK)

There is a strong tendency for *the accused* and *the deceased* to be used singularly in corpora. In the BNC, among the 970 occurrences of *the accused* and 554 of *the deceased*, only a handful are plural. A guess for this distinction is that the two phrases are used disproportionately in judicial contexts, which very often deal with individuals rather than a group of people. Furthermore, GHCs such as *their firstborn* can only be singular due to their semantics: we usually would not expect *firstborn* to refer to more than one person – there is a sequence, even for twins.

4.2.2.2 Genericity and specificity

Another possibly crucial factor that contributes to the singularity of some constructions, especially *the deceased*, is the tendency towards the expression of specificity rather than genericity, as a basic feature of the GHCs. Although the concept of ‘genericity’ is probably ill-defined, what Quirk et al. (1985: 265) describe about *tigers* is widely acknowledged:

[*Tigers* are specific when] we have in mind particular specimens of the class ‘tiger’... [The concept is generic when] we are thinking of the class ‘tiger’ without specific reference to particular tigers.

Singular definite NPs may denote genericity (8a) as well as specificity (8b), depending on the context.

- (8) a. The lion lives in African. [generic]
b. The lion killed a visitor in the zoo. [specific]

Similarly, singular GHCs are also available for specific interpretation:

- (9) a. In *R v Husseyin Ozdemir* (1986) a police officer had caught *the accused's* son (aged 14) driving a car and had indicated to *the accused* that the son would be charged with an offence for driving without a licence. (ICE-GB: S2B020-020)
 - b. We shouldn't be concerned with the character and disposition of *the accused*. (ICE-GB: S2A044-114)
- (10) a. *The deceased* was born on 28 July 1903. *He* died on 20 April 1986 at the age of 82. (BNC: FD2)
 - b. Section 11(5) of the Act of 1988 provides: ‘An inquisition... (b) shall set out, so far as such particulars have been proved -- (i) who *the deceased* was; and (ii) how, when and where the deceased came by his death...’ (BNC: FCT)

In (9a-b) *the accused* is used in quite distinctive contexts: it refers to a specific person in (9a), and the person's identity is recoverable when more information is given (we can interpret the accused here as ‘the one who is accused’). However, (9b) displays another instance where *the accused* may indicate ‘anyone who is accused’, i.e. singular genericity. Similarly, in (10a) what *the deceased* refers to is extremely specific: the information that follows contains dates of birth and death, and the age, which should be enough to pinpoint who the deceased is, though the name is untold. (10b), by contrast, expresses a situation where *the deceased* means ‘anyone concerned who is dead’. The difference between the generic and specific usage of *the accused* and *the deceased* are highly contextual: examples like (9a), (10a) are usually found in court judgements and especially law reports, in which the court focuses on specific cases; (9b) and (10b) are more likely to be found in articles of the law, where people are treated indiscriminately.⁸

⁸ Allerton (1995) argues against the generic use of *the accused/the deceased*. He concludes that these phrases only “have a specific meaning rather than a generic one”, although “they can be interpreted as

Similar to the previous section, there are still some GHCs which exceptionally resist genericity, such as *the elder*, *their first-/second-/lastborn* and *my beloved*. As discussed, this is very much related to semantics: for example, the reader of a love letter usually does not expect *my beloved* to imply anyone else.

4.2.2.3 Anaphora

Typical GHCs do not derive their meanings anaphorically, i.e. we do not rely on the previous context to understand that *the rich* means ‘the rich people’. It seems that constructions which involve anaphorical clues should be excluded from discussion, since they are no doubt elliptical NPs, and the interpretation of the elided noun depends solely on its antecedent.⁹ Possible counterexamples are *the accused* and *the deceased* in singular and specific use, and also *their firstborn* and *my beloved*, which seem to derive their reference from the earlier context. However, my argument is that derived reference should not be confused with derived sense. In (9a), for example, we may not be able to know the identity of the accused person without the context, but may always understand, with or without the context, that *the accused* denotes a human being who is accused. Similarly, the interpretation of *their firstborn* as ‘their first child’ and *the deceased* as ‘a person who is dead’ is not affected by either previous or later context (i.e. anaphora or cataphora). By contrast, a construction which is truly anaphoric is exemplified below:

- (11) The fundamental difference between *this new style* and *the old*, was that in

either singular or plural” (Allerton 1995: 87). However, he also quotes an “interesting example”, which he cannot explain:

(i) Normal police practice is not to release the name of *any deceased* until relatives have been informed. (Allerton 1995: 87, from M. Whitfield and P.W. Davies, *The Independent*, 1994)

This example, for me, is a good illustration of the generic use.

⁹ Günther (2018) strongly opposes this idea, claiming that both GHCs and common elliptical NPs are anaphoric. I will later discuss her argument in Chapter 5, Section 5.6.

order to achieve it you needed the assistance of an architect. (BNC: AB4)

In (11) the meaning of *the old* is unclear unless the context is taken into account. Normally, without the context *the old* is interpreted as a GHC, i.e. ‘the old people’, but anaphora can serve as a parameter that leads to other interpretations. In the above sentence *the old* means ‘the old style’, a sense that is endowed by the antecedent *style* in *this new style*. Otherwise, we will not be able to determine the denotation of *the old*. It is worth noting here that example (11) reflects a relatively rare usage in Modern English, as we often expect that anaphora is signalled by *one/ones* (i.e. a more natural expression is *this new style and the old one*). This topic, as well as the difference between Generic Constructions and elliptical NPs, will be continued in Section 5.6.

4.2.2.4 Reference

Finally, there is debate about what the reference of GHCs could be. Glass (2014, 2019) is among the very few who claims that GHCs do not only refer to human beings, but also to “animate entities” (Glass 2019: 10). This is not a novel argument, though, as Bregner (1928) has observed that adjectives (e.g. *young*) usually indicating human references could also be used to describe animals.

- (12) a. New Swarm theory: *The Weak Can Lead the Strong*. (Glass 2014: 168)
 - b. *The weak and mutated* die, *the healthy* survive to pass on their genes.
(Glass 2019: 10)
- (13) a. The wolves have five or six *young* at a time. (Bregner 1928: 29)
 - b. ...all apes carry their *young* the Indian fashion. (Bregner 1928: 29)

I am not sure whether they are real GHCs, as we can in fact identify the antecedent in (12a) and (13a-b) – *swarm*, *wolves* and *apes*, respectively. (12b) is a bit tricky, because the antecedent is absent, at least in the example Glass provides. This, however, does not effectively prove that *the weak and mutated* and *the healthy* are non-anaphoric. As I

will discuss in Section 5.6, the determination of anaphora, in the case of GHCs/GACs, could be rather laborious and subject to uncertainties, and we must pay attention to the differences between ‘antecedents’ and ‘contextual information’. (12b) might not be so obvious as (11), where the antecedent immediately precedes the elliptical NP, but I wonder if the reading of ‘animate entities’ is as conventionalised as the reading of human beings – or (12)-(13) are just less salient examples of elliptical NPs.

4.2.2.5 The parameters

As a provisional summary, two variables, namely number and genericity, are helpful in differentiating types of GHCs. On the other hand, the notion of anaphora is relevant to the extent that GHCs always assume a non-anaphoric reading. Therefore, most GHCs can be divided into three types: the majority, including those with irregular forms like *our poor*, reflect the feature [+generic, +plural]; structures like *the deceased* and *the accused* can be featured by both [±generic, ±plural]; a few GHCs such as *their firstborn* and *my beloved*, always have the features [-generic, -plural].

4.3 Syntactic theories of GHCs

The syntax of GHCs is intriguing because of the categorial indeterminacy: they seem right on the borderline of adjectives and nouns (NPs) by displaying typical properties of both categories. As was discussed in Section 4.1, we have much evidence for GHCs to be NPs, such that there is an intuition that the adjective is actually a converted noun, though it is different from Nom(A) in that it does not bear inflections (e.g. *Americans*, *the Olympic hopefuls*, but not **riches* in the meaning of rich people). However, I reject the notion that the adjectives in GHCs are by nature nouns; in fact, this idea would be rejected by almost all studies about GHCs, simply because of the following phenomena:

- (14) a. ...which introduces biases in development programmes in which *the poorer* are neglected because they are inescapably the most remote and

- difficult to reach. (BNC: APN)
- b. He'll be among *the richest* one day, I've no doubt. (ICE-GB: W2F007-030)
 - c. They often have to cope with negative public attitudes towards the stereotype image of *the mentally ill*, born of ignorance and fear. (W1A007-096)

Examples (14a-c) persuasively suggest that the adjectives are real adjectives, as they inflect comparatively (14a) and superlatively (14b), and can take adverb modifiers (14c). A proper way to deal with the inconsistent category between a phrase and its (seeming) head, therefore, is the major challenge for any linguist who wishes to explore the internal structure of GHCs. Scholars generally presume that the headhood of GHCs is expressed in a special way from normal NPs. It appears that the theories concerning GHCs are mainly divided into two schools: either an extra element is claimed, or the adjective is attributed with special features. In what follows I will present a number of studies in Section 4.3.1 and 4.3.2, and discuss them critically in Section 4.3.3. In Section 4.3.4 I will introduce how Huddleston & Pullum et al. (2002) analyse GHCs.

4.3.1 *Extra element*

One way of accounting for GHCs is to postulate a nominal head: it could be a noun with full meaning and lexical features, which is then deleted for concision, or it may be a nominal form devoid of semantics. Either way, the nominal head is an extra element that is not expressed on the surface structure of a GHC.

4.3.1.1 *People deletion*

Pullum (1975) proposes a rule which he calls ‘*people deletion*’:

- (15) *People deletion (optional)*

X	-	the	-	Adj.	-	PEOPLE	-	Y ¹⁰
1		2		3		Ø		5

As its name suggests, Pullum believes that in GHCs the word *people* is ‘optionally’ deleted. In other words, GHCs (e.g. *the rich*) are not very different from the ones with overt nominal head *people* (e.g. *the rich people*), except that this nominal head is omitted. The existence of ‘people deletion’ is supported by the fact that both elliptical NPs and GHCs cannot take genitive clitic -’s, as the following examples (taken from Pullum 1975: 175-6) show:

- (16) a. These children are orphans.
- b. *These’s being orphans may have something to do with it.
- (17) a. The houses of the poor people aren’t as interesting to visit as those of the rich people.
- b. *The poor’s houses aren’t as interesting to visit as the rich’s.¹¹

4.3.1.2 Little *pro*

Kester (1996a, 1996b) argues that the adjective in GHCs is followed by *pro*.

- (18) *The rich pro* are lonely. (Kester 1996a: 60)

¹⁰ Pullum does not make clear what X and Y stand for. Perhaps they refer to constituents preceding or following the NP, such as postmodifiers.

¹¹ It is interesting to see how Pullum’s attitude towards ’s differs from Arnold & Spencer’s. In example (2a) Arnold & Spencer believe that GHCs are eligible for possessive marking, yet Pullum considers it ungrammatical here. Corpus data support Arnold & Spencer’s analysis. I found dozens of cases in the BNC, including *the poor’s*, one of which is quoted below:

(i) A system that had been designed to exclude *the poor’s* income from the payment of tax, was reshaped in such a way that...the same privilege was extended to similar bands of income for all other taxpayers. (BNC: FAF)

I have no idea why the attitudes are contradictory. Perhaps Pullum is just wrong in this example.

Also, she claims that in English GHCs are specified as [+human, +generic, +plural], and “this specification corresponds to the only instance of N-*pro* that can be licensed in English” (Kester 1996a: 61), though, following Rizzi (1986), she seems to indicate that *pro* can be somehow parameterized and that [+human, +generic, +plural] are ‘default’ values of *pro* in English.

4.3.1.3 Empty noun

The majority of studies (e.g. Panagiotidis 2002, 2003, Baker 2003, Glass 2014, 2019, Günther 2018, Saab 2018) propose an empty noun, represented by the symbol \emptyset , that follows the adjective. Paradigms of this analysis are listed in (19a-b)¹²:

- (19) a. [DP the [ADJ rich_A [NP \emptyset]]] (Baker 2003: 121)
- b. [DP the [NumP [AdjP poor] [NP \emptyset]]] (Saab 2018: 540)

Panagiotidis (2003) examines the nature of empty nouns, which he abbreviates as e_N . According to his theory, the difference between e_N and *pro* is that e_N is a grammatical noun, although it “denote[s] no concept” (Panagiotidis 2003: 416) and should be regarded as semantically blank. Hence, e_N is not recoverable lexically, and its reference, in English is understood through “the pragmatic context” (Panagiotidis 2003: 423).

4.3.2 *Adjectives as heads*

Another approach, apart from positing a nominal head, is to take the adjective as the head. This is not easy to justify, as we usually expect the head of an NP to be a noun. In some theories efforts are made to structurally amend the adjectives so that they adjust

¹² The difference between (19a-b) is that (19b) introduces a Number Phrase, which accounts for the plurality. Many theories of GHCs assume that the node of NumP is responsible for the configuration of number (see also (21b), (22a-b)).

to the position of nominal heads.

4.3.2.1 Adjectives as explicit heads

In historical linguistics, a prevailing analysis is that in GHCs the adjective functions as the head of the NP in which it is included (e.g. Görlach 1991; Raumolin-Brunberg 1991; Rissanen 2000; Fischer 2000; Horobin & Smith 2002; Fischer et al. 2017). These views are the same as in Quirk et al. (1985), who claim that “[a]djectives are typically used as heads of noun phrases to refer to certain fairly established classes of persons” (Quirk et al. 1985: 421), as well as “with abstract reference” (*ibid.* 424). Lyons (1991: 103) creates an ‘Adjective Head Rule’ whose content is “[a] string *the* + Adjective may constitute an NP, understood as human and plural”. These authors’ account can be represented as (20).

- (20) [NP *the* [ADJ *X*]]

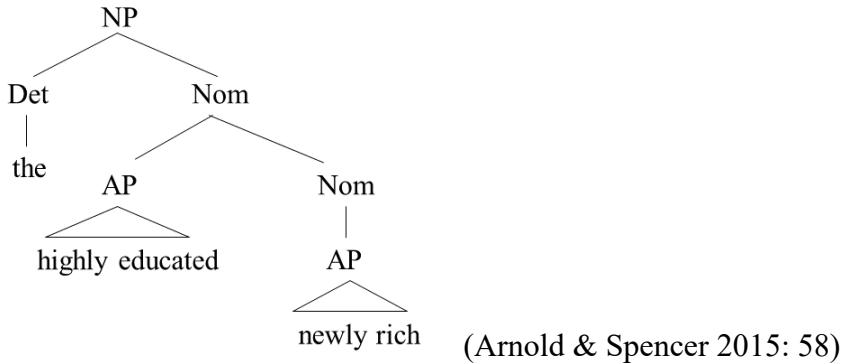
4.3.2.2 Adjustment of adjectives

The framework of (20) is obviously unwarranted if we presume that the head of the noun phrase should be a noun. Therefore, some theories, like Arnold & Spencer (2015) and Glass (2019), attempt to fill the gap between the analysis of NP and the lack of a nominal head by adding some ‘nouniness’ to the adjective, so that they are eligible for being the head. For example, following the HPSG framework, Arnold & Spencer construct a phrasal structure named ‘nominal-adj-ph’, where a nominal is built out of the adjective phrase (Arnold & Spencer 2015: 54). This structure can then account for the nominal characteristics (21a). Glass, on the other hand, defines a ‘type-shifter’¹³ which “sits in the ‘nominalizing’ node Nom as a sister to the AP because it combines

¹³ A ‘type-shifter’ in Glass (2019) is a morphosyntactic device that controls the semantic readings of a particular Generic Construction. I will further explain it in Section 5.3.1.

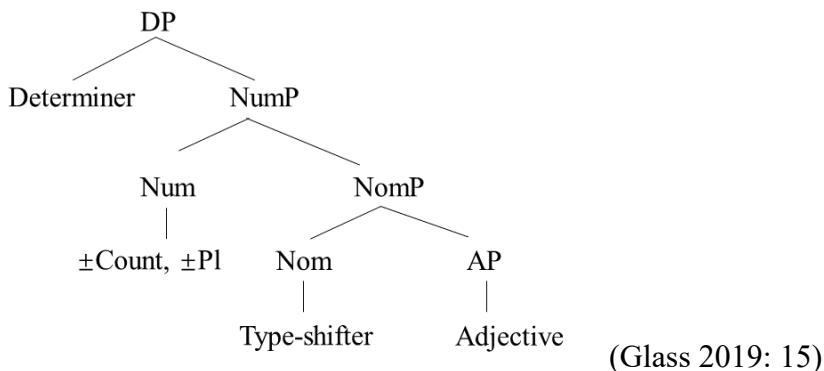
with the adjective phrase to turn it into something noun-like” (Glass 2019: 15). Furthermore, she includes a ‘number phrase’ similar to Saab (2018) to account for variations in countability and number (21b).

(21) a.



(Arnold & Spencer 2015: 58)

b.



(Glass 2019: 15)

4.3.2.3 Conversion and partial conversion

In some theories a change is proposed at the morphological level: the adjectives in GHCs might have been converted in some way to fulfil the role of being heads. However, both the fact that the word does not show number inflections like true nouns do (cf. **riches*, when it refers to persons) and the fact that the word express features of typical adjectives suggest that these theories are problematic, resulting in fewer scholars insisting on full conversion (cf. example (14a-c)). Instead, the concept of ‘partial conversion’ is sometimes mentioned as an amendment. Proposed by Strang (1969), partial conversion may apply if some words show “a measure of conformity with a

different class” (Strang 1969: 113). Balteiro (2007: 40) further gives a clear definition of this concept:

[Partial conversion occurs when] an item is used or acquires a function prototypical of another word-class (different from its own) but this is not accompanied by a change in its morphological characteristics.

Bregner (1928: 10) argues that

[W]hile it [i.e. a partially converted adjective] performs the function of a noun in the sentence, it retains its adjectival inflexions in Old English and Middle English and its indeclinability in Modern English...these adjectives have enough of the noun in them to take an attribute.

In other words, what partial conversion implies is that the adjectives in GHCS are still adjectives, but they can somehow also function as nouns. The difference between partial conversion and the theories summarised in Section 4.3.2.2 is that both Arnold & Spencer (2015) and Glass (2019) are syntax-based, which means that there is an ‘external force’, whether it is a ‘type-shifter’ or a ‘nominal-adj-ph’ phrase, that attributes the nominal features to the adjective phrases. By contrast, partial conversion works on the basis of morphology, which means that ‘nouniness’ is internal, derived within the adjectives.

4.3.2.4 The headless phrase

The final type of theory, claims that GHCS are truly headless (e.g. Allerton 1995, Dryer 2004). Dryer is among the scholars who have the most radical views: not only ‘noun phrases without heads’ are headless, he asserts, but ‘noun phrases with heads’ are also headless. In other words, the heads of NPs are not nouns – nouns just have a very high frequency inside NPs due to some pragmatic reasons, such as “they typically have richer meanings and are part of a classificatory system by which we classify things in the world” (Dryer 2004: 70). Furthermore, it seems that he does not advocate the DP

hypothesis either, because what he questions is not just the headhood of NPs, but the very concept of headhood: “It is worth asking what motivation there is for positing a notion of head, not only for noun phrases, but also for other phrasal categories as well” (Dryer 2004: 71).

4.3.3 *Comments on previous theories*

‘*People* deletion’ may be the intuitive approach when grammarians analyse GHCs, yet it may also be the theory with the most problems, one of which is that it cannot account for the singular GHC, such as *the deceased* and *the accused*. This problem is somehow inherited in the little *pro* analysis: as *pro* is just phonologically (not semantically) empty and can be case-marked, theoretically its reference can be recovered – which is not straightforward as we may struggle between the singular *person* and plural *people* in different contexts. When some special types of Generic Abstract Constructions are taken into consideration (cf. Section 5.3.2.1), the identification of *pro* becomes completely impossible. Even though Kester (1996a, 1996b) suggests that [+human, +generic, +plural] are parameters that are subject to configuration, there is a problem of licensing: how is *pro* licensed? Kester (1996b) seems to argue that it is licensed by the determiner *the*. This is criticised by Panagiotidis (2003). As he observes, *the* cannot appear without an adjective:

- (22) a. [D the [_{NumP} poor [_{Num} *plu*] e_N]] (Panagiotidis 2003: 395)
b. *[D the [_{Num} *plu*] e_N] (ibid.)

The contrast between (22a-b) indicates that *the* alone is not enough for licensing the nominal element (i.e. *pro* in Kester), and the adjective must also play a crucial role. Apart from Panagiotidis’s criticism, there is also a question of how the licenser *the* differentiates the parameters: as the plural *the rich* and the singular *the accused* contain the same determiner *the*, how could it tell apart the difference in number?

Even if the nominal element in ‘*people* deletion’ and little *pro* are recoverable, there

is still the semantic obstacle of equating a recovered structure like *the rich people* to *the rich*, since traditionally linguists do not think that definite plurals like *the rich people* express genericity (e.g. Huddleston 1984, Chafe 1970; Allerton 1995: 84 calls them “quasi-generic”). Quirk et al. (1985: 283) explain that “*the* + plural noun cannot be used for generic reference”, and Panagiotidis (2003: 394) explicitly claims that “by no means are [*the poor*] and [*the poor ones*] in free variation”. As Lyons (1991: 104-5) summarises:

[F]or a plural NP with a noun head to have generic reference, the NP must be indefinite...Definite plural generics only occur when the NP head is an adjective.

Therefore, a noun (*pro-form*) head with lexical meaning and human reference does not appear to be a good option.

Let’s now consider the empty noun (e_N) analysis. This analysis successfully avoids the problems of ‘people deletion’ and little *pro*. First, we do not have to worry about what the elliptical nominal element is, as it is no longer syntactically licensed – rather, it is understood pragmatically. Second, as e_N is semantically blank, *the rich* will be intrinsically different from *the rich people*, thus GHCs are separated from common definite plural NPs which cannot be generic.¹⁴

Many other scholars choose another route as they take adjectives as the heads of NPs. The advantage is obvious: the analysis can be as simple as possible (cf. (20)). Nonetheless, an immediate theoretical obstacle to this account is that it violates the basic assumption of endocentricity that the head and its projection should be of the same category: what is the difference between those special structures and normal adjective phrases which are also headed by adjectives? Also, how can the same adjective head deal with the potential differences of number and genericity, if we assume the ‘Det. + Adj.’ construction is complete (with adjectives functioning as heads

¹⁴ The empty noun theory is not without problems, though – for example, it cannot show the difference in number. An extra mechanism, therefore, is needed (see Section 4.4.4 and especially Section 5.4).

and determinatives being dependents) and no external element is required?

Lyons's (1991) 'Adjective Head Rule' is not very persuasive because he just stipulates the rule instead of explaining how '*the* + Adjective' can be understood nominally. This is improved in Arnold & Spencer (2015) and Glass (2014, 2019), where some mechanisms are proposed to make it possible for adjectives to head NPs. However, those mechanisms may need further clarification for those who are not familiar with the corresponding theoretical frameworks: 'nominal-adj-ph', for example, is only workable in HPSG, and a 'type-shifter' is mostly a semantic concept that is ill-defined in syntax.

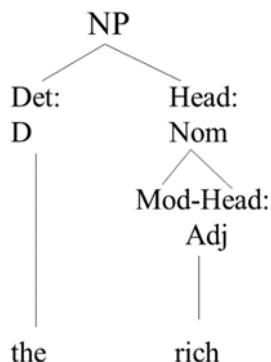
Partial conversion suffers from the same problem of stipulation. While I understand Balteiro's (2007) definition, I cannot imagine how a particular word can achieve the properties of two different word classes. If *rich* is an adjective which simultaneously acquires the function of a noun (as being the noun head), can I argue for an opposite situation that *rich* is in fact a noun that possesses the function of an adjective? Moreover, there are very few items to which partial conversion can apply. Nevalainen (2000) and Hernández (1999) can only think of two: adjectives-as-nouns, i.e. GHGs, and nouns-as-adjectives, in *copper pipe*, *virus infection*, etc. The latter are strictly not examples of conversion, since it is normal for nouns to function as pre-modifiers. As a result, the theory seems to be designed *ad hoc* for adjectives-as-nouns. Third, there is a problem telling the difference between an unconverted adjective, for instance, *rich* in *rich people*, from its partially converted form *rich* in *the rich*, since both of them stay in the same word class. In other words, how can we be confident that a word is ever converted without transcending its original word class?

Finally, the 'headless' analysis is probably the least attractive, as it is assumed in almost all theories (especially the head-driven ones) that phrases are headed in some ways. Headlessness is intuitively impossible – if, as Dryer (2004) argues, it is just a matter of frequency that nouns appear in NPs, then we need to ask the following questions: why do nouns so frequently occur in NPs that with a few exceptions (e.g. elliptical NPs and GHGs) an NP must contain at least a noun? Is it just a coincidence? In my view, this account would need to be further elaborated by its proposers.

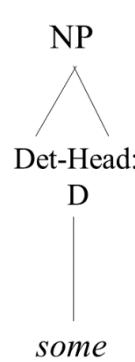
4.3.4 Fusion of functions

It is not easy to categorise FFT as it seems dissimilar to both schools I have just reviewed: Huddleston & Pullum et al. (2002) and Payne et al. (2007) do not allow an extra nominal element, nor do they permit adjectives as heads of NPs. Their proposals are as follows:

(23) a.



b.



The FFT account is special in two ways: it argues for the adjective to take the function of modifier and head of a particular NP at the same time, and it regards some determinatives, such as *some*, *many* or *few*, as possible GHCs as well. While I will leave the discussion of the second feature to the next chapter (Section 5.5), the first one needs some further exploration. A prominent advantage of the FFT account is of course its simplicity – there is no need for an additional noun. In fact, Huddleston & Pullum et al. (2002) are obviously opposed to a noun ellipsis analysis. For example, they make the following comparison (examples (24)-(25) are taken from Huddleston & Pullum et al. 2002: 420-421):

(24) a. *Alice performed the Schubert and Helen __ the Rachmaninov.*

b. *Alice's performance of the Schubert and Helen's of the Rachmaninov*

(25) a. **Alice performed the Schubert immediately after Helen __ the Rachmaninov.*

- b. *Alice's performance* of the Schubert took place immediately after *Helen's of the Rachmaninov*.
- (26) a. *Alice attempted to play* the Schubert and *Helen the Rachmaninov*.
- b. **Alice's attempt to play* the Schubert and *Helen's the Rachmaninov*

(24a-b), according to Huddleston & Pullum et al., seem to operate within the same mechanism: in *Helen __ the Rachmaninov* of (24a) the verb *performed* is elliptical, and in *Helen's of the Rachmaninov* the reduced element is *performance*. If this comparison is correct, then we can predict that there will be no difference in grammaticality between (25a) and (25b) and also (26a) and (26b). The reality, however, is deviant from this prediction: in (25a) verb ellipsis is ungrammatical and in (26b) noun ellipsis suffers a problem. Huddleston & Pullum et al. reason that the asymmetric results in (25)-(26) entail that the mechanism underlying (24b) should not involve noun ellipsis.

Huddleston & Pullum et al.'s data in (24)-(26) are a strong argument against the ellipsis solution, although the side-effect of it is that FFT cannot solve the puzzles in (25)-(26) either. Also, the similarity between FFT and Arnold & Spencer (2015) reveals the fact that the essential notion of FFT is partly derived from HPSG, which is the theoretical basis of Arnold & Spencer's analysis (for a detailed discussion of the design of FFT, see Section 9.2.2).

Despite the issues above, FFT could be more problematic in dealing with determinatives like (23b). I will return to this topic in Section 5.5.

4.3.5 *History as a factor*

From reviewing the theories (especially the ones about conversion), I am led to surmise that history may play a role in guiding our way of thinking of GHCSs. Scholars focusing solely on Modern English (especially Present-Day English) tend to regard the determinative (mostly *the*) as a crucial part of GHCSs: *the* is the second layer of Pullum's (1975) 'people deletion' paradigm; Kester (1996a, 1996b) coins the name 'Human Construction', which consists of both *the* and an adjective, and *the* serves as a licenser;

Glass (2014, 2019) calls it ‘Determiner + Adjective’ construction, where the NP must be created by an adjective combined with a determiner, etc. On the other hand, studies from a historical perspective pay much less attention to the determinatives, including *the*, but particularly focus on the adjectives. Also, studies with a historical background seem reluctant to devise an extra nominal element for the construction, as theories on Contemporary English do; for them, an internal, morphological process like (partial) conversion is often preferred.

Another fact about the study of GHCs is that few studies are carried out comparing both earlier English and Modern English, although among Bregner (1928) and Aschenbrenner (2014) are exceptions. It is not surprising to see that when Modern GHCs are compared with earlier ones, a simple and straightforward account seems impossible. Bregner carefully distinguishes ‘total conversion’, ‘partial conversion’ and the so-called ‘hybrid’, which are conceptually intertwined. Aschenbrenner, on the other hand, chooses to handle the differences in a split way: in OE there is partial conversion (although she does not use this term), while in Modern English the analysis ‘moves’ to a noun ellipsis account very similar to Pullum (1975). Therefore, it seems that if a more comprehensive account is to be devised, it is necessary to explore how GHCs are developed in history. Preferably, there can be a unified (rather than split) theory of GHCs in both earlier and Modern English.

4.4 The historical development of GHCs

4.4.1 GHCs in recent centuries

Aschenbrenner (2014) outlines a general trend of the occurrences of the ‘adjectives used as nouns’ construction throughout history by comparing translations of Boethius’s *The Consolation of Philosophy* from Old English (King Alfred’s translation) to Late Modern English (the translation of Sedgefield 1900). Her findings concerning human reference are plotted in Figure 4-1 (data extracted from Aschenbrenner 2014: 125-35).

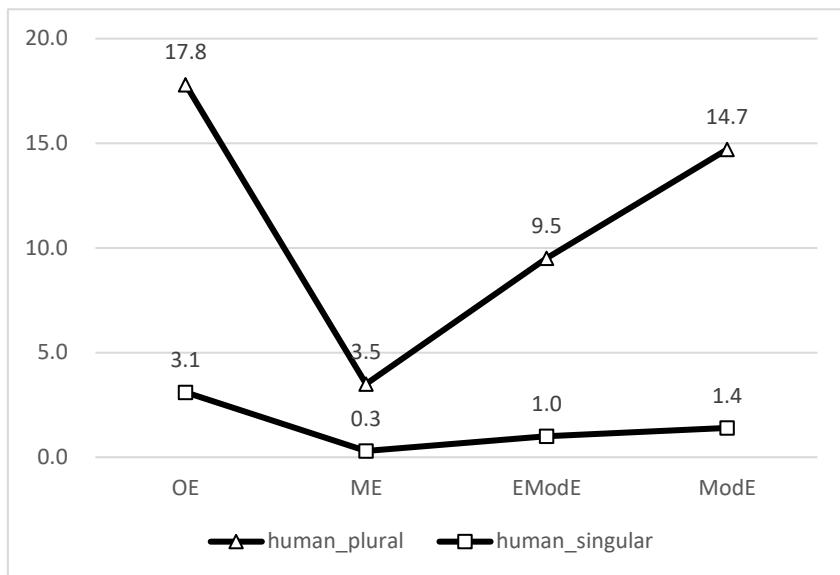


Figure 4-1 Percentages of ‘adjectives used as nouns’ with human reference in all cases of ‘adjectives used as nouns’ from OE to ModE (constructed from Aschenbrenner 2014).

The most obvious distinction is that in all periods ‘adjectives used as nouns’ with the feature [+singular] are much less common (in fact almost negligible); besides, ME seems to be the time when the fewest human-referenced ‘adjectives used as nouns’ are attested, and the frequency rises in ModE. However, while it is reasonable to compare translations of the same text so as to control random errors caused by genre, the styles of the translations may be a complicating factor: the reason is that word choices reflect personal preferences (Allen 2010). The comparison is meaningful on the assumption that each translated version reflects the exact meaning the original text (i.e. the Latin *De Consolatione Philosophiae*), yet this is not the case with *Boethius*. For example, the Old English *Boethius*, claimed to be translated by King Alfred, is far from a strict translation. This is clearly stated in the preface of the OE *Boethius*: *Hwilum he sette word be worde, hwilum andgit of andgit, swa swa he hit þa sweotolost and andgitfullicast gereccan mihte...* (“Sometimes he set it down word for word, sometimes sense for sense, in whatever way he could explain it most clearly and intelligently...”). The Old English *Boethius* is therefore mostly translated ‘in paraphrase’. As Aschenbrenner herself admits, “Alfred did not stay too close to the original, but rather treated the work with great freedom” (Aschenbrenner 2013: 109). Obviously, if the texts of each period show great variance and freedom, the value of comparison will be

undermined.

Moreover, the author calculates the percentages of particular structures in all ‘adjectives used as nouns’, rather than in the general text, which makes the data less reliable as the total number of ‘adjectives used as nouns’ may not be stable over time. Therefore, a study which takes into consideration the balance of time, genre and style factors is needed as a comparison.

Although a comprehensive corpus study throughout the history of English is much more desirable, such a study is not practical as the calculation of the number of relevant examples could only been done manually,¹⁵ which makes the corpus study rather time-consuming. For this reason, I mainly consulted the ARCHER Corpus, which focuses on the recent 400 years, and cite some previous studies on the OE and ME periods. The following Figure 4-2 is based on the data extracted from the ARCHER Corpus, focused on the definite GHCs (*‘the + adj.’*; possible indefinite ones beginning with *a/an* and numerals are very rare), including both singular and plural ones. The variable ‘token’ shows the total frequency of GHCs in each period from about 1600 to 2000, and the variable ‘type’ counts the number of types (i.e. different constructions, excluding repeated ones) that appear in each period.

¹⁵ To my knowledge, there is not a freely available parsed corpus which covers data from OE to ModE (although several parsed historical corpora that focus on specific periods are accessible), and most historical corpora are automatically tagged. Then it is apparently not appropriate to include all constructions formed like *‘the + Adj.’*, because most of those constructions are NPs. One way of singling out GHCs is to search for *‘the + Adj.’* constructions that are not followed by nouns. However, this method is not always reliable: due to the limitations of automatic tagging systems, a considerable number of constructions are inaccurately tagged. Therefore, the results need to be further refined.

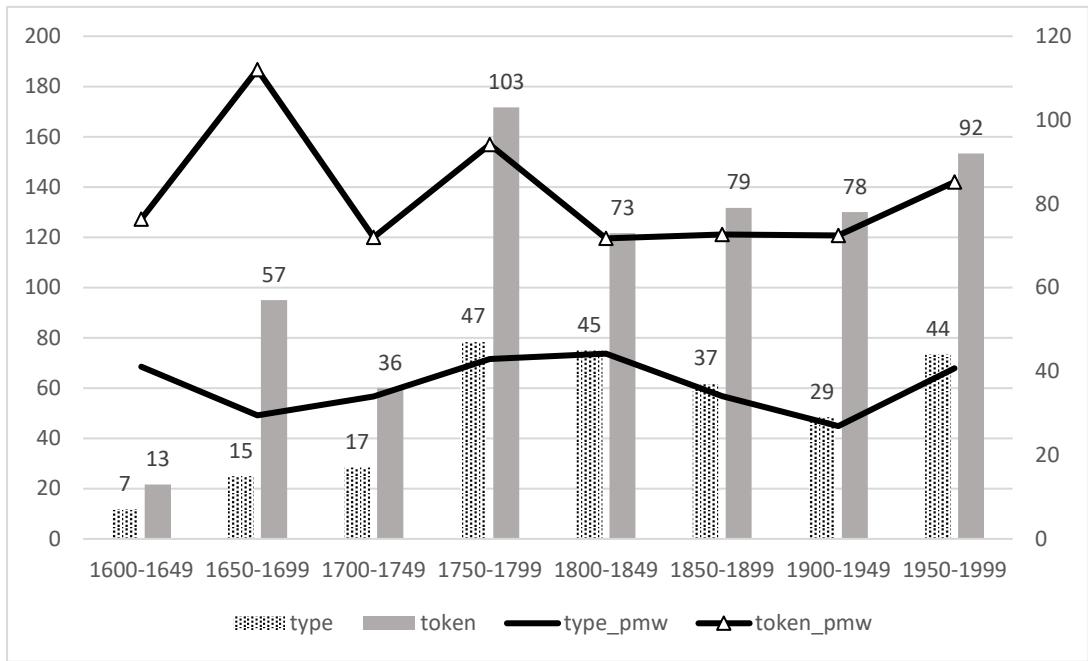


Figure 4-2 Types and tokens of GHCS from 1600-2000 in ARCHER, in both raw frequency (the right axis, with numbers over each bar) and per million words (the left axis).

While the number of types per million words stays fairly stable (around 60 pmw), the number of tokens fluctuates more strongly, especially in early periods. It seems that there are more GHCS from 1600 to 1799 than from 1800 onwards. However, since the size of the corpus is relatively small (though much larger than Aschenbrenner's corpus of *Boethius*) and is composed of different types of texts, we may assume the influence of genres and registers. In fact, a particular genre, the sermons, is the major source of GHCS. Figure 4-3 indicates that the frequency of GHCS in the category of 'Sermons' could be 3 to 4 times higher than in other genres, such as 'Journals', 'Letters' or 'Fiction'.

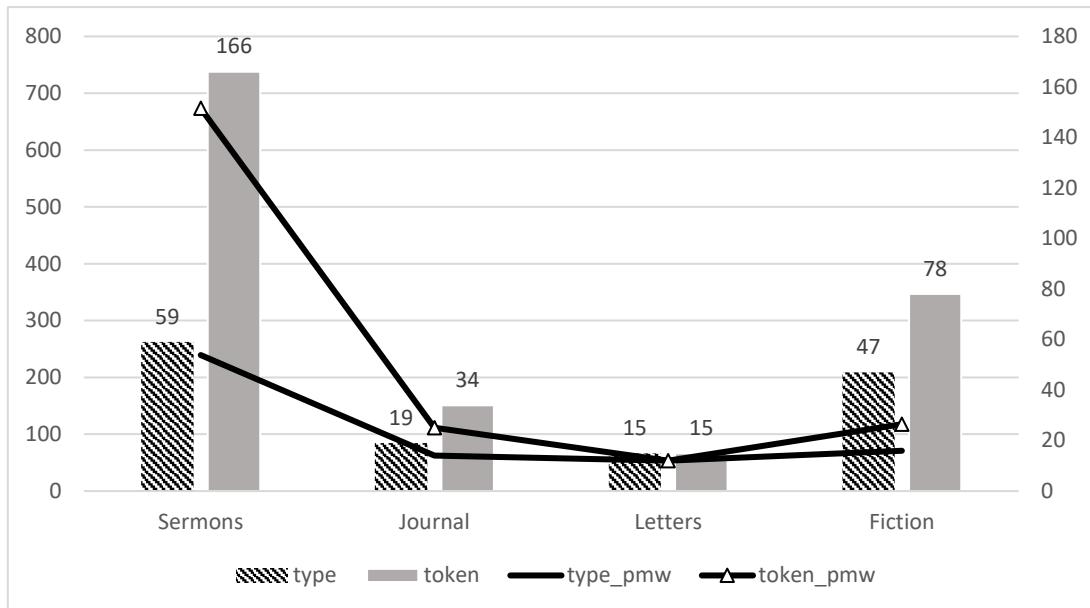


Figure 4-3 Types and tokens of GHCS in the genre ‘Sermons’, ‘Journal’, ‘Letters’ and ‘Fiction’ in ARCHER, in both raw frequency (the right axis, with numbers over each bar) and per million words (the left axis).

The sermons are inherently suitable for the use of GHCS: the addressees are humans, and usually humans as a general group, rather than individuals. It is also observable from the figure that while the frequency of GHCS in the sermons is very high, the number of types in the sermons is less high than we may expect. Compare ‘Sermons’ and ‘Fiction’, for example. There are 166 occurrences of GHCS in the former category, about two times higher than that in the latter one (78 occurrences); however, the number of types in the sermons is just slightly higher than that in fiction, which means that there is a much higher chance of repetition in the sermons (in fact, in the sermons alone we can identify 47 tokens of *the dead* and 22 of *the Almighty*), which will significantly affect the data pool. On the other extreme is the genre ‘Letters’, in which I notice 15 different types of GHCS out of 15 total occurrences, indicating that every GHC in this category is distinct. To quantify the degree of distinctiveness, I use a method similar to Lohmann (2018) here:

(27)

$$\text{Distinctiveness ratio} = \frac{\text{Number of types}}{\text{Number of tokens}}$$

The higher the ratio is (with a range from 0 to 1), the more distinctive the construction is. The category ‘Sermons’ has the lowest ratio 0.36, much lower than other genres examined (0.56, 1, 0.60 for ‘Journals’, ‘Letters’ and ‘Fiction’, respectively), and is hence the least distinctive. This may explain the difference between the fluctuation of ‘token_pmw’ (raw frequency per million words) and the relative stableness of ‘type_pmw’ (number of types per million words) in Figure 4-2: if a GHC repeats too many times in particular texts, we will witness an exceptionally high frequency of GHCs in the period that those texts belong to; by contrast, if texts full of repeated GHCs are fewer or absent in a period, the total number of GHCs will remain low. In this sense, the number of types per million words might be more accurate than the number occurrences in reflecting the historical trend: the number of GHCs does not change much during the latest 400 years.

4.4.2 *The syntax of GHCs in the history of English*

4.4.2.1 GHCs from OE to ModE

A characteristic of the early English GHCs is that they were much less fixed: in Old English the construction was not confined to the ‘*the* + Adj.’ or even the ‘Det + Adj.’ pattern, though this pattern, referring to generic groups of people, prevailed throughout history. Thus there is doubt about whether or not adjectives could be regarded as part of a ‘construction’. This may be one of the reasons why many OE specialists call these adjectives ‘substantival adjectives’ (henceforth SAs). A corpus study by Allen (2010) shows the syntactic variations within SAs in Old English and Early Middle English:

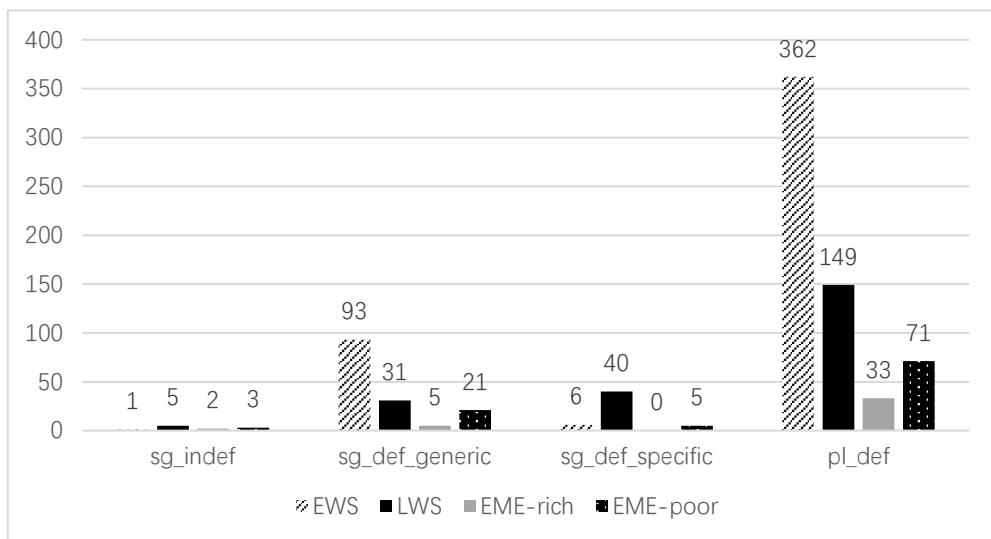


Figure 4-4 Frequencies of ‘substantival adjectives’ in Old English and Middle English texts (alter Allen 2010).¹⁶

Adjectives used with nominal reference predominately collocate with definite articles in the OE and ME periods, but we may also observe a considerable number of SAs which are singular and definite (with either generic or specific readings), and even a few singular indefinite constructions (i.e. ‘*a/an + Adj.*’). As Allen (2010) does not give specific examples of those four categories, I quote some from elsewhere:

- (28) a. Truly god displesis a ryghtwys proud þen a
 truly good displease a righteous proud than a
 synnar meyk. (Bregner 1928: 19)
 sinful meek
 ‘Truly good (people) displease a righteous proud (one) than a sinful meek (one).’
- b. forþan næs nænig untrum þæt he ungelacnod fram
 because not was none sick that he unhealed from
 him ferde. (Bregner 1928: 17)

¹⁶ Meanings of the abbreviations: ‘sg_indef’ = indefinite singular, ‘sg_def_generic’ = generic indefinite singular, ‘sg_def_specific’ = specific indefinite singular, ‘pl_def’ = definite plural, ‘EWS’ = Early West Saxon, ‘LWS’ = Late West Saxon, ‘EME-rich’ = Early Middle English texts rich in inflections, ‘EME-poor’ = Early Middle English texts poor in inflections.

him went

‘for there was no sick person that went from him unhealed.’ (translation by Goodwin 1848: 67)

- c. Genam *ða* *wundenlocc/* Scyppendes mægð/
took the wavy-hair Creator’s maiden
scearpne mece... (Judith 77b-78)
sharp sword

‘the wavy-hair (i.e. Judith), God’s maiden, took the sharp sword...’

- d. Ac *þa unrihtwisan* ne beoð na swelce... (Psalm 1)
but the unrighteous not are not so
‘but the unrighteous are not so...’

In early English it is possible for an SA to follow an indefinite article (28a), a definite article with singular reading (28c) or a definite article with plural reading (28d). (28b) suggests a type not included in Allen (2010), where there is no determinative. The use of bare adjectives in denoting human beings is not rare in Old English. Bare adjectives may be used for generic, plural meaning (29a), but also specific, singular meaning (29b).

- (29) a. he gehælde *untrume* on ðæs Hælendes naman, *blinde*
he healed sick in the Saviour’s name blind
and deafe. (Fischer et al. 2017)
and deaf.

‘he healed the sick in the name of the Saviour, blind and deaf (people).’

- b. *þa wearð hyre rume* on mode/ *haligre* hyht
then became her abundantly in mind holy hope
geniwod. (*Judith*)
renewed.

‘then in her mind hope was renewed abundantly for the holy (i.e. Judith).’

It is true that the constructions in (28)-(29) are the minority from a very early period,

and the frequency continues to decline, although the course of the decline might be even longer than Allen (2010: 21), who claims those structures were “still found in the fourteenth century”, anticipates: such uses can be found until recently (examples (30a-c) are quoted from OED).

- (30) a. ...as I am, *a poor*, it is one of my most earnest wishes. (Pope, 1716)
- b. Was *the righteous* ever forsaken? (Thackeray, 1859)
- c. There I've been mooning like *an unemployed* for three weeks. (Lawson, 1900)

I will not suggest that in Present-Day English the unconventional use of SAs is extinguished, but nowadays if someone says *a poor* like Pope did, there is a very high chance that he or she will be corrected. It is indeed extremely difficult to find these irregular constructions now (for instance, there is no attestation in BNC which has 100 million words). Genitive determiners, for example, are still acceptable, but they are special and rare in (even larger) corpora of contemporary English. (31) is one of the three tokens of *our poor* in BNC.

- (31) The EC's ‘four freedoms’ are good for multinationals but bad for our farmers, our small companies, *our poor*, our environment and the third world. (BNC: CRB)

On the other hand, indefinite determinatives (*a/an*) are now no longer permitted in standard English. This is the case with bare adjectives as well, except in the ‘coordinated structures’, where two adjectives are linked by *and* (e.g. *young and old*, cf. Section 4.2.1.1). Bregner (1928: 11) gives a rather detailed description in which he claims that this structure is permitted when adjectives are “contrasted or coupled with another adjective, or with a noun, or with itself in another degree of comparison”. It appeared throughout the history of English (e.g. *blinde and deafe* in example (29a)), and is still relatively active now, as a few cases containing *young and old*, *rich and poor*,

black and white, etc. can be found in the BNC (cf. (32), and also (3f)).

- (32) By using such evidence the historian can come to terms with some of the everyday reality of the war, and how it touched the lives and outlook of men and women, *famous and not so famous, rich and poor*, whose experiences are described in the proceedings of civil and criminal cases which have come down to us in some number (BNC: EDF)

In Figure 4-5 I present the number of adjectives following *a/an* and uncoordinated bare adjectives. While we may still find a handful of those adjectives before the 19th century, it becomes extremely difficult to do so thereafter.

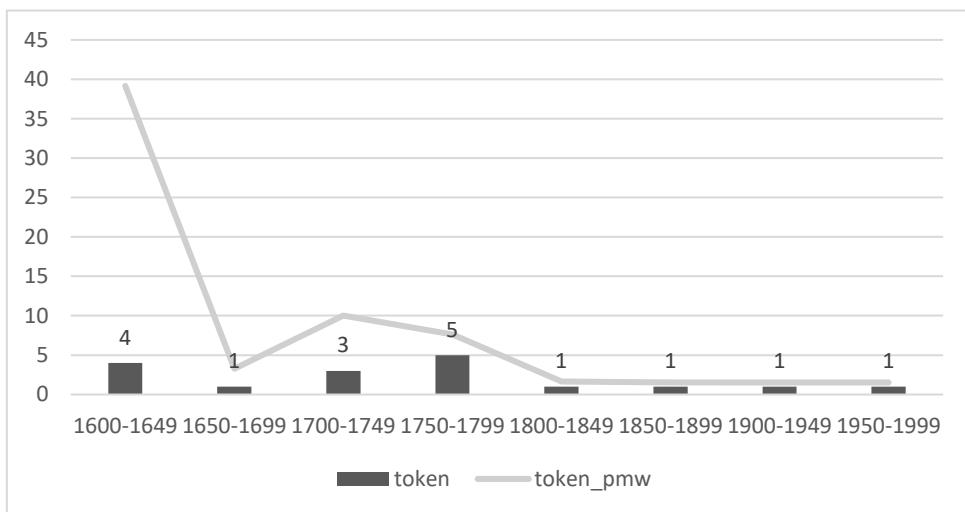


Figure 4-5 The number of non-definite adjectives with human reference found in the ARCHER Corpus, in both raw frequency (indicated above the columns) and per million words (leftmost vertical axis).

The final use of adjectives that has become impossible now, which is often overlooked, is when they are preceded by determinatives with deictic force. Examples can be found in Old English:

- (33) ...swa heo *ðæs unlēdan eaðost mihte/ wel*
as she this wretched most easily could well
gewealdan. (Judith 102-103b)

control

‘...as she could most easily control this unwretched (i.e. Holofernes) well.’

This/that are no longer allowed in modern GHCS (**that rich, [?]this accused*), probably because the notion of deixis clashes with genericity. However, there seem to be constructions beginning with plural *these/those*. This use, together with coordinated adjectives and numeral determinatives, will be discussed in the next section. In my view, they do not qualify as real GHCS.

4.4.2.2 *These/those*, numerals and coordinated adjectives

Before a provisional conclusion is drawn, I would like to clarify some potential examples against the argument in the previous section that many variations of determiners that used to precede adjectives are lost in Modern English. Although *this/that* is no longer permitted, there are constructions formed by ‘*these/those + Adj.*’ ((3c), repeated here as (34a)). Moreover, despite the unacceptability of *a/an*, numerals may specify GHCS in Modern English ((3g), repeated here as (34b)).

- (34) a. ...it must be appreciated that *those poor* who were included in these surveys were those who were deemed to be in need. . . (Arnold & Spencer 2015: 47)
- b. [Headline] *2 dead, 1 injured* in shooting incident on Ballenton Road.
(<https://bit.ly/37Rduq1>)

My proposal for the analysis of ‘*these/those + Adj.*’ and ‘numeral + Adj.’ is that they are elliptical clausal constructions. Quirk et al. (1985: 423) assume that ‘*these/those + Adj.*’ is an elliptical version of ‘*these/those + relative clause*’, i.e. *those rich = those who are rich*. If this account is correct, we would expect the adjective in ‘*these/those + Adj.*’ to be a predicative adjective rather than an attributive one in ‘*the + Adj.*’. Interestingly, while ‘*the + predicative-only Adj.*’ is ungrammatical as predicted (e.g.

**the alive*, **the awake*), ‘*these/those + predicative-only Adj.*’ is attested in Google.

- (35) a. I am the voice of *those afraid to speak*.
b. Sing a final lullaby to *those still alive*.

The grammaticality of the examples in (35a-b) proves the analysis of Quirk et al.: ‘*these/those + Adj.*’ is a shortened relative clause instead of a GHC. Similarly, the fact that words like *wounded* and *injured* can follow *one* but not *a/an* indicates that *wounded* and *injured* are past participles functioning as predicative complements rather than attributive modifiers, because numerals can be followed by predicative-only adjectives, forming elliptical relative clauses (36)-(37):

- (36) a. one (person who is) alive
b. *an alive
(37) a. one (person who is) injured/wounded/dead
b. *a(n) injured/wounded/dead¹⁷

Finally, with regard to coordinated adjectives, a crucial point is the lack of productivity. Though it seems that the adjectives are ‘freer’ without necessarily following a determiner, the combination is somewhat conventionalised and is restricted to a few possibilities such as *rich and poor* or *great and small* instead of any connected or contrasted concepts. As contrasts of SAs can be dated back to the OE period, I would argue that the construction of such coordination merely follows the tradition of earlier English, i.e. it is fossilised in ModE. Another possible account is that these coordinated elements are not real adjectives but nominalised ones. The concept of ‘nominalised adjectives’ and their relation with GHCs/GACs will be pursued in Chapter 5, Section 5.7.

¹⁷ *Injured/wounded/dead* are able to form GHCs, but they must follow the determinative *the*, e.g.. *the injured/wounded/dead*. In GHCs they are attributive, not predicative.

4.4.2.3 The syntactic fixation of adjectival constructions

As I have discussed in the previous two sections, the loss of inflections in SAs potentially means a new relationship between the adjectives and various determinatives. While there is essentially no restriction for early SAs to select determinatives, modern GHCs are mostly confined to the determinative *the*, with a few exceptions like genitives. The loss of this freedom makes the relationship between adjectives and the determinative *the* tighter, as if there is a fixed combination. In early English we are probably safe to say that those adjectives are ‘substantival adjectives’, because they do not prefer a particular kind of determinative (though the majority collocate with variations of *se*, such as *pā*, *pone*, *pæt*, *pām*, etc.); yet in Modern English, especially Present-Day English, those adjectives seem to be more phrasal rather than lexical, so that in most cases it is unimaginable to think of an SA without *the*. This is the reason why I am inclined to use the name SAs for those specially used adjectives in early English, but GHCs for the ones in Modern English, where they have become ‘constructions’.

Moreover, as nouns often have much freedom in selecting determinatives, there is room for proposing that SAs are nouns converted from adjectives. Although I do not argue for this proposal, it is nonetheless interesting to see that syntactically SAs in fact behave more like nouns than adjectives (Table 4-1). Table 4-1 helps to explain the observation in Section 4.3.5 of why studies of Modern English GHCs hardly think of conversion as a possible answer – Modern English GHCs, in terms of syntactic determination, are quite different from both early SAs and real nouns. Another factor that distinguishes Modern English GHCs from SAs and nouns is the frequent use of adverbial modifiers, which will be the topic of the next section.

	'the'	Deictic determinatives	Indefinite articles	genitives	Bare
SAs	+	+	+	+	+
Nouns	+	+	+	+	+
GHCs	+	-	-	+	- (except in coordination)

Table 4-1 A comparison of substantival adjectives, nouns, and adjectives in GHCs with respect to the ability of taking various kinds of determiners.

4.4.3 *The rise of adverbial modifiers*

4.4.3.1 Adverbial modifiers in GHCs

In both earlier English and Modern English only a minority of GHCs (or SAs) are modified, yet the types of modification seem to have changed. In OE and ME we may encounter adjectival modifiers more frequently (38):

- (38) Forþam sona gif he ænine *þearfan nacodne* gemette,
 therefore at once if he any needy naked met
 þone he scrydde. (Fischer et al. 2017: 82)
 him he would clothe
 ‘Therefore as soon as he came across a poor man who was naked, he would clothe him’.

In *Early English Books Online* (EEBO), it is fairly easy to find the GHC *the rich* augmented by another adjective, such as the *wicked rich*, *the said rich* and *the covetous rich*, but hardly any adverb occurs except *most* and *more* in *the most rich* and *the more rich*. I remain dubious about classifying the above *most* and *more* as true ‘modifiers’, since they are early equivalents of the comparative/superlative markers of *the richest* and *the richer*. In corpora for contemporary English like the BNC, however, *the very rich*, *the newly rich* and *the exceptionally rich* are not uncommon, though we still see

constructions with adjective modifiers such as *the new rich* or *the idle rich*.¹⁸ The hypothesis for the change of modification patterns after conducting this pilot research of *rich* is that there seem to be more adverbial modifiers in contemporary GHC than in earlier ones. To test this hypothesis, I conducted a brief study of the *Corpus of Historical American English* (COHA).¹⁹ I selected some of the most common GHCs by personal preference, namely *the rich*, *the poor*, *the young*, *the old*, *the ill*, *the dead* and *the educated*²⁰ and checked the occurrences with an adverbial modifier in the 19th and 20th centuries. The results are plotted in Figure 4-6:

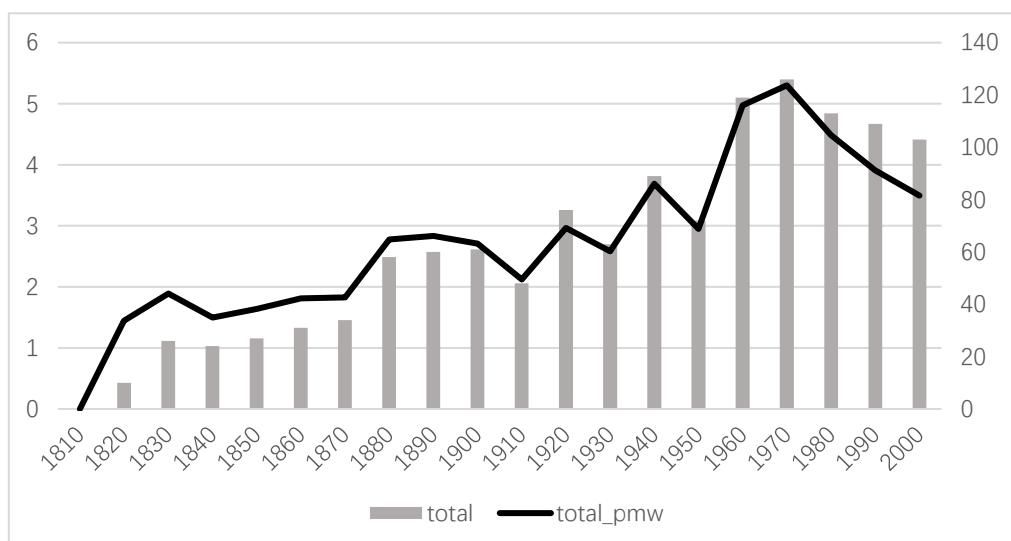


Figure 4-6 The sum of seven common GHCs modified by an adverb in COHA (*the rich*, *the poor*, *the young*, *the old*, *the ill*, *the dead*, *the educated*) in both raw frequencies (the right axis) and per million word frequencies (the left axis).

Although attested structures like *ða suiðe suigean* ‘the very silent’ can already be found in OE (Mitchell 1985: 64), which disproves the speculation that adverbial modification in GHCs is a later invention, the tokens of adverb-modified GHCs significantly rise from around 1900 and continue growing until the 1970s. The number has fallen back a

¹⁸ I will further discuss the two adjectives combination ('the + Adj. + Adj.) in Section 5.7.

¹⁹ The small size of ARCHER make it unsuitable for studying adverbial modification, because there are only a few hits in all periods.

²⁰ It is impractical to do a comprehensive, non-selective corpus study as there would be too much data for manual processing (see fn. 1). The choice for these GHCs is somewhat subjective, but they are among the most frequent GHCs in corpora.

bit recently, yet the overall occurrences are still much greater than a century ago. (This has hardly anything to do with the size of each period – the black line of ‘per million words’ fits the bars quite well.) One might argue that the larger frequency could be a result of, or at least related to, the possible increase of adverbial modification in general or the rise of GHCs: that is, the reason that the number of adverb-modified HCs rises is because there are more adverbs modifying the corresponding adjectives or there are simply more GHCs in general. As a response, the following test of the structure *the rich* is carried out to show the overall trending of the adverb-modified GHC ‘*the + Adv. + rich*’, the general GHC ‘*the + rich*’ and the adverb-modified adjective phrase ‘*Adv. + rich*’ (Figure 4-7):

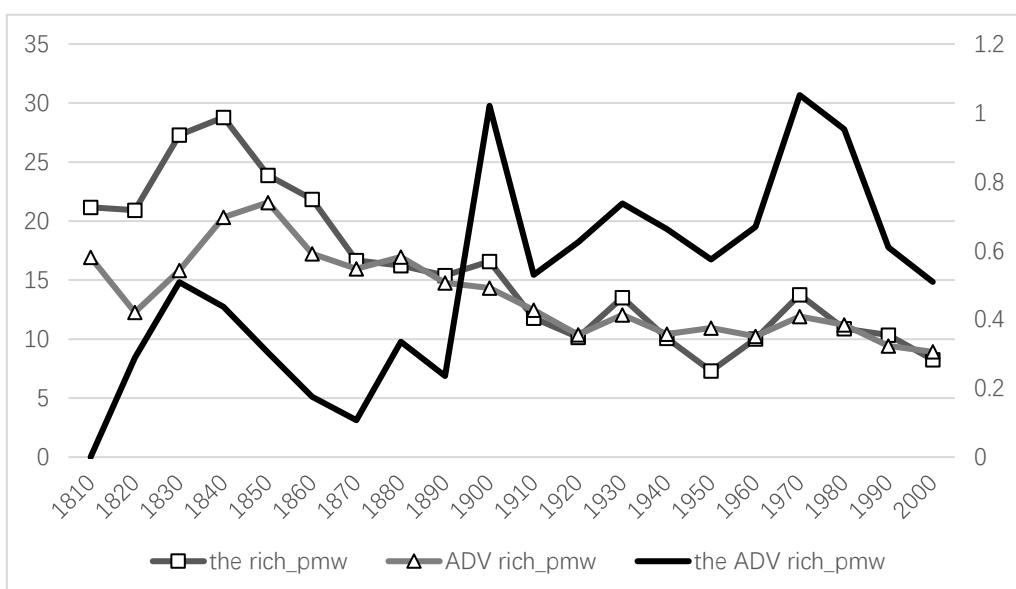


Figure 4-7 The overall trend of the GHC ‘*the + Adv. + rich*’ (the right axis), ‘*the + rich*’ and the AdjP ‘*Adv. + rich*’ (the left axis) per million words.

The data from COHA show that the frequency of the GHC ‘*the +rich*’ and the AdjP ‘*Adv. + rich*’ is slightly and stably decreasing (from around 20-30 per million words in 1840s to 10 in 2000s) in the past two centuries, which obviously cannot account for the increase of adverbs in GHCs (from around 1900 the numbers have been above 0.5 per

million words, with the highest point being over 1 per million words in the 1970s²¹). We may conclude, therefore, that it is an independent event, rather than the by-product of a more general change. In other words, GHCs in Late Modern English increasingly favour adverb modifiers.

4.4.3.2 Variation in the potential of taking adverbial modifiers

The overall trend in recent centuries is that we witness more GHCs modified by adverbs, but when it comes to particular structures, the situation may vary. Figure 4-8 shows the diachronic change of frequency of ‘*the + Adv. + dead*’ and ‘*the + Adv. + ill*’.

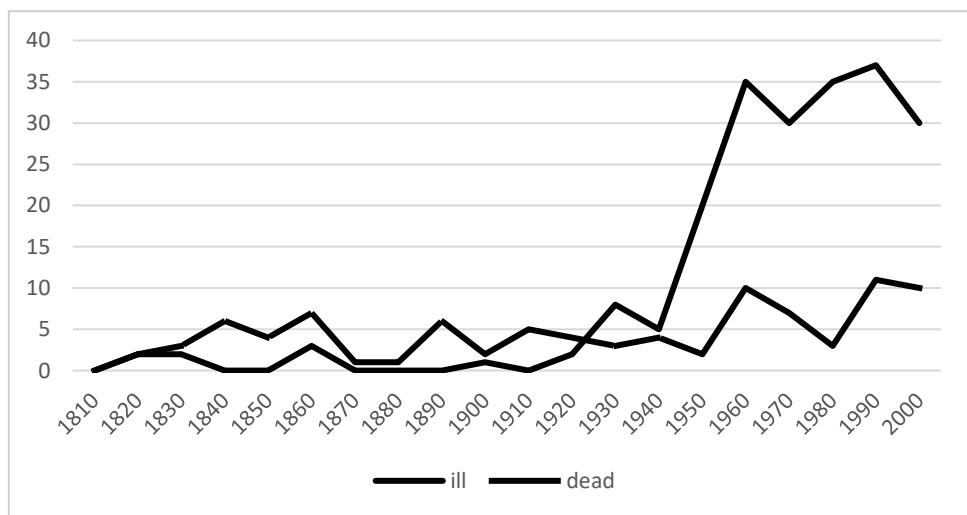


Figure 4-8 Diachronic change of raw frequencies of ‘*the + Adv. + ill*’ and ‘*the + Adv. + dead*’.

It is not difficult to see that the development courses of *ill* and *dead* are quite different, and they represent two extremes of the continuum. While we see a dramatic increase of adverbial modification for *ill*, there is no obvious change for *dead*. The reason for this large discrepancy from about 1940 remains elusive, though most likely it is due to the joint influence of both linguistic and extralinguistic factors. One of the factors might be

²¹ The data also reveal how difficult it is for a GHC to take an adverbial modifier: in the 1970s there are most attested GHCs with adverbial modifiers, yet the number only takes up less than 10% of the overall occurrences (1 pmw versus 14 pmw). For *the rich*, an adjective modifier is even less likely (cf. Figure 4-9); the overwhelming majority do not take any modifiers.

the increasing attention that illness and medicine have received in recent decades. For example, Byrd et al. (1980) find that from 1968 to 1978 TV programs in the United States depicting disability dramatically increased from 146 to 256. This is also true with mental illness, on which Wahl (1992: 345) comments that “public exposure to mental health information through mass media such as magazines, films and television is, if anything, increasing”. We might imagine that if more people paid attention to particular kinds of illness, they are more willing to describe diseases using language which may contain modifiers. This is at least the case with *the mentally ill*: in COHA, there is no occurrence recorded before the 1920s, and only a handful until the 1950s. The number then explodes from the 1960s, with an average occurrence of 21.8 in each of the following five decades. However, the word *dead* seems semantically more special: it is not a concept easily described and classified. Adverbs of degree like *very* or *relatively*, or of type like *temporarily* or *terminally*, are probably not applicable. As a result, we can only find somewhat bizarre expressions like *the newly dead*.²² A consequence of the difficulty of attracting adverb modifiers is that when GHCs need further description, adjectives are more preferred than adverbs. The choices of modifiers of four common GHCs are shown below:

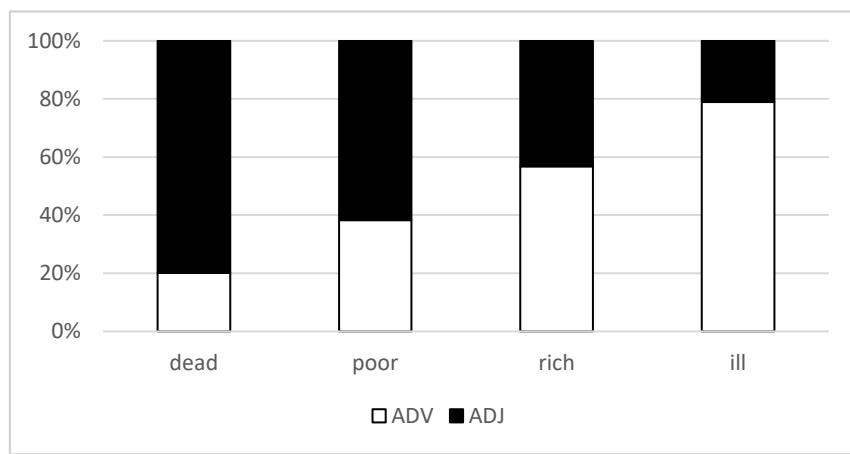


Figure 4-9 Choices of modifiers of four common GHCs in general (COHA, 1800s-2000s).

²² The *Oxford Collocation Dictionary* (McIntosh et al. 2009) lists collocations such as *nearly dead* and *almost dead*, but it is worth noting that they are mainly used as predicative complements. A quick search in corpora finds very few cases where they are used as attributives, and they seem never to appear as GHCs.

Syntactically, the percentages in Figure 4-9 are not implicative: I do not believe that GHCs with a higher probability of being modified by adverbs are ‘more adjectival’ and others are closer to nouns. However, a construction deserves some attention when it never takes an adverbial modifier. *The elder* is a good example. Traditionally *the elder* is regarded syntactically equivalent to *the old*, perhaps because of the comparative ending *-er* that suggests the adjective status of *elder*. This analysis may be problematic as I did not find any modifier that is adverbial: in rare cases where *the elder* is modified, I only found adjectives, such as *the wise elder*, *the venerable elder*, etc. If an alleged ‘adjectival construction’ can never be modified by adverbs, its status of being adjectival should be questioned. Maybe it would be better to regard *elder* as having a nominal nature.

4.4.3.3 The influence of adverbial modifiers

In Section 4.4.2.3 I compared SAs, GHCs and nouns, and concluded that because SAs syntactically behaved more like nouns rather than adjectives in older English, it is plausible to argue for a conversion analysis. It is, however, impossible to make this argument with regard to GHCs in Present-Day English because the more frequent use of adverbs as modifiers consolidates the status of the adjectives in GHCs. Adverb modifiers of SAs are so rare that most researchers of earlier English ignore them (there are only several noted in Mitchell (1985: 64)), yet in Present-Day English, there is a much higher probability that GHCs take (adverbial) modifiers, which has become one of the decisive criteria for claiming that GHCs contain overt adjectives rather than converted nouns.

As discussed in Section 4.4.3.1, apart from the plain form ‘Determiner + Adjective’, ‘Determiner + Adjective₁ + Adjective₂’ is also easily found in corpora like EEBO (e.g. *the wicked rich*). Such constructions can sometimes be misleading, as the relationship between the two adjectives *wicked* and *rich* is debatable. Aschenbrenner (2014: 143), based on the analysis of *þa ofermodan rican* ‘the proud rich’ in her Boethius corpus,

argues that *rican* could be a weak adjective converted into a weak noun (OE weak adjectives and nouns have the same inflectional endings), because it is modified by the adjective *ofermodan*. Although I am not sure that what *ofermodan* modifies is absolutely the word *rican* (maybe an additional empty noun instead), the juxtaposed adjectives in *þa ofermodan rican*, *bearfan nacodne* in example (38), or even *the living dead* and *the idle rich* give a feeling that the two adjectives are not of the same status. It seems that one of them acts as more syntactically and semantically central, and the other is an ordinary modifier. Thus we may interpret *þa ofermodan rican* as ‘the rich people who are proud’, and *bearfan nacodne* a poor person who is naked. Similarly, instead of thinking of someone as both dead and alive, we understand *the living dead* and *the idle rich* as ‘the dead people who are (or seem to be) living’ and ‘the rich people who are idle’. This, in return, reinforces the impression that the second adjective may have been converted to a noun.

The situation becomes clearer in Modern English (especially in the recent century) as more and more adverb modifiers are introduced to English GHCS – while it is possible to suppose a null noun under most theoretical frameworks, a null adjective is never allowed. So if there is an intervening adverb in a GHC, we almost have no choice but to admit that the element following the adverb is a real adjective. The rise of adverbial modification within GHCS, therefore, affirms the status of the core elements in GHCS as adjectives: while adverbs intervening in GHCS are quite rare until Early Modern English (as indicated in EEBO), they are relatively common now, and in some cases (such as *the ill*) adverbs have become dominant sources of modification. Also, because of this affirmation, the focus of the debate has been shifted from one about word classes (adjectives vs. nouns) to one about function (how to account for the head), with the most straightforward method assuming some kind of null noun or noun ellipsis. Therefore, the frequent occurrence of adverbial modifiers serves as another important factor in explaining the observation in Section 4.3.5: as the common assumption shared by nearly all theories on Present-Day English GHCS is that the adjectives are real attributive adjectives, which have nothing different from the ones seen as modifiers in common NPs, conversion becomes both unnecessary and undesirable.

4.4.4 Distinguishing SAs from GHCs

Finally, I return to the ‘split’ theory proposed by Aschenbrenner (2014): in earlier English SAs are the result of word-formation, but in Modern English GHCs are the result of syntax. In other words, early SAs are formed through the process of (partial) conversion, and modern GHCs are formed by ellipsis (e.g. *the rich [people]*) (cf. Section 4.3.5). To some extent I agree with this ‘split’ solution, because SAs and GHCs are indeed different; but as I have argued in previous sections, both partial conversion and the ellipsis account (especially ‘*people* deletion’) can be problematic. More crucially, I oppose the idea that SAs and GHCs reflect completely disparate grammatical phenomena. Instead, I would argue as follows:

- i. SAs and GHCs are similar in that they both reflect a set of features such as [\pm human], [\pm plural] and [\pm generic];
- ii. The main difference lies in the acquisition of these features. While these features are directly incorporated in SAs, they are external to GHCs. In other words, these features need to be assigned to GHCs.

I will discuss this proposal in the following two sections.

4.4.4.1 Feature assignment

What are the differences between SAs and GHCs based on the discussion so far? One important discrepancy is that SAs are inflectional but the adjectives in GHCs are not. For example, *rice* (‘powerful’) has various forms such as *rica*, *ricne* or *ricra*, which agree with the nouns it modifies. The determinative *se* also has inflectional forms, which can be formed as *bone*, *bes*, *bam*, *ba*, etc. in alignment with declension (strong, weak), gender (masculine, feminine, neuter), case (nominative, accusative, genitive, dative and occasionally instrumental) and number (singular, plural) of the head noun.

Therefore, the feature [\pm plural] (and sometimes [\pm generic], as it is often related to [\pm plural]) is already incorporated in the inflections. Moreover, as Aschenbrenner (2014) observes, in many SAs such as *god* ('good'), declension is also related to reference – while strong inflections (e.g. *god*, *godes*) tend to denote neutral reference, weak ones (e.g. *goda*, *godan*) are often relevant to human beings.²³ As a result, the feature [\pm human] is, to some extent, also accounted for by inflections.

As per GHCs, none of those features are inherently expressed by the adjectives or the determinatives, because in Modern English the inflection system of adjectives and determinatives is lost. Therefore, I shall propose that, since those features are not inherent, they must be assigned as extra properties, through a mechanism I term as ‘feature assignment’. The differentiation between SAs and GHCs is achieved by the assignment of three nominal features [\pm human], [\pm generic] and [\pm plural].

4.4.4.2 The locus of feature assignment

A new problem arises in the wake of my proposal of feature assignment: where do we assign the features? I argue that the locus of feature assignment in GHCs is at the phrasal level, i.e. the features are assigned not to the adjectives, but to the entire construction. There are at least two reasons of doing so. First, as I argued in previous sections, while SAs are independent and behave like nouns, their corresponding adjectival constructions in Late Modern English have undergone syntactic fixation (cf. Section 4.4.2.3) and the adjectives are quite dependent on the whole constructions. Second and more importantly, if the features are assigned to the adjectives, then GHCs like *the rich* will not be generic, because the determinative *the*, which escapes the feature assignment, will still function as definite determiner, making *the rich* nothing different from *the rich people* (i.e. referring specifically to a subgroup of rich people). To cancel the definiteness of *the*, certain features, especially [+generic], must be assigned at the

²³ However, this does not suit all OE words. A more detailed introduction of Aschenbrenner’s observation can be found in Section 5.3.1, and my critical discussion of it is in Section 5.3.3.2.

phrasal level so that [+generic] has the scope over the syntax of *the*. As a result, the entire GHC can receive genericity (if this GHC is generic at all). The differences between SAs and GHCs are shown in the following representations in (39):

- (39) a. SA: [NP \emptyset a [rican e_N]]

 [+generic, +human, +plural] (incorporated in inflections)

b. GHC: [NP the [rich e_N]]

 [+generic, +human, +plural] (assigned as features)

In (39a) the features are incorporated in the adjective *rican* (or to be more precise, the nominal *rican e_N*, because the adjective agrees with the head noun), yet in (39b) the same features are assigned to the whole NP *the rich e_N*. Again, the difference reflects the findings of the previous sections: first, compared with GHCs, SAs are more flexible and less related to the determinatives, which results in the determinatives being outside the scope of the feature assignment.²⁴ Second, compared with GHCs, SAs like *rican e_N* directly receive the nominal features. For anyone who does not assume the existence of an empty noun, it looks as if the features are allotted to the adjective *rican*, making it more noun-like. There is no such effect in (39b): as the whole NP *the rican e_N* receives the features, it is easier to tell that *rich*, as merely a part of the construction, is a real adjective. However, this does not mean that conversion occurs in (39a) and ellipsis in (39b), because the structure [*ba/the [rican/rich e_N]*] remains the same. The proposal in (39b) is subject to further modification, and I will continue my discussion in the next chapter.

²⁴ Some features may still be transferred to the determiners through the determiner-head agreement. In this case, *ba* is the nominative/accusative plural form of *se*, reflecting the case and number of the head *rican*. Therefore, *ba* is not completely irrelevant to the feature assignment.

4.5 Conclusion

In this chapter I explored in detail Generic Human Constructions, which have the form ‘Determiner + Adjective’ and denote human reference. I began with a summary of the basic structure, and then discussed the syntactic and semantic features of GHCs, such as number, genericity and reference. In the following section I then reviewed current theories about GHCs, which either assume some extra nominal element or regard the existing adjectives as essentially the heads. In Section 4.4 I continued my study from a historical perspective, comparing ‘substantival adjectives’ (SAs) in Old and Middle English with GHCs in Modern English. The major findings are twofold: first, SAs are more flexible and less bounded by the determiners, which contributes to their resemblance to nouns. Second, GHCs are more frequently modified by adverbs, which consolidates the adjectival elements as real adjectives. Finally, I proposed an account to distinguish SAs and GHCs, in which nominal features are either incorporated or assigned to the NP level. This account will be elaborated in Chapter 5.

5. Generic Abstract Constructions and other relevant constructions

5.1 Introduction

In the previous chapter I discussed Generic Human Constructions. In this chapter I will cast my net wider, because the construction ‘*the* + adjective’ does not only denote an established group of people. A large number of phrases formed as ‘*the* + adjective’, such as *the impossible* or *the mystical*, can mean something abstract. However, little attention has been drawn to these phrases, presumably because they are sometimes indistinguishable from common NPs with the determinative *the*. Günther (2013) coins the term ‘Abstract Constructions’ for these phrases, in contrast to ‘Human Constructions’ (which are called ‘Generic Human Constructions’ in the previous chapter). Parallel with the previous chapter, I will call them ‘Generic Abstract Constructions (GACs). This chapter aims to discuss some structural, syntactic and semantic characteristics of GACs. Also, a new theory will be proposed in Section 5.4, which suits not only GACs, but GHCs as well. Finally, as the title of this chapter suggests, I will pursue some further relevant syntactic constructions in Section 5.5 to 5.7.

5.1.1 *The denotation of GACs*

Consider the following example:

- (1) Indeed, for Freud, *the unconscious* itself totally lacks imagination... (ICE-GB: W2A002-019)

The italic phrase *the unconscious* looks similar to the construction discussed in the previous chapter: it is a noun phrase (proved by its function as the subject) which does not have a noun on the surface. Also, it consists of two components: a determinative

the, functioning as the determiner of the NP, and an adjective. However, there is something special in this phrase that separate it from constructions like *the rich*. First of all, it does not denote human beings but something abstract. Second, on many occasions we are not quite sure what this abstract thing is, i.e. we are unable to specify its reference. While the human reference in an GHC can be identified with a noun ‘people’¹ added after the adjective (e.g. *the rich = the rich [people]*), what *the unconscious* refers to is not easily revealed because we cannot repeat this ‘adding a noun’ manipulation without hesitation. It may range from ‘instinct’ or ‘thought’ to something more abstract like the word ‘thing’ itself. There even exist some constructions for which this manipulation is completely meaningless:

- (2) a. He lived his philosophy to *the full* in his defiance of all the rules of good appearance and good behaviour. (ICE-GB: S2B026-069)
- b. At *the utmost*, the allegation that he relied on the testator’s promise seems to me to import no more than that he believed the testator would be as good as his word. (BNC: H81)

Third, (1) shows that *the unconscious*, unlike most GHCs that are plural in number, is singular. This is true for almost all examples of this type of construction that we can think of. These basic features are distinctive enough to discriminate the nounless construction denoting abstract things from the GHCs. Phrases like *the unconscious* or *the full* are typical examples of Generic Abstract Constructions (GACs). In the following sections I will discuss the differences between GHCs and GACs in detail.

5.1.2 GACs compared with GHCs

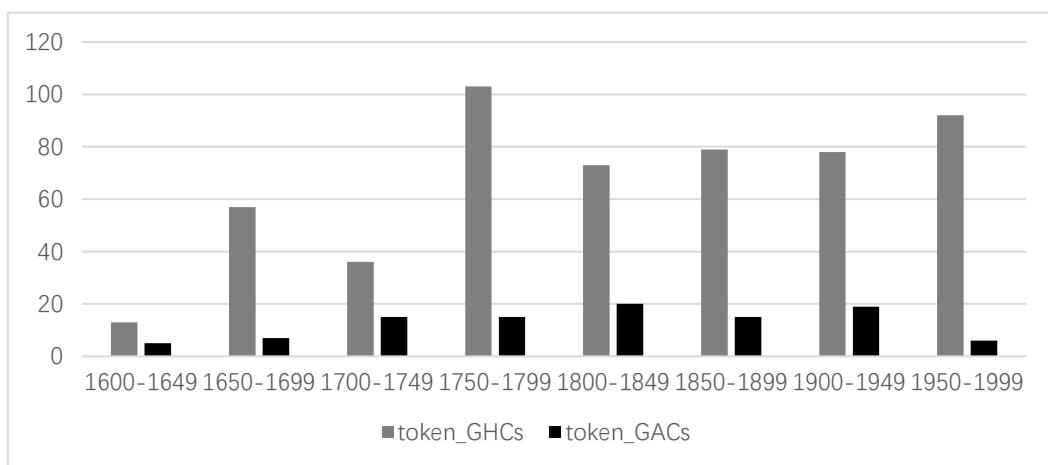
There is little doubt in the literature whether GACs and GHCs belong to the same structure, as most scholars believe that GACs only differ from GHCs in semantics.

¹ For some special constructions like *the accused* and *the deceased*, it is ‘person’, as we have seen.

Quirk et al. (1985), for example, subsume GACs under the section ‘Adjectives used as heads of noun phrases’, regarding them as the third type of such adjectives, parallel with ‘*the* + common adjective’ (e.g. *the innocent*) and ‘*the* + nationality adjective’ (e.g. *the Dutch*). However, my research shows that there are significant differences between the two constructions, which have gone largely unnoticed in the literature.

5.1.2.1 Frequency

While GHCs are frequently seen and relatively productive, GACs are quite rare. For instance, among the 1,172 words or phrases labelled as ‘nominative adjectives’ in ICE-GB, 230 (19.6%) are GHCs, but only 48 (4.1%) are recognised as GACs under stricter criteria (i.e. only those which contain unquestioned adjectives are taken into account).² This is also true on a longer, historical scale. The following Figure 5-1 shows that in the ARCHER corpus the frequencies of GACs are lower than those of GHCs in every historical period from the beginning of the 17th century.



² The two recognised generic constructions amount to about 24% of the total occurrences. The following cases are excluded: 1) a few parsing errors; 2) ellipsis with obvious anaphora/cataphora; 3) ellipsis in a partitive structure (e.g. *the most reliable of the boys*). The partitive structures are excluded from discussion because although they are not anaphoric or cataphoric straightforwardly, the elliptical elements can be easily restored from the NP complements of the preposition *of* (in the above example *the most reliable [boy] of the boys*). By ‘unquestioned adjectives’ I mean the words for which (almost) no one challenges their status as adjectives, such as *impossible* and *ridiculous* – nevertheless, there are also many words in GACs which are widely considered as nouns. These will be discussed in Section 5.2.

Figure 5-1 Raw frequencies of GHCs and GACs in the ARCHER corpus.

5.1.2.2 Syntactic uniformity

Another characteristic of GACs is that almost all constructions look the same, though there are a few candidates deviating from the ‘*the* + adjective’ combination. In Section 4.2.1.1 I reviewed some rare forms of GHCs, such as ‘possessive pronoun + adjective’, ‘genitive noun + adjective’ and conjoined bare adjectives (cf. (3a-g) in Chapter 4). Most of them seem not to be suitable as GACs:

- (3)
- a. their sick/*impossible
 - b. today’s young/*ridiculous
 - c. the number of elderly/*mystical
 - d. we rich/*it unknown
 - e. (the) rich and poor/(the) public and private
 - f. from poor to rich/from bad to worse

As the above examples show, the adjectives in GACs cannot take determiners like possessive pronouns (3a), nouns with genitive markers (3b), or be contained in *of*-constructions (3c) or be preceded by pronouns (3d). However, those adjectives can be conjoined, just like the ones in GHCs (3e-f). Also, Quirk et al. (1985) enumerate some constructions like *in short*, *for good*, *in common*, etc. It seems that the irregular forms can be divided into two subgroups: either they are conjoined bare adjectives, or they are PPs in which the adjectives seem to be complements of the head prepositions. The latter feature is absent in GHCs, as we can hardly imagine **in rich* or **for dead*.³

As we have seen, syntactically, GACs hardly vary as regards grammatical number. In the previous chapter the number of GHCs is discussed (cf. Section 4.2.2.1). Variations are identified in GHCs as follows: 1) the default number of some

³ It is possible to find a sentence like *He left her for dead*, but here *dead* is an oblique predicative complement of *her*.

constructions (e.g. *the accused*) is singular, and 2) the number of these constructions can vary in context. GACs, however, seem always to be singular. The constant singularity is reflected not only in subject-verb agreement (when GACs function as subject) but also in the inability to take modifiers that indicate plurality, such as numerals: while we can have *the three accused*, **the three inevitable* is simply impossible. Interestingly, GACs even resist determinatives for singularity, i.e. *a/an* (cf. Section 4.4.2.1; it is historically possible, albeit rare, to come across GHC adjectives determined by *a* or *an*), suggesting that, if there are nominal elements in the construction (whether the adjectives are in fact nouns as Aschenbrenner (2014) argues, or there are null nouns following the adjectives), they are most likely non-count nouns. Hence, it is more accurate to regard GACs as non-count instead of singular.

The modification patterns of GACs also deserve exploration. Like GHCs, GACs are also eligible for adverbial modifiers (4a) as well as adjectival ones (4b).

- (4) a. ...it is incumbent on politicians to ensure that adequate regulatory controls provide as large a degree of environmental protection as is possible when dealing with *the relatively unknown*. (BNC: B1E).
- b. Among these the Underworld was *the great unknown* and was therefore the dominant feature of funerary texts from the Middle Kingdom onwards.
(BNC: EVR)

Since it is impractical to explore the modification patterns of all GACs, the same strategy is used as the previous chapter: I chose four GACs, namely *the fantastic*, *the inevitable*, *the unknown* and *the sublime*, for a study in the British National Corpus (BNC). The results are shown in Figure 5-2.

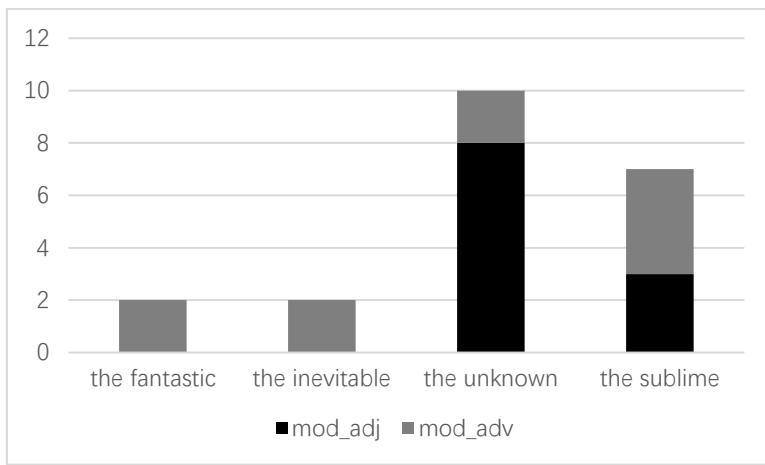


Figure 5-2 Raw frequencies of the four modified GACs in the BNC.

The findings of this pilot research show how difficult it is for GACs to be modified. Except in *the unknown*, the adverb modifiers outnumbered adjective modifiers. In *the fantastic*⁴ and *the inevitable*, adjective modifiers are practically impossible. Given the extreme scarcity of modification in GACs, it is not feasible to carry out a diachronic analysis like I did for GHCs; but in contemporary English, we can roughly say that adverb modifiers are not difficult to find, and unlike GHCs, some GACs (e.g. *the fantastic*) can be modified by adverbs alone.

5.1.2.3 The reference of GACs

In Section 4.2.2.4 I argued against the notion that GHCs may denote concepts other than human beings, maintaining that the references of GHCs can only be of a human nature. But the situation becomes complicated with GACs. The most identifiable and yet often neglected aspect of GACs, in terms of semantics, is that the notion of ‘abstractness’ is not well defined. As I have shown in previous sections, *The inevitable* and *the utmost* reflect different kinds of abstractness: the former refers to a generic entity that is inevitable, and usually a word *thing* or *something* can be inserted,⁵ e.g.

⁴ There is an idiom ‘trip the light fantastic’ which might mislead the automatic tagging device. But apparently it is not what I am looking for.

⁵ Note that *the inevitable thing* is only semantically equivalent to *the inevitable*; I do not suggest that *the inevitable* is the elliptical form of *the inevitable thing* for two reasons: 1) I have just argued in the previous

the inevitable thing, something inevitable (or, as Lyons (1991) suggests, it may be understood as ‘that which is XX’; thus *the inevitable* means ‘that which is inevitable’). The latter, however, expresses a generic concept that can be regarded as the nominalisation of the adjective. It is impossible to add the word *thing* in these phrases, e.g. **the utmost thing* or ‘*that which is utmost’. Therefore, Generic Constructions may express at least three kinds of meanings – human (the human reading), abstract non-human entity (the entity reading) and abstract concept (the concept reading). Interestingly, I observed a phenomenon of intersective expression – i.e. a situation in which a particular Generic Construction may be used to denote different references. *The best*,⁶ for example, can have both the entity reading (5a) and the concept reading (5b); *the obscure* may have both the human reading (6a) and the entity reading (6b). Moreover, as Glass (2019) discovers, some adjectives such as *old* have the potential for both the human reading ((7a), Glass calls it ‘the individuated reading’) and the concept reading ((7b), Glass names it ‘the mass reading’):

- (5) a. I don’t even dare to write what *the best* and the worst I can expect is. (ICE-GB: W1B007-070)
 - b. She did *her best* to make me feel that when we were all together we made a genuine threesome, not a twosome plus a member of the awkward squad. (ICE-GB: W2F014-028)
- (6) a. Our county council always has enough money for *the obscure* and the daft, but when it comes to providing for its old people’s homes, it does not have money. (BNC: HHW)
 - b. My science fair project combined *the obscure* and the melodramatic, the exotic and the mundane; the flamboyant noise and fire of the Van de Graaff

section that GACs are non-count, but *thing* is countable for both singular and plural forms (*the inevitable thing/the inevitable things*); 2) the ellipsis account itself is problematic. I will discuss this issue in Section 5.3.2.1.

⁶ There might be some doubt on whether *best* in *the best* is an adjective. I will show in Section 5.2.3 that it is, though it is an atypical one.

generator, the quiet steady efforts of the grass seeds... (COCA: 2014_FIC_HusdonRev)

- (7) a. *The old* are generally happier than the young. (Glass 2019: 2)
b. *The old* is never ordinary. (Glass 2019: 2)

This phenomenon of intersective expression is illustrated in Figure 5-3.

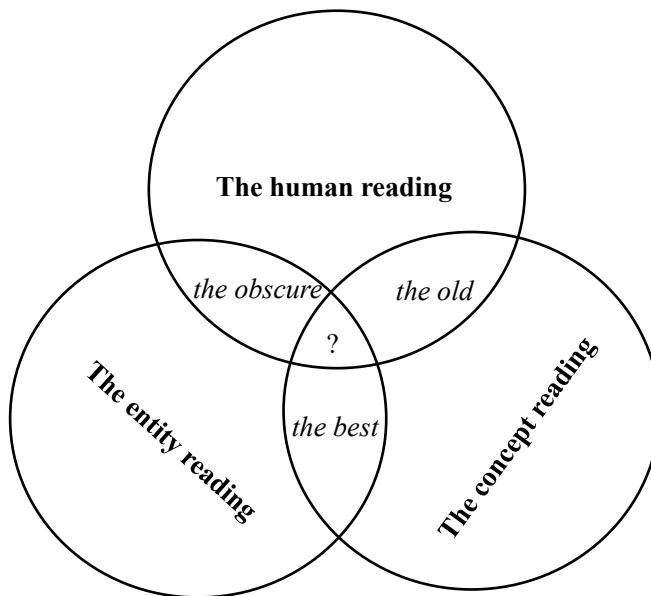


Figure 5-3 Intersective expression of different Generic Construction readings.

Theoretically, we may expect a construction that could have all the three readings in different contexts (as shown by the question mark in the centre), but I have not encountered any examples.

Finally, there is no variation between genericity and specificity in GACs (cf. Section 4.2.2.2, where I argue that some GHCs such as *the deceased* denote both specificity and genericity and a few like *their firstborn* denote specificity only), which, according to cognitive grammar, is a typical feature of non-count nouns as their semantic domains are homogenised, instead of being composed of individual members (see Radden & Dirven 2007). It is simply not possible to identify a specific kind of ‘sublime’ as *the sublime* refers to a generic concept that is not dividable. GACs have their own characteristic, namely the variation between more abstract and more concrete

denotations, and this issue will be explored in Section 5.3.2; yet it is worth noting here that no matter whether a GAC refers to something purely abstract or something with a certain concreteness, it can never be specific – for a GAC with the entity reading the meaning is always generic; and for a GAC with a concept reading, it seems that the differentiation between genericity and specificity is simply not applicable, as no entities are referred to.

5.2 The grey area: a discussion of problematic examples

The ICE-GB data presented in Section 5.1.2.1 were selected with a conservative strategy, which means that words whose word-class status is indeterminate were filtered out. Unfortunately, the frequency of indeterminate adjectives is much larger than that of the unquestioned ones. Errors and ellipses (see fn.2) aside, there are still several hundred cases out of 1,172 ‘nominal adjectives’ left unclassified. The most common ones include *good* (11),⁷ *better* (11), *best* (94), *public* (85), *private* (8), *worst* (22) and *own* (101), which, in total, take up nearly 30% of all ‘nominal adjectives’, outnumbering the 48 (4.1%) unquestioned adjectives. Unlike *impossible* or *ridiculous*, these words are often categorised, especially in dictionaries, as nouns (in the case of *own*, a pronoun). This might be one of the reasons why Aschenbrenner (2014) regards all adjectives in GACs as nouns or at least reflecting ‘nouniness’. After all, *the good* or *the public* are much more frequently used than *the ridiculous*. The following section is devoted to a discussion of these controversial words, which will be the empirical basis of my discussion on ‘nominalised adjectives’ in Section 5.7.

5.2.1 Public and private

Typical usages of the word *public* and *private* in ICE-GB, tagged as a ‘nominal adjectives’, are shown below.

⁷ The number in brackets indicates the appearances as ‘nominal adjectives’ in ICE-GB.

- (8) a. After nineteen eighty-one, *the public* were alive to the gap which had developed between police and the society they policed... (S2B037-004)
- b. *The public* has been misled therefore into thinking that embryo research will produce cures for diseases like cystic fibrosis and Down's Syndrome... (S1B060-054)
- c. This has serious implications for the support which social workers can expect to receive from *the general public*. (W2B017-034)
- d. We have confidence that our commitment will ensure that *the British public* can have every confidence in our present system of policing. (S2B031-081)
- e. The police service from constable to chief recognises the importance of the quality of service that we must deliver to *our public*. (S2B031-080)
- f. But it did much to raise the status of Yiddish in the eyes of *a wide public*. (S2B042-075)
- g. Well I personally have been involved in some Bax symphonies *in public* which had very good audiences. (S1B032-196)
- (9) a. What bit of the health service has moved *from public to private*? (S1B039-084)
- b. He wanted more collaborative ventures *between public and private*. (S1B039-065)

The most common structure involving *public* is *the public*, which, just as NPs, can function as subject (8a, b, d), adjunct of source (8c) or complement of a preposition (8e). It can be modified either by a common adjective (8c, f) or an adjective of nationality (8d). Possessive pronouns (8e) sometimes substitute for the determinative *the*, as in some GHCs (cf. Section 4.2.1.1). There are several characteristics which differentiate *public* from typical adjectives in GACs that have just been discussed in Section 5.1.2.2. First, this item may be determined by the indefinite article *a* (8f); second, the phrase *the public* can be semantically either singular or plural in contexts

(8a-b). Moreover, although it may take various modifiers, no adverbial one is allowed. The first two characteristics clearly show that, unlike common GACs whose nominal elements are always non-count, the nominal elements in *the public* can freely vary in number without displaying inflections. This is very similar to some collective nouns such as *family* or *committee*:

- (10) a. Judaism can't survive for instance without strong families, and *the family* is rapidly eroding. (S1B047-091)
- b. All *the family* are here since you're here. (S1A028-162)

It is generally agreed that *the family* is interpreted as an inseparable entity in (10a), and as a collection of its members in (10b). The same logic applies to *the public*: while in (8b) the society is considered as a whole, (8a) implies that it is the individuals of the public that “were alive to the gap”. In terms of the modifiers, I discussed the case of *the elder* in Section 4.4.3.2, and doubted that *elder* in *the elder* is ever an adjective because it cannot be modified by adverbs. The situation is similar here, as *public* does not typically take adverb modifiers. In conclusion, *public* in *the public* is better regarded as a noun.

The account above does not fit (8g) and (9a-b) very well, if we have determined that *public* is a collective noun with human reference which roughly means ‘general community’. *In public* is often interpreted as having the rather neutral meaning ‘openly’ (although *openly* hints that it is open to ‘people’ instead of nature), and we cannot substitute *the general community* for *public* here (*in the general community* would mean something different, but here a closer substitution is *in front of the public/the general community*).

More problematic is the account of the word *private*. Unlike *public*, we do not see **the private* or **a private*⁸ with human reference, and *in private* is unlikely to mean something other than ‘not openly’. The difficulty of explaining *private* with human

⁸ Excluding cases where the phrase refers to a soldier.

reference leads to the speculation that *private* is an adjective denoting abstract concepts (i.e. an adjective in the GAC). By analogy, *public* in *in public*, as well as in *from public to private* and *between public and private* (coordinated elements should have similar properties) should also be an adjective.

Therefore, two different types of *public* are identified here: in sentences like (8a-f) it is a noun with human reference which appears in *the public* or takes other determiners such as possessive pronouns and numerals; in (8g), however, it is better analysed as an adjective that denotes an abstract concept. *Private* belongs only to the latter type (9a-b), and the conditions in which it can be used are much more limited.

5.2.2 Past, present and future

An interesting phenomenon in ICE-GB is that it recognises *present* (meaning ‘now’) of *the present* as a ‘nominal adjective’ while *past* in *the past* and *future* in *the future* remain purely nominal (11a-c):

- (11) a. And if we fail to make the necessary investments if we continue what we are frankly doing at *the present* which is simple muddle through, not very well we will be creating the very worst outlook for our ability to compete in the next century. (ICE-GB: S2A023-075)
- b. Anyway what is required on that version of *the past* is some radical reversion to *that past*. (ICE-GB: S2A021-084)
- c. What we have to do is provide the means by which people can be self-determining to make their own choices in *the future*. (ICE-GB: S1B027-135)

It is not difficult to justify such a classification, as we can easily find collocations like *a hopeful future* or *a tragic past*, as in (12).

- (12) The main assumption is that we were rescued from *a tragic past* and handed

a hopeful future, and that to look back and piece together the facts behind our orphan status would be counterproductive and even unhealthy. (COCA: GACAD_Humanist)

On the other hand, it seems that *present* is fossilised in the structure *the present* and does not occur with other determinatives: we hardly come across any examples of *?a present* or the like. This may be because the semantic characteristics of *present* are slightly different from *past* and *future* as the present is usually considered unique and transient. In (11b) we see a deictic use of *that past*, which is impossible for *present* (**that present*, because both *that* and *present* encompass a meaning of uniqueness, which will cause semantic redundancy).

Despite the inability to be determined by *a*, *present* behaves similarly to *past* and *future* in that it can be modified by an adjective. Structures like *the conscious present* are attested:

- (13) Consciousness, in Humphrey's scheme, arises when sensation is made to reverberate within the nervous system, connecting the present to the immediate past: '*the conscious present* is largely the immediate sensory afterglow of stimuli that have just passed by.' (BNC: CAL)

Therefore, all these words should be regarded as converted nouns, although the use of *present* is more restricted.

5.2.3 Good, bad and best

A fact that may be used as evidence for the noun status of *good*, *bad* and their comparatives and superlatives (*better*, *best*, *worse*, *worst*) is that they collocate flexibly with a relatively wide range of words. Apart from *the* (14a), they can also co-occur with determinatives like *any* (14b) and *more* (14c), possessive pronouns (14d), certain prepositions (14e), or they can occur on their own as objects of certain verbs (14f).

- (14) a. What's *the best* and *the worst* that I can expect? (ICE-GB: W2B001-087)
- b. Is that *any good*? (ICE-GB: S1A074-349)
- c. It's one thing to use these measures to compare the benefits of two treatments for the same illness, quite another to use them in deciding whether *more overall good* comes of doing say heart transplants or hip operations. (ICE-GB: S2B038-012)
- d. We should simply continue to do *our best* to provide the information they seek and await the sight of their report. (ICE-GB: W1B029-116)
- e. These questions in turn raise others about those buildings which, *at best*, fail to engage our admiration, or, *at worst*, actually repel us. (ICE-GB: W2A005-035)
- f. We deserve *better*. (ICE-GB: S2A040-009)

However, this is not decisive, as adjectives can also co-occur with determinatives or verbs, as long as there are external nominal heads. As the comparative and superlative inflections are already suggestive that these words are originally adjectives, any argument for the noun status should include more convincing evidence. In fact, I would argue that while *good* can be a noun, *better* and *best* remain adjectives in all cases for two reasons. First, *good* may participate in more complex combinations such as *for good*, *do one good* (cf. *do one harm*, in which *harm* is a noun) or *be no/much/any/some good*, and it is reasonable to regard a lexical item which can both be complement of prepositions (as in *for good*) and take various determinatives other than *the* (as in *be no/nuch/any/some good*) as a real noun. On the other hand, the use of *better* and *best* is more restricted: for instance, *best* mostly collocates with *the* and possessive pronouns (e.g. *do the/one's best*), which indicates that *best* has the same distribution as the adjectives in Generic Constructions.

Second, while *best* is sometimes modified by adverbs such as *very* (15a), I cannot find any example in corpora where *good*, in its independent form (i.e. where *good* does not modify a noun), is adverbially modified. The only close example is (15b). On the

surface it seems that *mentally* modifies *good*, yet a careful examination reveals that what *mentally* modifies is rather the VP *does you good*. Therefore, it seems that only *good* has been converted to a noun.

- (15) a. I wish you the *very best* of luck in your career. (ICE-GB: S2A021-085)
- b. But those of you who have studied some of the theories about why physical exercise does you *mentally good* may have come across endorphins... (ICE-GB: S2A027-044)

Although we do not have enough evidence to argue that *best* and *worst* are more than the superlatives of *good* and *bad* respectively, the two adjectives may have gained some lexical independence which separates them from the originals. Data from ICE-GB show how frequently *best* and *worst* are used as ‘nominal adjectives’ in contrast with *good*, *bad* and their comparatives (Figure 5-4).

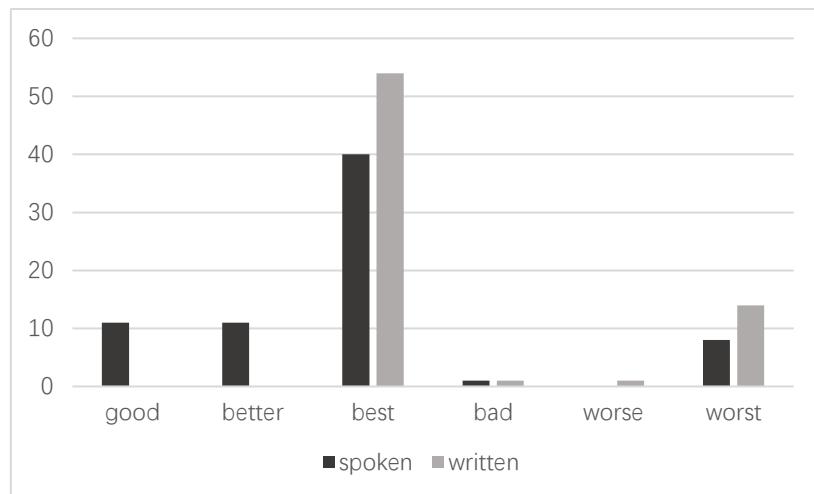


Figure 5-4 Raw frequency of *good*, *better*, *best*, *bad*, *worse* and *worst* used as nominal adjectives (i.e. as GACs) in the spoken and written sections of ICE-GB.

As a comparison, I calculate the frequencies of these six words used as common adjectives, which is plotted in Figure 5-5:

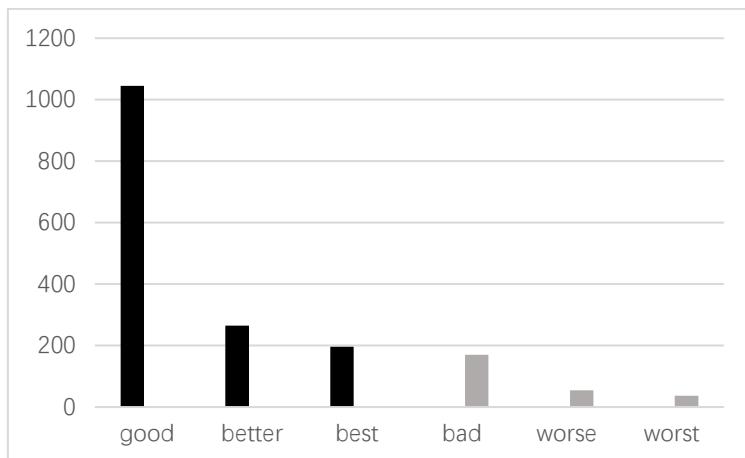


Figure 5-5 Raw frequency of *good*, *better*, *best*, *bad*, *worse* and *worst* used as common adjectives in ICE-GB.

Figure 5-5 reflects that the adjectives *good* and *bad* occur more frequently than their comparative and superlative forms, and it also conforms to the findings of Biber et al. (1999: 523) that comparative adjectives are much more frequent than superlative adjectives. Nevertheless, Figure 5-4 shows quite the reverse: *best* and *worst*, when used in GACs, are several times more frequent than the original and comparative forms. Moreover, it seems that *best* and *worst* appear more in written texts, contra the overall trend summarised by Biber et al. (1999: 524), in which superlatives are rarer than comparatives in all three categories of written language (fiction, news and academic). These facts indicate that the relations of *best* and *worst* to the absolute and comparative forms in GACs are different from those used as common adjectives, i.e. *best* and *worst* can be regarded as independent lexical items in GACs. However, the data above are not enough to argue against the syntactic evidence that *best* and *worst* are just the superlatives of *good* and *bad*, rather than converted nouns. *Best* and *worst* might be on the way to acquiring a certain independence, but their syntactic behaviour suggests that they are not essentially special.

5.2.4 *Own*

Own is almost always used with a possessive pronoun, whether it modifies a noun or not. There are some examples in ICE-GB:

- (16) a. It's an interesting area of the law and involves doing a lot of work *on my own* without having to constantly refer to the head of department.
 (ICE-GB: W1B011-022)
- b. Or if she was eighteen she might have a sexual relationship *of her own*.
 (ICE-GB: S1A037-057)
- c. The trains are now air conditioned + free of graffiti which used to make me feel the sprayers had marked out this territory *as their own*. (ICE-GB: W1B012-116)
- d. But to see his sister in a world *above his own*, with companions far cleverer and cleaner *than his own*...all this was a deep humiliation which nothing in his life afterwards ever seems to have eradicated. (ICE-GB: W2B006-097)

Something else in common in (16a-d) is that all the ‘possessive pronoun + *own*’ combinations function as PP complements or modifiers. But in (16c-d) there seem to be elliptical nouns after *own* which are usually the ones immediately before the adjunct or modifier in which *own* belongs: we can assume *as their own [territory]*, *above his own [world]* and *than his own [companions]*, and as a result those cases are excluded from GACs as they involve anaphora.

On the other hand, (16a-b) are somewhat tricky because the italic parts do not seem anaphoric. This is especially the case with (16a), in which it is very difficult to insert a noun behind *on my own*. There is potentially a way to analyse constructions like (16a-b). The OED classifies instances of *own* that do not modify a noun as pronouns, which does not make much sense because two pronouns usually do not occur next to each other. However, it is possible to regard ‘possessive pronoun + *own*’ as a compound pronoun, just like reflexive pronouns which are morphologically composed of ‘accusative pronoun + *self/selves*’. This analysis is inspired by the fact that *own* always occurs simultaneously with a certain possessive pronoun before it. An immediate advantage of this analysis is that we do not need to debate whether a construction

containing *own* fulfils the criteria of GACs or not, because now all *own*-related constructions involve pronouns which are inherently qualified as heads of NPs. However, unfortunately this idea is not viable, as there can be intrusive modifiers between the two components:

- (17) Jeffrey Archer's 'private office' had brought an Amstrad to Brighton; at the push of a button, he could summon up a blacklist of *his very own*. (BNC: HNK)

Normally a compound does not accept an extra word in between, unless we are dealing with a situation called 'expletive infixation', e.g. *every-bloody-body* (see McCarthy 1982), but in this case the extra word is a modifier of the latter component. In consequence, this account should be dismissed. I will still take 'possessive pronoun + *own*' in (16a-b) as GACs when they function as complements of *on* and *of*, although I should also note that 'possessive pronoun + *own*' is a special kind of GAC in at least two ways. First, it has only the concept reading (cf. Section 5.1.2.3), as we are unable to insert any nominal element representing either a human or non-human entity (just like *the full* or *the utmost*). Second, unlike other GACs in which the adjectives are usually preceded by the determinative *the*, *own* can only collocate with possessive pronouns.

5.2.5 *Summarising this section*

In this section I presented a detailed discussion of a few commonly used constructions which look like GACs and are parsed as the equivalent of 'nominal adjectives' in ICE-GB. Some were accepted as real GACs. One consequence of this is that the total number of GACs increases, though it is still smaller than that of GHGs in corpora. An observation from this discussion is that as far as GACs are concerned, people tend to infer the word class of the component words from the properties of the phrases (i.e. NPs), and the outcome is that many of them are labelled as nouns without full consideration. On the other hand, sometimes the boundary between adjectives and

nouns is so fuzzy that it is a difficult task to draw a distinction, especially when conversion is involved. I will continue my discussion of nominalised adjectives in Section 5.7.

5.3 Theories of GACs

Compared with GHCs which have accumulated a relatively abundant literature, little attention has been paid to GACs. Most theories that claim to account for the special usage of adjectives seem to apply to only GHCs, and the analyses of adjectival constructions which do not refer to human references are either ignored or excluded (e.g. Arnold & Spencer 2015, Kester 1996a, Borer & Roy 2010). One reason might be the structural likeness between GHCs and GACs – it is easy for GACs to be regarded as a subcategory of GHCs with different denotations. However, there are still a few scholars who have noticed the differences between GHCs and GACs. In this section I will critically evaluate those theories.

5.3.1 *Theories*

Apart from Quirk et al. (1985: 424) who give a half-page description in the section “Adjectives as heads of noun phrases”, Aschenbrenner (2014) is among the few studies that theoretically compares GACs with GHCs. For her, the adjectives in GACs (which she terms as “substantivized adjectives denoting [an] abstract neuter entity”) are different from those in GHCs (“substantivized adjectives denoting person(s)”) as they are real nouns.⁹ On the other hand, adjectives in GHCs are ‘nouns’ (the author uses the quotation marks to imply that they are not real nouns in essence) which to some extent acquire the function of prototypical nouns without breaking away from adjectives. Aschenbrenner argues that from Old English to Modern English the adjectives in GACs

⁹ Her stance seems quite confused, as she sometimes admits that “[to] some extent the words [those denoting abstract entities] are thus still presumed to be adjectives.” (Aschenbrenner 2014: 145)

are always more like nouns than those in GHCs, with reasons varying in different periods. For example, in the Old English part of the author's diachronic *Boethius Corpus*, adjectives in GACs are characterised by strong inflections (like the genitive singular marker *-es* in *godes* 'good'), lack of comparative and superlative forms and the inability to be supplemented with an elided noun. On the other hand, adjectives in GHCs typically show weak inflections (like *-an* in *þa godan* 'the good'), are sometimes used in comparatives/superlatives (e.g. *se unstrengra* 'the weaker') and it is often possible for nouns of human reference to be added where necessary. In Modern English with the loss of adjectival inflections the differences may be blurred, but the author still distinguishes 'adjectiviness', a label for adjectives in GHCs and 'nouniness' (Aschenbrenner 2014: 157), one for adjectives in GACs. The implication for the use of the terms 'adjectiviness/nouniness' is that both types of words stay between the extremes of real nouns and adjectives, but the adjectives in GACs are closer to the noun point while those in GHCs show more affinities to common adjectives.

Another theory concerning GACs is Glass (2019), which was already mentioned in Section 5.1.2.3. Here I repeat (7a-b) as (18a-b):

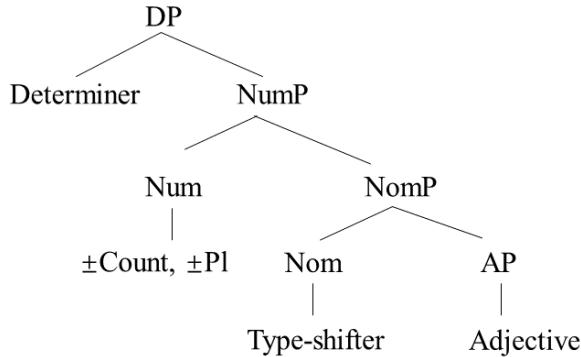
- (18) a. *The old* are generally happier than the young. [individuated reading]
- b. *The old* is never ordinary. [mass reading]

Glass distinguishes the mass reading (18b) from the individuated reading (18a), though the two readings are semantically related (both readings are derived from the 'state analysis' of adjectives). She defines the individuated reading as denoting individuals who hold some state of a particular adjective, while the mass reading refers to a state of this adjective held by several individuals. Therefore, in (18a) *old* means "individuals who hold some state of being old" (Glass 2019: 2), and in (18b) it means "states of being old held by some individuals" (*ibid.*). In other words, the meaning of *old* in (18a) is closest to 'old people' and in (18b) is approximately 'oldness (of people)'.

By applying the mass analysis Glass presumes that the adjectives are real ones. In order to deal with the problem that *the old* is an NP, she proposes a 'type-shifter' that

offers two functions to the adjective: semantically it adds the individuated reading or the mass reading, and syntactically it nominalises the adjective *old* ((20b) in Chapter 4, repeated here as (19)).

(19)



5.3.2 Critical comments

5.3.2.1 Ellipsis

The first issue I would like to address is that some theories about GHCs cannot be transplanted directly to account for GACs, especially the ones proposing ellipsis. The reason is obvious: it is often difficult or impossible to pinpoint the elliptical word (cf. Section 4.1.2.3). Quirk et al. (1985) state that sometimes the word ‘thing’ might be added, yet it seems that this option is only plausible for a few adjectives such as *good* or *impossible*, as we can say *the good [thing]* or *the impossible [thing]*. It is not an ideal operation for adjectives like *unconscious* or *public*, which are illustrated in examples (1), (8g) and (9a) (I repeat them below as (20a-c)):

- (20) a. Indeed, for Freud, *the unconscious* itself totally lacks imagination... (ICE-GB: W2A002-019)
- b. Well I personally have been involved in some Bax symphonies *in public* which had very good audiences. (ICE-GB: S1B032-196)
- c. What bit of the health service has moved *from public to private*? (S1B039-

While the completion of *the unconscious* or *in public* is not impossible, *thing* is clearly not the appropriate choice. We may, as discussed in Section 5.1.1, prefer a word that is semantically close to the concept of ‘mind’ for *the unconscious*. Trickier is *public*, which induces different concepts in (20b) and (20c): symphonies are better played *in public [places]*, but services are usually provided *from public [sectors] to private [sectors]*. In short, to convey the meaning more accurately we sometimes need to search for a more concrete semantic equivalence. Note that a difference between GACs and GHCs is that although GHCs can sometimes be interpreted more concretely, the broader interpretation is always possible (21).

- (21) In 1796 *the French* invaded northern Italy. (Quirk et al. 1985: 424)

Here *the French* metonymically denotes not the general population who have the French nationality, but ‘the French military’. The narrower reading is implied by the verb *invade*, which usually requires an agent that can perform military operations, rather than *the French* themselves. In other words, both the generic noun *people* or a more specific noun like *troops* can be added afterwards, while the corresponding sentences (*the French people invaded northern Italy* and *the French troops invaded northern Italy*) remain semantically equivalent. This is not true for *unconscious* or *public*, as **the unconscious thing* or **the public thing* is inconceivable in semantics. As a result, we are not able to find a word like *people/person* that can fit universally in every GAC.

More serious is the explanation about GACs with the concept reading (or the mass reading in Glass (2019)). Apart from *the full* and *the utmost* in (2a-b) and *the old* in (18b), there is a quite representative example in COCA:

- (22) JERAS: There’s a facebook page about this opossum. It has like 120,000 fans or more, and people just can’t get enough of it. Look how *cute* that is.

WHITFIELD: Yes.

JERAS: It was born in the United States, though, by the way.

WHITFIELD: OK. Let me refrain. I think you watch it, because you really can't believe. Are you staring because you're like, oh, so *cute*? Or are you staring because, oh, *unusual*?

JERAS: I'm going with *the cute*.

WHITFIELD: OK.

JERAS: You?

WHITFIELD: You're going with *the unusual*.

JERAS: There you go.

WHITFIELD: I'm not saying. I just think, it does have kind of a train wreck kind of effect. Where you can't stop looking, and I don't know why.

JERAS: All right.

WHITFIELD: But it is in the realm of *cute*. OK. I'll go with that. Jacqui thanks so much. Very fun stuff. (COCA: 2011_SPOK_CNN_News)

In (22) we can identify a mixture of nouns and adjectives pertaining to *cute* and *unusual*. Let's consider *cute* first. In the early part of this conversation there are two cases of the adjective *cute* (*Look how cute that is* and *oh, so cute*), and they are no doubt real adjectives because of the adverbs *how* and *so*. Also at the end we see a nominalised *cute* (*it is in the realm of cute*), functioning as complement of the preposition *of*. As both the adjective and noun *cute* demonstrate, in Glass's (2019) words, the 'state of being cute', *the cute* in *I'm going with the cute* must have the same denotation, i.e. the concept reading. There is no way of interpreting it otherwise, because the whole conversation is about the characteristics of a particular opossum. Yet as long as we recognise that *the cute* roughly means 'the cuteness', we will immediately encounter the problem that there is no noun in English which bears the interpretation of the abstract *-ness* – the endeavour of finding the elliptical noun head is then proved fruitless.

The situation with *the full* and *the utmost* is even more complicated, because while *the cute* in (22) or *the old* in (18b) can function as subject or object, *the full* and *the*

utmost are almost exclusively used as a type of adjunct, which Quirk et al. (1985: 590) and Biber et al. (1999: 780) call ‘amplifiers’, as shown in (2a-b), repeated here as (23a-b).

- (23) a. He lived his philosophy to *the full* in his defiance of all the rules of good appearance and good behaviour. (ICE-GB: S2B026-069)
- b. At *the utmost*, the allegation that he relied on the testator’s promise seems to me to import no more than that he believed the testator would be as good as his word. (BNC: H81)

To the full in (23a) and *at the utmost* in (23b) amplify the degree of corresponding verb or clause, a function which is usually realised by adverbs such as *fully* or *completely*. As we are not expected to find a nominal element in *fully* or *completely*, *to the full* and *at the utmost* should not contain such elements, either. Hewson (1991), while discussing the headhood of NPs, distinguishes nouns from adjectives/adverbs in terms of their “internal cognitive structures” (Hewson 1991: 329). In short, a noun should be composed of two parts, namely a lexical element that characterises a referent and also the referent itself, yet an adjective or adverb only contains the lexical characterising element because the referent is external, i.e. the referent is independent from the adjective/adverb. In (23a), for instance, what the PP *to the full* amplifies is the verb *live*, resulting in the unnecessary attempt to look for a nominal referent within the PP structure. As both the impossibility of pinpointing an internal referent and the amplification of a corresponding verb suggest that *the full* or *the utmost* do not actually contain a noun, whether it be overt or covert, theories insisting on ellipsis fail to account for these unusual constructions.

5.3.2.2 Limitations of Aschenbrenner (2014)

Despite her effort in differentiating GHCs and GACs, Aschenbrenner’s theory is not without flaws. For example, it is not difficult to find in Old English some examples

where adjectives with strong inflections are used to denote human references. The following examples come from *The Wanderer*: in (24a) *dōmgeorne* refers to a group of people in general ('people who are eager for glory'), while *swāsne* in (24b) has a non-generic reference – it stands for a particular person, the 'lord' the poet remembered.

- (24) a. For ðon *dōmgeorne* drēorigne oft in hyra
 therefore eager for glory dreary often in their
 brēostcofan bindað fæste. (*The wanderer*, 17-18)
 breasts bind firmly

'Therefore those eager for glory often keep secure something dreary in their breasts.'

- b. Ponne bēoð þy gefigran heortan benne, sāre
 then are the heavier heart wounds sore
 æfter *swāsne*. (*The wanderer*, 49-50)
 for the sake of beloved

'Then the heavier wounds of the heart are sore for the sake of the beloved (i.e. the lord).'

This is perhaps a drawback of a highly homogenised corpus: the scarcity of strong adjectives denoting people in the Old English translation of *Boethius* does not entail that weak adjectives are the only option for human references in all Old English texts. The same problem has been identified in the previous chapter (see Section 4.3.1), where a study of the ARCHER corpus shows a contradictory result. Consequently, the representativeness of the *Boethius Corpus* needs to be carefully evaluated, as possibly skewed data can lead to inaccurate analyses.

Another problem with the homogenised *Boethius* corpus is that it inadvertently narrows the scope of research, as the syntactic potential of the structures concerned is not fully achieved. Aschenbrenner discusses modification very little, because the modification of adjectives is mostly absent in all versions of *The Consolation of Philosophy*. Nevertheless, modification of adjectives is possible from as early as the

Old English period (cf. Mitchell 1985: 64), and adverb modification in GHCs has become more frequent in the recent 200 years (see Section 4.3.3). A lack of knowledge regarding modification therefore undermines the overall conclusions, as modification functions as a significant criterion for testing the word class.

Perhaps the strangest aspect of Aschenbrenner's theory is that the criteria she establishes for nouns and adjectives are very different from mainstream grammars of Modern English. The plural marker *-s*, for example, does not indicate a real noun in her work, resulting in *blacks* or *mortals* being regarded as adjectives. This view indicates that the author may be influenced by Roman languages, in which adjective modifiers or predicative complements agree with corresponding nouns. An example raised by Aschenbrenner is the French phrase *les jeunes filles* 'young ladies'. However, since English does not have number concord between adjectives and nouns, cross-linguistic comparison is pointless. In English plural *-s* is a prominent feature which is sufficient (though not necessary, as mass nouns do not inflect for number) to categorise a word as a noun, and this feature is employed by Borer & Roy (2010) to distinguish 'Noms(A)' (cf. Section 4.1.1) from real adjectives. Therefore, the unusual criteria cause a proliferation of adjectives, which may otherwise be excluded from discussion, and they also cause the author's exploration of 'adjectiviness' and 'nouniness' to be unreliable.

5.3.2.3 Limitations of Glass (2019)

The main contribution of Glass (2019) is the differentiation between the individuated reading and the mass reading of the adjectives in Generic Constructions. Nonetheless, she does not realise that apart from concepts, GACs can also denote abstract entities, which may be difficult to explain in her framework. Her theory looks neat and simple in assuming that all the adjectives in Generic Constructions can be explained by the state analysis of adjectives, in which the interpretation is controlled by only two parameters, i.e. the state of an adjective and its holder. Whether a construction is understood as a GHC or a GAC depends on which parameter is to be turned on/off. For example, if we emphasise the holder of an adjectival state and interpret an adjective,

say, *rich*, as ‘those who hold the state of being rich’, then we get a GHC *the rich*. But if the entity reading is taken into account, we have to further distinguish two kinds of holders: Holder₁ (human) and Holder₂ (non-human), which will complicate the theory – a result Glass may not want. A consequence of Glass’s taxonomy is that she obtains inconsistent results in comparing GACs and nominalised adjectives with the suffix -ness:

- (25) a. My girlfriend has always been fairly neurotic, but since we had a child, *the crazy/craziness* is making me nuts. (Glass 2019: 18)¹⁰
- b. What they [Bronze Age rural people] did share with them [urbanities] was a taste of *the expensive/expensiveness* and *the exotic/exoticness*, and thanks to well-established trade-routes...they had long been able to get what they wanted. (Glass 2019: 19)

Glass discusses lengthily why GACs and ‘Adjective + -ness’ nouns are interchangeable in some situations (like (25a)) but not others (like (25b)). It should not be difficult to explain this, though, as long as we regard *the crazy* in (25a) and *the expensive* and *the exotic* in (25b) as different kinds of GACs. *Expensiveness* and *exoticness* cannot replace *the expensive* and *the exotic* in (25b) because these GACs bear the entity reading, i.e. ‘that which is expensive’ and ‘that which is exotic’, respectively. This is further proved by the cataphoric relation between these GACs and *what they wanted* in the next clause – what the Bronze Age rural people wanted through the trade-routes is obviously not the concepts, but ‘something’.

5.4 Towards a unified theory

As I have shown in Section 5.3.2.1, if a unified theory accounting for both GHCs and

¹⁰ For some British English speakers *the crazy* is not a grammatical option. But I will not question the validity of this example as she states that all her examples are attested on the internet.

GACs is to be proposed, then any assumption that involves ellipsis should be abandoned. Also, little *pro* is not an appropriate head, as I do not believe that GACs with the concept reading are case-marked.¹¹ Adjective-head could be an option, but all attempts to transfer the adjective into something noun-like need to be justified, as those are not real processes of conversion. By contrast, the empty noun analysis offers a good balance between simplicity and effectiveness.

As in the previous chapter, I propose a theory based on Panagiotidis's (2003) element *e_N*, an empty grammatical noun without denotation. It immediately explains GACs with the concept reading: the nominal elements in *the cute* in (23) or *the full* in (24a) should be devoid of semantics so that the state readings of the adjective *cute* and *full* prevail. However, it faces difficulties in analysing GHCs and the remainder of GACs, where the meanings are composed of the denotations of the adjectives plus either human beings or abstract events: since *e_N* is a purely functional element, the human or event reference should be expressed elsewhere. As I argued in Section 4.4.4, this may be solved by feature assignment – the denotations are not built-in, but assigned individually as external features. The locus of the features, as I also suggested in Section 4.4.4, is the entire NP ‘Determiner + Adjective + *e_N*’ string in Modern English. In other words, GHCs and GACs in Present-Day English semantically behave like non-compositional phrases, i.e. idioms, in which there are additional meanings beyond those of the determiners and the adjectives. Finally, with regard to the kinds of features that are relevant, I propose [\pm plural], [\pm human], and, rarely, [\pm generic] for GHCs and an additional feature [\pm count] in distinguishing GACs from GHCs. The possible array of feature assignment is summarised in Table 5-1.

¹¹ Little *pro* lacks phonetic properties but its syntactic ones are retained. Usually a *pro* is still case-marked, even though it is not overtly expressed.

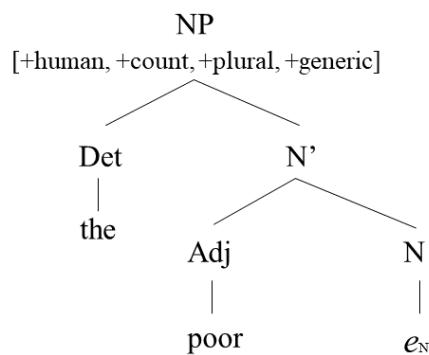
	[human]	[count]	[plural]	[generic]
<i>the poor</i> ((2a) in Chapter 4)	+	+	+	+
generic <i>the accused</i> ((9a) in Chapter 4)	+	+	-	+
specific <i>the accused</i> ((9b) in Chapter 4)	+	+	-	-
<i>the unknown</i> (4a)	-	-	-	+
<i>the cute</i> (23)	-	-	-	-

Table 5-1 Feature assignment in Generic Constructions.

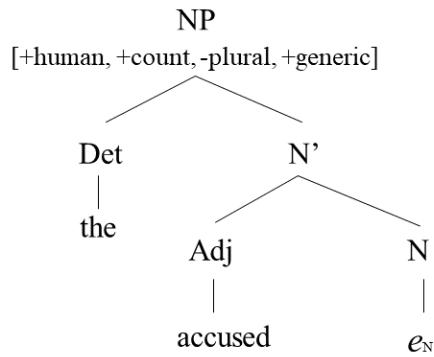
The poor, therefore, is assigned a positive value for all features; *the accused* in generic meaning is assigned [+human], [+generic], [+count] and [-plural]; *the cute*, by contrast, is negative in all relevant features, which means there are no additional syntactic properties. Note that the failure of feature assignment should not be confused with the assignment of a related feature, so if a construction is not assigned [+plural], it does not mean that this construction must alternatively be singular. For example, while the combination of [+count] [-plural] suggests that *the accused* is singular, the feature [-plural] in *the unknown* may not be relevant as it is already marked as non-count (cf. Section 5.1.2.2). Similarly, the failure of assigning [+generic] to *the cute* does not imply that it is specific; rather, the distinction between genericity and specificity is not applicable to *the cute*, simply because it does not have a referent, whether it is human or non-human (cf. Section 5.1.2.3).

The structure of Generic Constructions is shown in (26a-e). All features are assigned to the NP level.

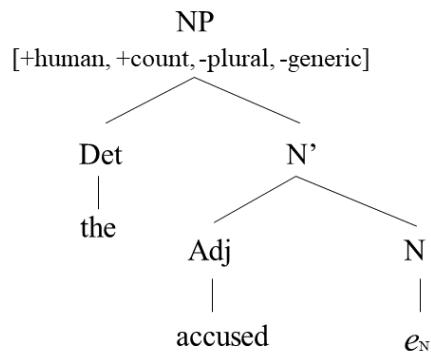
- (26) a. *the poor*



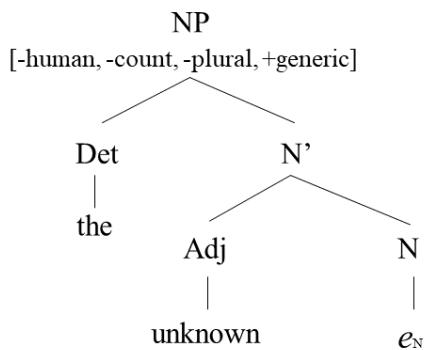
b. generic *the accused*



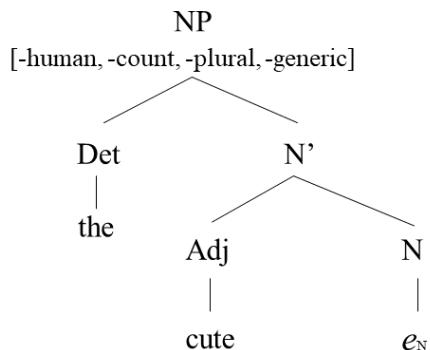
c. specific *the accused*



d. *the unknown*



e. *the cute*



There are some further issues about my idiom-like proposal we need to address. First, the idiomatic characteristics of generic constructions are not at odds with the ability of being modified. Idioms do not always resist internal modification. According to a corpus study by Minugh (2007: 217), the probability of receiving internal modification shows strong individual variation: idioms like *a dime a dozen* are used in simplex forms, i.e. without modification, in more than 97% of examples; on the other hand, about 96% of *bear the burnt* are modified. In general, internal modification of idioms is not only possible but also relatively frequent, which does not make much difference from compositional phrases.

Second, the features are primarily assigned by the adjectives, as most adjectives have only one reading, e.g. *poor* assigns [+human, +count, +plural, +generic], *impossible* assigns [+generic, -count, -plural, -human]. An important factor which empowers the adjectives in feature assignment is their semantics. *Rich/poor/dead* tend to assign the feature [+human], but *impossible* can never do so as it does not modify *people/person*. *Firstborn* will only permit the feature [-plural] by its semantics. Even when a particular adjective can receive more than one reading, the frequencies of those readings are not evenly distributed. For example, in Section 5.1.2.3 I discussed Glass's (2019) finding that *the old* could be interpreted as human beings or as abstract concepts. However, in corpora *the old* is predominantly likely to receive the human reading, and usually the concept reading needs to be confirmed by the context. On the other hand, for some adjectives, such as *good*, the context may be very important in determining which reading is more apposite (27a-b).

- (27) a. He cares neither for the broad sweep of grand strategy nor for the narrow focus of specific campaigns, so he ignores both government archives and the memoirs of the great and *the good*. (BNC: A4U)
- b. The specific point that Nagel is making is that there is no way of justifying the conditions of choice in the original position except from the point of view of a certain conception of *the good*. (BNC: ANH)

The interpretation of *the good* in (27a-b) depends on the meanings of the lexical chunks that precede them, and *memoirs* and *conception* may be the two key words. In examples (27a-b) we cannot say that the features are assigned by the adjective *good*, because there is no structural difference between the two instances of *the good* in (27a-b); on the contrary, the features should be assigned by the context – we are not likely to know the meaning of *the good* without understanding the whole sentence in which it is embedded.

5.5 Determinatives as generic constructions

The exploration of Generic Constructions is not yet complete. Apart from the common Generic Constructions (some of them are less common, though), i.e. constructions with the form of ‘D (usually *the*) + A’, there are some remaining grammatical phenomena which bear much relevance: either they are potentially unidentified Generic Constructions, or they should be distinguished from typical Generic Constructions. In the following section I will examine those constructions in detail. In Section 5.5 I will discuss adjectiveless Generic Constructions; in Section 5.6 I will talk about elliptical NPs; and finally Section 5.7 will be on nominalised adjectives.

5.5.1 *Independent determinatives and genitives*

In Chapter 2 I briefly introduced Huddleston & Pullum et al.’s (2002) classification of ‘fused constructions’ (cf. Section 2.2). Huddleston & Pullum et al. propose two kinds of fused heads based on the relationship between the heads and their dependents, namely ‘fused modifier-head’ and ‘fused determiner-head’. While many proposals have been put forward regarding ‘fused modifier-heads’, which I call Generic Constructions in this dissertation, ‘fused determiner-heads’ are often ignored. To my knowledge, except for Günther (2018), who vaguely acknowledges the independent use of determinatives, no previous study that discusses Generic Constructions, whatever these constructions are named, offers additional analyses for bare determinatives.

However, as Huddleston & Pullum et al. (2002) summarise, examples of determinatives/genitives used independently are replete (28)-(35).

- (28) a. They had found *much/little* to criticise in his thesis. (p. 395)
- b. *Many/Few* would disagree with you on that point. (p. 395)
- c. Kim isn't *much* of an actor/*any more* of an actor than Pat. (p. 395)
- (29) a. It's a little late, but *that* doesn't matter. (p. 373)
- b. *This* doesn't look like Jill's writing. (p. 414)
- (30) a. *All* here admire her. (p. 376)
- b. *All* I want is peace and quiet. (p. 376)
- (31) The film is disappointing – *some* might put it more strongly than that. (p. 385)
- (32) He behaves like *one* who considers himself born to rule. (p. 387)
- (33) The prizes were presented by *none* other than the President herself. (p. 390)
- (34) You have already said *enough/sufficient* to convince me.¹² (p. 396)
- (35) a. There is a party *Kim's* tonight. (p. 415)
- b. I'd better take you to *the doctor's*.¹³ (p. 415)

If Generic Constructions are defined as ENPs with the reference of human beings or abstract entities in general, then there is no reason not to regard the majority of the italic lexical items in (28)-(35) as competent candidates. Variety is shown among those independent determinatives. For instance, *one* in (32) is singular and *Kim's* in (35a) is relatively specific, but singularity/plurality and specificity/genericity function as parameters which do not necessarily affect the status of corresponding constructions (i.e. they can be turned on/off without changing the status). By contrast, as I discussed

¹² Unlike *enough*, which Huddleston & Pullum et al. always classify as a determinative, *sufficient* can sometimes be an adjective, as in *This isn't a sufficient reason for dismissing them*.

¹³ Strictly speaking, *Kim's* and *the doctor's* in (36) are not determinatives but genitives of nouns. However, they function as determiners in corresponding ENPs, just as *many/much* do (see also Section 5.5.2).

in Section 4.2.2.3, the availability in anaphora may be a better criterion in judgement of Generic Constructions – this will exclude (29a-b), where *that* in (29a) refers to *It's a little late*, and *this* in (29b) is used deictically.¹⁴ All the remaining examples should be regarded as Generic Constructions.

On the other hand, we should also acknowledge the differences between independent determinatives and the common ‘D + A’ constructions:

- i. While in the common Generic Constructions ‘D’ is usually the determinative *the*, almost all types of determinatives can be used independently.
- ii. In ‘D + A’ constructions adjectives are not ommissible, yet in independent determinatives/genitives they are optional. Examples (28)-(35) do not contain adjectives, but adjectives may be added afterwards (36a). Note that these optional adjectives, unlike the ones in ‘D + A’ that function as premodifiers (36b), must be predicative adjectives which function as postmodifiers of corresponding ENPs.
- iii. Feature assignment is, to some extent, simpler in independent determinatives, because they inflect in number. In Section 5.1.2.2 I observed that Generic Abstract Constructions, whether they denote abstract entities or pure concepts, are always non-count. Therefore, count determinatives, no matter whether they are plural (e.g. *many/few*) or singular (e.g. *one/none*), only refer to humans (37a), and non-count determinatives (e.g. *much/little*) only refer to something abstract (37b).

- (36) a. They had found *little important/*utter* to criticise in his thesis.

- b. *The rich/*alive* should donate more money.

- (37) a. *Many/*Much* would disagree with you on that point.

- b. They had found *much/*many* to criticise in his thesis.

¹⁴ Note that the dismissal of *this/that* as Generic Constructions does not affect their being ENPs. Huddleston & Pullum et al. (2002) take them as ‘simple determinative-heads’ (cf. Table 2-1), and as I will argue in Section 5.6, they are different from Generic Constructions.

Exceptions of Point (iii) include *all*, *some*, *both*, *neither* and *either*. *All* is permitted in both human and non-human references (30a-b), as it is both count and non-count. Therefore, the difference can only be told with the help of the context. *Both*, *neither* and *either*, despite being count, are seldom used independently because they must occur in anaphora: for example, when we say *both agree with you*, we do not refer to two unidentifiable people but rather two particular people that were mentioned before. A potentially problematic determinative is *some*, which seems to avoid non-human reference even if it can be non-count (31). Perhaps there is some kind of convention that *some* favours the human reading.

Genitives seem to incorporate properties from both independent determinatives and ‘D + A’ constructions. They resemble independent determinatives in that as determiners they do not need extra determinatives like *the*.¹⁵ Also, similar to ‘D + A’ constructions, genitives are richer in their semantics, which enables the NP within the genitives to assign features: although independent genitives are inherently [-human] and [-plural], the feature of genericity/specificity can be influenced semantically. First, The reference of *Kim’s* and *the doctor’s* could be more specific than ‘thing’ – presumably ‘place’. Second, ‘place’, like ‘human’, is still a concept of certain genericity, and we can possibly seek a more accurate interpretation. In (35a), for instance, *Kim’s* could be understood as ‘Kim’s home’ or ‘where Kim lives’, but in (35b), the interpretation may be “more specific”, as expressions like *the doctor’s*, *the hairdressor’s* or *the grocer’s* usually have “a strong implicature of purpose” (‘the doctor’s surgery’, ‘the grocer’s shop’, etc.) (Huddleston & Pullum et al. 2002: 415). Consider the following examples (38a-b):

- (38) a. *Let me introduce you to *the doctor’s*/give you *the doctor’s*.
- b. I’d better take you to *the doctor’s*, where you can play chess with his daughter.

¹⁵ In *the rich*, *the* is external to *rich*, while in *the doctor’s*, *the* is internal to *doctor*, i.e. [the doctor]’s.

(38a) indicates that any interpretation other than ‘place’ (e.g. ‘introduce you to the doctor’s wife’ or ‘give you something of the doctor’) is strictly prohibited. (38b) shows that the implicature of location could be so strong that it has no risk of cancellation even in a semantically bizarre context: it might be more meaningful if *the doctor’s* refers to ‘where the doctor lives’ (like *Kim’s*) as normally home is the place where the doctor’s daughter plays chess. Nevertheless, *the doctor’s* in (38b) still means ‘the doctor’s surgery’, and accordingly we need to interpret the whole sentence, quite strangely, as ‘I’d better take you to the doctor’s surgery so that you can place chess with his daughter’. In other words, the reference of *the doctor’s* or *the hairdresser’s* is rather specific and stable, immune to the influence of context.

5.5.2 *Expanding the category*

An implication of incorporating determinatives/genitives in Generic Constructions is that perhaps we should rethink the status of determinatives and adjectives. In traditional views adjectives are always considered of primal importance, and hence there are analyses such as ‘adjectives used as nouns’ or ‘adjectives as heads of NPs’ (see previous theories in Section 4.3). However, if independent determinatives and genitives are taken into consideration, it becomes clearer that the core elements of Generic Constructions are not adjectives, but determinatives – more precisely, the function of ‘determiner’. Recall that in Section 4.1.1 I talked about variations of Generic Human Constructions, in which I quoted some examples where the adjectives are preceded by other elements than *the* ((2a-b) in Chapter 4, repeated here as (39a-b)):

- (39) a. They had to take care of *their sick and wounded*. (Jespersen 1933)
b. Most of *Asia’s newly rich* are simply the first winners in a rush to own markets. (Arnold & Spencer 2015)

What *the rich*, *many*, *Kim’s*, *their sick* and *Asia’s newly rich* have in common is that all

those constructions contain lexical items that function as determiner. Unlike traditional theories, Panagiotidis (2003: 395) observes that “the D and the AP (or the head of whose AP is the specifier) seem to license the *pro* jointly”,¹⁶ i.e. both D and A could be important for a Generic Construction. But the discussion above further suggests that probably D (as determiner) alone is sufficient to license the elliptical noun head e_N .

On the other hand, it is true that in ‘D + A’ constructions adjectives are also indispensable, as *the rich* is grammatical and **the* is not. I believe this is because of the need of feature assignment: *the* is devoid of both semantics and inflection, so it requires something extra to do the job. By contrast, *many* or *little*, which already contains information on countability and number, does not have such a requirement.

In summary, I propose two general properties for Generic Constructions in Modern English:¹⁷

- i. With a few exceptions (cf. 3e-f), a Generic Construction must contain a determiner;
- ii. A Generic Construction must contain a feature assigner, whose role may or may not be fulfilled by the determiner.

5.5.3 *Representing independent determinatives*

5.5.3.1 ‘Fusion of functions’ theory on independent determinatives

While traditional grammars regard independent determinatives such as *many* and *few* as pronouns (e.g. Quirk et al., 1985, see Table 2-1), Huddleston & Pullum et al. (2002: 419) raise several objections to this treatment:

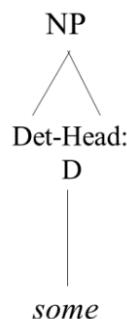
¹⁶ Little *pro* appears in Kester (1996), Panagiotidis uses e_N instead when referring to the missing nominal element.

¹⁷ As I argued in Chapter 4, earlier English shows a quite different pattern, as adjectives may be used independently (cf. Section 4.4.2.1).

- i. While regarding *many* or *few* as pronouns is plausible, this cannot be generalised to other cases. *Rich* in *the rich* is certainly not suitable for this treatment, especially when comparative and superlative forms are considered. Or, in the example of *Kim's* (35a), *Kim* is a proper noun, not a pronoun.
- ii. The syntactic behaviour of those ‘pronouns’ is the same as their ‘determinative’ counterparts. For example, we may add a modifier to *few*, forming *very few admitted to deep moral objections...*, and the same operation can be done in expressions like *very few people*, in which *few* should be a determinative. Therefore, it seems there is no need to distinguish the ‘determinative’ *few* from the ‘pronoun’ *few*.
- iii. Those ‘pronouns’ have no genitive form: **many's* or **few's* is impossible. However, normally pronouns can be transformed to possessives, e.g. *I* to *my*. This exclusion of genitive inflection cannot be explained in traditional theories.

As I noted in Section 5.5.1, Huddleston and Pullum combine those independent determinatives with Generic Constructions and propose a representation very similar to the latter. For example, according to FFT, *some* in *some agree with you* would be functionally represented as follows ((23b) in Chapter 4, repeated here as (40)).

(40)



Again, FFT’s representation enjoys the benefit of simplicity. Also, as I discussed in previous sections, although independent determinatives are somewhat different from Generic Constructions, it is plausible that they belong to the same structure. However,

is FFT an appropriate theory for both constructions? In the following sections I will argue that FFT is not accurate as it claims to be: it can be problematic in dealing with some particular examples.

5.5.3.2 *Some* and *another*

A problem with FFT representations is their limited suitability for determinatives, or what Huddleston & Pullum et al. call ‘fused determiner-heads’. For (40) it looks robust, but when modification is involved problems begin to reveal themselves:

- (41) For *some who made the journey into Wales*, the experience was profound.
(BNC: B0R)

What element is the antecedent of the relative clause *who made the journey into Wales*? On the surface only *some* can fulfil this role, and in fact FFT requires that *some* do so, because it is a ‘fused determiner-head’ which also subsumes the function of the nominal head. However, this analysis breaches Huddleston & Pullum et al.’s basic rules of nominal modification. Consider the following non-fused example:

- (42) The best undergraduate studies usually come from *the students who can see the possible application of a theory or concept to a specific empirical example*.
(BNC: B25)

The italic part is a long NP which consists of a determiner *the*, a nominal head *students* and a clausal modifier *who can see...* According to the modification sequence that I briefly introduced in Section 3.2.2.1, the relative clause, as a kind of post-head internal dependent, should function within the scope of the determiner, i.e. [_{NP} *the* [*students who can see...*]]. This is also one of the reasons why Huddleston & Pullum et al. believe that the antecedents of restrictive relative clauses should be head nouns or nominals rather

than entire NPs.¹⁸ In other words, determiners (usually realised by determinatives) do not belong to relative constructions. This, however, obviously contradicts the analysis that *some* in (41) is also part of the relativization. Thus a dilemma looms: if we retain *some* in the relative construction, we will violate the rules of the modification sequence and the notion that determiners do not count as antecedents (43a); but if we take *some* away from the relative construction, we will risk not having an antecedent (43b).

- (43) a. *[NP [*some who made the journey into Wales*]]
 - b. *[NP *some* [*who made the journey into Wales*]]
- (44) [NP [*some* [*eN who made the journey into Wales*]]]

This dilemma may never be properly addressed in Huddleston & Pullum's framework. By contrast, my solution, which proposes an empty nominal element, can solve this problem fairly easily, as (44) shows.¹⁹

More problematic is the analysis of the word *another*. As Huddleston & Pullum et al. (2002: 391) write:

Determinative *another* derives historically from the compounding of the indefinite article and the adjective *other*; the consequence of this for the modern language is that the existence of the determinative *another* blocks the co-occurrence of the indefinite article and *other* as separate syntactic constituents: **an other book*.

Why does this blocking happen? A natural deduction is that the syntax (and semantics as well) of *another* clashes with **an other*. In other words, it can be assumed that in *another* the indefinite article and the adjective *other* are still syntactically active. Quirk et al. (1985: 389) argue that “although spelt as a single word, [*another*] is to be considered a fusion of the two words *an* and *other*, or alternatively as a reduced version

¹⁸ Huddleston & Pullum et al. (2002) do not make this argument explicit, but in all relevant examples throughout the book, the antecedents are always head nouns. In Huddleston & Pullum (2005: 183), they indicate that “the antecedent is always the head noun or nominal modified by the relative clause”.

¹⁹ For a similar analysis, see Keizer (2020: 346).

of *one other*”. Of course the concept of ‘fusion’ in this quote is not equal to the one in ‘fusion of functions’; rather, Quirk et al. may be referring to it as something similar to ‘compounding’ or ‘derivation’. If this is the case, then what Quirk et al. mean is that *another* is morphologically a single word but syntactically a conglomeration of ‘Determinative + Adjective’ (i.e. ‘*an* + *other*’) equivalent to *one other* (also a combination of ‘Determinative + Adjective’). Therefore, we have a new example of a ‘compound phrase’ apart from compound pronouns (CoPros). I described the category of ‘compound phrases’ in Section 3.3, and this concept will continue to play a role in later sections. To put it briefly, compound phrases combine the properties of morphological words and syntactic phrases. One important characteristic I mentioned in Chapter 3 is ‘syntactic coercion’: any element (usually a modifier) that occurs within a compound phrase will be coerced to a different position. This also happens in *another*:

- (45) a. *The other two* excuses are regularly voiced by Kevin McNamara. (BNC: AC0)
 - b. Political activity is often divided between *the two other* spheres of civil society. (BNC: FAW)
- (46) So, I am going to spend *another two* minutes telling you why I have always loved trains and railways. (BNC: EED)

For *the other* there are two possible collocations with numerals (e.g. *two*): *the other two*, which is more frequent (there are 1,041 attestations in the BNC), and *the two other*, which is relatively rare (only 104 occurrences in the BNC), as in (45a-b). However, *another* only allows the first option (45a) and **a two other* is ungrammatical. Huddleston & Pullum et al. (2002: 391) also document this phenomenon, but do not attempt to explain it. If *another* is a compound phrase, then we would expect that **a two other* is blocked because of the morphology of *another* (as a compound), and *two*

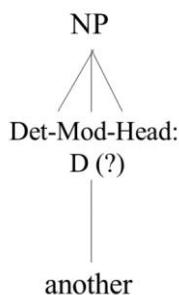
is thus coerced forwards, forming *another two*.²⁰

Compound phrases require their components to be functioning independently. As a result, *another* should be analysed syntactically as a combination of a determinative (functioning as a determiner) and an adjective (functioning as a modifier), not as a single determinative. With this internal structure made clear, we continue to examine the ‘fused’ use of *another*:

- (47) His refusal to construe a trust appears to rest solely on the fact that he deprecates interference of this kind in the rights of *another*. (BNC: B2P)

Huddleston & Pullum et al. (2002: 391) analyse *another* in cases such as (47) as ‘fused determiner-head’, which means the function of a head noun also falls on *another*. But as we just discussed, the word *another* itself already incorporates two functions (determiner and modifier). If the process of fusion is applied again, then we will end up having a construction like (48):

- (48)



Let us provisionally call it ‘multiple fusion’. As far as I know, multiple fusion is not discussed anywhere in the literature about FFT, and I doubt that FFT permits it at all. As a result, unless this theoretical obstacle is overcome, FFT cannot really account for

²⁰ Note that this is only one way of forming *another two*. Based on the frequencies of *the other two* and *the two other*, I assume that in most cases *another two* is constructed directly by adding *two* after *another*, in the same way that *the other two* is formed.

the word *another*.

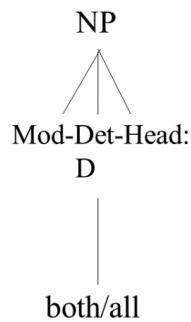
5.5.3.3 Predeterminer modifiers

Another potentially problematic structure is raised by Huddleston & Pullum et al. (2002: 419) themselves, and is exemplified below:

- (49) *Both/All these issues* were ignored in the first draft, but *both/all* are now adequately covered.

In the framework of Huddleston & Pullum et al., *both* and *all* in *both/all these issues* are predeterminer modifiers – modifiers which come before determiners (in this case the determiner is *these*). Following the usual practice, we would expect that in the second clause where there is no head noun, *both/all* form ‘fused modifier-heads’. However, this is quite impossible because apart from the predeterminer modifier *both/all* and the fused head noun (supposed to be *issues*), the determiner *these* is left unexpressed. On the other hand, if the determiner function is added to the fused construction, then we will get another case of ‘multiple fusion’:

- (50)



Huddleston & Pullum et al. (2002: 419) are aware that this analysis would be “problematic”; instead, they pursue a different solution: since the determinatives *both* and *all* can also function as determiners (as in *both hands* and *all students*), in the

second clause of (49) they can be “implicitly partitive determiner-heads” (*ibid.*), i.e. a short version of *both/all of them*. While this alternative analysis could work, it is hard to imagine that *both/all* in the second clause are not equivalent to *both/all these issues* in the first clause, but rather represent a different construction in which they have a new function (determiner rather than predeterminer modifier). Is the proposed solution necessary? After all, if we adopt the ellipsis analysis²¹ for (49), we could simply say that in the second clause an elliptical NP – *these issues* is reduced to avoid repetition, whose meaning is able to be restored by referring to the previous clause.

5.6 Generic Constructions and elliptical NPs

Günther (2018) proposes a unified account for both Generic Constructions and common elliptical NPs.²² Her arguments are twofold: first, both constructions have an empty noun, sometimes spelling out as *one/ones*; second, both constructions are anaphoric. While I acknowledge the empty noun analysis for Generic Constructions (cf. Section 5.4, although I maintain that the empty noun account is to be accompanied by feature assignment), I am reluctant to accept that common elliptical NPs share the same syntactic structure as Generic Constructions. In the following sections I will examine the difference between common elliptical NPs and Generic Constructions by arguing against her two proposals.

5.6.1 Context and anaphora

The empty noun analysis Günther proposes is based on Olsen (1988), who argues that both common elliptical NPs and Generic Constructions contain nominal heads, though

²¹ The ellipsis analysis fails in antecedent-less constructions like Generic Constructions, but when an explicit antecedent occurs, ellipsis may be the most natural account.

²² To put it under the classification of Huddleston & Pullum et al. (2002), Günther aims to argue that ‘simple determiner/modifier head’ and ‘specific determiner/modifier head’ are in fact of the same type. In Chapter 2, fn.4, I mentioned that Huddleston & Pullum et al. do not justify their differentiation of the simple type and the specific type, and Günther unconsciously argues against this differentiation.

often the elliptical NP heads are overt, i.e. *one/ones*, because *one/ones* indicate anaphoric relations with previously mentioned nouns. While Günther (2018: 100) comments that “[t]he main elements of Olsen’s analysis are on the right track,” she is unsatisfied with Olsen’s differentiation between anaphoric empty nouns (i.e. the ones in common elliptical NPs) and non-anaphoric ones (i.e. the ones in Generic Constructions) as she believes that both constructions are anaphoric. She starts to defend her argument by analysing the following example:

- (51) These guys did more tax cuts over this week. This is ridiculous. It’s like a drunk at the end of the bar, and regardless of the outcome, just give me *another one*. (Günther 2018: 108, originally extracted from COCA)

While *another one* is presumably an elliptical NP, *one* does not have an explicit antecedent. Nevertheless, we can successfully interpret *another one*, with the help of the long clauses preceding it, as ‘another drink’. In other words, an explicit antecedent is not necessary for the formation of an anaphoric relationship. Then she claims that:

[A]s is well known, anaphoric elements do not require a linguistic antecedent... I assume that the content of the silent noun in the Human and Abstract Construction can be retrieved in a similar way: even though there is no antecedent as such, grammatical and lexical information is available. This comprises countability (mass vs. count), number, gender (in German), as well as the lexical meaning of the adjective and other elements, such as the verbal predicate. (Günther 2018: 108-109)

The first question that arises is how to define anaphora. In one definition, it means “[t]he use of a word or words as a substitute for a previous linguistic unit when referring back to a person, thing, event, etc., denoted by the latter” (Aarts et al. 2014: 26). If we acknowledge that anaphora involves ‘referring back’ to ‘a previous linguistic unit’, then (51) can count as anaphoric (even though there is no explicit substitution), but (52a-b) cannot (both examples are taken from De Botton 2004: 75, 139):

- (52) a. *The rich* simply dissipated resources through their taste for extravagance and luxury.
- b. *The rich and well-mannered* are not immediately good or *the poor and unschooled* bad.

The rich in both examples cannot be anaphoric because this NP occurs at the beginning of both sentences, which leaves no room for it to ‘refer back’. Therefore, I assume that what Günther refers to as ‘anaphora’ also includes ‘cataphora’, in which mechanism certain elements “point forward to a later word, phrase or clause” (Aarts et al. 2014: 58). Even so, there is still another question: can ‘grammatical and lexical information’, such as countability, number or lexical meaning, really be regarded as something anaphoric? If what Günther says in the quote is true, then can we imagine any syntactic phenomenon that is not anaphoric?

Unlike Günther’s overgeneralisation, I would rather regard this ‘grammatical and lexical information’ as ‘contextual information’ or ‘contextual clues’. Although the retrieval of elliptical nouns may not rely exclusively on explicit antecedents, as (51) shows, it must require strong contextual clues. For instance, while we do not get the antecedent ‘drink’ in (51), contextual information like *a drunk* and *the bar* is provided for cognitive deduction. On the other hand, Generic Constructions only need minimum contextual clues. This can be shown when both (51) and (52b) are significantly shortened as follows:

- (53) a. Regardless of the outcome, just give me *another one*.
- b. *The rich* are not good.

Even though the reduced (53b) contains only the simplest predicative structure, the meaning of *the rich* is clear. However, (53a) provides no clue about what *another one* refers to.

Another way of distinguishing elliptical NPs and Generic Constructions is to do a ‘what-question’ test. Imagine two speakers, A and B, are engaging in a conversation,

when A abruptly digresses from the current topic and says:

- (54) a. A: I dislike *the new (one)*. B: The new what?
b. A: I dislike *the rich*. B: ?The rich what?

While it is legitimate for B, who is unaware that the topic has changed, to ask *The new what?* question in (54a), in (54b) a similar question would be strange. One reason is that many Generic Constructions are conventionalised phrases which are used idiomatically and therefore do not need to be further explained, but a more important reason is that elliptical NPs and Generic Constructions demand different degrees of specificity: although Generic Construction can sometimes be interpreted more specifically if stronger contextual clues are offered (e.g. in *The French invaded northern Italy*, *The French* may be understood as *The French troops* if necessary, cf. Section 5.4.1), with some exceptions generic interpretation is always possible (and actually essential). By contrast, elliptical NPs can never be interpreted generically – they must be perceived as specific as possible. If contextual clues are not sufficient for a specific semantic restoration, the whole clause will suffer unclarity, as (53a) shows.

The distinction between the requirement of maximum contextual clues for elliptical NPs and that of minimum contextual clues for Generic Constructions, I assume, is caused by different syntactic mechanisms: elliptical NPs operate on syntactic/semantic restoration, which means that they should inherit as many syntactic/semantic properties as possible from relevant preceding elements (which in most cases are overt antecedents). But Generic Constructions work under feature assignment. As I proposed in Section 5.4, the adjectives in Generic Constructions are primal feature assigners, so contextual clues may not be crucial – of course, the context can serve as a means of adjustment in feature assignment as well, especially when a particular Generic Construction could have more than one reading.

5.6.2 One/ones

Now I turn to a point that both Olsen and Günther agree on: the empty noun, if there is one, is equivalent to, or spells out as *one/ones*. I think this notion is imaginary for two reasons: first, *one/ones* are not compulsory in elliptical NPs (as (51a) shows), nor permitted in Generic Constructions. This was discussed in the previous section and will not be reiterated here. Second, historically, the appearance of adjectives used as nouns is much earlier than the grammaticalization of *one/ones*. In Old English, elliptical NPs generally cannot be differentiated from Generic Constructions in form, because both of them can be constructed by a determiner plus an adjective:

- (55) a. Ac *pā unrihtwīsan* ne *bēoð nā swelce*, ne him ēac *swāne*
but the unrighteous not are no so nor to them also so not
limpð. (Pslam 1)
happens
'But the unrighteous are not so, nor does it happen to them thus.'
- b. *Swā se inwidda ofer ealne dæg/ dryhtguman*
so the wicked throughout all day warriors
sīne drencte mid wīne... (Judith)
his made drunk with wine
'So the wicked one, for the entire day, drenched his retainers in wine...'
(translation from Hostetter 2019)

Although structurally *pā unrihtwīsan* 'the unrighteous' and *se inwidda* 'the wicked' are not distinguishable, we are capable of telling them apart from other perspectives. Semantically *pā unrihtwīsan* refers generically to people who are unrighteous, and *se inwidda* is anaphoric to Holofernes, the villain (in the Old English poem *Judith*) whose name occurs a few lines before. Syntactically, *unrihtwīsan* has the plural ending '-an' and agrees with the verb *bēoð* 'are', while *inwidda* is inflected singularly ('-a') and agrees with the verb *drencte*, which is the past third person singular form of *drencon*.

In the Old English period we can probably argue that elliptical NPs and Generic constructions share the same structure, but this has nothing to do with *one/ones*, because *one/ones* are mostly used as numerals at that time. It is the abundant inflections that guarantee the disambiguation of these constructions. *One/ones* as anaphoric pronouns are a later development. It is probably in the Early Middle English period that *one* is used in anaphoric contexts (cf. Rissanen 1967). Here I quote one of the Middle English examples from Fischer (1992: 224):

- (56) He haues a wunde in þe side.../ And he haues *on* þoru his arum...

It is worth noting that the rise of *one* as a prop-word seems only related to elliptical NPs. In (56), for example, *on* ‘one’ refers to *a wunde* ‘a wound’ in the previous clause, which is obviously specific. The indefinite and ‘generalising’ use of *one* probably developed even later (cf. Rissanen 2000: 198, where he argues that “[i]n the fifteenth century *one* develops the generalising or generic pronominal use...”), and again it is not linked to Generic Constructions. Rissanen (2000: 198) gives an example from *Hamlet*:

- (57) While *one* with moderate hast might tell a hunderd. (‘While one with moderate haste might tell a hundred.’)

Example (57) represents an independent usage of *one*, instead of the empty noun proposed in Generic Constructions. I would rather consider the rise of *one* as the beginning of structural differentiation between elliptical NPs and Generic Constructions: the extensive use of *one* as both definite and indefinite pronoun, which can denote both human and non-human entities structurally separates the elliptical NPs from Generic Constructions. In Modern English most elliptical NPs contain *one* as their head, and only on some restricted occasions, such as when the antecedent is very close, can an elliptical NP occur without an overt head. On the other hand, “[t]he only case in which a substantival adjective remains possible in Present-Day English is when the

noun (phrase) is used generically” (Fischer 1992: 222). In other words, while elliptical NPs have been ‘modernised’ by the use of the overt empty noun *one/ones* because there is a need for avoiding repeating the antecedents, Generic Constructions may be better regarded as relics of ancient linguistic features – because the interpretation of the generic *the old* relies on conventions instead of context, adding a pro-form afterwards is simply unnecessary.

5.7 Nominalised adjectives

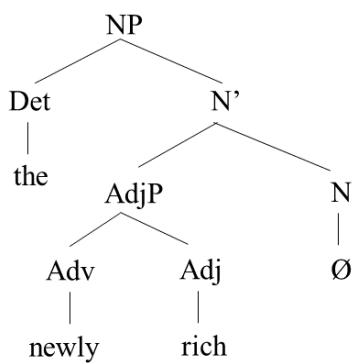
Although the overwhelming majority of Generic human constructions follow the ‘D + A’ patterns, on a few occasions we can be almost certain that the head is of a nominal nature. Such use is very rare, but there are at least two examples in ICE-GB (58a-b), and also *the new rich* in (58c), which was already mentioned in Section 4.4.3.1 fn.17.

Those examples are in contrast to (18), repeated here as (59a), and (59b):

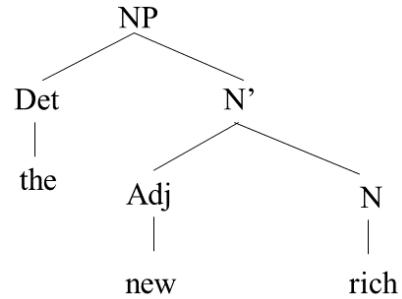
- (58) a. Uhm and they’re *high status rich*. (ICE-GB: S2A047-102)
- b. It’s *the ‘old old’* or those over 75 who are the most likely to experience major health and mobility problems. (ICE-GB: W2A013-007)
- c. More than that, they are exiles scattered all the way from Belgrade to Duluth, pining and suffering in poverty...and, what is worse, entertaining *the new rich*. (COHA: 1928_MAG_Harpers)
- (59) a. Forþam sona gif he ænine þearfan nacodne gemette,
therefore at once if he any needy naked met
þone he scrydde.
him he would clothe
- “Therefore as soon as he came across a poor man who was naked, he would clothe him”.
- b. That sympathy and regret which the city had expressed for *the young dead* was manifested only in decorum and respectful attendance at the funeral.
(COHA:1890_FIC_MizoraAProphecy)

On the surface (58a-c) are not much different from (59a-b): in all examples there seem to be two modifiers adjacent to each other. However, as I discussed in Section 4.4.3, the adjectives in (59a), as well as in (59b), are coordinated modifiers which modify the same nominal head. Therefore, we may interpret *ænine þearfan nacodne* as ‘a poor (lit. needy) person who was naked’, or roughly ‘anyone who was poor and naked’, and *the young dead* as ‘the dead people who were young’. By contrast, (58b-c) cannot receive such interpretations, as ‘*the old people who are old’ and ‘*the rich people who are new’ are semantically odd. Rather, we derive a more plausible meaning if we take the first adjective as the modifier which modifies the second, alleged ‘adjective’: *the old old* in (58b) means ‘the even older people in the group of the old people’, and *the new rich* means ‘a group of people who have newly become rich’. In other words, *the new rich* is semantically equivalent to *the newly rich*, though their syntactic structures are different – there is no other choice but to regard *rich* in *the new rich* as a nominal element, because adjectives cannot be modified by other adjectives (60a-b).

(60) a.



b.



Example (58a) is slightly different because semantic dissonance is not yielded if we think of *high status* and *rich* as coordinated modifiers (‘they are those who are high status and rich’). Nevertheless, there is still syntactic difficulty in analysing *high status rich* since coordinated modifiers in predicative position are usually separated by certain conjunctions (e.g. *the hair is beautiful and long* rather than *?the hair is beautiful long*).

As a result, instead of an adjective modifier, the word *rich* in (58a) is better considered as a nominal element just as those in (58b-c).²³

Another problematic construction, mentioned in Section 5.1.2.2, is of the form ‘personal pronoun + A’, such as *we rich* and *you dead* (Quirk et al. 1985). It is unlikely that there is a relation of modification or determination between the two words; a more probable analysis is that *rich* and *dead* are appositives of *we* and *you* respectively, as is the case for *a famous scientist* and *Isaac Newton* in the sentence *Isaac Newton, a famous scientist, was born in 1642*. But as Huddleston & Pullum et al. (2002) point out, appositive elements are usually NPs, which semantically entail or supplement the nominal head (see Huddleston & Pullum 2002: 447-448, 1357). This means that *rich* and *dead* in the above construction should also be of a nominal nature, equivalent to *rich people* and *dead people*.

The final type is ‘the said + A’, which is frequent in Early Modern English. For example, EEBO records dozens of *the said rich*. Leung & van der Wurff (2018) conduct research on ‘the said + N’ (e.g. *the said messenger*), but they do not mention the possibility that *the said* may be followed by an adjective. Nevertheless, *the said rich* should have the same modification pattern as *the said messenger*, in which *said* modifies the noun head *messenger*, making the internal structure of *the said rich* more like (60b) than (60a). Furthermore, as ‘the said’ is often used with anaphoric reference, it lacks genericity. Therefore, it would be more reasonable if *the said rich* is analysed as ‘the said + N’, with *rich* being something nominal.

To sum up, the second ‘adjective’ in (58a-c) and the one immediately following a

²³ Since the outbreak of Coronavirus in 2020 we have seen the phrase *the new normal*, and it is perhaps weirdly interesting for linguists to wonder about the word class of *normal*. I would argue here that *the new normal* is different from *the new rich*, because of its ability of taking the indefinite article *a* and the deictic determinative *that*:

(i) People will have to get used to *a ‘new normal’* due to coronavirus... But what might *that ‘new normal’* look like? (<https://bit.ly/2O0st8r>)

It is more likely that *normal* has been converted to a count noun in this particular context, in contrast with the non-count noun *normality*.

personal pronoun should all be regarded as nominal elements. I use the term ‘nominal elements’ rather than ‘nouns’ because they lack nominal inflections for number, i.e. there is no **riches* (denoting rich people) or **olds*. While we can possibly argue that they are mass nouns which do not inflect for number, a more likely answer is that they are nominal forms directly derived from corresponding adjectives. Unlike the alleged ‘nominalised adjectives’ in Generic Constructions which have proven to be real adjectives, I believe they are genuine nominalised adjectives.

Nominalised adjectives are not part of Generic Constructions: first, Generic constructions do not allow overt nominal heads. Second, in Modern English determiners are indispensable for Generic Constructions, yet nominalised adjectives do not necessarily require determiners (58a). In most cases, I believe, nominalised adjectives are variants of corresponding NPs or Generic Constructions. For example, *the new rich* could be replaced by *the newly rich*, and *we rich people* or *we, the rich* may substitute for *we rich*. However, there are occasions where certain pragmatic needs require the creation of nominalised adjectives. Take *the ‘old old’* as an example. Compared with *the newly rich* and *the new rich*, we do not have a construction like **the oddly old*, in which the adjective *old* is further semantically refined by an adverb. Comparatives (*the older*) will not do the job, either. When it is rather difficult to find a shorter phrasal expression denoting ‘the even older people in the group of the old people’, a nominalised *old* is needed. But since these pragmatic needs are relatively scarce, we do not encounter many nominalised adjectives (at least in corpora), and more often the choices are either common NPs or Generic Constructions.

More generally, I would regard nominalised adjectives to be in the intermediate stage of conversion: while a full conversion will attribute some nominal traits (such as the ability of bearing the determinative *a/an* or the plural ending *-s*, making the adjectives ‘Noms(A)’ (cf. Section 4.2.1.2, two more examples here (61a-b) are quoted from Brown & Miller (2016: 25)), this does not happen to nominalised adjectives.

- (61) a. Let a woman ask me to give her *an edible* or *a wearable*...I can at least understand the demand...

- b. It offers a rare chance to one of the *unfashionables* to reach the final.

The differences among real adjectives, nominalised adjectives and converted adjectives are tabulated below:

	Adjectival features of the underlined word		Nominal features of the underlined word				
	Adverbial modification	Gradeability	Plural marker	Adjectival modification	Determined by <i>the</i>	Determined by <i>a/an</i>	
<i>-s</i>							
<i>A rich person</i>	+	+	-	-	-	-	
<i>The new rich</i>	-	-	-	+	+	-	
<i>unfashionables</i>	-	-	+	+	+	+	

Table 5-2 Syntactic comparison of *a rich person*, *the new rich* and *unfashionables*.

I would like to use the term ‘semi-conversion’ to refer to the process of how nominalised adjectives like *rich* in *the new rich* are established, as ‘partial conversion’ has been defined otherwise (cf. Section 4.3.2.3). An interesting observation concerning semi-conversion is that, while full conversion may happen to adjectives with (e.g. *edibles*) or without (e.g. *nasty* in *a real nasty*) the suffix *-able* or *-ible*, I cannot find an example where an *-able/-ible* adjective is semi-converted. Brown & Miller (2016: 25) mention that “[w]ords with the suffix *-able* or *-ible* lend themselves to use as (plural) nouns”, but they do not explain the reason. My speculation is that adjectives with *-able/-ible* endings look more ‘adjective-like’ in such a way that people consciously make a strict discrimination between the originals and the conversions, but in terms of words like *rich*, *dead* or *ill* which somehow linger around the boundaries between adjectives and nouns, there tends to be a higher chance of confusion.

5.8 Conclusions

In this chapter I continued with the discussion of Generic Constructions, and focused on Generic Abstract Constructions (GACs), a group of Generic Constructions which denotes non-human referents. I began with a comparison between GHCs and GACs

with regard to syntax, semantics and reference, and then moved on to some case studies, examining a few problematic constructions whose status is on the borderline between GACs and common NPs, because the category of GACs is quite heterogeneous. After reviewing previous theories on GACs in Section 5.3, I proposed a unified theory for both GHCs and GACs (a theory which was already put forward in Chapter 4) in detail. In the second half of this chapter I engaged in the discussion of some fringe constructions which could potentially be cases of Generic Constructions. I subsumed bare determinatives (5.5) under the category of Generic Constructions but rejected nominalised adjectives (5.7) as candidates, although the latter look just the same as GHCs. I also made a cautious attempt to differentiate between Generic Constructions and common elliptical NPs (5.6), which are often confused with each other (by authors like Günther 2018).

6. Referential metonymy

6.1 Introduction

Consider the following examples:

- (1) The ham sandwich has left without paying. (Bowerman 2019: 22)
- (2) *The French fries* is waiting. She is upset. (Warren 2006: 24)

At first glance it seems that *the ham sandwich* is nothing more than a typical noun phrase: a head noun (*sandwich*) is modified by another noun (*ham*) and determined by the article *the*. However, in example (1) this reading is apparently improper, as the verb *leave* requires an animate argument, and *pay* needs a subject that can perform the action of payment. Similarly, French fries, if not animated for a stylistic purpose, cannot wait or have emotions. The reader/hearer of (1) needs to make no effort to realise that *the ham sandwich* refers not to a kind of sandwich but to a person who presumably eats the ham sandwich in a restaurant. In other words, there is a metonymic meaning in *the ham sandwich*.

Langacker (1993: 29) defines metonymy as “occurring when an expression that normally designates one entity is used instead to designate another, associated entity.” Warren (2002, 2006) further distinguishes ‘referential metonymy’ from ‘propositional metonymy’. In her definition, the former kind “relate[s] one entity with another” and the latter “relate[s] two propositions” (Warren 2006: 5). While examples (1)-(2) contain referential metonymy (henceforth RM), examples (3)-(4) reflect propositional metonymy.

- (3) It won’t happen while *I still breathe*. (Halliday 1994: 340, quoted from Warren 2006: 5)
- (4) Drive carefully. *The roads are greasy*. (Warren 1998: 302)

It appears from the examples that propositional metonymy is realised on a clausal level: *I still breathe* is a metonymy of ‘I am still alive’ in (3), while by saying *the roads are greasy* the speaker actually means ‘the roads are dangerous’ (4). On the other hand, RM always occurs with nouns, for which reason it may function as “subject, object, predicative and prepositional complements” (Warren 2006: 19), which are the normal functions of NPs. The syntactic distribution of RM constructions seems to indicate that they are not distinctive from other NPs, yet the mismatch between their thematic roles and the roles that the verbs require in (1)-(2) suggests that the structure of RM expressions needs to be analysed in a different manner.

Discussions of RM from a syntactic perspective are rare and no syntactic theory about NPs/ENPs has considered extending to account for RM constructions. This chapter serves as an experiment of how syntactic theories (including FFT) would be used to explain a seemingly stylistic usage. First I will concentrate on the syntactic behaviour of RM constructions, and then in Section 6.2 I will introduce, and critically evaluate, representative syntactic accounts for RM. A new approach will be proposed in Section 6.3. Finally, I will compare metonymy with polysemy in Section 6.4.

6.1.1 *The head of an RM construction*

There is consensus among mainstream theories that RM constructions involve a shift of reference, i.e. the use of RM enables a particular phrase to refer to concept A, where otherwise it refers to concept B. For example, Nunberg (1979) refers to the mechanism as ‘deferred interpretation’, in which “expressions can be used to refer to something that isn’t explicitly included in the conventional denotation of that expression” (Nunberg 2006: 344). Lakoff (1978: 84) takes a model as metonymic if “a subcategory (or an individual member of a category) is used for some purpose to stand for the category as a whole”. Langacker (1993: 30) believes that “a well-chosen metonymic expression lets us mention one entity that is salient and easily coded, and thereby evoke – essentially automatically – a target that is either of lesser interest or harder to name”.

Those assertions about the nature of RM seem to involve what Warren (2006: 28) calls “a replacement”: concept B, which is *the ham sandwich* in (1) and *the French fries* in (2), substitutes for concept A, which is presumably *a customer eating a ham sandwich/French fries* in these examples, and serves as a bridge that connects the concept that it replaces. In other words, if there is a replacement underlying the RM constructions, then it should be the explicit NP that normally functions as head. However, (2) does not support the ‘replacement’ analysis: the subject of the first clause is still singular, as suggested by the verb *is*, and the pronoun in the second clause (*She*) is anaphorically linked to a female human antecedent, which cannot be a kind of food. I would therefore like to argue that the implicit concept A still has its influence on these clauses, both semantically and syntactically.

6.1.2 Two kinds of referential metonymy?

There are abundant examples like (2) that prove the existence of implicit elements (concept A). The next question is: are implicit elements universal in RM constructions? Or, does every RM construction contain an implicit element? Jackendoff (1992) and (Culicover & Jackendoff 2005: 356) propose a ‘statue rule’ (i.e. “[i]t is legitimate to identify a statue by using the name of the person that the statue portrays”), where they imagine that Ringo Starr stumbled in Madame Tussauds and fell on a statue of himself:

- (5) Ringo fell on himself (=his statue). (Jackendoff 1992: 5)

Culicover & Jackendoff are cautious about the conditions where the rule applies. They believe in the specificity of the ‘statue rule’, namely that it is not suitable for all kinds of shifted references. Specifically, they distinguish two kinds of RM constructions, which are exemplified as follows ((6a) and (7a) are adapted from Culicover & Jackendoff 2005: 364; (6b) and (7b) are adapted from (2)):

- (6) a. *The four oxen* (=the statue of four oxen) are cute. [number agreement]

- b. *The French fries* is waiting.
- (7) a. Look at *the four oxen* over there. Aren't they cute! [pronominal agreement]
- b. Look at *the French fries* over there. Isn't she disgusting!

While (6b) and (7b) show the discord between the subject and the verb, and the antecedent and its pronoun, in (6a) and (7a) they are in agreement (I will refer to the former as ‘discorded RM’ and the latter as ‘agreed RM’). The authors conclude that “one cannot treat these reference transfers as a unified class; each requires its own analysis” (Cullicover & Jackendoff 2005: 366), though they do not discuss in detail why this should be the case. It might be argued, based on the ‘specialised’ statue rule, that the agreed RM bears some physical resemblance to the original target, as ‘Ringo’s statue’ to ‘Ringo’. In other words, the statue of four oxen looks like (and is therefore taken as) four oxen, which results in the concord; by contrast, there is no physical resemblance between the French fries and the customer (or, the customer and the French fries are connected in another way than likeness), which causes the discord.

If this is a robust explanation, then we might expect that when the statue rule applies to situations not involving statues, we will most likely get discorded RM. Unfortunately, it is not always so (8)-(9).

- (8) A truck hit Ringo (= Ringo’s car) in the fender when he was momentarily distracted by a motorcycle. (Cullicover & Jackendoff 2005: 361)
- (9) Look at the green trousers dance! (Bowerman 2019: 26)

Both (8)-(9) do not show physical resemblance (i.e. Ringo’s car does not look like Ringo, and the dancer does not resemble the trousers), but the agreement patterns are totally different: we have agreed RM in (8), and discorded RM in (9). It seems, therefore, that there is not a standard rule by which we can identify whether a particular RM is discorded or agreed. However, this does not mean that implicit elements are absent in those agreed constructions, as agreement is just one of the criteria. It is almost certain, from a semantic point of view, that implicit elements still play a role in these

constructions, if we think that *himself* in (5) does not denote the musician Ringo but his statue. The only problem is that for some reason these implicit elements may behave differently from the ones in discorded constructions. In fact, most scholars do not pay much attention to this internal difference. Nunberg (1995, 2006) and Warren (2002, 2004, 2006), whose theories will be explored in the following section, regard RM constructions as a unified phenomenon, though both of them somehow notice that the data are not invariable.

6.2 The accounts

6.2.1 *The implicit element as the head*

In Section 6.1.1 I presented is that there is an implicit element apart from the explicit elements, and it is natural to deduct that this implicit element is more likely to be the head. In example (2), it is the female costumer that is waiting and feels upset. Another piece of evidence is that sometimes adjectives or PPs may modify something which is logically not the head of the explicit NP. The following examples (10)-(11) are taken from Warren (2006: 21) and (12) was made up.

- (10) They are taking on *new hands* down at the factory.
- (11) ‘dress for sale’
- (12) We are looking at *the damn French fries*.

As Warren reasons, it is unthinkable that someone has a pair of ‘new hands’; rather, (10) should be interpreted as ‘someone new who has hands’, in which *new* modifies some hidden elements meaning ‘workers’. Similarly, in prostitution it is not the dress, but a person, that is for sale (11). The potential ambiguity in (12) reflects two ways of modification: it is possible for some customers who rage at the poorly cooked French fries to say (12), in which case both *damn* and *French* modify fries; or if this is a situation when the waiters are looking at a customer who did something inappropriate

while having French fries, the two adjectives modify different targets – *French* is still a modifier of fries, but *damn* should describe the waiters' feelings towards the customer. Therefore, the RM constructions, at least on the surface, resemble Generic Constructions because they may also be exocentric noun phrases, as their heads are not expressed. The difference is that while Generic Constructions, comprising of determinatives and adjectives, lack nominal heads, RM constructions are NPs in which the nouns may not be the real heads. Warren (2002: 118) proposes an approach of “a modifier-head combination”, whose rationale is simple: the explicit elements are modifiers, and the heads are implicit. For instance, *hands* in (10) would receive an interpretation of ‘that which is with hands’, with *new* modifying the whole phrase. Similarly, (11) is interpreted as ‘that which (who) is in a dress’. A large number of RM constructions could be understood in a similar way, roughly paraphrased as ‘that which/who is...’

Syntactically, however, this approach can be problematic. One reason is that in most cases the explicit heads are simply not modifiers, but complements. Take *new hands* as an example. If this RM construction is interpreted as ‘someone new with hands’, then strictly speaking, the explicit head *hands* is not the modifier of the implicit head *someone*, but a complement within its PP modifier *with hands*.¹ Similarly, in (11) *dress* cannot be regarded as the modifier of the implicit head *woman* or *prostitute*, but a complement of the PP *in a dress*. In dealing with this issue Warren creates a category – ‘link’² – for the prepositions, which is somewhat difficult to justify. Moreover, in the case of (1)-(2) and (12), we cannot interpret the RM constructions in a way that contains PPs. They are most likely objects (e.g. that/who is having *French fries*). Therefore, while there is no doubt that the explicit NPs denote essential properties of the implicit heads, the claim that RM constructions reflect ‘a modifier-head combination’ needs

¹ Huddleston & Pullum et al. (2002) call this function ‘oblique’.

² Warren does not define or even attempt to describe the concept ‘link’, but merely mentions it in some examples. For instance, in *the kettle is boiling*, it is not *the kettle* but *that which in the kettle* that is boiling. Warren argues that the implicit head *that which* and the modifier *the kettle* is ‘linked’ by the preposition *in*.

more elaboration.

6.2.2 *Syllepsis*

The model for RM constructions, which consists of the explicit elements (whatever functions they take) and implicit heads, seems reasonable up to now, despite some problems affecting its robustness. However, it may face another challenge dealing with sentences that involves syllepsis.

There are quite a few names for “[a] figure of speech in which a single linguistic expression has to be interpreted in two distinct ways simultaneously, which often gives rise to a type of semantic and/or pragmatic anomaly” (Huang 2012: 329): Warren calls it ‘zeugma’ and Nunberg uses the label ‘sortal crossings’, which refers to more or less the same notion. Another inconsistency with the study of syllepsis is its acceptability in different literature: for Warren, zeugma is something ungrammatical that needs to be avoided, but Nunberg hints that a sortal crossing can be either acceptable or unacceptable on particular occasions.³ In other words, while Nunberg recognises that both (13a-b) are examples of sortal crossings, Warren would only categorise (13b) as zeugmatic.

- (13) a. He read me a letter and a warning afterwards. (Matthews 2014: 394)
b. *The cat caught a mouse that was used by the programmer.

Therefore, for the purpose of clarity, I will use the term ‘syllepsis’ to refer to examples like (13a) in the following sections. ‘Zeugma’, by contrast, will only be used in Section 6.4 when I refer to ‘unacceptable syllepsis’ like (13b).

³ Grammarians tend to regard syllepsis as a special figurative linguistic device which is less standard. For example, Quirk et al. (1985: 971) think zeugmatic clauses are “examples of semantically ill-assorted coordination”. Huddleston & Pullum et al. (2002: 1324) hold a similar view: “Likeness of syntactic function thus must be accompanied by likeness of semantic relation.” However, Nunberg (2006: 363-64) argues that sortal crossings are acceptable as long as they are derived from metonymy instead of metaphor.

Nunberg (1995, 2006) studies the syllepsis phenomenon in which an NP has both the RM and non-RM (original) readings in his papers about ‘deferred interpretation’. Coordination is the typical syntactic construction where syllepsis occurs (examples (14)-(15) below), but this phenomenon is also seen in relative clauses or other constructions with embedded elements.⁴

- (14) Cædmon is a poet and difficult to read. (Warren 2002: 123)
- (15) Yeats did not like to hear himself read in an English accent.⁵ (Nunberg 2006: 358)

Examples (14)-(15) are rather distinctive from (12), in that (12) permits either a metonymic or a non-metonymic reading, which causes ambiguity, unless we know more about the context. By contrast, (14)-(15) require the coexistence of both readings, if we admit that in (14) both *a poet* and *difficult to read* are predicates of *Cædmon*, and the reflexive pronoun *himself* in (15) truly reflects the respective subject. In other words, if we paraphrase (14)-(15) into (16)-(17), we will have:

- (16) Cædmon is a poet and his poetry is difficult to read.
- (17) Yeats did not like to hear his works read in an English accent.

As (16)-(17) reveal, *Cædmon* or *Yeats* in (14)-(15) refer to both a person and something

⁴ For Nunberg, reflexive pronouns are also bearers of syllepsis. He gives as an example *Ringo squeezed himself into a narrow space*. He apparently believes that the ‘statue rule’ is a subcategory of syllepsis, contra Culicover & Jackendoff. In the following discussion I will not exclude examples containing reflexive pronouns, since Nunberg, like Warren, does not differentiate agreed RM from discorded RM. I will treat them equally as the coordinated ones.

⁵ In this example the word *read* has two possible pronunciations, /ri:d/ and /red/. The former pronunciation will lead to the interpretation ‘Yeats read his own works in an English accent’ or even ‘Yeats does not like to hear himself read anything (out loud)’, while by the latter the sentence will mean ‘Yeats does not like it when someone reads his work in an English accent’. However, since the former interpretation has nothing to do with syllepsis (because in this interpretation *himself* refers to the poet himself). It is discarded by Nunberg. Therefore, in example (15), as well as the following (17) and (23a-b), I will be concerned with the reading in which *read* is pronounced as /red/.

related to them at the same time. This undermines our previous argument that there is something implicit in a metonymic construction, because the head of *Cædmon* in *Cædmon is a poet* is obviously explicit. Warren (2002) touches upon this problem, saying that both referents in (14) are the person *Cædmon*, yet in the second half there arises “an implicit addition coerced by the predicate [i.e. *difficult to read*]” (Warren 2002: 123). However, this claim is rather obscure, because it is the ‘addition’ that is syntactically important – if this ‘addition’ is the subject of the second clause, how could it be completely absent in the first clause?

6.2.3 Double exposure and its syntactic realisation

In a later study, Warren (2006) elaborated her arguments for RM constructions, proposing a theory called ‘double exposure’. She describes it as follows:

Double exposure is...that the explicit element takes the syntactic position of a nominal head, but turns into a modifier when interpreted, simultaneously suggesting an implicit head. These functions attached to one item are not clearly kept apart. (Warren 2006: 22)

Hence, for Warren, there is incongruity between the syntax and semantics of the sentence *Cædmon is difficult to read*. Syntactically, *Cædmon* is the nominal head; but in interpretation *Cædmon* should be understood as the modifier of ‘Cædmon’s works/poetry’.⁶ In short, *Cædmon* is a syntactic head and semantic modifier.

The new theory differs from Warren (2002) as the author no longer insists on the distinction between an explicit modifier and an implicit head. Rather, she turns to a stance which suggests some kind of ‘blend’: the explicit modifier (e.g. *Cædmon*), which also incorporates the implicit head, functions syntactically as the *de facto* head, and the implicit head (e.g. *poetry*) will not reveal itself until semantically interpreted. This explanation seems impeccable, as it successfully deals with the coexistence of two

⁶ However, genitives like *Cædmon’s* are often regarded as determiners instead of modifiers.

different readings. However, the problem with it is that Warren does not show any intention to discuss in detail how double exposure could be represented in syntax, although she claims it is a syntactic phenomenon. In the following sections I will try to describe this notion in syntactic terms.

6.2.3.1 Co-indexation

It is true that the syntactic realisation of double exposure is not' straightforward due to the complexity of this notion. If we do not insist on the ‘simultaneous expression’ of both explicit and implicit elements, we might suggest, as many researchers have done, that there is something elliptical, which is not strictly coreferential to the explicit subject (or object), in coordination and relativisation. The *Cædmon* example may be analysed as follows.

- (18) a. *Cædmon_j* is a poet and *he_k* is difficult to read.
b. *Cædmon_k*, who_j is a poet, is difficult to read.

We may consider (14) as a short version of (18a) as in (14) the pronoun *he* is elided. However, it is worth noting that *he* (with the subscript ‘_k’) does not strictly refer back to its antecedent *Cædmon* (with the subscript ‘_j’), which is purely a name, because *he* contains both explicit and implicit elements, meaning ‘that which is written by Cædmon’, or more straightforwardly, ‘Cædmon’s poetry’. The process is reversed in (18b), where *Cædmon_k* is the combination of the explicit modifier and the implicit head, and *who_j* in the relative clause is coreferential with only the explicit head, meaning the person Cædmon. This way of analysing (14) is easier to understand than Warren’s double exposure, because nothing will be simultaneously present and absent. Rather, the original target and its metonymic reference are separated and placed in different clauses.

6.2.3.2 Property assignment

If the notion of double exposure is to be preserved without compromise, there might be other ways to implement it, one of which is to regard the related meaning of the original target as not an implicit head, but as a [\pm property] that can be regulated (turned on or off) by the following predicate (VP). Recall that in Section 5.4 I created a device which assigns syntactic/semantic features (e.g. [\pm human], [\pm plural]) to particular Generic Constructions. A similar device of ‘property assignment’ may help us distinguish constructions with double exposure from the ones without it. For instance, when *Cædmon* means ‘Cædmon’s poetry’, it is marked as ‘Cædmon [+poetry]’, rather than as ‘Cædmon Ø’, where Ø is the implicit head. A strength of this property representation is that properties are not syntactic constituents which must be suitably handled functionally, and their presence or absence does not affect the status of the constituents they are attached to. Therefore, unlike (18a-b), (14) will be analysed in the following manner instead:

- (19) Cædmon [-poetry] is a poet and (Cædmon [+poetry] is) difficult to read.

Note that the two *Cædmon* are syntactically identical, because the distinctive property label ([\pm poetry]) does not play a role in syntax. A somewhat similar theory is proposed by Abusch (1989), where he includes the pragmatic function of ‘reference shifters’, abbreviated as *f*, in the clauses.⁷ For example, his analysis of *Norman Mailer reads himself before going to sleep* is approximately (semantic values omitted for concision)

⁷ Abusch does not define ‘reference shifters’. However, he is clearly inspired by Fauconnier (1985/1994) in that a reference shifter consists of a ‘reference trigger’, which is the original meaning of an NP (e.g. *Cædmon* as a poet), and a ‘reference target’, which is the metonymical reference (e.g. *Cædmon* as the poems). The latter two concepts are created by Fauconnier when he introduces Nunberg’s Identification Principle:

If two objects (in the most general sense), *a* and *b*, are linked by a pragmatic function *F* (*b* = *F(a)*), a description of *a*, *d_a*, may be used to identify its counterpart *b*. (Fauconnier 1994: 3)

For Fauconnier (1994: 4), *a* is the reference trigger and *b* is the reference target.

the following:

- (20) [S [NP Norman Mailer]_i [VP reads [NP f [NP himself]_j] before going to sleep]].

In (20), while *himself* coreferences with *Norman Mailer*, the reference shifter *f*, which is out of the domain of the reflexive pronoun *himself*, realises the property that denotes the ‘Norman Mailer’s work’ reading.⁸

The main problem with the suggested version of property assignment is that it looks rather counterintuitive in both syntax and semantics. Consider the second half of example (21):

- (21) Cædmon [+poetry] is difficult to read.

One may argue that it would be strange to consider ‘poetry’ as a property of ‘Cædmon’ rather than the reverse, because semantically it is the poems (not the poet) that are read, and syntactically the head of *Cædmon’s poetry* is *poetry* (cf. [NP *Cædmon’s* [N *poetry*]]) instead of *Cædmon*. This suggests that if property assignment is possible, there must be something else underlying the process. I will discuss an enhanced version of property assignment in Section 6.3.

6.2.3.3 Fusion of modifier and head

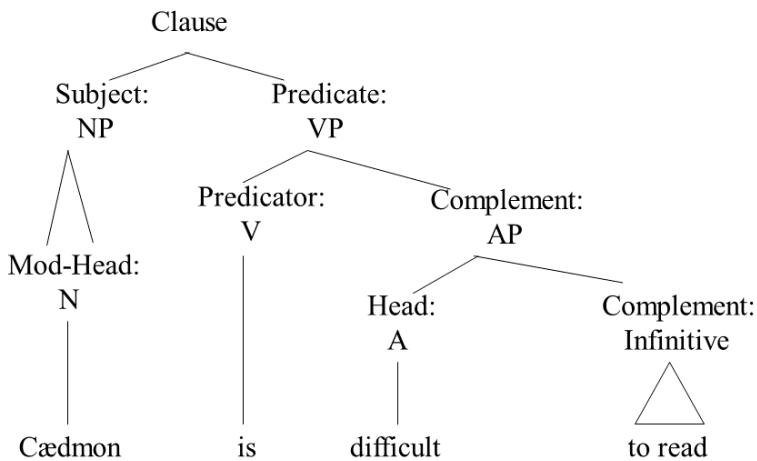
The theory of double exposure, in fact, sounds similar to Huddleston & Pullum et al.’s (2002) ‘Fusion of Function Theory’ (FFT). The structure that double exposure refers to would probably be regarded by Huddleston & Pullum et al. as a special case of ‘modifier-head fusion’, in which the (implicit) head is fused with its modifier (cf. Section 2.2). Although Huddleston & Pullum et al. do not mention the possibility of

⁸ The main difference between property assignment and Abusch’s approach is that ‘referential shifters’, as shown in fn.7, are essentially pragmatic. It would be difficult to imagine the intrusion of a pragmatic function in syntactic representations.

extending FFT to RM, we can still construct a ‘fused modifier-head’ analysis, based on Warren’s descriptions as in (22a). As a result, *Cædmon is difficult to read* can be represented as (22b).

- (22) a. [Mod-Head *Cædmon*]

b.



Although (22a-b) look simple and cohesive, they suffer from quite a few problems. First, as I argued in Section 6.2.1, it is unlikely that what Warren claims to be ‘modifiers’ are real modifiers. For instance, *rich* in *the rich* is a modifier because this adjective is able to attributively modify nouns in non-fused NPs such as *rich people*, but *Cædmon* cannot be treated in the same way, as **Cædmon poetry* (instead of *Cædmon’s poetry*) is ungrammatical. Second, although Huddleston & Pullum et al. believe that NPs are eligible to be modifiers, only adjective modifiers are allowed in their model of ‘fused modifier-head’ (e.g. *the rich*, *the other*). Third, certain syntactic/semantic information may be lost in the FFT representation: we do not have any clue from the ‘fused modifier-head’ *Cædmon* that what *Cædmon* (a human being) really denotes is ‘Cædmon’s poetry’ (a non-human entity). As a result, FFT does not seem to be a reliable solution.

6.2.4 Transfers of meaning

In Section 6.2.3.1 I discussed how syllepsis can be accounted for if we do not insist on strict anaphoric relationships between antecedents and their pronouns or relative clauses. However, Nunberg (1995, 2006) is strongly against this approach, as for this approach to work we must posit that the co-indexation in those examples is loose and imprecise, which, for him, is unacceptable. He analyses syllepsis from a different angle. Unlike his early thoughts, which still focused on the shift of references (Nunberg 1979), his later paper emphasises the transfer of meanings of the predicates. In other words, he argues that syllepsis is not caused by different readings of the subjects, but by the altered meanings of the predicates. According to this idea, in (14) it is *difficult to read*, not *Cædmon*, that has changed its meaning to reflect the salient relation between Cædmon and his poetry. Similarly, in his own interpretation of (15), Nunberg claims that the predicate *read in an English accent* (especially the VP) “has a transferred reading in which it contributes a property [i.e. his works] of poets” (Nunberg 1995: 124).

A strong point of this analysis is that there is no need to struggle with the interpretation of *Yeats* or *Cædmon*: they are simply proper nouns that refer to certain people on every occasion. Moreover, the mismatch between the proper nouns and reflexive pronouns is settled, as there now can be a strict coindexation between *Yeats* and *himself*. Nunberg also proposes a measure of diagnosing the possibility of RM: ‘noteworthiness’.⁹ As he proposes, predicate transfer will not be triggered until the new predicate is ‘noteworthy’. The following example (23b), adapted by me from (15) (which is copied here as (23a)), illustrates how it works.

- (23) a. Yeats did not like to hear himself read in an English accent.
- b. ?Trump did not like to hear himself read in an English accent.

The oddness of (23b) arises, according to Nunberg’s theory, from that fact that writing is not a ‘significant’ or ‘notable’ property of Trump (excluding his Twitter posts), so

⁹ A similar concept in Langacker (1993: 31) is ‘active zone’, within which metonymy can be triggered.

that an alternative, transferred reading of the predicate does not become noteworthy.

The ‘transfers of meaning’ theory has been applied to the philosophical explanation of polysemy (Şerban 2017) and the study of multiple uses of proper nouns (Rami 2015). However, Nunberg’s theory is much more pragmatic than syntactic. Although it seems that there will be no problem for the NPs, the potential inconsistency is in fact passed over to the predicates or VPs. If the transfer works, we must admit that in (24a) and (24b) the same syntactic structure *read by all students* means something different, because while *the textbook* keeps its original meaning, *Shakespeare* does not:

- (24) a. The textbook was read by all students.
b. Shakespeare was read by all students.

It then seems that by suppressing the proliferation of NP semantics, we create multiple readings of other parts. Or, in Nunberg’s own words, “[p]redicate transfer allows us to treat syntactic identity as sortally chaste [i.e. avoiding syllepsis], by imputing all the promiscuity to the predicates involved” (Nunberg 1995: 123). In my opinion, this cannot be considered a significant improvement of reference transfer.

6.3 Property emergence: a new approach

Let us consider the following example again:

- (25) Cædmon is a poet and difficult to read.

How is this coordinated sentence formed? McCawley (1998: 272) proposes a mechanism called ‘Conjunction Reduction (CR)’, “in which a coordinate structure whose conjuncts are identical except for one constituent is simplified by factoring out the shared parts and creating a conjoined constituent in place of the non-shared parts”.

An example given by the author (*ibid.*) shows how CR works:

- (26) a. [s Tom washed the dishes] and [s Tom dried the dishes].
 b. Tom [v washed and dried] the dishes.

McCawley argues that the coordination (26b) is derived from (26a): originally there are conjoined sentences which are partly identical (in (26a) those parts are *Tom* and *the dishes*). Then the identical parts are factored out, forming a shared structure, and the verbs are conjoined instead. In some cases the situation can be more complex, because an additional transformation is needed before CR (examples (27a-c) are taken from McCawley (1998: 275)).

- (27) a. [s Bert robbed a bank] and [s the police caught Bert].
 b. [s Bert robbed a bank] and [s Bert was caught by the police]. (Passive transformation)
 c. Bert [v robbed a bank and was caught by the police]. (CR)

The underlying structure of (27c), according to McCawley, is still the conjunction of two sentences (27a), but for (27a) to be eligible for CR the second sentence must undergo the ‘Passive transformation’ (27b) so that the two sentences can have an identical part *Bert*.

Now we turn to example (25). It seems that the formation of (25) resembles the simpler situation (26a-b), in which coordination is created by the direct application of CR. The most straightforward solution, therefore, is (28a), which is quite problematic because *Cædmon* in the second clause is clearly different from the first one. Instead, I proposed (28b) in Section 6.2.3.2: we can differentiate the two *Cædmans* by assigning a positive or negative property [\pm poetry].

- (28) a. Cædmon is a poet and Cædmon is difficult to read.
 b. Cædmon [-poetry] is a poet and Cædmon [+poetry] is difficult to read. (= (19))

However, as I pointed out in the same section, *Cædmon* [+poetry] seems fallacious because the head should not be *Cædmon*, but *poetry* – therefore, it is better if the subject of the second clause is *poetry* [+Cædmon], and then something happens to make the property [+Cædmon] salient. Therefore, I will argue that (25) is formed in the more complex way of (27a-c), and the underlying structure of (25) is the conjunction of two non-identical clauses, as (29a-c) show.

- (29) a. Cædmon is a poet and the poetry [+Cædmon] is difficult to read.
- b. Cædmon is a poet and [Ø Cædmon] is difficult to read. (Property Emergence)
- c. Cædmon is a poet and difficult to read. (CR)

The original construction is (29a), which has essentially the same meaning as (16) (*Cædmon is a poet and his poetry is difficult to read*). The property [+Cædmon], which is a copy of first head *Cædmon*, belongs only to the second head *the poetry*. Then in (29b) there is a process which I call ‘Property Emergence’, in which the property [+Cædmon] is overtly expressed while the head becomes covert. The result of Property Emergence in (29b) is that an identical part *Cædmon is* can now be witnessed (as the real head *the poetry* has ceased to be an overt syntactic element), which is ready for CR. Finally, in (29c) CR is applied to this identical part, forming the coordinated construction (25).

The oddness of syllepsis arises in the process of CR. While in (27b) *Bert*, the subject of both sentences, is a genuinely identical part, *Cædmon* in the two sentences in (29b) is not identical, because the first *Cædmon* is a head whereas the second one is merely an overtly expressed property. Another problem caused by Property Emergence is the inconsistency of subject-verb agreement. Recall that in Section 5.1.2 I discussed ‘the agreed RM’ and ‘the discorded RM’, which are exemplified by (6a-b), repeated here as (30a-b).

- (30) a. The four oxen (= the statue of four oxen) *are* cute.

- b. The French fries *is* waiting.

Although both subjects (*the four oxen* and *the French fries*) are plural, the following verb *be* varies in number. I will argue that while both examples undergo Property Emergence, the original agreement between the head noun and the verb is only retained in (30b). In (30a) there is a readjustment in the verb as it agrees with the newly expressed property (i.e. *the four oxen*) – in this sense, it may be better to regard (30a) as ‘the discorded RM’. Again, as I discussed in Section 6.1.2, it seems that there is not a universally acknowledged rule controlling the readjustment, and the agreement is in fact subject to arbitrariness. Perhaps it is indeed something that requires individual analysis, as Cullicover & Jackendoff (2005: 364) have stated.

Property Emergence is not a completely new concept. Instead, I would like to consider it as an enhanced version of double exposure. The main difference is that I believe there is a ‘head-property’ rather than a ‘head-modifier’ relationship between the co-existed in the explicit element, because the function of modifier cannot be realised (cf. Section 6.2.1) – regarding the implicit element as a property helps to bypass restrictions on the ‘head-modifier’ relationship because properties are not counted as syntactic elements unless they emerge. However, although I oppose that what Warren claims to be ‘the explicit modifier’ is the real modifier of the implicit head, I agree with her that in Property Emergence the expressed property is an attributive element to the covert head (as in ‘Cædmon’ and ‘Cædmon’s poetry’).

6.4 Referential metonymy or polysemy?

In this last section I would like to briefly explore the boundaries of referential metonymy: to what extent can we differentiate RM constructions, which are potentially exocentric noun phrases containing implicit nominal heads, and polysemous words, which are themselves heads?

Warren (2002) in her discussion of syllepsis (though she does not use this term) compares example (14), repeated below as (31a), with (32b):

- (31) a. Cædmon is a poet and difficult to read.
 b. *The mouse is a favourite food of cats and a practical cursor controller.

She reasons that (31a) is non-zeugmatic because *Cædmon* does not comprise two different senses, but one sense that is realised as different functions (i.e. head/modifier). By contrast, *mouse* in (31b) means two different things in the coordinated clauses, i.e. an animal in the former and a computer device in the latter. In other words, while RM is connected with syllepsis in coordination, which is usually acceptable, polysemy (or more prominently, homonymy) is related to zeugma, which is generally regarded as problematic.¹⁰ Let us consider more examples: (32)-(34) are taken from Nunberg (2006: 358-39) and (35)-(39) are from Warren (2006: 21-30).

- (32) *Roth* is Jewish and widely read.
 (33) ?*The newspaper* that Mary works for fell off the table.
 (34) ?*The airline* disappeared behind the mountain.
 (35) ?These are foolish *words* of three letters.
 (36) ?She has a good *head*, which is oval-shaped.
 (37) ?They are taking on new *hands*, which have long fingers, down at the factory.
 (38) *The milk* tipped and stained the cloth.
 (39) *The shoes* are clean and neatly tied.

These examples, which Nunberg and Warren believe are RM constructions, are all syllepsis (some of them are coordinated, and others are embedded in relative or other constructions), but they are not equally grammatical. Nunberg (2006: 358) asserts that this is because “natural language permits no sortal crossings” so that only a small number of RM constructions survive the coordination test. However, there is a crucial

¹⁰ In fact, the status of *mouse* is debatable: it can be regarded as an example of homonymy, as the two senses are completely different. Nonetheless, the computer device *mouse* is clearly derived from the animal *mouse* by metaphor – in this sense we can also say that they are polysemous.

question that needs to be answered before any conclusion is drawn: are they real RM constructions? As Nunberg himself observes, some transfers “hold across a wider range of situations, and provide a more context-independent way of classifying the bearers of derived properties”, so that such a predicate “represents a lexical sense of the item in question, or at least deserve listing in a dictionary”. If we take ‘listedness’ as a crucial criterion for the entry to the lexicon, as Di Sciullo & Williams (1987) do, then some of the italic items in (32)-(39) suggest that they do not represent referential shifts (or transferred predicates), but different senses. The following are some listed senses in the OED:

- (40) a. Something that is or has been said; an utterance, a statement, a speech, a remark. (OED: s.v. *word*, n. 1a)
- b. The head considered as the centre of mental activity; the seat of the faculties; a person’s mind (OED: s.v. *head*, n. 2a)
- c. A person, with an allusion to the hand as an instrument of agency (OED: s.v. *hand*, n. 13a)
- d. The organization or office issuing such a publication [i.e. newspaper publication]. (OED: v.s. *newspaper*, n. 1)

In other words, (33), (35)-(37) can, and in fact had better be regarded as examples of zeugma instead of syllepsis. On the other hand, (32), (38)-(39) truly reflect syllepsis, as there is no meaning of ‘Roth’s writings’ for *Roth*, ‘milk bottle’ for *milk*, and ‘shoe laces’ for *shoes* in dictionaries like OED.¹¹ The only tricky remaining example is (34): *airline* is not yet polysemous with *flight* (which means it does indicate metonymy), but the sentence is unacceptable for most people. My own explanation for the dilemma of (34) is that there are two levels of metonymy: *airline* is metonymic to *flight*, which is further metonymic to *aeroplane* (‘aeroplane’ has a more concrete and physical meaning, while

¹¹ Here I do not advocate that listedness ‘determines’ the boundary between RM uses and polysemy/homonymy. On the contrary, I believe that listedness only ‘reflects’ the factual discrepancies between these two, as a sense will not be listed unless it has become relatively context-independent.

‘flight’ is more abstract), and it is a particular aeroplane that disappears behind the mountain. The acceptability downgrades as metonymy multiplies (*aeroplane* → *flight* → *airline*). It seems, therefore, that natural language is slightly more tolerant of syllepsis than Nunberg has claimed, and what natural language (at least English) does not permit is zeugmatic expressions characterised by the use of polysemy or homonymy.

Also, it seems from the above discussion that the closer a shifted reference (or transferred predicate) is to the lexicon, the more zeugmatic, and therefore less acceptable it will be. To my knowledge, this possible trend has never been discussed before. It might be related to the processing of the mental lexicon, as if once the human mind differentiates two senses, they are no longer available for semantically ‘blended’ structures like syllepsis.

6.5 Conclusion

In this chapter I explored a possible candidate for English exocentric noun phrases, the referential metonymic construction. The discussion began with some basic semantic and syntactic behaviours, and then comparisons were made between two potentially different types. The theories of RM constructions that were discussed included Warren (2002, 2004, 2006) and Nunberg (1995, 2006). I proposed a revision of Warren’s ‘double exposure’ theory, called ‘property emergence’, which I believe is an improvement on her work. Finally, I discussed the demarcation between RM constructions and polysemy, because the distinction reflects the contrast between syntax and morphology: once the stylistic or figurative use of an RM construction is conventionalised and then lexicalised, it loses its potential as an ENP and becomes an independent lexical item, which needs to be explained from another perspective.

7. Free relative clauses

7.1 Introduction

There are two types of relative constructions in English (1)-(2).

- (1) Gating is [something] [*which* has already started to worry critics of sub-band coding, and of which we shall be hearing a lot more later]. (ICE-GB: W2B038-122)
- (2) In this very general terminology [*what* we are seeking] is to design a sound vessel with good easy course keeping, good control on the turn and responsive handling qualities in restricted waters. (ICE-GB: W2A039-035)

Example (1) shows a common type of (restrictive) relative clause: a clause led by a particular relative word (*which* in both clauses in (1)), which is linked to an antecedent) in the matrix clause. A relative clause typically modifies an antecedent, and the relative word is co-indexed with the antecedent, e.g. *which* refers to *something* in (1). However, (2) is quite different in structure: there is no antecedent, without which we cannot find modification and co-indexation on the surface. In other words, while in (1) the relative clause is bound to the antecedent, in (2) the relative clause is ‘free’ – thus relative clauses like the one in (2) are called ‘free relative clauses’ or ‘free relatives’ (henceforth FRs).¹

FRs may be further divided into two kinds, which are exemplified in (3a-b).

¹ (2) is also an example of a pseudo-cleft. Both Quirk et al. (1985) and Huddleston & Pullum et al. (2002) regard pseudo-clefts as FRs with restrictions. For example, Quirk et al. (1985: 1387) argue that pseudo-clefts must be Subject-Verb-Complement clauses in which FRs function as subject or complement. Huddleston & Pullum et al. (2002: 1421) discuss additional constraints such as that the verb *be* must be specifying (not ascriptive) and the FRs must express the variable (not the value). In other words, FR is a much broader concept than pseudo-cleft.

- (3) a. So *what* we're going to do is to go through the different sections. (ICE-GB: S2A056-005)
- b. When the attack ends, some children are unaware that anything abnormal has happened and just continue to do *whatever* they are doing continuously. (ICE-GB: W2B023-019)

(3b) is semantically different from (3a) in that the *wh*-element (*whatever*) has a non-specific interpretation (Quirk et al. 1985: 1059), or the FR in (3b) indicates 'free choice' (Huddleston & Pullum et al. 2002: 1075). Following Baker (1995), I will specify an FR that has *-ever* in the *wh*-element as a 'conditional free relative' (CFR).

In this chapter I will discuss the syntactic phenomena of FRs. Chapter 8 is about CFRs, in which I will explore in detail the formation of the *wh*-elements with *-ever* from a historical perspective, and then compare CFRs, especially the marginal ones (e.g. *whenever*, *wherever*), to relevant clausal constructions.

7.1.1 *The wh-elements*

The very first issue that raises debates among scholars is the question of which *wh*-words are acceptable in FRs. This is one of the basics in the study of FRs which is often taken for granted, yet the different attitudes towards the acceptability of *wh*-elements determine the range and size of the data, based on which the analyses are carried out. For example, Baker has a very strict criterion that "*what* is the only noun phrase that can be used to introduce definite free relatives [i.e. non-CFRs]" (Baker 1995: 208). Extending the category to non-NPs, he further recognises two *wh*-elements, *where* and *when*, which is still significantly conservative compared with the majority of scholars (e.g. Bresnan & Grimshaw 1978, Citko 2000, Grosu 2003, Caponigro & Pearl 2008). Also, he excludes *how* and *why* from the data. By contrast, the two words are acknowledged in Quirk et al. (1985) to be possible in FRs, though their use is restricted in the position of subject complement, as (4a-b) show (taken from Quirk et al. 1985: 1058):

- (4) a. That's *how* she works.
 b. That's *why* I don't go there anymore.

In the following discussion I will assume that most *wh*-words in headed relative clauses are also eligible for FRs: *which(ever)*, *what(ever)*, *who(m)(ever)*, *where(ver)*, *when(ever)*, *how(ever)*, and *why*. Nevertheless, as I will show in this and the next chapter, the acceptability of the *wh*-words above varies, with some considered more common and frequent, and others deemed more marginal.

7.1.2 FRs as phrases

As the name suggests, FRs are traditionally regarded as a special kind of relative clauses. This notion, however, has been argued against in contemporary grammars.² Quirk et al. (1985: 1058) summarise that FRs “have the same range of functions as noun phrases”,³ namely subject (5a), direct object (5b), indirect object (5c), subject complement (5d), object complement (5e) appositive (5f) and preposition complement (5g) (all examples are taken from Quirk et al. (1985: 1058)):

- (5) a. *What I want* is a cup of tea.
 b. You should see *whoever deals with complaints*.
 c. He gave *whoever asked for it* a copy of his latest paper.
 d. April is *when the lilacs bloom*.
 e. You can call me *what(ever) you like*.
 f. I'll pay the whole debt: *what I originally borrowed and what I owe you in*

² There are still some syntactic theories that assume that FRs are clauses (or ‘complementizer phrases’) following an empty noun head. This approach is called ‘the COMP Hypothesis’. See Section 7.2.1 for details.

³ The analysis in Huddleston & Pullum et al. (2002) is slightly different as they take *when/where/how* as prepositions. As a result, they analyse FRs beginning with these words as PPs.

interest.

- g. You should vote for *which(ever) candidate you think best.*

Another reason why FRs are often thought of as clausal constructions is their resemblance to interrogative clauses. Headed relative clauses do not cause confusion, because of the presence of the antecedents and the slightly narrower range of *wh*-words allowed (e.g. *what* is only permitted in FRs); but for FRs, there are a few occasions when the meaning of a sentence is ambiguous between the relative reading and the interrogative reading.

- (6) *What she wrote* was a mystery. (Quirk et al. 1985: 1061)

- (7) a. *What she wrote* was amazing.
b. *What she wrote* went into the trash.
c. I wonder *what she wrote*.

Quirk et al. reason that (6) potentially means ‘she wrote a mystery story’ (FR), or ‘I don’t know the answer to the question *what she wrote*’ (interrogative). Such ambiguity rarely happens, though. In (7a-b), there is only one interpretation – *what she wrote* in both examples can be understood only as ‘that which she wrote’; by contrast, the same clause in (7c) is only available for the interrogative interpretation. Ambiguity arises because the function of phrases and clauses may have some degree of overlap: in (6), for instance, the subject can be both clausal and phrasal. On the other hand, the semantics of the verbs or predicative complements restricts the interpretation of *wh*-phrases or clauses, so that an interrogative reading is only licensed when the verbs or predicative complements themselves are related to interrogation. ‘Mystery’ or ‘wonder’ are obviously compatible with the ‘questioning’ reading, while ‘go into the trash’ is not.

Moreover, as Baker (1995: 206) points out, interrogative clauses can be extraposed:

- (8) a. It was a mystery what she wrote. [interrogative]
b. *It was a mystery what she wrote. [FR, meaning ‘the story she wrote’]

- c. It was a mystery, what she wrote. [FR]

(8b) is ungrammatical as phrasal constructions cannot undergo extraposition. However, NPs may occur in ‘dislocation’ (8c), in which, unlike the one in (8a), *it* is not a dummy, but a pronoun correlative to the NP *what she wrote*.⁴

Huddleston & Pullum et al. (2002) further raise a few reasons why FRs should be considered phrasal ((9a), (10a), (11)-(13) are quoted from Huddleston & Pullum et al. (2002: 1069-1073)):

- (9) a. What books she has *are* in the attic. [FR: subject-verb agreement]
- b. What books she has *confuses* us. [interrogative]
- (10) a. Is *what she suggests* unreasonable? [FR: subject-auxiliary inversion]
- b. *Is *what she suggests* unreasonable? [interrogative]
- (11) a. **To what he's referring* is Riga. [fronting of preposition]
- b. I can't imagine *to what he's referring*.
- (12) a. Whatever they give him *that he didn't need* he passed on to me.
 [antecedent of restrictive relative clause]
- b. He told me he had done it himself, *which was quite untrue*.
- (13) a. Jill gave him something last night, but I don't know *what*. [ellipsis]
- b. *Jill gave him something last night, but he lost *what*.

In (9a) the verb agrees with the NP head *books* (*What books she has* is a combination of ‘determinative + noun + relative clause’⁵) instead of the clause, while (9b) is the reverse, where the verb *confuses* agrees with the question ‘what books does she have?’, which is regarded as a single proposition. Subject-auxiliary inversion typically occurs

⁴ Huddleston & Pullum (2005: 255) argue that dislocation differs from extraposition in three aspects: 1) extraposed clauses “usually have unbroken intonation” while dislocation is marked by a comma; 2) dislocation never permits dummies whereas extraposition does; 3) dislocation is informal, but extraposition is a neutral and sometimes preferable structure (e.g. when the clause is ‘heavy’).

⁵ For an account for determinatives as relative words, see Section 7.4.2.

with NPs and excludes clauses, resulting in the ungrammaticality of (10b). Also, preposition fronting is only allowed in clauses, therefore (11a) is unacceptable. In (12a) the FR can be followed by a restrictive relative clause because it is an NP. Usually, a clause may only be the antecedent of a non-restrictive relative clause (12b, Huddleston & Pullum et al. call it a ‘supplementary’ relative clause, suggesting that the relative clause provides supplementary information).

(13a-b) need some more detailed attention. The authors describe that “such reduction is quite impossible with fused relatives [i.e. FRs]” (Huddleston & Pullum et al. 2002: 1072), relating it to headed relative clauses:

- (14) *Jill gave him a book last night, but he lost the book *which*. (Huddleston & Pullum 2002: 1073)

This comparison is reasonable on the grounds that both *what* and *which* are relative words, which is intuitively straightforward. But given that I have been arguing for the phrasal status of FRs, a new problem will arise: what is the head of this FR if it is an NP, since *what* is just a relative pronoun? That is why I subsume FRs under the category of ENPs – while we have plenty of evidence arguing that FRs are NPs, the headhood of FRs is as yet indeterminate. And it is this very question that gives rise to a great number of models and theories over the past decades. I will continue this topic in Section 7.3.

7.2 The syntax of free relative clauses

Before I discuss different theories of FRs, I will first look at two important issues. One of them concerns the so-called ‘matching effects’, a distinctive syntactic property of FRs that is seen in neither headed relative clauses nor interrogative clauses. The other concerns a type of subordinate clause (called ‘transparent relative clause’) that is superficially similar to standard FRs, though its status is often open to question. No theory of FRs is complete (and convincing) unless it successfully addresses these two

issues.

7.2.1 Matching effects

Matching effects, as van Riemsdijk (2006: 349) argues, are “among the most salient and crucial properties of FRs”. Izvorski (2000: 3) gives a detailed definition of them:

The essence of the phenomenon is a particular constraint on the morphosyntactic form of the *wh*-phrase in a free relative such that the *wh*-phrase not only has to satisfy the grammatical requirements of its own clause, but also meet those imposed externally by the embedding predicate.

He also provides some formulae to represent different aspects of matching effects:

(15) Matching effects (Izvorski 2000: 4)

- a. Case matching: $[\text{matrix } F_1^0_{[\text{case } \alpha]} [\text{FR}_{\text{case } \alpha} \text{ wh-CASE } \alpha \dots]]$
- b. Person/Gender/Number matching: $[\text{matrix } F_1^0_{[\varphi\alpha]} [\text{FR}_{\varphi\alpha} \text{ wh-}\varphi\alpha \dots]]$
- c. Categorical matching: $[\text{matrix } \dots] [\text{FR=XP}_i \dots \text{ wh-XP}_i \dots]$

What (15a-c) indicate is that if the *wh*-phrase has a particular case feature α , or the φ -features of person, gender or number, or is in a category XP, which is required by the relative clause, then the *wh*-phrase must also comply with the requirements obtruded by the matrix clause, and vice versa. As English is poor in inflection, not all effects can be easily observed (especially in terms of the φ -features described in (15b)). However, there are still a few matching effects available for discussion. I will now discuss each of them in turn.

7.2.1.1 Case matching

While case matching has been studied in languages like Dutch (e.g. Groos & van Riemsdijk 1981), Spanish (e.g. Suñer 1984) and Catalan (e.g. Hirschbühler & Rivero

1983), it has not attracted equal attention in English, probably because the Modern English case system is now largely simplified, compared with that of Old English. Nonetheless, case matching can still be observed with the relative pronoun *who(ever)* and *whom(ever)*. The following examples (16a-d) are quoted from Payne et al. (2007: 576).

- (16) a. *Whoever* is responsible for the damage must pay for it.
- b. He will criticise *whomever* she brings home.
- c. [?]*Whomever* he marries will have to be very tolerant.
- d. [?]She lunches with *whomever* is going her way.

(16a-b) are perfectly grammatical because both the matrix clauses and the relative clauses require the same case, i.e. nominative in (16a) and accusative in (16b). When there is a mismatch between the case requirement of the matrix clause and that of the relative clause, the whole sentence can be odd. The reason is that no relative pronoun in English can simultaneously represent both nominative and accusative case, but a choice has to be made. Therefore, in (16c) the case of the relative pronoun reflects the demand of the relative clause and yet in (16d) it conforms to that of the matrix clause.⁶

It seems, from (16c-d), that English speakers tend to fulfil the requirement of whichever clause appears first, regardless of the clause type. The corpus data, however, suggest an alternative strategy: *whomever* is frequently abandoned (17)-(18).

- (17) a. It was asked, since the testator had in a general clause charged a trust

⁶ Jespersen (1924: 104) remarks that

When Dickens writes ‘Peggotty always volunteered this information to whomsoever would receive it’ (DC 456), *whom* is wrong, for *whosoever* is the subject of *would receive*, though the whole clause is the object of *to*; but *whosoever* would be correct if the clause had run (*to*) *whomsoever it concerned*.

Clearly he deems the clash in case not just odd, but ungrammatical.

- relating to all dispositions on *whoever* should be his heir, to pay whatever legacies he had left... (BNC: B2P)
- b. You should be prepared to accept the response: “Find *whoever* put up the poster and kill them.” (BNC: HYA)
- (18) a. *Whoever* volunteers will be asked to remove the stick and take it back to his or her place without making a noise. (BNC: AM6)
- b. *Whoever* should be my heir, let *him* be obliged to give, do, and perform all that is written in this my will, and I entrust that to his faith. (BNC: B2P)

While accusative case of *whoever* is expected in both (17a) as being the complement of the preposition *on*, and (17b) as being the object of the verb *find*, *whomever* is not used. This is in accordance with the tendency that in real life *whom* appears less often than is prescribed, and even in “non-subject functions *whom* is as infrequent as *who*” (Aarts 1993: 21).

(18a-b) indicate two more strategies speakers employ to avoid case mismatch: in (18a) the matrix clause is constructed in the passive voice so that *whoever* demands the same case as the relative clause; in (18b) the FR is split into a ‘correlative construction’,⁷ where the *whoever*-clause becomes an adjunct, and the accusative case is carried by a separate personal pronoun *him*. In summary, although the rule of case matching causes problems, these may not be serious as they can be actively prevented with some linguistic strategies.

7.2.1.2 Person/gender/number matching

The matching of features such as person, gender and number is not discussed in most studies. Izvorski (2000), despite mentioning ‘φ-feature matching’ (15b), does not provide any examples. The reason why Izvorski considers φ-features may be his

⁷ ‘Correlative clause’ is concept used by some linguists to refer to a clausal construction that is similar to both a relative clause and a content clause. I will discuss it in more detail in Section 8.2.2.

emphasis on Serbo-Croatian, presumably an inflection-rich language; in English, however, we would expect to see much less variation.

The fact that Modern English adopts natural gender, rather than grammatical gender, means that in most cases problems about gender merge with, or turn into, problems about semantics. Consider the following examples:

- (19) a. He will criticise *whomever/whatever* she brings home. (adapted from
(17b))
- b. John took home *whatever/whoever* was left in the warehouse.
- c. He will steal **whoever/*whatever* she marries.

As the only gender difference shown in English free relatives is human (represented by *who/whom*) and non-human (represented by *what/which*), we can see from (19a-c) how dissonance is created. Both *whomever* and *whatever* are suitable for (19a) because both human beings and objects can be criticised or brought home; but when a particular *wh*-word is used, we assume that the gender which is represented by this *wh*-word is reflected in both matrix and relative clauses. For instance, by saying *He will criticise whomever she brings home*, we presume that the patients of both *criticise* and *bring* are human beings (in fact the same person). (19b) is slightly odd with *whoever* because while the matrix clause does not prefer a human or non-human object, the relative clause semantically favours a non-human patient. When the matrix clause and relative clause strongly require different genders (i.e. steal *something*, marry *someone*), ungrammaticality arises (19c).

On the other hand, problems with person and number do not show in English: relative words are always considered singular and in the third person:

- (20) *What I want/It* is a cup of tea. (adapted from (5a))

7.2.1.3 Category matching

Van Riemsdijk (2006: 343) gives some examples of category matching ((22c) was made up by me):

- (21) a. We should interview the woman *with whom* he goes out.
- b. *We should interview *with whom/whoever* he goes out.
- (22) a. We should talk to the woman *to whom* he talks.
- b. We should talk *to whom/whoever* he talks.
- c. *We marvel at *to whom* he talks.

The ungrammaticality of (21b) reflects the phenomenon Huddleston & Pullum et al. show in (11a), namely that the preposition in FRs cannot be fronted. Van Riemsdijk argues that this is because the FR itself is syntactically restricted by the matrix clause – the problem of (21b) is that the verb *interview* licenses a direct object (which is fulfilled by an NP), rather than a PP complement. (11a) could be explained in the same manner: *to what he's referring* is not permitted because the subject position requires an NP instead of a PP. (22b) is an interestingly rare example, because to make it grammatical two preconditions are needed: first, both verbs in the matrix clause and the relative clause (in (22b) both are *talk*) must license a PP complement headed by *to*; second, the preposition (*to*) should be identical so that it can be ‘shared’ by both clauses (in fact, it is not possible to determine whether *to* belongs to the matrix clause or is pied-piped within the relative clause). The failure of observing the first precondition leads to the ungrammaticality of (21b), and the non-fulfilment of the second precondition results in the problem of (22c).

Category matching, which has been discussed ever since Bresnan & Grimshaw (1978), is reflected other than with NPs and PPs. It also involves FRs beginning with *when(ever)*, *where(ever)* and *how(ever)*. Baker (1995: 214) observes a rule of ‘external behaviour’ of FRs:

If a free relative is introduced by a certain type of phrase, then the clause as a whole can serve as a phrase of the same type in the sentence of which it is a

part.

Baker's 'type of phrase' is somewhat different from the mainstream grammars, as he introduces a so-called 'locative phrase' (which indicates location) and a 'motion phrase' (which describes the direction of movement), which can be realised by the same word *where* ((23a-b) are quoted from Baker 1995: 212):

- (23) a. John will sit [_{LocP} *wherever* he wants to sit __].
b. Nora will go [_{MotP} *wherever* she wants to go __].

For Baker the FRs in (23a-b) would be of different types, though this does not undermine that fact that (23a-b) comply with the rule of category matching. Of course, for most scholars, the FRs (23a-b) are adverb phrases or preposition phrases,⁸ which are licensed by verbs in the matrix clauses.

There are in total four kinds of phrases which can appear in FRs: NP, PP, AdjP, and AdvP. Category matching requires that only one type of phrase occurs in the FRs that are embedded in certain matrix clauses. If the rule is not observed, there is a mismatch and the resultant clause is considered ungrammatical ((24)-(25) are taken from van Riemsdijk 2006: 350):

- (24) a. *The police arrested *who* the witness pointed.
b. *She will make you *however happy* your ex married.
c. *I'll play the music *however loudly* you listen to.
(25) a. matrix NP vs. FR PP
b. matrix AdjP vs. FR NP
c. matrix AdvP vs. FR NP

All examples (24a-c) are marked as ungrammatical because the rule of category

⁸ Huddleston & Pullum et al. (2002).

matching is violated. (24a) has almost the same problem as (21b), with a difference that the category of the *wh*-word in (24a) fits the matrix clause but not the relative clause (25a), while in (21b) there is a reverse situation. (24b-c) are ungrammatical because the *wh*-phrases, AdjP and AdvP respectively, fail to meet the requirement of the relative clauses (NPs) (25b-c).

There are, according to van Riemsdijk, two more restrictions. One is that the universally quantified type of FRs (i.e. CFRs) tends to be more favoured, especially when they are PPs or AdjPs/AdvPs. When the context “strongly imposes the definite/specific reading” (van Riemsdijk 2006: 351) and thus the FR is constructed accordingly without *-ever*, the result can be degraded even though categories are matched ((26a-b) are taken from van Riemsdijk 2006: 351):

- (26) a. ?Tomorrow I will speak to *who(m)* you spoke last night.
b. ?You can't word your letter *how* rudely they worded theirs.

It seems true that even common FRs tend to avoid specificity.⁹ While Baker (1995) argues that only *what*, *where* and *when* are permitted in ‘definite free relatives’ (cf. Section 7.1.1, which, as the following (27b) reveals, may not be correct), he also admits that the situation is quite distinctive with CFRs because all *wh*-words except *whose* and *why* become acceptable when *-ever* is added. Moreover, it is indeed difficult to find a context strongly indicative of a specific reading where definite FRs are used. Consider these examples from the BNC (27a-b):

- (27) a. The practical effect of it is to reduce the law's interest in implying duties largely for the reason that public policy demands that an employee be free

⁹ It may be worth noting that in here and what follows I use ‘definiteness/indefiniteness’ as a grammatical concept, and ‘specificity/genericity’ as a semantic concept. If syntactic construction is definite this does not necessarily entail that it must be specific, and vice versa. See Aarts et al. (2014: 384). However, I will not alter the original wording of some quotations, if they use definiteness/indefiniteness and specificity/genericity interchangeably.

- to work for *whom* he chooses. (BNC: J7B)
- b. But the widow of a vassal was commonly at the disposal of the vassal's lord:...so long as she was not disparaged, she could be married to *whom* the lord chose. (BNC: BMV)

What is interesting with (27a-b) is that the semantics of the FRs is hard to determine: while the relative word *whom* suggests syntactically definite FRs (not *whomever*), the meanings are closer to non-specificity, especially in (27a) where the employee is empowered with the ‘freedom’ to choose their boss. (27b) is potentially more definite, as the widow is said to marry ‘someone’ rather than ‘anyone’ selected by the vassal’s lord, but still the identity of this bridegroom is not completely clear and specific. Although Baker wrongly excludes *who/whom* from specific FRs, his argument may be justifiable to some extent as *who/whom* are less suitable to specific contexts – what he has not anticipated is that *who/whom* can also be used on non-specific occasions.

The other restriction is that, as shown in (26a-b) and (22a), if a particular element (usually a preposition) is ‘shared’ by the matrix clause and the relative clause, the verbs in both clauses should be identical (e.g. *to* is shared by the verb *speak* in both clauses in (26a)). Problems may also rise if we choose different verbs for either clauses ((28a-b) are taken from van Riemsdijk 2006: 351):

- (28) a. ?Why don’t you ever dance *with whomever* I came to parties?
 b. ?I’ll keep my bedroom *however dark* you paint your study.

However, I wonder whether it is the verbs that are at fault. The problem with (28a) may be due to the mismatch of the functions of the PP *with whomever*: in the matrix clause it is a complement, but in the relative clause it functions as adjunct. (28b) may have something to do with lexical semantics, because the adjective *dark* is polysemous in different clauses (‘lack of light’ in the matrix clause and ‘a shade close to black’ in the relative clause). Therefore, I cannot agree with van Riemsdijk’s assertion that category matching is restricted by the use of verbs; rather, (28a-b) indicate two more kinds of

matching effects undiscovered by previous studies: apart from case and category, the matrix clauses and the relative clauses also demand, or at least prefer, matching in function and lexical meaning.

7.2.2 *Transparent free relative clauses*

A special kind of FR is exemplified in (29a).

- (29) a. John saw *what he believed to be racoons* outside. (Schütze & Stockwell 2019: 1)
- b. John saw *what he had been waiting for* outside.

(29a) and (29b) both contain a subordinate clause introduced by *what*,¹⁰ and this clause functions as object of the verb *saw*, which means that at least on the surface *what he believed to be racoons* in (29a) and *what he had been waiting for* outside should be considered as FRs. On the other hand, the difference is also obvious: while it is clear what John saw in (29a), it is unclear what he saw in (29b). Wilde (1999) coins the name ‘transparent free relatives’ (henceforth TFRs) to demonstrate the semantic (and also syntactic, as shown in the following sections) transparency of the FR. The part *raccoon*, which is the predicative complement of *be*, is referred to as the ‘transparent nucleus’ (TN) by Grosu (2003),¹¹ and the rest of the FR (*what he believed to be*) is usually thought to have a parenthetical force with a hedging effect. Apart from the transparency of the TN, there are other distinctive characteristics in TFRs, which will be reviewed in the following sections.

7.2.2.1 The *wh*-elements

¹⁰ Although I have argued before that FRs like (29b) are NPs by nature. See Section 7.1.2.

¹¹ There have been different names for this part. Grosu (2003) originally called it ‘transparent nucleus’ but later on changed to ‘pivot’ (Grosu 2014, 2016). In Schelfhout et al. (2004), Van de Velde (2011) and De Smet & Van de Velde (2013), it is called ‘content kernel’.

The first remarkable feature of TFRs is their restriction in choosing relative *wh*-words. Some *wh*-words which are permitted in common FRs are not allowed in TFRs (30a-b).

- (30) a. *I will visit you on *when* we traditionally call Christmas Day.
b. *They planned to spend their holidays in *where* we now identify as the Isle of Mann.

Yoo (2008), among others, believes that *what* is the only *wh*-word that can be employed in TFRs, but as Schütze & Stockwell (2019) argue, *who* is another possible option, cf. (31a-b):

- (31) a. I once saw *who I thought was Robert Redford* at a Starbucks.
b. After the collision, Rhonda was rescued by *who she suspects was a highway patrol officer*.

(31a-b) are quoted from Schütze & Stockwell (2019: 3), with (31a) attested on the web, and (31b) constructed by the authors. They also showed the examples to 60 native American English speakers and asked them to rate the sentences on a 1 (completely ungrammatical) to 7 (completely grammatical) Likert scale. The result was that (31a-b) are rated 6.18 and 6.33 respectively, which proves the existence of *who*-TFRs.

However, the choice may be further extended. I found the following examples on the internet.

- (32) a. As it is though I was quite thrilled and humored to find *whom I think is one of the world's most accomplished living artists* in Tattoo magazine.
(<https://bit.ly/3ac3QyA>)
b. The Midwest is *where I call home* and I shall always remain interested in the development of brewing and judging there. (<https://bit.ly/2VxKoYW>)

If *who*-TFRs exist, it is not surprising to see that *whom*-TFRs are also possible (32a), though similar to the situation in common FRs, *whom*-TFRs are extremely infrequent. (32b) is indeed interesting, as to my knowledge no previous study has discussed TFRs introduced by *where*. By analogy to FRs, it is theoretically possible to find *when*-TFRs, which, unfortunately, I did not. Also, I did not encounter TFRs introduced by *how*, even in large corpora.

7.2.2.2 Number

Compared with FRs which are always singular (cf. (5a), repeated here as (33a)), number in TFRs shows more flexibility: the verb in the matrix clause agrees with the TN ((34b-c) are taken from Grosu 2003: 281):

- (33) a. What I want is a cup of tea.
- b. What seems to be a book *is* lying on the desk.
- c. What seem to be books *are* lying on the desk.

If, as Grosu (2003: 281) claims, the “syntactic number is clearly determined by the TN”, then the problem of headhood arises immediately. As we usually expect the head (of an NP) to determine the number, a natural deduction is that the TN is the head of the corresponding TFR, which contradicts the situation of common FRs: in (33a), for example, *what* is regarded (by some scholars) as the head of the FR *what I want*; but in (33b) *a book* seems more probable. As a result, a special account is needed for number agreement, or it may be argued instead that TFRs are structurally different from FRs.

7.2.2.3 Reference and category

Schelfhout et al. (2004) believe that while *what* in common FRs cannot refer to human beings, it can in TFRs (34).

- (34) *What I could best describe as my idol* kisses me. (Schelfhout et al. 2004: 1)

Example (34) is possible but rare. As discussed in Section 7.2.2.1, human reference is also possibly realised by *who*-TFRs. Moreover, as Grosu (2003) argues, *what*-TFRs can be used to denote TNs that are not NPs – AdjPs, AdvPs or clauses can be TNs as well as (35a-b) show.

- (35) a. What I think is *very helpful* is being near all these antique shops where people are thinking about their homes. (COCA: 2014_NEWS_WashPost)
b. He felt my mother was what he called *poisoning my mind*. (Grosu 2003: 283)

Again, the flexibility of *what*-TFRs poses the problem of headhood. In Section 7.2.1.2 I reviewed some cases of category matching, which are realised by *wh*-words as in (22b) and (25a), repeated here as (36a-b):

- (36) a. We should talk to *whom* he talks.
b. John will sit *wherever* he wants to sit.

The situation is quite different in TFRs, as it is not *what* but TNs that conform to the rule of category matching: in (35a), for example, the AdjP *very helpful* functions as predicative complement in both the matrix and relative clauses. Similarly, as a VP is required after the verb *was* in the matrix clause, the head of the TFR in (35b) cannot be anything else but *poisoning*.

Another piece of evidence for TNs as the loci of category matching is raised by van Riemsdijk in his coordination test ((37)-(38) are taken from van Riemsdijk 2006: 365):

- (37) a. *What I consider inconvenient* has been returned to the seller.
b. *What I consider inconvenient* is the method of payment.
(38) a. *He dislikes trains and *what I consider inconvenient*.

- b. He dislikes trains and *what I consider an equally inconvenient alternative*.

Van Riemsdijk argues that *what I consider inconvenient* has two potential readings: it can be interpreted as an FR (37a) or as a TFR (37b, which is also a pseudo-cleft). However, in (38a) the FR reading seems to be suppressed and *what I consider inconvenient* is interpreted exclusively as a TFR, resulting in the ungrammaticality of the whole sentence (because *dislike* requires a nominal object). On the other hand, the TN in (38b) is an NP (*an equally inconvenient alternative*), so there will not be problems with its syntax.

7.2.2.4 Indefiniteness

Similar to common FRs, TFRs can be in different degrees of specificity. For example, (31a) is more generic, while (31b) is best understood as specific. What is distinctive for TFRs, as van Riemsdijk (2006: 363) points out, is that “an indefinite predicate nominal expression can turn a TFR into an indefinite [i.e. more generic expression]” (39a-b).

- (39) a. *What appeared in the sky* had landed on the freeway.
b. *What appeared to be a jet airliner* had landed on the freeway. (van
Reimsdijk 2006: 363)

(39b) differs from (39a) in that (39b) cannot be explained specifically. In other words, while *what* seems to incorporate a definite use that may be interpreted as ‘the thing that’ in (39a), this specific meaning is cancelled by the indefiniteness of the article *a* in the predicate of the TFR in (39b). Therefore, *what appeared to be a jet airliner*, according to van Riemsdijk, can only be understood as ‘something that looked like a jet airliner’ instead of ‘the thing that looked like a jet airliner’.

7.2.2.5 Idiom chunks

Finally, van Riemsdijk (2000, 2006) observes that the predicate in the TFR can be an idiom chunk corresponding to the matrix clause by giving example (40a).

- (40) a. Nick *lost* what according to the dictionary are called *his marbles*. (van Riemsdijk 2006: 365)
- b. ?Nick has *kicked* what may be called *the bucket*. (Grosu 2003: 285)

This, however, is criticised by Grosu (2003) because whether the split idiom has retained its idiomatic meaning is questionable. In (40a) *lost his marbles* may have not completely lost its status as a proverb, which is probably due to the hint of the word *dictionary*, or as Grosu argues, because of the loose semantic link between the idiom chunk in the TFR (*his marbles*) and the matrix clause (*lost*). If the link is tight, as (40b) shows, the idiomatic meaning disappears – *kicked the bucket* in (40b) has only the literal meaning that Nick has struck the bucket with his foot.

7.3 Theories

Grammarians have tried to tackle the mystery of FRs for over a century. In this section I will introduce and comment on theories of FRs diachronically: early theories up to Jespersen will be discussed in Section 7.3.1, then in Section 7.3.2 I will explore the classic debate between the Head Hypothesis and the COMP Hypothesis, which has a continuous effect on subsequent approaches. Finally, in Section 7.3.3 I will talk about a few more recent theories.

7.3.1 Early theories

Jespersen (1909-1949, III: 54-55) introduces two analyses of free relatives (which he calls ‘relative clauses as primaries’ [i.e. heads]), namely ellipsis and condensation. The first view, mainly advocated by Onions (1904) and Sonnenschein (1916), believes there is an omission of the antecedent:

- (41) a. He helped to bury *whom* he helped to starve. (Onions 1904: 74, quoting Pope)
- b. Who breaks pays. (Sonnenschein 1916: 23)

For Onions, (41a) is equivalent to *He helped to bury the person/one whom he helped to starve*, with the antecedent (*the person/one*) of the relative clause (*whom he helped to starve*) dropped. Similarly, Sonnenschein (1916: 23) reasons that in (41b) “[t]he subject of the main verb ‘pays’ is not the clause ‘who breaks’ but the antecedent ‘he’, which is understood.”

Another view, advocated by Sweet (1900), regards FRs as ‘condensed relatives’. Sweet himself is a critic of the ellipsis analysis, as he thinks that *what you say is true* cannot be restored as **what you say, that is true*. Instead, he believes that “the word *what* does duty for two words at once: it stands in one grammatical relation to *say*, and in another to *is*.” In addition, “*what* unites the grammatical functions of the two words *something* and *which...*” (Sweet 1900: 42)¹² Sweet’s argument may remind us of the basic notions of FFT (cf. Section 2.2) – it is interesting to observe that the idea of syntactic ‘fusion’ is not an abrupt invention, but it has been broached from an early time.

Jespersen agrees with neither theory. He dismisses Onions and Sonnenschein for two reasons. First, he thinks antecedents can only be recovered without problems in *who*-relatives (e.g. *He who breaks pays* above). In *what*-relatives, however, recovery of antecedents is impossible as the proposed antecedents are incompatible with *what* (e.g. *I agree with that which you say, not *I agree with that what you say*) – an argument similar to that of Sweet. Second, there should not be antecedents in CFRs, i.e. free relatives with *-ever*, because pronouns like *whatever* or *whoever* are indefinite. With regard to the condensation analysis, Jespersen’s main objection is that it is not the relative pronouns but the entire FRs that function in matrix clauses. For instance, in

¹² Sweet’s concept of condensation goes beyond relative clauses. Imperatives can also be condensed. For instance, he believes that in *Come!* “subject and predicate are expressed by one word” (Sweet 1900: 41).

what you say is true the subject of the matrix clause cannot be *what* but *what you say*, as *what is true* does not make sense.

Jespersen's own analysis is as follows: first, relative pronouns such as *what* or *whoever* do not have antecedents; second, as the name 'relative clauses as primaries') suggests, "it is the clause itself in its entirety that is the subject or object" (Jespersen 1909-1949, III: 53); third, unlike previous grammarians who often regard CFRs and FRs as different constructions, Jespersen might be the first to subsume these two kinds of clauses under the same category. A problem with Jespersen's theory, however, may be that he does not make clear what role relative pronouns like *what* or *whoever* play in either matrix or relative clauses, which his predecessors do (Onions takes *what* as an ordinary relative pronoun (like *which*) in relation to an omitted antecedent, and Sweet considers it as a combination of an antecedent and an ordinary relative pronoun). We may think of Jespersen's theory as a primitive version of the later 'Head Hypothesis' (see below).

7.3.2 Two hypotheses

Studies of FRs in the second half of the 20th century basically belong to two schools: one (initiated by Bresnan & Grimshaw (1978)) advocates the so-called 'Head Hypothesis' and the other (first proposed by Groos & van Riemsdijk (1981)) insists on the 'COMP Hypothesis'. These two theories are illustrated below:

- (42) a. I will eat [NP *what* [RelClause *you give me*]]. (the Head Hypothesis)
b. I will eat [NP Ø [RelClause *what you give me*]]. (the COMP Hypothesis)

Although both acknowledge that FRs are NPs, the two theories treat *wh*-words differently: in the Head Hypothesis, *what* functions as the head of the NP (42a), and in the COMP Hypothesis, *what* is merely a relative word (a 'complementizer' occupying the position (Spec, CP) in generative grammar, see van Riemsdijk 2006: 342) of a headed relative clause which modifies an external NP head (42b). The external NP head

is either an empty element or, as Suñer (1984) proposes, a *pro*.¹³

Either approach has its pros and cons, and not surprisingly, the problems with one theory are exactly the strengths of the other. The COMP Hypothesis helps to unify FRs and headed relative clauses because it proposes that words like *what* do not significantly differ from *which*, but it cannot explain matching effects ((16d) and (21b), repeated below as (43a-b)). If the relative word only belongs to the relative clause and has nothing to do with the matrix clause, case/category matching will be unnecessary. As a result, (43a) should be absolutely ungrammatical because *whomever* cannot appear in the subject position of the FR, and (43b) should not be problematic as fronting (or pied-piping) of prepositions is allowed in all kinds of relative clauses. These predictions are clearly against the data.

- (43) a. ?She lunches with [*whomever* is going her way].
b. *We should interview [*with whom/whoever* he goes out].

On the other hand, the Head Hypothesis deals with matching effects quite well because, in (42a), *what* is the head of the NP functioning as object of the matrix clause, which means that *what* needs to express the properties (in case, number or category) of an object. The problems with (43a-b) will thus be resolved: in (43a) *whomever* fulfils the requirement of taking the accusative case, and (43b) violates grammaticality because the bracketed part is a PP (while *interview* requires an NP object). However, if *what* is the head, then we need to explain the missing relative word. This will lead to a proposal that the relative word is elliptical for some reasons, which, just as in headed relative clauses, can be recovered (44).

¹³ An interesting finding here is that it seems all modern theories have their ancestors in earlier grammars, though this is not fully acknowledged. The COMP Hypothesis looks similar to Onions (1904) and Sonnenschein (1916), and the main idea of the Head Hypothesis, as I have mentioned in the previous section, has been suggested by Jespersen (1927). A third branch, namely the multidimensional theories, can be dated back to Sweet (1900). However, none of the earlier works is cited in modern studies.

- (44) I will eat [NP what [RelClause (**which*/**that*) you give me]].

Example (44) indicates that it is simply impossible. Under the COMP Hypothesis this is easy to account for – a relative clause cannot have two relative words, or, to put it more formally, the node (Spec, CP) cannot be occupied by more than one lexical item. Also, as I observed in Section 7.1.2, the Head Hypothesis fails to answer the question why *you give me* cannot be omitted in modifier reduction. But for the COMP Hypothesis the answer is straightforward: *you give me* is not reducible because it is just part of the modifier – *what* as a complementizer is the other inseparable part.

7.3.3 Multidimensional theories

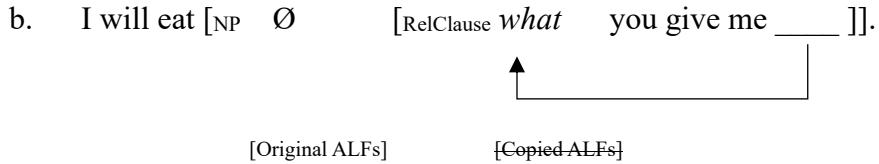
A crucial downside with both the Head Hypothesis and the COMP Hypothesis is that they are one-dimensional, i.e. they can only account for the syntactic facts in either the matrix clause or the relative clause. The significant point, it seems, is how to come up with a theory which can unite both clauses. This is the focus of more recent studies. Some choose to amend the existing hypotheses (Section 7.3.3.1), while others (Parallel Merge in Section 7.3.3.2 and Graft Theory in Section 7.3.3.3) propose new solutions that transcend the restrictions of mainstream syntactic theories.

7.3.3.1 Compromise approaches between the two hypotheses

It seems that fewer scholars are alone supporting either hypotheses. Recent studies attempt to combine the Head Hypothesis and the COMP Hypothesis because they “want the best of both hypotheses” (Stockwell 2018: 6). The keywords of the improvements are ‘movement’ and ‘rearrangement’, which are shown in (45a-b).

- (45) a. I will eat [NP *what* [RelClause you give me ____]].





Studies such as Izvorski (2000) and Donati & Cecchetto (2011) believe movement plays an important role: in (45a) *what* moves from the relative clause object position (Donati & Cecchetto (2011: 521) call this process ‘labelling’) and lands in the head position. Or, as in Assmann (2013), *what* lands in the complementizer position of the relative clause with a copy of argument licensing features (ALFs) which are checked with the original ALFs in the external nominal head Ø, and then this copy is deleted. No matter which specific theory is proposed, it is clear that efforts are made to blur the boundaries between heads and relative words (i.e. complementizers), so that the serious problems of both original hypotheses can be avoided.

7.3.3.2 Parallel Merge

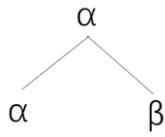
Citko (2000, 2005) devises a mechanism called ‘Parallel Merge’ to account for FRs and ATB [‘Across-the-Board’] *wh*-questions. ATB questions are questions “involving what looks like simultaneous extraction of a *wh*-element from two (or more) conjuncts” (Citko 2005: 479), e.g. *What did John recommend and Mary read?*). According to minimalist theory, Merge (or ‘External Merge’) usually occurs between two elements, following paradigm (46) (Chomsky 1995: 223). Its two realisations are shown in (47a-b) and plotted as (48a-b).¹⁴

$$(46) \quad K = \{ \gamma, \{ \alpha, \beta \} \}, \text{ where } \alpha, \beta \text{ are objects and } \gamma \text{ is the label of } K.$$

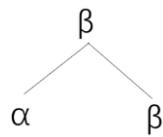
- (47) a. $K = \{ \alpha, \{ \alpha, \beta \} \}$
- b. $K = \{ \beta, \{ \alpha, \beta \} \}$

¹⁴ In the following representations ‘K’ means a particular construction and the Greek letters represent different nodes.

(48) a.



b.



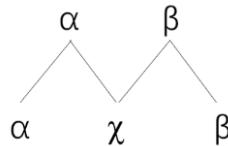
Parallel Merge is more complicated because it involves more inputs and labels. Its paradigm, as Citko (2000: 30, 2005: 476) presents it, is shown in (49), and one of its many realisations is illustrated in (50a-b).

(49) $K = \{ <\delta, \varepsilon>, \{ \alpha, \beta, \chi \} \}$, such that

- (i) binary branching is observed
- (ii) χ is simultaneously a sister of α and β

(50) a. $K = \{ <\alpha, \beta>, \{ \alpha, \beta, \chi \} \}$

b.

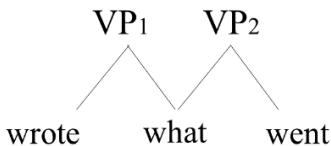


Parallel Merge allows a *wh*-word to appear in a position that is dominated by both the matrix clause and the relative clause. (52a-b) represent the structure of (51a-b), which were originally (7b) and (16a).

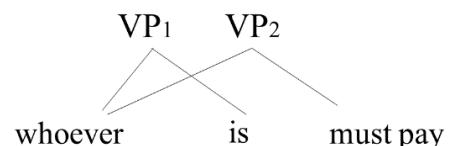
(51) a. What she wrote went into trash.

b. Whoever is responsible for the damage must pay for it.

(52) a.



b.



7.3.3.3 Graft Theory

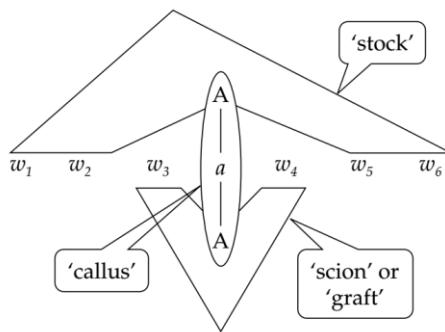
The origin of Graft theory is attributed to Lakoff (1974), who discusses a structure named ‘syntactic amalgam’ (53).

- (53) John is going to, I think it’s Chicago on Sunday.

Recalling the discussion in Section 7.2.2, it is not difficult to find that syntactic amalgams are rather similar to ‘transparent free relatives’ (TFRs). The major difference is that what is embedded in the matrix clause of (53) is not an FR but a parenthesis. Graft Theory, according to van Riemsdijk, is especially effective and succinct in explaining syntactic amalgams and TFRs, although it can also account for common FRs.

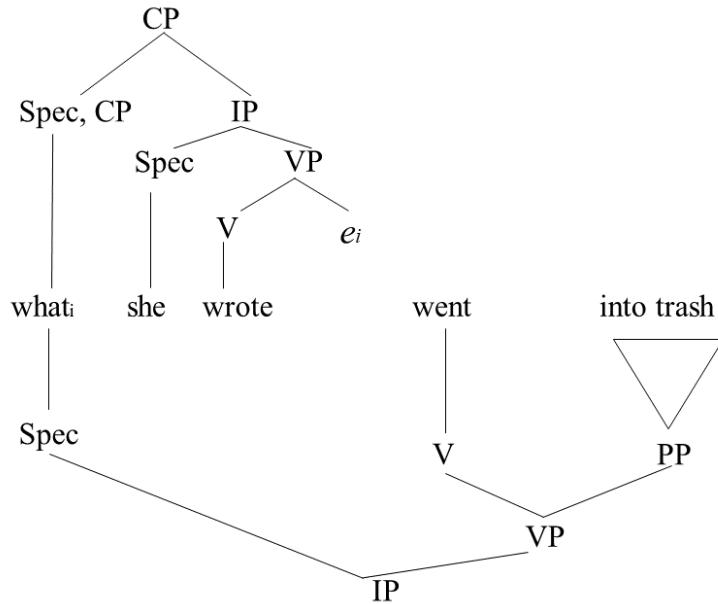
Graft Theory proposes that the matrix clause and the relative clause are grafted together like plants: an element which takes up a certain function in the matrix structure also fills a slot in a distinctive, subordinate structure. Adopting terminologies from botany, the author names this element ‘callus’, and the matrix and relative clauses are termed as ‘stock’ and ‘scion’ respectively. van Riemsdijk (2006: 370) draws a picture for this relationship:

- (54)



An analysis of the FR *What she wrote went into trash* (51a), based on Graft Theory, is shown below (55).

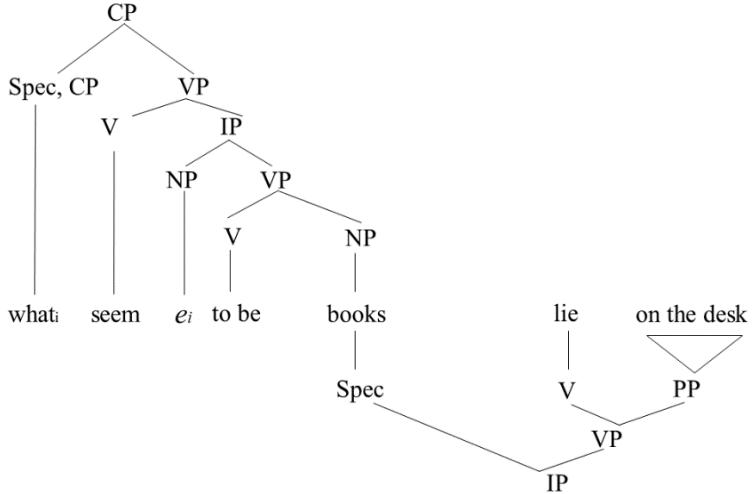
(55)



Similar to what is indicated by Parallel Merge, Graft Theory predicts that *what* (the ‘callus’) functions as a link between the matrix clause (*what went into trash*) and the relative clause (*what she wrote*) and thus has a position in both clauses, which is the reason why it shows matching effects.

Concerning TFRs, however, van Riemsdijk gives a rather distinctive analysis – he believes that the callus in a TFR is not the *wh*-word, but the ‘transparent nucleus’ (TN, cf. Section 7.2.2). Therefore, *What seem to be books lie on the desk* is analysed as follows:

(56)



Van Riemsdijk argues that this analysis is supported by abundant evidence. For instance, the number agreement between *books* and *lie* (cf. Section 7.2.2.2) indicates that *books* also belongs to the matrix clause. The fact that TNs can be phrases other than NPs, including AdjPs, AdvPs and VPs (cf. Section 7.2.2.3) suggests TNs to have a unique status as well. Furthermore, the sense of indefiniteness revealed in TFRs (cf. Section 7.2.2.4) is also a strong argument that TNs are the shared elements.

7.3.3.4 Comments on Parallel Merge and Graft Theory

While (it is quite likely that) Parallel Merge and Graft Theory are devised independently, they bear much resemblance as they acknowledge multi-dominance. As Citko (2005: 476) remarks:

The existence of **External Merge** and **Internal Merge** predicts the existence of a third type, **combining the properties of both**. This third type, which I will refer to as *Parallel Merge*, is like External Merge in that it involves two distinct rooted objects [...], but it is like Internal Merge in that it combines the two by taking a subpart of one of them... (emphasis added)

Van Riemsdijk (2010: 292) makes a very similar claim:

Observe now that Graft is merely a **combination of internal and external**

Merge...There is no question that Merge in the most general sense is an extremely powerful device. (emphasis added)

The same theoretical outlook suggests that Parallel Merge and Graft Theory are like the two faces of Janus.¹⁵ The advantage of multidimensional theories is obvious: the mystery of FRs can be neatly explained as the requirements that both the matching effects and the position (Spec, CP) are fulfilled. Moreover, both theories have been extended to more constructions than FRs: for instance, Citko (2000, 2005) talks about ATB *wh*-questions, and van Riemsdijk (2010: 291) deals with some complex NPs (e.g. *a far from simple matter*). There is also evidence from the study of complex numeral expressions in several languages (Meinunger 2015) and German FRs (Bergsma 2019) that supports Graft Theory.

Nevertheless, the multidimensional theories are also controversial. A strong objection to van Riemsdijk's analysis of TFRs comes from Grosu (2014, 2016), for whom the most serious problem related to English TFRs is that regarding TNs as the shared elements can cause semantic misinterpretation. Consider the following examples (extracted from Grosu (2016: 1254)):

- (57) a. Bill is speaking with what seems to be a policeman.
- b. Bill is speaking with a policeman, or so it seems.
- (58) a. Bill is speaking with what he thinks is a werewolf.
- b. Bill is speaking with a werewolf, at least, he thinks so. (=58a?)
- (59) a. Bill is speaking with what can't possibly be a policeman.
- b. #Bill is speaking with a policeman, but it can't possibly be one. (=59a?)

According to the views that TNs are the semantic cores of both clauses (Grosu dubs them ‘pivot-as-head approaches’), (57a) can be interpreted as (57b). But when

¹⁵ Although both theories are quite similar to ‘Fusion of Function Theory’ (FFT) by Huddleston & Pullum et al. (2002) (see the previous discussion in Section 2.2) the authors of ‘Fusion of Functions’ do not presume a process of ‘Merge’. I will continue the discussion of FFT on FRs in Section 7.3.3.5.

properties of TNs or predicates of the relative clauses change, TFRs can be difficult to paraphrase. For those who do not believe in the existence of werewolves, Grosu argues, (58a) is still felicitous, but (58b) is not (Bill cannot ‘speak with a werewolf’). (59b), where negation is included, can be even more problematic, as the two propositions are self-contradictory. However, the situations can be significantly improved if we paraphrase (58a) and (59a) as *Bill is speaking with something which he thinks is a werewolf* and *Bill is speaking with someone who can't possibly be a policeman* respectively. Under the latter interpretation, we need to think of *wh*-words, instead of TNs, as heads.

Grosu’s (2007, 2010, 2014, 2016) own analysis is as follows:

- (60) Bill is speaking with [_{NP} Ø_D [_{RelClause} what seems to be a policeman]].¹⁶

Grosu (2016: 1251) reasons that his “primary motivation was to maintain the simplest possible structural assumptions for TFRs, making use of structures and principles that are independently needed for FRs”. (60) is indeed very similar to the classic representation of the COMP Hypothesis, except that the empty element is clearly stated as a determiner (D).¹⁷ This ‘indirect approach’ (i.e. TNs are only semantically central to the relative clauses, but the syntactic cores are *wh*-words) nonetheless faces theoretical obstacles which are unproblematic for its ‘pivot-as-head’ counterparts, such as reference concord (cf. 7.2.2.3), number agreement (cf. 7.2.2.2) and cancellation of definiteness (cf. 7.2.2.4).

To tackle the first problem, Grosu (2016: 1256) imagines that an ‘intensional operator’, functioned by certain lexical items (e.g. *seems* in (57a), *thinks* in (58a) and *can't possibly* in (59a)) transmits the meaning of the TN to the *wh*-word. An advantage of this device is that the transmission only applies within the relative clause, leaving the matrix clause unaffected, and therefore misinterpretations like (59b) will be avoided.

¹⁶ The original representation is ‘Bill is speaking with [_{DP} Ø_D [_{CP} what seems to be a policeman]].’ But I made some modifications here to maintain consistency in terminology.

¹⁷ Obviously, Grosu adheres to the DP Hypothesis, which takes D as the head of DP/NP.

As for the latter two problems, Grosu (2010: 169) argues that the number of the *wh*-words, especially of *what*, is indeterminate. In FRs *what* is exclusively singular (cf. 33a) because “syntactic singularity appears to be no more than a default value”, and it may be “neutralized in an equational copular configuration [i.e. the relative clause in a TFR]”. Reconsider the following examples ((33b-c), repeated here as (61a-b)):

- (61) a. What *seems* to be a book *is* lying on the desk.
- b. What *seem* to be books *are* lying on the desk.

It is quite likely that it is not *book/books*, but *what* that determines the choice between *is* and *are*, because the verb *seem/seems* in the relative clauses also shows number difference (verbs only agree with subjects). Therefore, a more plausible route is that the syntactic features are ‘conveyed’ to *what*, which then decides the form of *seem/seems* (Grosu 2010: 169-170), i.e. *book* → *what* → *seems* and *books* → *what* → *seem*. Similarly, genericity (expressed either by the indefinite article *a/an* (61a) or the plural marker *-s* (61b)) can also be transmitted through this path. Therefore, for Grosu, both semantic and syntactic characteristics can be transferred, via different operators, up to the *wh*-word.

Moreover, there is still an issue Grosu does not deal with: van Riemsdijk’s coordination test ((62a-b), copied from (37a-b)).

- (62) a. *He dislikes trains and *what I consider inconvenient*.
- b. He dislikes trains and *what I consider an equally inconvenient alternative*.

In fact, I believe that this coordination test is not convincing enough. The problem of (62a) for me is that the ungrammaticality is due to the fact that the FR reading is much less accessible than the TFR reading. This could be related to the implicature of expressions like *I consider*, *he takes as*, *seems to be*, etc. (which favour the TFR reading), and may also be context-specific. Take (63a), which I found on the internet, as an example.

- (63) a. If you have ever been around small children, you will know that they have uncensored a view of life. They are wide-eyed, open, curious, and completely unjaded by [life and what *is* “appropriate”].
[\(https://bit.ly/2Vu5AiD\)](https://bit.ly/2Vu5AiD)
- b. ...They are wide-eyed, open, curious, and completely unjaded by [life and what *seems to be/adults consider* “appropriate”].

While (63a) is grammatical, (63b), with the original *is* being replaced by *seems to be* or *adults consider*, does not significantly deteriorate. Also, we can make this replacement in an opposite way: by substituting *is* for *I consider*, we create a new sentence (64).

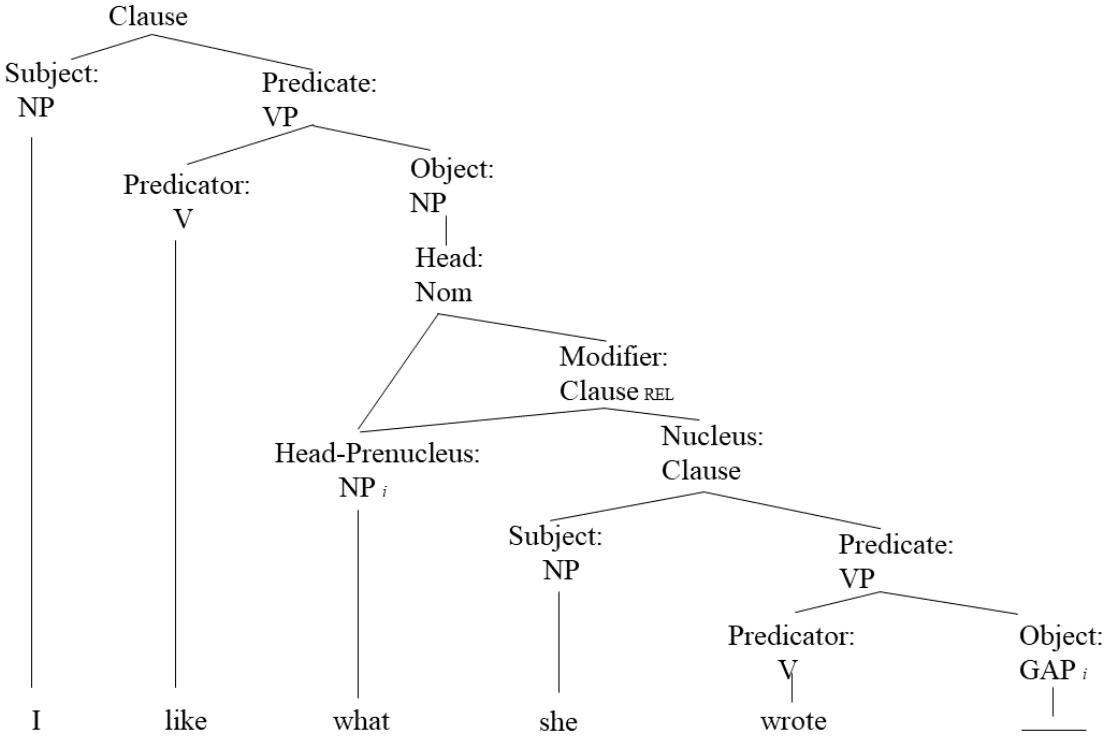
- (64) ?He dislikes trains and *what is inconvenient*.
- (65) a. *What is inconvenient* has been returned to the seller.
- b. *What is inconvenient* is the method of payment.

Note that *what is inconvenient* still has two readings (65a-b), but (64) is slightly better than the original sentence. Hence, the problem with (62a) may not be simply attributed to the TN as the head, but is more likely a consequence of multiple factors. This flawed coordination test could be another problem with van Riemsdijk’s analysis of TFRs – although this is not mentioned in Grosu’s critiques.

7.3.3.5 ‘Fusion of Functions’ and FRs

Free relatives are a significant construction analysed in both Huddleston & Pullum et al. (2002) and Payne et al. (2007). A typical representation of *I like what she wrote*, following FFT, is shown below:

- (66)



As we can see from (66), the fusion occurs in *what*: it represents a fused function called ‘head-prenucleus’ (‘prenucleus’, in the framework of Huddleston & Pullum et al., is a function label used for a relative word positioned before the ‘nucleus’, i.e. the remaining part of the relative clause). In more general terms, *what* is a fusion of the antecedent (which is also the head of the relative clause) and the relative word. Therefore, the ‘head-prenucleus’ looks quite similar to the ‘callus’ in Graft Theory (although Huddleston & Pullum et al. do not see the ‘head-prenucleus’ as a result of a ‘merging’ process, cf. fn.14), which makes FFT a member of multidimensional theories just like Graft Theory and Parallel Merge.

Compared with the fusions I introduced in previous sections, there is an enormous difference in the fusion taking place in FRs: we are dealing here with a clausal, rather than a phrasal, construction. While in the NP *the rich* the modifier is a word (i.e. *rich*), in the FR *what she wrote* the modifier is a clause, whose major part is obviously unaffected by fusion. Payne et al. must have been aware of this theoretical obstacle, as they create a new type of fusion: ‘fused head-IDOID’, where IDOID means ‘an immediate dependent of an immediate dependent’. In the case of *I like what she wrote*,

the first ‘immediate dependent’ refers to *what*, and the second is *what she wrote*. In other words, the function of head indirectly fuses with a dependent further down in the relative clause, associated with the GAP position. The following Figure 7-1 illustrates this complex case:

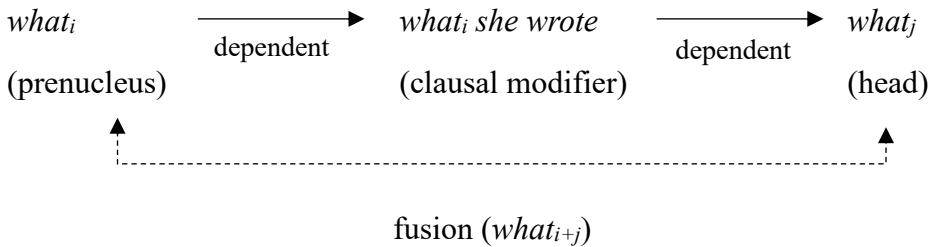


Table 7-1 An illustration for ‘fused head-prenucleus’.

As I argued in Chapter 2, ‘fused head-IDOID’ looks like an *ad hoc* construct – something tailored just for FRs. Payne et al. (2007) envisage that there are two subtypes of this complex fusion, namely ‘fused head-IDOID’ and ‘fused IDOID-head’, with the difference lying in the relative position between head and IDOID. But in English the second subtype does not exist, and the first subtype actually contains only one case (i.e. FRs). Recall that within the ‘fused head-dependent’ family, which consists of a wide range of members from determiners to modifiers, the ‘fused head-IDOID’ seems quite special and detached from other kinds of fused constructions. Also, the theory of ‘fused head-IDOID’ is undermined by its complexity, especially compared with other multidimensional theories like Graft Theory or Parallel Merge, which do not require additional configurations apart from multi-dominance.

“The most striking advantage” of FFT, according to Payne et al. (2007: 576), is that it solves the problem of matching effects with ease. However, this, as I just argued in the previous section, is a major advantage for all multidimensional theories. Or to be more precise, this is a merit of multi-dominance: syntactic features must be matched in some ways if we assume two separate clauses (i.e. the matrix clause and the relative clause), but if the two are bridged by a single construction which carries all the features, the problem of ‘matching’ immediately disappears. Hence, as long as a theory adopts

multi-dominance, it is capable of addressing matching effects.

Since all multidimensional theories admit multi-dominance as their core configuration, the criticisms posed on Graft Theory, as introduced in the previous section, will also be a problem for FFT, although FFT can account for most FRs in a “clear and systematic” manner (Payne et al. 2007: 573). Another possible ‘threat’ to FFT is the analysis of *where*-FRs. Caponigro & Pearl (2008) distinguish two kinds of *where*-FRs (the following (67a-b) are adapted from Caponigro & Pearl (2008: 4)):

- (67) a. Lily adores [NP *where* this very tree grows __].
b. Lily napped [PP *ep where* this very tree grows __]. (*ep* = empty preposition)

Caponigro & Pearl argue that *where* is always of nominal nature, functioning as head of the NP *where this very tree grows* which is licensed by the transitive verb *adores*. But when the matrix clause has an intransitive verb (in this case it is *napped*) and therefore an adjunct is required, *where this very tree grows* becomes the nominal complement of an empty preposition, which functions as head of the PP adjunct. It is (67b) that causes trouble for FFT. If Caponigro & Pearl are correct, then we will have an empty preposition *ep* and a noun *where* functioning respectively as ‘head’ and ‘prenucleus’ (rather than a fused ‘head-prenucleus’). In other words, (67b) is not a fused construction but an ordinary relative clause. This is clearly against Huddleston & Pullum et al.’s assumption, as in their framework all FRs are analysed as fused constructions. However, (67b) proves to be an exception to this generalisation.

It is worth noting, however, that this is more of a clash between theories rather than a clash of facts. Emonds (1987), the theoretical basis of Caponigro & Pearl, proposes the so-called ‘Invisible Category Principle’, from which he argues that the deep structure of the ‘adverbial NP’ (i.e. NPs as adjuncts) is the combination of an empty preposition and its NP complement (cf. Emonds 1987: 617). Obviously, Huddleston & Pullum et al. would not accept it, as they do not endorse empty categories in general. As I mentioned in Chapter 1, they impose a strict demarcation between word class and function, and the two concepts are not absolutely correlative. Therefore, the adverbial

(adjunct) function can be realised not only by adverb phrases or preposition phrases, but also by noun phrases. This means that in Huddleston & Pullum et al.'s framework, we will not have (67a-b), but a unified (68):

- (68) Lily adores/napped [NP *where* this very tree grows __].¹⁸

The difference only lies in whether *where this very tree grows* functions as object or adjunct. Hence, I think it is only a ‘threat’ to some extent, if we abide by Emonds’ framework, but not Huddleston & Pullum et al.’s. Within their own framework FFT is generally self-contained.

7.4 Rethinking multidimensional theories

In this final section I will explore some issues regarding multidimensional analyses. They are not the mainstream theories which prevailed in the previous century, discussed above, but in explaining constructions like FRs they may enjoy some advantages such as simplicity and the capability of accounting for various syntactic properties. In this section I will raise some arguments in favour of multidimensional theories. I will first discuss how multidimensional theories can be improved for analysing TFRs in Section 7.4.1, and in 7.4.2 I will discuss *wh*-words as relative determinatives, a phenomenon which could be easily explained by multidimensional theories. Finally, in Section 7.4.3 I will briefly discuss multidimensional theories from a historical perspective.

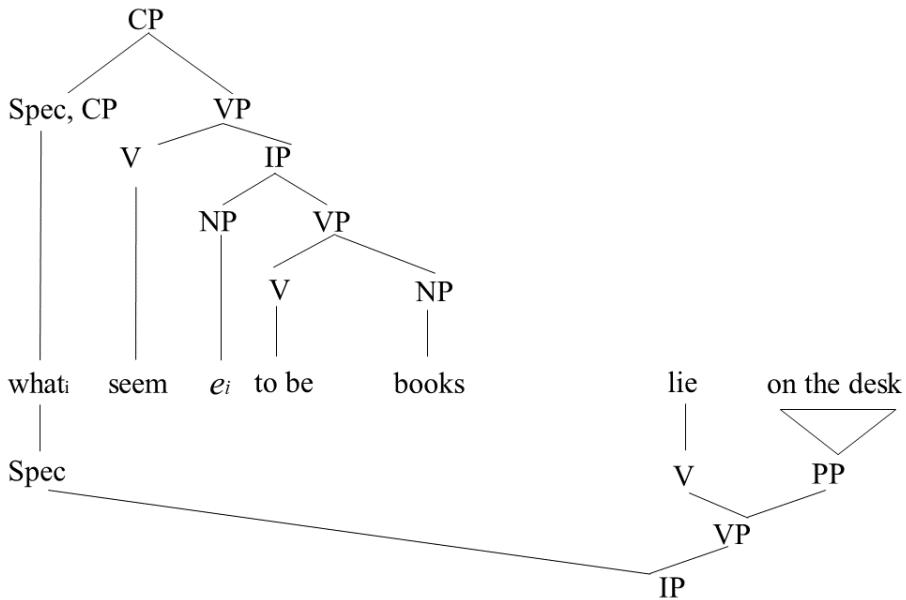
7.4.1 Improving the analysis of TFRs

In Section 7.3.3.4 I discussed how Grosu argued against van Riemsdijk’s way of

¹⁸ In fact, this analysis is not in conformity to Huddleston & Pullum et al.’s original theory, because they always take *where* as a preposition. But in Chapter 3 and elsewhere I already argued for the nominal nature of *where*.

analysing TFRs,¹⁹ using persuasive arguments.²⁰ However, he does not explicitly oppose Graft Theory, or any other multidimensional theory, as long as TFRs are analysed ‘indirectly’, i.e. TNs are mediated by *wh*-words. In fact, Graft Theory is compatible with indirect approaches – what I suggest is to dismiss (56), where the TN is the callus, in favour of the kind of representation in (55) where the *wh*-word is the callus. If we do so we can analyse *What seem to be books lie on the desk* as in (69).

(69)



Analysis (69) suggests that the analysis of TFRs is hardly different from that of FRs, in conformity with van de Velde’s (2011) argument that TFRs are mutations of FRs.²¹ Another fact that relates TFRs to FRs is that many of the *wh*-words used in FRs are permitted in TFRs as well. It is usually claimed (including by van Riemsdijk and Grosu)

¹⁹ There are other theories which analyse TNs as shared cores, though the other issues are handled differently. For instance, van de Velde (2011) regards the non-TN parts of the relative clauses as ‘conglomerated modifiers’, e.g. [NP *what seem to be* [N *books*]], where *what seem to be* is the modifier of *books*. Grosu classifies all these theories as ‘pivot-as-head approaches’, which he argues against as a whole.

²⁰ Van Riemsdijk seems impervious to Grosu’s critiques. In van Riemsdijk (2017), his latest article on free relatives, he insists on analysing TNs as the ‘calluses’.

²¹ Nevertheless, van de Velde believes that TFRs, though originated from FRs, are completely different constructions (cf. fn. 10). He argues that this is accounted for by reanalysis (see van de Velde 2011: 404).

that only *what* can be used in TFRs, but as I have discussed in Section 7.2.2.1, Schütze & Stockwell (2019) show that *who* is also allowed. I further argued in that section that *whom* and *where* are possible, and in fact the list might be even longer. This suggests that TFRs and FRs may be more similar than they appear to be. And finally, adopting an analysis like (69) can “maintain the simplest possible structural assumptions”, as Grosu (2016: 1251) hopes.

Compared with Grosu’s approach shown in (60), (69) may be more advantageous. The reason is that as a slightly different version of the COMP Hypothesis, Grosu’s analysis does not presume the fulfilment of matching effects (van Riemsdijk and others do, but they think the elements fulfilling matching effects are TNs, which is argued against by Grosu). Grosu might say that matching effects are irrelevant, given the fact that *what* does not show any kind of inflection. However, this is misguided if we look at some examples that contain *wh*-words other than *what*, such as the following (70a) (copied from (32a)).

- (70) a. As it is though I was quite thrilled and humored to find [*whom* I think is one of the world’s most accomplished living artists] in Tattoo magazine.
- b. ?[*Whom* I think is one of the worlds most accomplished living artists] is found in Tattoo magazine.

In (70a) the *wh*-word *whom* functions as subject in (part of) the relative clause (*?I think whom is one of the world’s most accomplished living artists*), but there is obviously a mismatch in the case of this item. This could only be explained if *whom* also has a role in the matrix clause, where it is an object (*to find whom*). If, as Grosu argues, TFRs are self-contained constructions that are not affected by the matrix clauses, how can he explain attested examples like (70a)? Moreover, if we move *whom* together with the whole TFR to the subject position, the whole sentence becomes less acceptable (70b). (70a-b) indicate that there is indeed something shared between the matrix and the relative clause, although these elements are not TNs, but *wh*-words.

7.4.2 Wh-words as relative determinatives

In this section we focus on another special kind of FRs. They are exemplified as follows

(71):

- (71) But they agreed at a meeting on Saturday that they would *take whatever steps* were necessary to protect their colliery. (BNC: K5M)
- (72) a. But they agreed at a meeting on Saturday that they would *do/*take whatever* was necessary to protect their colliery.
- b. But they agreed at a meeting on Saturday that they would *take whatever of the steps* were necessary to protect their colliery.

In (71) the *wh*-word *whatever* functions as the determiner of *steps*. Note that while it can be argued that in (72a-b) *whatever* can be analysed either as the head (i.e. the Head Hypothesis) or the relative word corresponding to an empty NP head (i.e. the COMP Hypothesis), in (71) *whatever* does not enjoy any independence and can only be the dependent of the noun *steps*.

This kind of FR is interesting because it is more ‘transparent’ than TFRs. On the one hand, *steps* is special as it seems to belong to both the matrix and the relative clause: while there is no doubt that *steps* is part of the relative clause *whatever steps were necessary to protect their colliery*, it is also licensed by the verb *take*. This becomes obvious in (72a): if we remove *steps*, then *take* looks inappropriate as well. Another piece of evidence is number agreement (73a-b):

- (73) a. Whatever *leisure* the holidays had promised *was* now ended. (BNC: A6N)
- b. Whatever *risks* she took in her career *were* calculated ones. (BNC: G1W)

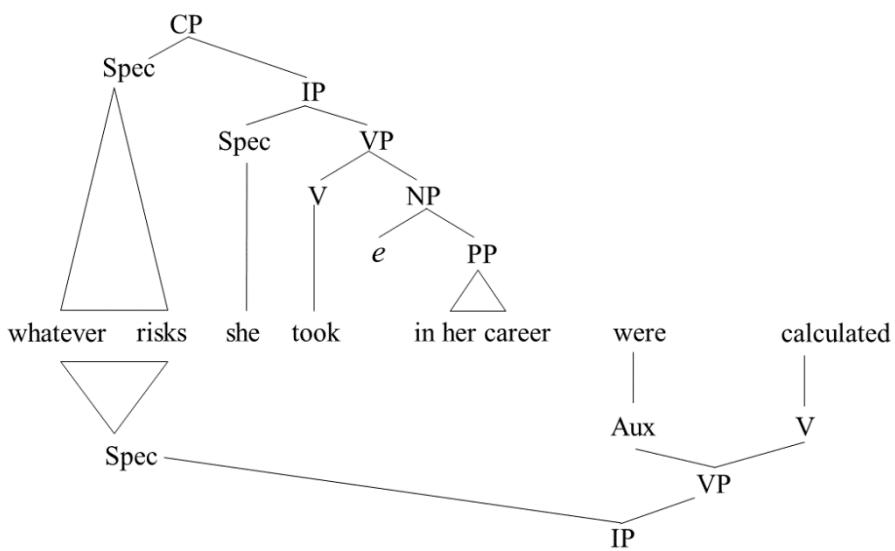
In this sense, *steps* in (71) is rather similar to TNs of TFRs as it affects both clauses semantically and syntactically.

On the other hand, *steps* differs from TNs because it and the relative determinative

whatever form a single ‘D + N’ constituent. Recall from Section 7.3.3.4 that in TFRs Grosu argues that there is a so-called ‘equational copular configuration’ which transmits syntactic properties of TNs to *wh*-words, e.g. in *what seems to be a book* the singularity of *a book* is passed on to *what*, which then takes effect on the external matrix clause. However, in (71) this is impossible simply because *whatever steps* is already joined together – there is no room for equational configuration. In other words, all ‘indirect approaches’ are not workable for FRs like (71).

Therefore, while classic theories struggle with matching effects, relative clauses like (71) put forward an even more severe challenge: we are not dealing with matches of syntactic properties between (probably empty) antecedents and relative words, but the possibility that antecedents and relative words in these FRs are part of, or have blended into, an inseparable ‘D + N’ construction. Of course we can come up with new devices for this problem, but for me the easiest way of elucidation is to assume that ‘D + N’ is shared by both clauses. A representation of (73b), based on Graft Theory, is shown in (74).²²

(74)



²² The analysis is still subject to refinement. I will discuss the syntax of *-ever* in Chapter 8.

7.4.3 Some remarks on the development of FRs

A typical example of one of the two types of Old English FRs is shown as follows (taken from Allen (1980: 276), also quoted by Harbert (1983: 549)).

- (75) ðæt is, ðæt man for-gife, ðam ðe wið hine
 that is, that one forgive, him that against him
 gegylte.
 sins
 ‘that is, that one₂ forgive him₁ who sins against him₂.’

An interesting characteristic of *ðam ðe* in (75) is that the dative case of *ðam*²³ is required by the verb *for-give* in the matrix clause rather than the verb in the relative clause, because as the subject in the relative clause it should be in nominative case (*se*). Allen (1980: 277) reasons that “[t]he most straightforward analysis of this type of relative is that it is simply a *ðe*-relative with a demonstrative pronoun head.” In other words, *ðam ðe* is better analysed as ‘pronominal antecedent + relative word’, which in fact does not differ from that of headed relative clauses. As Harbert (1983: 550) summarises, “[o]ne might conclude more generally from these facts [i.e. Allen’s observations including (75)] that OE did not allow RCs [i.e. relative clauses] without overt heads”. If we regard *ðam* as an overt antecedent, then we have to admit that *ðam* (antecedent) and *ðe* (relative word) belong to the matrix clause and the relative clause respectively (76).

- (76) ðæt is, [MatrixClause ðæt man for-gife, *ðam*] [RelativeClause *ðe* wið hine gegylte].

In Middle English, *wh*-words began to appear in different kinds of relatives

²³ In (73) *ðam* is translated by Allen as ‘him’, but literally it is the dative case of *se*, which is roughly equivalent to the Modern English ‘that’.

(including FRs):

The greatest change in the ME period is the introduction of the *wh*-relative. In OE *wh*-pronouns (or rather their etymological equivalents in *hw*-) were used as interrogatives and as generalizing, indefinite pronouns, but never as relatives... The use of *wh*-relatives ([*the*] *which* [*that*], *whom*, *whose*) dates from the beginning of the ME period but became really frequent only in eModE. (Fischer et al. 2017: 102)

Fischer (1992) suggests that *wh*-words gradually became relative words in early ME period while *se ðe* faded with Old English. A side-effect of the rise of *wh*-words and the fall of *se ðe* is that the original functions of antecedent and relative word, realised by *se* and *ðe* respectively, concentrate in a single element (i.e. the *wh*-word). Note that in (75) Allen translates the original text into a headed relative clause *that one forgive him who sins against him*, but if we do the translation strictly and make it a Modern English FR, we would get an odd sentence (77).

- (77) ?That is, that one forgives *who(m)* sins against him.

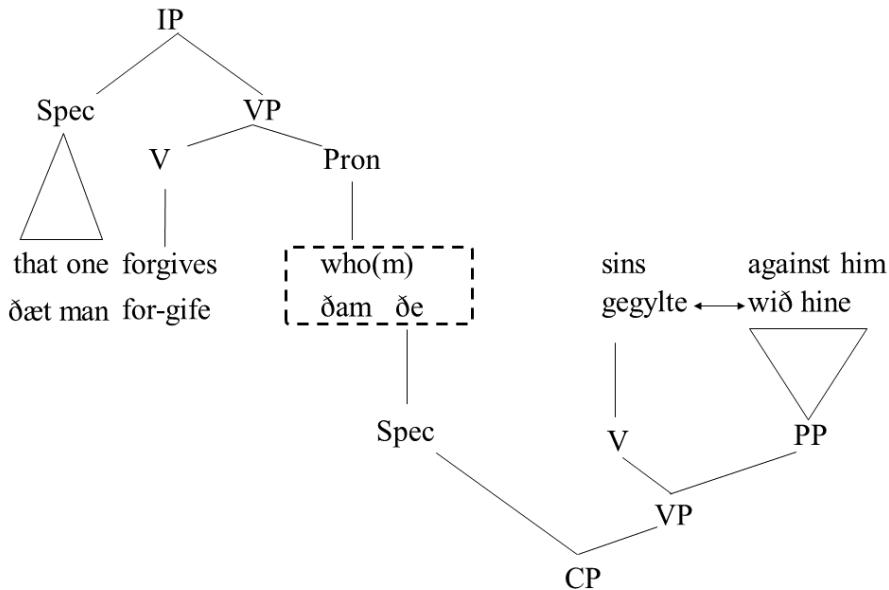
There is a problem that does not occur in the OE counterpart: (77) suffers from a case mismatch. This does not happen in (75) because we have two elements realising different functions (antecedent and relative word). However, in (77) both semantics and syntactic functions need to be realised by the same element – the relative word *who(m)*. Therefore, I believe that multidimensional theories can be justified from a historical perspective: *wh*-words in FRs behave multidimensionally because they absorb the properties of two elements which have distinctive semantics and syntax in OE.²⁴

²⁴ Another possible account is to assume that *what* is not a substitute, but a blend of *se ðe*, according to a formal theory which proposes syntactic blending, rather than multi-domination (Wescoat 2002). Using Wescoat's way of representation, we can divide the blend *what* into two parts: *what_a* and α . The sentence *I will eat what you give me* will then be analysed as follows:

(i) I will eat [NP *what_a* [Relclause α you give me]].

In (78) I show the structure of both (75) and (77) (without *ðæt is/that is*) based on Graft Theory.

(78)



7.5 Conclusion

In this chapter I explored the syntax of free relative clauses. I started with the differences between FRs and clausal constructions (including headed relatives and interrogatives), especially the status of FRs as noun phrases, which make them another example of English ENPs. Then I discussed some syntactic properties of FRs, such as the matching effects. A special kind of FRs, namely ‘transparent free relatives’ (TFRs), was also studied in detail. Various theories, from early accounts to the debate between the Head Hypothesis and the COMP Hypothesis, were introduced. Among those theories, the multidimensional approaches (including Parallel Merge and Graft Theory)

The blending approach is advantageous in explaining why *what* appears in FRs but not in headed relatives: blending is only blocked due to the presence of overt nominal antecedents. In other words, *what* = *that which*. However, with regard to other *wh*-words, the blending approach could be less effective. For example, although we can say that in headed relatives *who* is a single lexical item and in FRs *who* breaks down into *who_a* and *a*, how could they be distinguished since the two words are superficially identical?

have been developed and continuously improved in recent years. Finally, in the last section I talked about some issues which favour multidimensional theories: TFRs and another subset of FRs (FRs with relative determinatives) can be neatly accounted for by those theories, and evidence from the historical development of FRs is also in support of them.

In the next chapter I will discuss conditional free relatives (CFRs).

8. Conditional Free Relatives

8.1 Introduction

In Chapter 7 I discussed free relatives and one of its most researched subtypes, namely transparent free relatives. In Section 7.4.2 I also used an example *They would take whatever steps were necessary to protect their colliery* to illustrate *wh*-words as relative determinatives. Note that in this example the *wh*-word is *whatever*, instead of *what* which was the focus of Chapter 7. This chapter will continue the discussion of free relatives, with an emphasis on the ones whose *wh*-words consist of the morpheme *-ever* – a type termed as ‘conditional free relatives’ (CFRs) by Baker (1995). In what follows I will first describe the syntax and semantics of CFRs (8.2), in which I will differentiate two types of CFRs (*wh-ever* clauses and *wh-soever* clauses) and also two semantic readings (the universal reading and the definite reading). The ensuing sections are organised around this differentiation: Section 8.3 and 8.4 discuss the differences between *wh-ever* clauses and *wh-soever* clauses, respectively, from a historical and a syntactic perspective, and in Section 8.5 I will provide a syntactic solution to the two semantic readings.

8.2 The syntax and semantics of CFRs

8.2.1 The syntax of CFRs

CFRs differ from common FRs in that their *wh*-words contain the suffix *-ever*. But the syntactic influences caused by *-ever* seem less distinctive than the morphological and semantic ones (which will be discussed in Section 8.2.4): first, with one exception (namely *why*), there is always a *wh-ever* word corresponding to an ordinary *wh*-word; second, CFRs maintain the same syntactic properties (gender, number, etc.) as their corresponding FRs, which means that, if semantically acceptable, *wh-ever* words can

substitute for ordinary *wh*-words without causing ungrammaticality, as (1a-b) (originally (5e), (5g) in Chapter 7) show:

- (1) a. You can call me *what/whatever* you like.
- b. You should vote for *which/whichever* candidate you think best.

Relative words allowed in CFRs include *whatever*, *whichever*, *who(m)ever*, *whenever*, *wherever* and *however*. **Whyever* does not exist. Also, Baker (1995: 210) asserts that *whose* does not have a corresponding -ever form, as neither *whosever* nor *whoever's* is legitimate. This is clearly not true, because both words can be attested in corpora (2a-b).¹

- (2) a. Or we can decide by *whoever's name* is closer to the word ‘phone’.
(COCA: 2001_TV_Friends)
- b. *Whosever pole* lands the straightest and farthest wins. (COCA:
1992_NEWS_CSMonitor)

Therefore, it seems that CFRs are hardly syntactically distinctive from FRs, as most researchers would agree. However, a few studies, especially Donati & Cecchetto (2011), do not subsume CFRs in the category of FRs. Instead, they regard CFRs as a special kind of headed relative clauses (which they call ‘full relatives’). I will not introduce their arguments here, as Caponigro (2019) has convincingly argued against this classification and defended the status of CFRs. I only want to comment on some of the

¹ Baker argues that one reason why *whosever* or *whoever's* is impossible is that it causes ambiguity in free relatives. In the following example, “it is unclear whether it is the dog or the dog's owner that has to make a trip to the pound” (Baker 1995: 211).

(i) ?Whoever's dog bit your mailman will have to make a trip to the pound.

This is hardly convincing, as it has little to do with -ever: even if we replace *whoever's* with *whose*, the problem remains. Moreover, as (2b) suggests, it seems that the interpretation often favours the owner (i.e. the person wins, not the pole). Thus it is more likely that in (i) the owner has to go to the pound.

problematic examples they use, as shown below:

- (3) a. I shall visit *whatever town* you visit. (Donati & Cecchetto 2011: 552)
b. *Whatever* happens, I am not here. (*ibid.*: 555)

It is not completely unreasonable to deem *town* in (3a) as some kind of ‘antecedent’ (after all it is quite clear that *town* also belongs to the matrix clause, see Section 7.4.2) and thus think of (3a) as containing a headed relative clause (*you visit*) whose relative word is elliptical. However, this will leave *whatever* not properly analysed, because if *town*, the head of the NP *whatever town*, is the antecedent, then *whatever* must also be part of the matrix clause – it would be rather counterintuitive if *whatever* has nothing to do with the relative clause. As I argued in Section 7.4.2, there is a simpler way of explaining (3a) under multidimensional theories (i.e. regarding *whatever town* as the callus shared by both the matrix and the relative clauses). Moreover, even if the structure of (3a) is what Donati & Cecchetto propose, namely as involving a relative clause without a relative word, it just represents a small portion of CFRs. There are other types to account for. Consider *I shall visit wherever you visit*, an example where the *wh-ever* word does not function as determiner. It will not be accounted for by their proposal because the ‘antecedent’ (like *town* in (3a)) is absent. Therefore, Donati & Cecchetto’s analysis of (3a) is not comprehensive as it cannot be extended to a wider range of CFRs.

The problem with (3b), as Caponigro (2019: 366-367) points out, is obvious: Donati & Cecchetto confuse relative clauses with conditional clauses. (3b), despite containing *whatever*, is not a relative clause at all. This will be discussed in the next section.

8.2.2 *Relatives and conditionals*

A common problem regarding FRs and CFRs is that both clauses could be mistaken for other clause types. In Section 7.1.2 I briefly discussed the differences between FRs and

interrogative clauses and quoted the example *what she wrote was a mystery* from Quirk et al. (1985: 1061) to illustrate that sometimes ambiguity can arise due to this confusion. Similar problems happen in CFRs, since they are often mistakenly related to a particular type of conditional clause (4a-b) which Quirk et al. (1985: 1006, 1060) label as ‘universal concessive-conditional clauses’ (UCCs).

- (4) a. Whoever did that should admit it frankly.
- b. Whatever I say to them, I can’t keep them quiet.

(4a) and (4b) tend to be confused because both clauses are indeterminate in semantics. Huddleston & Pullum (2002: 762) admit that the two constructions, categorised as interrogative clauses and relative clauses respectively, show “the character of a relative-interrogative blend”. Nonetheless, they specify several differences between FRs and UCCs that both include *wh-ever* words (Huddleston & Pullum 2002: 988-89):

- i. Meaning. While (4a) denotes a particular person (though this person’s identity is unknown to the hearer), (4b) refers to a generic situation instead of a specific proposition.
- ii. Clausal status. *Whoever did that* in (4a) is an NP, but *Whatever I say to them* in (4b) is an interrogative clause. Therefore, *Whoever did that* may, like other NPs, function as subject in (4a).
- iii. Relationship with ‘governed exhaustive conditionals’. This is a term Huddleston & Pullum use to name the UCCs following not *wh-ever* words, but prepositions like (*regardless of*) or *no matter*. Normally, governed exhaustive conditionals are interchangeable with ungoverned ones like (4b). Hence, we may transform (4b) to (5b), but such a transformation is impossible for (4a), as (5a) is considered ungrammatical. Similarly, as Caponigro (2019) argues, FRs could be extended to the form of ‘*any + N + relative clause*’ (6a), but UCCs cannot (6b).

- (5) a. **No matter who did that* should admit it frankly. (\neq 4a)
- b. *No matter what I say to them*, I can't keep them quiet. (= 4b)
- (6) a. *Anyone who did that* should admit it frankly. (= 4a)
- b. **Anything that I say to them*, I can't keep them quiet. (\neq 4b)

For discerning readers distinguishing (4a) from (4b) may not be an obstacle. But how about the following quote from the Bible (Matthew 6: 21)?

- (7) For where your treasure is, there will your heart be also.

Many examples like (7) can be found in older English texts. Below is one from Rydén (1966: 354):

- (8) [A]nd *what so euer he doethe*, it muste nedes be a good werke.

Examples (7) and (8) belong to a construction that involves some properties from both CFRs and UCCs. They look like CFRs because there is an anaphorical relationship between the first and the second clause (*where your treasure is* and *there* in (7), *what so euer he doethe* and *it* in (8)), and actually (4a) can ‘split’ into something similar: *whoever did that, s/he should admit it frankly*. As Rydén (1966: 354) explains, “in the latter case [i.e. the case similar to (8)] the relative is often resumed by a pronoun”, which means that he considers this construction as a ‘relative’. In fact, this type of construction, termed by Österman (2001) as ‘correlative clauses’, is regarded as a kind of relative clause by at least a few scholars such as Downing (1973), Izvorski (1996) and Österman herself.

However, if Huddleston and Pullum’s syntactic criterion (iii) is applied to correlative constructions like (8), it is hardly justifiable to categorise a correlative clause as exclusively relative ((9a-b) are re-written in Present-Day English orthography):

- (9) a. *No matter what he does*, it must needs be a good work. (conditional

- transformation)
- b. ?Anything that he does, it must needs be a good work. (relative transformation)

(9a) follows (iii) because the ungoverned exhaustive conditional clause is rewritten as a governed one. Its grammaticality indicates that *what so euer he dothe* in (8) could be a clausal adjunct. (9b), on the other hand, follows the relative transformation and becomes what Huddleston & Pullum (2002) call ‘dislocation’ – a less acceptable construction in which the pronoun of the main clause is anaphorically related to a detached element (i.e. *it* and *anything*).² In this sense, correlative constructions resemble UCCs as well.

Moreover, when *whenever*, *however* and *wherever* are involved, the situation can be even more complicated:

- (10) He blushes *whenever he sees her*. (Huddleston & Pullum et al. 2002: 764)

Example (10) is rather similar to (4b), except that there is no comma, although Huddleston & Pullum et al. regard it as a CFR. Confusion arises because CFRs introduced by *whenever*, *however* and *wherever* seldom function as subject, object or PP complement as other CFRs do (e.g. *whoever did that* in (4a) is the subject). On the contrary, they are most likely adjuncts as in (4b) (see Section 8.3.4.2 for a detailed comparison of syntactic distribution). As a result, examples like (10) increase the difficulty of differentiating CFRs and UCCs.

We have seen that CFRs and UCCs are often closely related. This will cause a practical problem in corpus studies (as it will do in the following sections), especially historical ones, because there are not many ‘typical’ CFRs and UCCs like (4a-b), between which a considerable discrepancy can be observed. A large portion of data lies in a grey area. Rydén includes all correlative clauses and UCCs undistinguishable from

² I briefly introduced dislocation in the previous chapter. See Section 7.1.2 and fn.4.

CFRs in his study, and this is also what I will do too. But as FRs and UCCs only share a surface similarity and their syntactic behaviour can be quite different, at least in *whatever* and *whoever* clauses, I will still identify these two types of clauses, where possible, in the following study.

8.2.3 Wh-soever clauses

There is a minor type of CFRs, namely those introduced by *wh*-words with the suffix *-soever*:

- (11) As we've already read, *whosoever* shall call upon the name of the Lord shall be saved. (BNC: KJU)

This type of CFRs is quite under-researched for a number of reasons: first, it almost has the same syntactic distribution as the ordinary type. Second, it is now archaic in English: most examples found in corpora of Present-Day English come from religious texts, where old vocabulary and usages are retained (for example, (11) is extracted from a sermon).

Nevertheless, it could still be interesting to compare *wh-soever* words with *-ever* ones: are *wh-soever* words just another variation of *-ever* compounds, or were they widely used some time ago? If they used to occur frequently, have they become archaic because of the competition with their *-ever* counterparts? When did this happen? With regard to the syntactic distribution, are *wh-soever* words really syntactically the same as *-ever* ones even in the past? What can we learn, in terms of morphology, from the similarities and differences between *wh-soever* and *wh-ever* words? To my knowledge, those questions still remain unanswered, and to find out the answers, a historical study, ideally corpus-based, is needed. In Section 8.3, I will try to solve those questions based on historical research.

8.2.4 The semantics of CFRs

The most striking difference between ordinary FRs and CFRs is semantic: CFRs are mostly generic, denoting something universal and ‘unconditional’.³

- (12) a. He criticised *who* she brought home.
b. He criticised *whoever* she brought home.

While (12a) is likely to be interpreted as ‘he criticised the person that she brought home’, (12b) means ‘he criticised any/every person that she brought home’, probably referring to a multiple number of people. Note that the number and identity of the people being criticised are indefinite, as long as the condition ‘brought home by her’ is fulfilled. That is probably why a few scholars, including Huddleston & Pullum et al. (2002) and Caponigro & Fălăuș (2018), term CFRs as ‘free choice’ FRs.

However, not every CFR is characterised by ‘free choice’. Consider the following examples:

- (13) a. We’ll use *whichever* edition is available. (Huddleston & Pullum et al. 2002: 398)
b. Everyone who went to *whatever* movie the Avon is now showing said that it was boring. (Dayal 1997: 99)

Huddleston & Pullum et al. (2002: 398) explain that (13a) is glossed as ‘we’ll use *the* edition that is available, no matter which it is’. Similarly, as Dayal observes, (13b) means ‘everyone who went to *the* movie the Avon is now showing (whatever it is) said that it was boring’. A common point shared by the two examples is that they do not

³ In a number of previous studies FRs are said to be definite, compared with CFRs which are indefinite. Syntactically, although indefiniteness is indicated by the presence of *-ever*, FRs, being a modifier, may neither be definite nor indefinite. What those studies mean, as I understand, is that the subjects modified by FRs are more identifiable.

display ‘free choice’. (13a) is ironically characterised by the lack of choice, while in (13b) it seems that the meaning of free choice is irrelevant – if we replace *whatever* in (13b) with the determinative *the*, the denotation of the whole sentence will not significantly change.

Šimík (2017) distinguishes two different readings of CFRs: the definite reading and the universal reading.⁴ For a particular sentence such as (14), both readings (15a) and (15b) are possible, depending on the context ((14)-(15) are extracted from Šimík (2017: 4, 7)):

- (14) *Whatever Adam presented sounded plausible.*
- (15) a. The thing(s) Adam presented sounded plausible. [the definite reading]
b. Everything Adam presented sounded plausible. [the universal reading]

From Jacobson (1995) and Dayal (1997) onwards, there has been a great deal of literature exploring the ambiguity of CFRs from a semantic perspective. (Šimík thoroughly summarises those semantic theories.) However, few grammarians discuss the differentiation between the definite reading and the universal reading, perhaps because they pay more attention to the difference between CFRs and common FRs, where the presence or absence of *-ever* leads to a distinctive interpretation. I would like to argue that even though *-ever* is always present in CFRs, its special relationship with *wh*-words potentially causes ambiguity. A syntactic analysis of (14) will be given in Section 8.5.

8.3 Lexical competition: a study of *-ever* and *-soever*

8.3.1 *Background and methodology*

⁴ Huddleston & Pullum et al. (2002: 398) have a similar argument: “The relative NPs in the fused construction can plausibly be regarded as definite”.

Relativization since the Early Modern English period has been studied quite thoroughly, yet most studies, including the ones concerning Shakespeare's English (e.g. Blake 2002, Hope 2003), Jane Austen's English (Phillipps 1970) or using corpora (Dekeyser 1984), focus exclusively on the common relativizers (e.g. *who*, *which* and arguably *that*). Research that discusses relativizers with *-ever* includes Jespersen (1949), Rydén (1966), Denison (1999), Rissanen (2000). Rydén (1966) gives a very comprehensive description of all relativizers in the 16th century based on a self-compiled corpus. This is a large database: I calculated that his major source of data, which is Sir Thomas Elyot's works, is composed of approximately 330,000 words, and he also examines more than 20 books by Elyot's contemporaries). About 10 pages are devoted to *-ever* compounds.

Unlike in Present-day English where 'free choice' relative words almost exclusively end in *-ever*, there were more types in earlier days. Those compounds can be composed of *wh-* interrogative words *what*, *who*, *which*, *where*, *when*, *whose* and the archaic *whither*, and the adverbial endings *-ever*, *-soever*, and occasionally *-somever* and *-so*.⁵ The endings may be either glued with *wh*-words, or separated from them, which creates many combinations. Interestingly, as Rydén observes, *-ever* is extremely infrequent, and *-somever* and *-so* are also uncommon in the 16th century. By contrast, *-soever* is predominantly common, a situation very different from Present-day English.

In practical terms, Rydén's corpus is well-constructed, although it may be argued that the corpus is not quite balanced in genre, because Sir Thomas Elyot's works and other books that Rydén selects are less literary, and especially poetic texts are missing. Moreover, Rydén focuses on Early Modern English in the 16th century, which means that his corpus is synchronic. For diachronic purposes, I discarded Rydén's data pool (though I will still quote some examples) for more comprehensive and balanced historical corpora.

An embarrassing fact about the choice of historical corpora in this dissertation is

⁵ In the following sections I will give examples of *-somever* and *-so*, but they will not be included in the corpus study due to their rareness.

that there seems to be no free corpus which incorporates data from early English (e.g. OE) to Contemporary English. Most historical corpora restrict themselves to either earlier periods (such as OE and ME) or later ones (some corpora begin at EModE). I got around this problem by simultaneously employing two different historical corpora: the *Helsinki Corpus of English Texts* (HC) and *A Representative Corpus of Historical English Registers* (ARCHER). The primary reason for choosing these two corpora is that their data cover different periods: HC starts from late OE and ends at around 1710, whereas ARCHER begins at 1600. There is only an overlap of about 110 years, which means that the combination of both corpora may roughly show a picture of the diachronic change from around the 9th century to the 20th century. Nonetheless, I am also fully aware that ‘sewing’ one corpus to another could be precarious, simply because their size, genre, and sampling methods are all different. I will therefore report the data separately: I will not put the data in one graph but create a diagram for each corpus. But when I try to identify a trend, I will consider the attested examples from both sources.

8.3.2 Variation

The first characteristic that is easily observed is that the *wh*-words and the endings enjoy much freedom of combination: *ever*, *soever*, *somewer* and *so* can either be affixes or independent elements. Moreover, *so* and *ever* can either be combined (*soever*) or separated (*so ever*), and so be *somewer*. Denison (1999: 286) observes that *whomsoever* may have up to eight possible combinations, but if we take into account *somewer* and *so*, there are potentially even more. The following examples show different combinations of *where*:

- (16) a. A vine may grow up there, and above these narrow places enlarge it self
where ever it meets with room. (HC: E3 IS HANDO LANGF)
- b. *Wherever* there is love, there is a degree of fear. (ARCHER:
1778hami_f4b)
- c. *Where so euer* knowledge doth accompanie the witte, there best vtterance

- doth alwaies awaite vpon the tonge. (HC: E1 IS/EX EDUC ASCH)
- d. I am prepared to accompany him *wheresoever* he may go, if it were even to greater solitude than this. (ARCHER: 1828cust_d5a)
 - e. They here or *wher someuer* they be, that they wyth theyr conseyl and dedes helpe me tauenge this ouer grete trespaas... (HC: M4 NI FICT REYNARD)
 - f. And he euer, *where some euer* he be, gathereth vniustely ryches, that careth chiefly for these worldely promotions. (Rydén 1966: 359)
 - g. *Wheresomeuer* the soule is, there is lyfe. (Rydén 1966: 359)

Morphologically, it is clear that *-ever*, *-soever* or *-somever* are not suffixes but independent adverbs that are combined with *wh*-words. It looks like it took quite a long time for *-ever* words to have an absolute form, as there are various forms of *-ever* compounds before the Early Modern English period. Also, the independence of *-ever*, *-soever* and *-somever* suggests that CFRs, UCCs and correlative clauses could be later developments – they are probably all derived from *wh*-clauses with additional adverbs.

Moreover, all variations of *wherever/wheresoever* in (16a-g) denote more or less the same meaning, which means that the orthographical changes do not significantly affect the semantics of *wh*-words. Nevertheless, the combination or separation of the *-soever* endings has yielded morphological and particularly syntactic differences that influence how *wh-ever/wh-soever* words are used. This is not discernible in *where*, but is rather obvious for the words which can function as determiners or modifiers, like *what*, *which* and *how*. This issue will be discussed in 8.4.1.

8.3.3 Frequency

8.3.3.1 *What* and *who*

Figures 8-1 and 8-2 show how *whatsoever* and *whatever* dominate the Early Modern English and Late Modern English, respectively, in two different corpora. In HC the

number of *whatsoever* (including variations *what soever*, *whatsoeuer* and *what soeuer*) soars from the 15th-16th century, and the same situation happens with *whatever* in ARCHER: its frequency continues to rise in the 17th century and then a sharp increase is seen in the first half of the 18th century.

The word choice, however, is quite complicated because although we may find some signs of competition, the relation between *whatsoever* and *whatever* may not be simply explained by zero-sum rivalry. For instance, both numbers increase between 1570-1620 and 1640-1710, though the sudden rise of *whatever* might be a reason that causes the slow-down of the *whatsoever* increase. Also, in ARCHER the line of *whatsoever* flattens between 17th and 18th century and at the same time the number of *whatever* rises significantly; nevertheless, while *whatsoever* starts to become archaic in the 19th century, we do not witness more occurrences of *whatever*: on the contrary, its frequency begins to drop as well.

The situation of *whosoever* and *whoever*⁶ is somewhat similar: the increase of *whoever* and the decrease of *whosoever* between 1570-1640 and 1640-1710 indicates that the two words compete with each other, yet as *whosoever* gradually disappears in the recent three hundred years, *whoever* does not become more frequent.

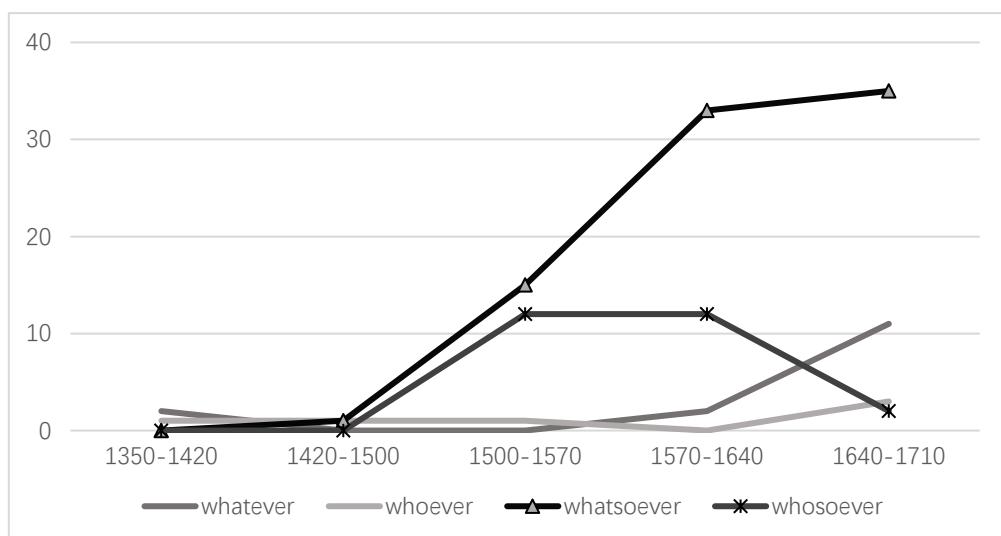


Figure 8-1 Raw frequencies of *whatever*, *whoever*, *whatsoever* and *whosoever* in different periods of the Helsinki Corpus.

⁶ The following data include *whomsoever* and *whomever*, which are actually rare in both corpora.

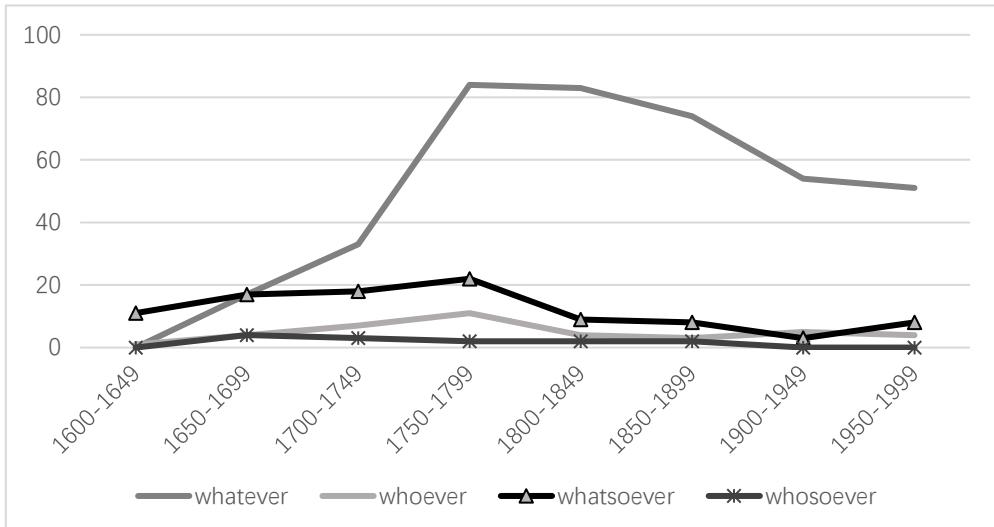


Figure 8-2 Raw frequencies of *whatever*, *whoever*, *whatsoever* and *whosoever* in different periods of the ARCHER Corpus.

That is somewhat strange, if we assume that the chances of using *wh*-words to express generalising or indefinite meanings are equal in all periods. There are some possible reasons for this: people have expressed generalising meanings less frequently since the 19th century, or they turn to *wh*-words without *ever/soever* instead, which can express both specific and non-specific meanings (for example, *I'm going to where you live* can be ambiguous between ‘I'm going to the place you live’ and ‘wherever you live, I'm going there’). A third possibility is that English speakers have more choices than selecting from *ever/soever*: as discussed in the previous section, other choices include words with *-somever* and *-so* endings. However, those endings may actually carry little weight in influencing the word choice as they are extremely scarce in corpora. In ARCHER *-somever* and *-so* are totally absent, and I can find no more than a couple of cases in HC, all of which appear very early (no later than the 16th century, confirming Rydén 1966).

Of course, the discussion above is based on the assumption that the corpora genuinely reflect the use of *wh-ever/wh-soever* in English. In reality, due to the relatively small size of historical corpora and the even smaller number of occurrences of *wh-ever* and *wh-soever* words reported here (most numbers shown in Figure 8-1 and 8-2 fall in the range of 0 to 20), it is possible that the data are subject to random errors. Thus we should focus more on overall trends, rather than specific numbers in some particular periods.

Holistically, we can at least identify two trends from Figures 8-1 and 8-2:

- i. As Figure 8-1 shows, the rise of *wh-soever* (*whatsoever*, *whosoever*) is earlier than that of *wh-ever* (*whatever*, *whoever*). The former begins to be frequently attested in the 16th century, whereas the latter remains scarce until the 17th century. This trend is consistent with Rydén (1966), where *wh-soever* words are much more frequent than *wh-ever* compounds in the 16th century.
- ii. There is an obvious turning point in raw frequency between *whosoever* and *whoever*, as shown in both corpora: *whoever* starts to replace *whosoever* in the 17th century, resulting in the obsolescence of *whosoever* as early as the 18th century. Nonetheless, the trend with *whatever/whatsoever* is a bit delayed and in fact inconsistent in the two corpora. ARCHER suggests that the turning point is the second half of the 17th century (1650-1699), yet in HC there are many more cases of *whatsoever* than *whatever* during the same period (1640-1710). But considering the fact that in HC the number of *whatever* significantly rises from the 17th century, it is probable that *whatever* replaces *whatsoever* at some point later in the 18th century.

8.3.3.2 *When*, *where* and *which*

When and *where* show a different pattern of change from *what* and *who* (Figures 8-3 and 8-4), because there is not a period when *whensoever* and *wheresoever* enjoy absolute dominance. In HC, for instance, the frequencies of all four categories are very low.⁷ Moreover, data from ARCHER show that *whenever* and *wherever* outnumber their competitors in all periods (there is no *whensoever* in ARCHER). The observation above seems to suggest that *when* and *where* were not used much as compounds in conditional situations until the 18th century, though their appearance can be dated back

⁷ It seems that from 1570 to 1640 there are more cases of *whensoever* and *wheresoever* than their -*ever* counterparts. However, I am cautious to draw such a conclusion as the numbers are very small (1 and 3 respectively).

(in HC) to the 1400s. When the two words began to frequently occur in the 1700s, the only ending favoured by English speakers was *-ever*.

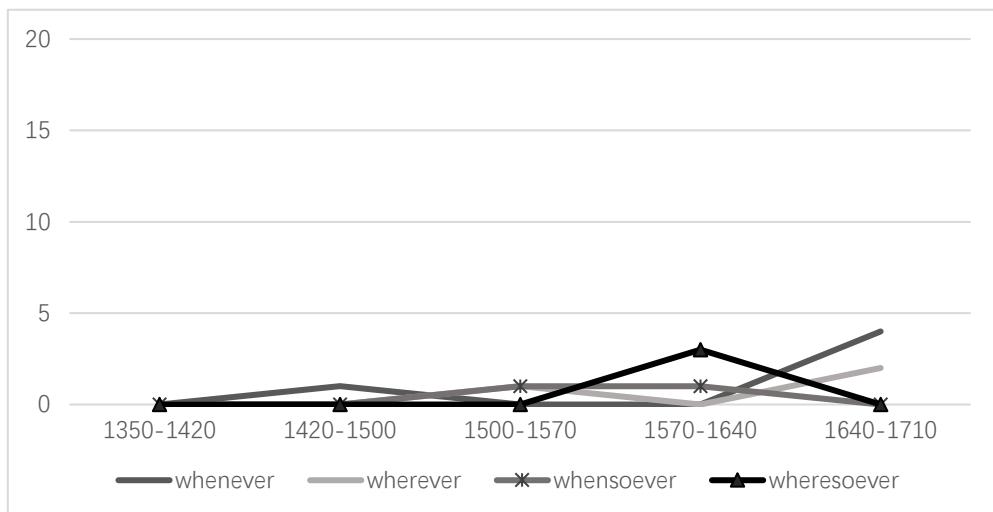


Figure 8-3 Raw frequencies of *whenever*, *wherever*, *whenssoever* and *wheresoever* in different periods of the Helsinki Corpus.

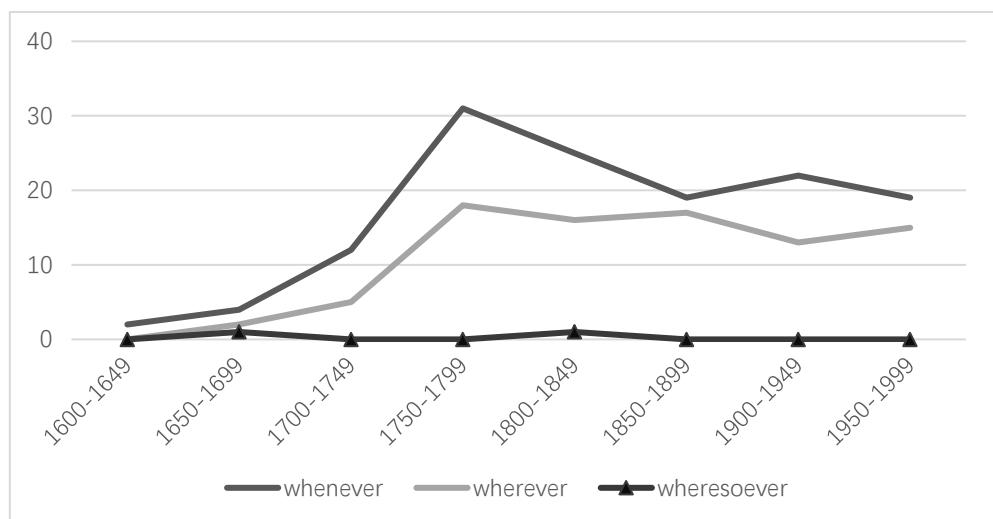


Figure 8-4 Raw frequencies of *whenever*, *wherever*, *whenssoever* and *wheresoever* in different periods of the ARCHER Corpus.

-Ever compounds for *which* are extremely rare. There are only 6 cases of *whichever* in ARCHER, one of which is quoted below as (17). *Whichsoever*, in the cohesive form, does not appear in both corpora, but there is one example where *which* and *soever* are separated by an additional noun (18).

(17) He hides everything behind a manner that's either over-meek, over-arrogant,

or over-flippant, *whichever* is going to disconcert the most. (ARCHER: 1960ratt_d8b)

- (18) The pith...has much such a kind of texture, save onely that which way soever I set this light substance, the pores seem'd to be cut transversely... (HC: E3 EX SCIO HOOKE)

8.3.4 CFRs, UCCs and other usages

8.3.4.1 *Whatever/whatsoever*

Figure 8-5 shows how the 396 occurrences of *whatever* are used in ARCHER. In each period except 1950-1999, the number discrepancies between a relative word (including uses as a relative pronoun (19a) and relative determinative (19b)) and an interrogative conditional word (19c) are small. However, during these periods, the use of *whatever* as an adverb that emphasises *any* or *no/not* (19d) rises and falls dramatically: it began to appear in the early 1700s,⁸ and was used intensively in the 1800s before a substantial decline.

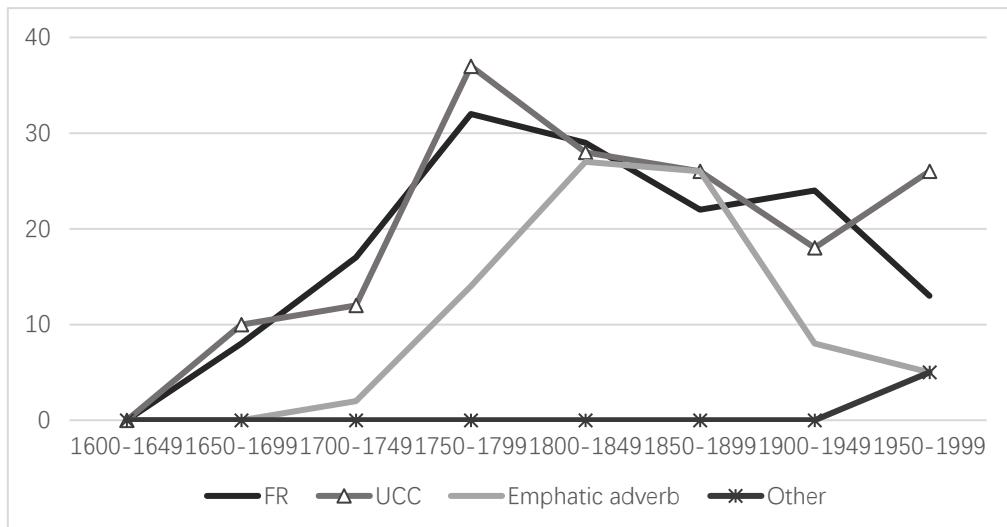


Figure 8-5 Raw frequencies of *whatever* used in CFRs, UCCs, and as emphatic adverbs and other functions in the ARCHER Corpus.

⁸ The earliest year that the OED records is 1628 (OED: s.v. *whatever*, pron.).

- (19) a. *Whatever* you lay out upon them shall be punctually refunded. (ARCHER: 1767rush_x4a)
- b. On the 19th , she complained more of her head, had slept little in the night, and threw up *whatever drink* she took (ARCHER: 1755mood_m4b)
- c. ... my Charge against you is, that in those Days *whatever you did*, you did what you would... (ARCHER: 1759walk_h4b)
- d. If something of the kind be not adopted, I have no confidence in any mode of opposition *whatever*. (ARCHER: 1784burk_x4b)
- e. I can, of course, for 3 or 4 days *or whatever*, to plan future course. (ARCHER: 1951fknr_x8a)
- f. Why, *whatever* were you doing in the army, Sid? (ARCHER: 1951marq_f8a)

On the other hand, the period 1950-1999 witnesses some distinctive changes: there are fewer cases of relative *whatever*. Moreover, we may encounter some usages that were not seen before, namely the expression *or whatever* (19e) and the interrogative *whatever* that introduces an interrogative clause (19f). The latter observation is somewhat perplexing, because according to the OED, the interrogative usage can be dated back to the 15th century. I cannot report that there is a ‘revival’ of this old usage in the second half of the 20th century simply because I do not have sufficient data, but a possible reason is that *whatever* is more frequently muddled, especially in colloquial English, with *what ever* (20), a usual form to deliver an emphatic question (cf. Huddleston & Pullum 2002: 987), so that in this usage *-ever* has its original meaning rather than functioning as a bound morpheme denoting ‘free choice’.

- (20) *What ever* does the woman mean? Is the little dark-eyed doe implying that she hasn’t been haunted, since the moment of their first encounter, with images of our fascinating, leather-jacketed heroine? (BNC: HGN)

The situation with *whatsoever* is much more complicated. In ARCHER both relative and interrogative conditional *whatsoever* are attested (21a-b), yet the two uses only take up a small portion. By contrast, an increasing number of *whatsoever* is used emphatically (21c), and by the second half of 20th century the emphatic ‘at all’ usage has almost become the only possibility (Figure 8-6). Note that in the last two periods of Figure 8-6 the sharp drop of *whatever* as an emphatic adverb is accompanied by a continuous and considerable rise of *whatsoever*, which seems to indicate that, despite being interchangeable in previous days, *whatever* and *whatsoever* have become functionally distinctive in PDE such that they occur as a pronoun/determinative and as an adverb, respectively.

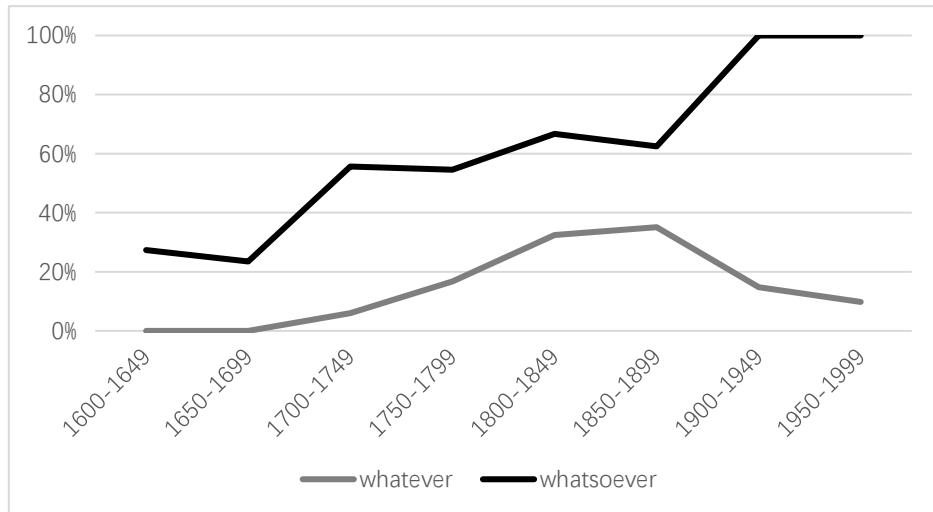


Figure 8-6 Percentages of *whatever* and *whatsoever* as emphatic adverbs in each period of the ARCHER Corpus.

- (21) a. Nor was she less apt to receive, nor firm to retain *whatsoever* was taught her. (ARCHER: 1640brat_p1b)
- b. However, he assured me, that *whatsoever resolutions* he should take, he would act nothing upon the white-people. (ARCHER: 1688behn_f2b)
- c. He proposed to me one afternoon at the office after lunch during Book Afternoon Week, and money had nothing *whatsoever* to do with it. (ARCHER: 1951marq_f8a)

A phenomenon worth-noting with *whatsoever*, which cannot be explained by any of the usages discussed above, is exemplified in (22a-b).

- (22) a. That the Non-claim or Fines could not hurt the Plaintiff's Title, because the Fines were levied to Parties privy to the Trust, so as *what Estate whatsoever* passed to them, the Trust was not disturbed... (ARCHER: 1649atki_11b)
- b. Which showed and manifestly proved unto you, I doubt not but those Paper walls, which have been raised heretofore to defend these Doctrines, *how fair whatsoever* they may seem to the outward eye, and *whatsoever colours* have been laid upon them... (ARCHER: 1636hey1_p1b)

The prominent syntactic feature of *whatsoever* in (22a-b) is that it always follows the word *how* and *what*, though usually there is another word in between. What does this *whatsoever* mean? On the one hand, in (22a) *what...whatsoever* seems redundant and we may expect *whatsoever* to be an emphatic element meaning 'at all', just like it is in (21c). On the other hand, such an explanation is clearly invalid, because according to the context, the clause containing *what Estate whatsoever* is better understood as 'whatever/whatever Estate passed to them, the Trust was not disturbed' instead of '**what Estate at all* passed to them, the Trust was not disturbed' because the latter interpretation does not make sense. As a result, the only plausible answer is that there is redundancy in this usage of *whatsoever*, as it is semantically equivalent to *soever*. The same situation happens in (22b), where we also interpret the first *whatsoever* as a redundant version of *soever*, and thus *how fair whatsoever* as *howsoever fair* (interestingly, the second *whatsoever* is a good, non-redundant contrast). Although this usage is not recorded in the OED, it was used quite often in the 1600s and 1700s, as I found 16 examples (out of 68 in the 17th and 18th century) alone in the ARCHER Corpus.

8.3.4.2 *Whenever* (*whensoever*), *wherever* (*wheresoever*) and *however* (*howsoever*)

The borderline between CFRs and UCCs, in terms of *when*, *where* and *how* compounds, is extremely subtle, making it difficult, if ever possible, to tell whether a clause involving *whenever*, *wherever* or *however* is undoubtedly a relative clause. Although Huddleston & Pullum (2002: 764) conclude that the difference between UCCs and CFRs is “nonetheless real”, they discuss only semantic differences:

- (23) a. I'm determined to go to the wedding, *whenever it is*.
b. He blushes *whenever he sees her*.

Huddleston & Pullum reason that while (23a) means ‘I'm determined to go to the wedding, no matter when it is held’, (23b) denotes that ‘He blushes on every occasion when he sees her’ (Huddleston & Pullum 2002: 764). In other words, they regard (23b) as a relative clause. However, (23b) could also have a conditional meaning ‘He blushes no matter when he sees her’ – though an alteration of (23b) to (24) would make this interpretation more plausible:

- (24) Whenever he sees her, he blushes.

An alternative argument arises from the comparison of (23a-b) regarding whether the comma might play a role. It is worth noting that the presence or absence of the intervening comma has never been used as a formal criterion of relativization before, and I do not think that this punctuation mark functions as more than a light pause, though it is true that normally non-restrictive relative clauses are not interrupted by punctuation. But if we were to use it as a rough and unreliable criterion, we will see that in around 63% (85 out of 134) examples there is a comma or full stop before or after the *whenever*-clause. The figure is even higher (75%, 70 out of 93) if data from the 1900s are excluded. Furthermore, all examples of *whenever*-clauses in HC are punctuated (25a), and it is common to have *that* before *whensoever* (25b).

- (25) a. However, every thing was now ready to give them a warm Welcome,
whenever they should please to signify their Errand by beginning the Attack. (ARCHER: 1747anon_j3b)
- b. But God doth knowe, *that whensoever ye shulde eate of it, youre eyes shuld be opened.* (HC: E1 XX BIBLE TYNDOLD)

Again, I believe that taking punctuation into account is potentially enlightening, even though I am very cautious of employing it as a criterion, especially when it is not accompanied by other syntactic criteria.

There are indeed some syntactic aspects in which CFRs involving *whenever*, *wherever* and *however* behave distinctively, especially compared with the common ones introduced by *whatever* and *whoever*. The first aspect is syntactic distribution. As NPs, clauses introduced by -ever compounds should be free to function as subject (26a), (direct) object (26b) and PP complement (26c), as non-clausal NPs do. *Whatever* and *whoever* obviously enjoy such freedom:

- (26) a. *Whatever you lay out upon them* shall be punctually refunded. (Subject, 1767rush_x4a)
- b. Notwithstanding this Difference in the Brightness of the Objects , we were able, with this reflecting Telescope, to see *whatever we have hitherto discovered by the Hugenian...* (Object, 1723thor_s3b)
- c. ...but, alas, she so ill employed her wit, that her genius was only to circumvent her husband in *whatever he designed* (PP complement, 1702anon_f3b)

On the other hand, the occasions in which *whenever*, *wherever* and *however* are used in such functions are quite restricted: in both corpora a disproportionate majority of clauses introduced by these words functions as adjunct. (27) is one of these few examples (they are still infrequent even though they are the majority use) extracted

from ARCHER:

- (27) Hundreds of subtle maladies are floating around us ready to attack *wherever there is a weak point*. (Object, 1890illn_a6b)

It seems that the function of subject is particularly rare. If we move the *wherever* and *whenever* clause in (28a), (29a) to the subject position, we will find the newly-formed examples less acceptable (28b), (29b):

- (28) a. I'll go *wherever they tell me to go*.
b. **Wherever they tell me to go* is perfect to visit.
- (29) a. He blushes *whenever he sees her*.
b. **Whenever he sees her* sounds convenient.

Even though there is an overt NP heading the clause, as in (30a), and *however much* serves as a modifier, relocating the clause to the subject position can lead to degradation (30b):

- (30) a. She can provide *however much financial support is needed*.
b. ?*However much financial support is needed* requires further calculation.

The second aspect in which *whenever*, *wherever* and *however* behave distinctively is the relationship with ‘correlative clauses’. In Section 8.2.2 I argued that it is more natural to transform correlative clauses into UCCs rather than CFRs, as (9a-b) show. However, relative transformation is not impossible as long as we make changes in the matrix clause by removing the pronoun. Consider the following examples:

- (31) a. Whatever he does, it must be a good work.
b. Whatever he does must be a good work.

We can transform a correlative clause like (31a), an adapted version of (8), into (31b) by removing the pronoun *it* and then conjoining the two clauses.⁹ Of course, such a transformation can be reversed, which means that we can also make (31b) into (31a) by splitting clauses and adding a relevant pronoun. Correlative transformation can be easily done not only in *whatever* and *whoever* clauses, but also in *wherever* and *whenever* clauses. In the following examples (32)-(33) I transform CFRs into correlatives.

- (32) a. I'll go *wherever they tell me to go*.
- b. *Wherever they tell me to go*, I'll go *there*.
- (33) a. He blushes *whenever he sees her*.
- b. ?*Whenever he sees her*, he blushes *then*.

However, there is some dissonance in (32)-(33) because although the antecedents in (32b) and (33b) are also NPs (*wherever* = *any place where*, *whenever* = *any time when*), they correspond to prepositions (*there*, *then*) instead of pronouns (*it*, *he or she*). There are two ways to account for this mismatch. The first way is that we regard *there* and *then* as nouns, an issue McCawley (1988: 588) has touched upon. This is theoretically possible if we recognise that NPs are able to function as time or place adjuncts. Another account, as Caponigro & Pearl (2008) propose, is one in which *wherever* and *whenever* may be nominal complements of silent prepositions. Accordingly, *whenever* in (33a-b) is better interpreted as '(at) any time' or '(on) any occasion'. If this theory is workable (on the surface it is), then we will have an example of 'exocentric preposition phrases' – PPs that do not contain overt prepositional heads.

In terms of *however*, there is no corresponding correlative construction. We cannot fill the gap in (34b) and (35b) with any single pronoun, preposition or adverb. Only some phrases, like *at that speed*, or *in that way*, will do.

⁹ Strictly speaking, (31a) is not completely equivalent to (31b) because it is definite. So this transformation is just an approximate one, less rigorous than the one for UCCs shown in (9a). I will argue in Section 8.5 that this is because correlative clauses like (31a) have a different structure.

- (34) a. I can drive however fast you drive.
 b. *However fast you drive, I can drive_.
- (35) a. You can dress however you want.
 b. *However you want, you can dress_.

The syntactic and semantic characteristics of *whatever/whoever*, *whenever/wherever* and *however*, discussed in the sections above are tabulated below:

	<i>Whatever/whoever</i>	<i>Whenever/wherever</i>	<i>However</i>
Universal reading/definite reading	Yes	Yes	Yes
Object/PP complement	Yes	Somewhat restricted	Somewhat restricted
Subject	Yes	Restricted	Restricted
Correlative construction transformation	Yes	Yes, but with dissonant reference	No

Table 8-1 Comparison of -ever compounds in accordance with some syntactic/semantic features.

Table 8-1 does not dispute *whenever*, *wherever* and *however* as relative markers, but it poses the argument that the relative clauses introduced by *whenever*, *wherever* and *however* are atypical and often indistinguishable from corresponding conditional clauses. While UCCs and CFRs introduced by *whatever/whoever* are very different from each other, the boundaries between relative constructions and conditional constructions blur when *whenever*, *wherever* and *however* are involved.

8.4 The effects of compounding

In the previous section I analysed some data from the ARCHER Corpus and the Helsinki Corpus, and argued that *-soever* and *-ever* compounds are prevalent in different periods. Generally, *-ever* won the competition in the recent two hundred years,

resulting in either obsolescence (e.g. *whatsoever* as an FR marker; *whosoever*, cf. Section 8.3.3.1) or infrequency (e.g. *whensoever*, *wheresoever*, cf. Section 8.3.3.2) or a significant semantic change of the *-soever* forms (e.g. *whatsoever*, which is now exclusively emphatical, cf. Section 8.3.4.1). An interesting question arising from this phenomenon is whether *wh-soever* and *wh-ever* are completely identical: if *wh-soever* and *wh-ever* are the same in structure, how can they co-exist for hundreds of years? Also, why does *wh-ever* finally succeed over *wh-soever*? I will explore the answer to these questions in the following sections.

8.4.1 Soever

Jespersen (1949: 66) observes that “the adverbial *soever* is sometimes separated from the pronoun: it is quite natural...when *what* is an adjunct to the substantive separating the two words”.¹⁰ This happens very often to *what*, *which* and *how* clauses when those words are not heads but elements determining or modifying the nominal or adjectival heads. For *what* and *which*, it is common to have an NP (36a), or coordinated NPs (36b), between the *wh*-word and *soever* (occasionally also *somewer*). For *how*, the most common intrusive element is an AdjP (37a), but it is also possible to see a modified NP, in which *how* modifies the adjective modifier instead of the whole NP (37b):

- (36) a. The pith...has much such a kind of texture, save onely that *which way soever* I set this light substance, the pores seem'd to be cut transversely... (HC: E3 EX SCIO HOOKE)
- b. [T]he Commissioners of the Customes...are hereby required to give a full and true Accompt in Writing...of *what Nature or Kind soever* that shall before that time be exported to any Place whatsoever... (HC: E3 STA LAW STAT7)

¹⁰ It is nevertheless bizarre to say that *what* is an adjunct when Jespersen exemplifies his observation with *what worms soever you fish with*. I would rather guess Jespersen's 'adjunct' refers to 'determiner' in modern English grammar.

- (37) a. *How plausible soever* this Objection may appear, I do not despair... (HC:
E3 IR SERM TILLOTS)
- b. You know that you may beleive mee, *how little truth soever* there be in
other men. (HC: E3 XX CORP HOXINDEN)

On the other hand, some less common patterns are also identifiable. First, *soever* can be separated from, but still immediately follow the *wh*-word, such that it occurs right between the head noun and its determinative (38). Second, *soever* can be so far away from the *wh*-word (usually *who*) that a complete finite clause occurs in between (39a). (39b) is even more interesting: although *soever* occurs within a relative clause introduced by a *wh*-word (*who*), what element it is related to cannot be easily determined. It is quite likely that *soever* is in fact an adjunct of *any way*, making *in any way soever* something semantically similar to ‘in whatever way’.

- (38) And of all that lyveth *what soever flesh* it be, shalt thou brynge in to the arcke, of every thyng a payre, to kepe tham a lyve wyth the. (HC: E1 XX BIBLE TYNDOLD)
- (39) a. ...for *who sets eye thereon soever* knows... (Jespersen 1949: 66)
- b. To all *who are perplexed in any way soever*. (Newman 1835, quoted from OED: s.v. *soever*, adv.)

Although Jespersen (1949: 66) straightforwardly criticises (39a) as “very unnatural”, examples (38)-(39), as supplements of (36)-(37), show the flexibility of *soever*. It behaves like a typical adjunct that occurs freely in different positions of a clause, so that we have not only the ‘*wh*-word + NP + *soever*’ pattern, which is relatively common, but also patterns like ‘*wh*-word + *soever* + NP’ and ‘*wh*-word + NP + VP + *soever*’. Moreover, according to OED, *soever* may appear alone, meaning ‘whenever’:

- (40) And *so ever* ony Sarazin comyth by that Sepulcre he cast a stonne ther att.
(Torkington 1884, quoted from OED: s.v. *soever*, adv.)

The above examples prove that *soever* (and *somever*) functions as an independent intensifier that provides a sense of universality in different patterns. However, in cases where the *wh*-word and *soever* join together, all patterns disappear.

- (41) a. All that I have hitherto contended for is that *whatsoever rigor* is necessary it is more to be used the younger children are... (HC: E3 IS EDUC LOCKE)
- b. Third rule, and that generall for all Students, is this: that *whatsoever difficult words, or matters of speciall observation*, they do reade in any Author, be marked out... (HC: E2 EX EDUC BRINSLEY)

In cases like (41a-b) any noun, however simple or complicated it might be, must follow *whatsoever*: since there is no space between *what* and *soever*, the noun head which usually immediately follows *what* is coerced towards the end of the phrase. Note that in (41b) the NP is rather ‘heavy’, which may be a reason for the grammaticalization of *whatsoever*, because English tends to relocate ‘heavy’ elements at the end.

8.4.2 Ever

Ever as an option of combination with *wh*-words is quite different from *soever*. First, it is a relatively late development: Jespersen (1949: 66) points out that “[t]he pronouns containing -ever have for centuries been much more colloquial [than those with -soever]”. Second, most instances I can find are in either of the following forms: the *wh*-word and *ever* are separated but adjacent immediately to each other (42a), or they appear as a single word (42b).

- (42) a. [A]nd he that first cam doun in to the sisterne, aftir the mouyng of the watir, was maad hool of *what euer sijknesse* he was holdun. (HC: M3 XX NEWT WYCNEW)

- b. [W]hen it once come to be a triall of skill and contest for mastery (as if you command and he refuses it is) between you must be sure to carry it *whatever blows* it cost, if a nod or words will not prevaile... (HC: E3 IS EDUC LOCKE)

Very rarely, there are examples like (43), in which the *wh*-words and *-ever* are separated by an additional element:

- (43) *What harm hit euere were...* (Visser 1963: 914)

Apart from (43), there are no examples in HC, ARCHER, the OED, Jespersen (1949) or Rydén (1966) of the *wh*-words and *ever* separated by an NP or something else. There may be space between the two words, as in (42a), but more likely the head noun still occurs after *ever*. It is possible that *wh-ever* words, as a late innovation, evolve analogously to their *wh-soever* counterparts, but it also seems that *wh-ever* is more grammaticalized than *wh-soever*: we may consider the latter as a phrasal combination that consists of a pronoun/determiner and an adverb, yet the former is moving towards some kind of compound, even if the two elements are sometimes separated.

8.4.3 *The structure of wh-soever and wh-ever*

The structural difference between *wh-soever* and *wh-ever*, proposed above, is best illustrated by *whosoever* and *whoever* in their readiness of taking the genitive marker -'s. The bearer of this marker should be an NP of merely a nominal head (44a) or more complex structure (44b). An external element to a particular NP, such as an adjunct, cannot bear the genitive marker, as the comparison between (45a-b) shows.

- (44) a. [Kim]'s

- b. [the King of England]'s

- (45) a. I forgot to return *my friend's pen* yesterday.

- b. *I forgot to return *my friend yesterday's* pen.

In other words, if a construction is eligible to take -'s, we expect that it needs to be an NP without external elements interfering as in (45a). (45b) is unacceptable because *yesterday* is not part of the NP. On the other hand, *who* can be inflected, because it has a genitive form *whose*. But the condition for this transformation is that *who* should at least be syntactically active (otherwise it cannot bear inflections). Therefore, *whosoever* and *whoever* have two potential ways of forming the genitive case: if they take the genitive marker -'s (Pattern 1), we will infer that *-soever* or *-ever* is no longer an external adverb but part of a compound that is nominal. Or, if *who* in *whosoever* or *whoever* becomes *whose* (Pattern 2), so that we derive *whosesoever* and *whosever*, it would be more plausible that *who-* and *-soever/-ever* are not yet compounded so that both parts are still syntactically active (i.e. *who-* as a pronoun and *-soever/-ever* as an adverb). The corpus data of the four possibilities are shown in the following table (I used the *Corpus of Historical American English* (COHA) in order to extract more examples):

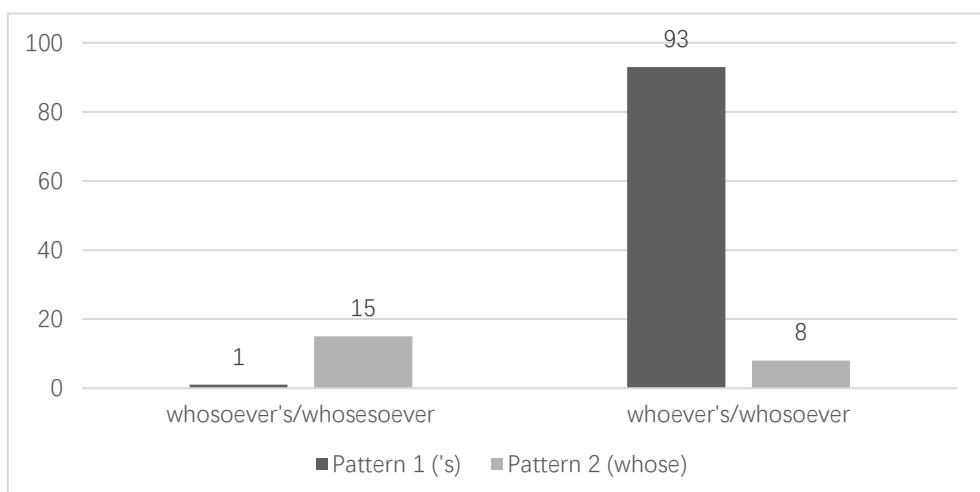


Figure 8-7 Raw frequencies of *whosoever* and *whoever* showing genitive forms of Pattern 1 and Pattern 2 in COHA.

Figure 8-7 unveils conspicuous contrasts: while there are 15 examples of *whosesoever* in COHA, only one *whosoever's* is identified.¹¹ By contrast, *whoever's* (93 attestations)

¹¹ This only example comes from a quote in an unknown source.

is much more frequent than *whosever*, although *whosever* (8 attestations) is not very rare (cf. there are 26 cases of *whosever* and 911 cases of *whoever's* in COCA). These results confirm the hypothesis in the previous section that *wh*-words with *-ever* are structurally more grammaticalized than those with *-soever*. While the majority of instances of *-ever* has been lexically combined with *wh*-words, *-soever* and *wh*-words seem to form some kind of amalgam. In fact, I would argue here that *wh-soever*, and a small number of *wh-ever*, display the typical characteristics of ‘compound phrases’, which I described in Section 3.3.2.

The structure of *wh-soever* and *wh-ever* is shown in (46) and (47a-b).

- (46) [[PRON/D wh-] -soever]
- (47) a. [PRON/D wh-ever] (more frequent)
- b. [[PRON/D wh-] -ever] (less frequent)

There is not yet a theory for how two similar constructions compete with each other historically. My speculation is that *wh-ever* wins because of its shortness and simplicity: it is shorter than *wh-soever* by two letters, and it is structurally simpler and more cohesive than its competitor since the majority of *wh-ever* words are real compounds.

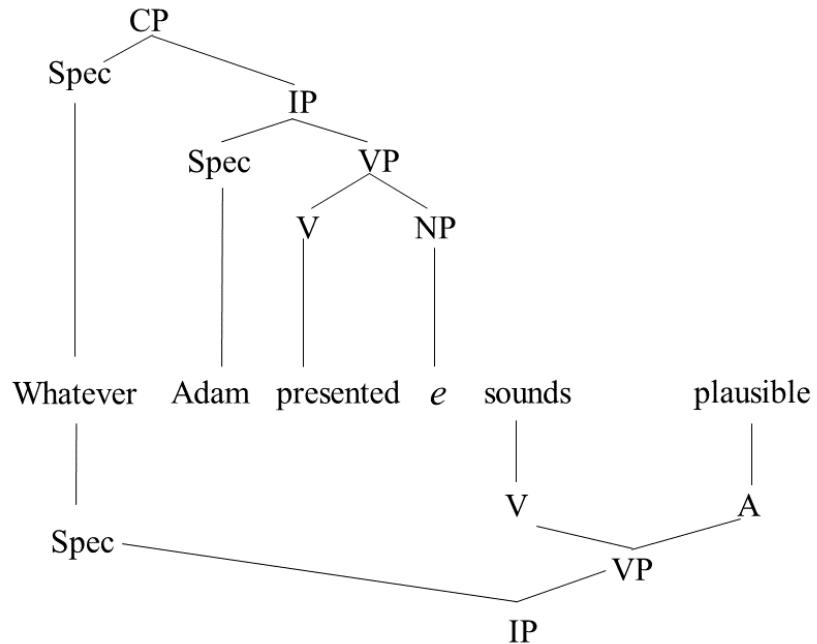
8.5 A syntactic approach to the ambiguity of CFRs

In this final section I will address the question I raised in Section 8.2.4: is there a syntactic reason for the two readings (the definite reading and the universal reading) of *whatever*, which are shown in (14)-(15) (repeated below as (48)-(49))?

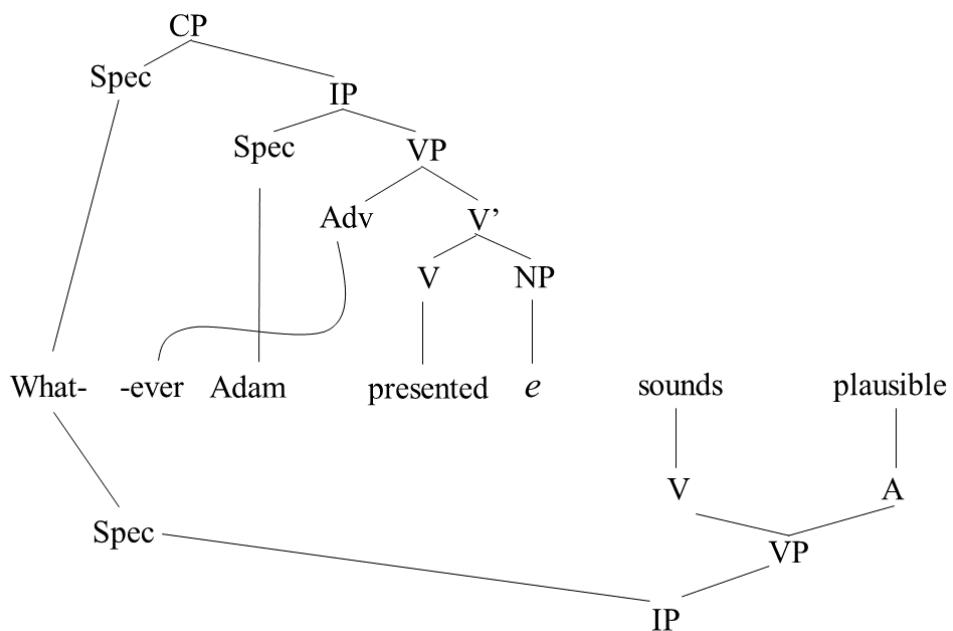
- (48) *Whatever Adam presented sounded plausible.*
- (49) a. ‘The thing(s) Adam presented sounded plausible.’ [the definite reading]
- b. ‘Everything Adam presented sounded plausible.’ [the universal reading]

The major semantic difference in (49a-b) lies in the definiteness of the matrix clauses (because both relative clauses are *(that/which) Adam presented*), which is further determined by the different use of *the thing(s)* and *everything*. Note that example (48) and the definiteness of the paraphrased clause in (49a) is determined by the indefinite morpheme *-ever*. If (49a-b) are strict semantic interpretations of (48), as Šimík (2017) claims, then I would suggest that the differentiation of (49a-b) is caused by what the callus (i.e. the shared element between the matrix clause and the relative clause) is in the CFR (48): if the callus is the compound *whatever*, as it is in most cases, then we will have (49b) because the morpheme *-ever*, as part of the compound, is also shared in the matrix clause. On the other hand, if the shared element is merely *what*, and *-ever* remains exclusively in the relative clause, then the matrix clause stays definite. The second possibility corresponds exactly to what I argued in (47b): in less frequent situations, the *wh-ever* words (in (48)-(49) it is *whatever*) are not compounds, but compound phrases, in which the *wh*-words and *-ever* are two syntactically separate words that morphologically join together. The syntactic representations of the two readings, in accordance with Graft Theory, are shown as follows:

(50) a.



b.



The different representations of (48) are in conformity with our intuition that although CFRs are potentially ambiguous, the universal reading is often more accessible than the definite reading: as I suggested in the previous section, the ‘compound phrase’ analysis of *wh-ever* is relatively rare, compared with the compound analysis of *wh-ever*. Moreover, if we do a relative transformation (cf. Section 8.3.4.2) and turn (48) into the following (51), it will be clearer that this transformed sentence corresponds not to (50a)

but to (50b), because while the first clause is indefinite, the second one is definite, as suggested by the definite pronoun *it*. This is the reason why I argue in footnote 8 that the transformation is just an approximate one – the transformed sentence will only prefer the definite reading.

- (51) *Whatever Adam presented, it sounded plausible.*

Moreover, (51) is instructive because it belongs to a category called ‘correlative clauses’. Hence we have a new observation that correlative clauses (at least with *what* and *who*) prefer the definite reading. I briefly introduced them in Section 8.2.2 with example (8) extracted from Rydén (1966). Here I repeat (8) in PDE orthography:

- (52) And whatsoever he does, it must needs be a good work.

A characteristic of (52) is that it has a strong tendency to be definite (*it* is a definite pronoun, as the one in the UCC (51) above), although semantically it is still indeterminate: we are more likely to interpret it as ‘*the* thing he does must be a good work, although I do not know what it is’ than ‘*everything* he does must be a good work’. The difference lies in what element the pronoun *it* is coindexed with. The possible universal reading arises when *it* refers back to *whatever* (53a), and the possible definite reading is yielded if *it* is coindexed with *what-* (53b).

- (53) a. And *whatever_i* he does, *it_i* must needs be a good work.
b. And *what_{-i} -soever* he does, *it_i* must needs be a good work.

In Section 7.4.3 I argued that *-soever* is structurally more distant from *wh*-words. It is not surprising, therefore, that (53b) is more likely than (53a). Moreover, in the original sentence *soever* is actually separated from *what* (*what so euer*), which reinforces the definite reading shown in (53b). But even though the correlative clauses are introduced by *wh*-*soever* words, rather than *wh*-*ever* words, as in (51), it is better to say that *it* only

coindexes with *what*, as both are definite pronouns.

8.6 Conclusion

This chapter is a continuation of Chapter 7 as it mainly focused on a subtype of free relatives, namely ‘conditional free relatives’ which are formed not around *wh*-words but *wh-ever* words. I started with the syntax and semantics of CFRs, and then compared *wh-ever* clauses and *wh-soever* clauses from a historical perspective. In the ensuing sections I also explored the variations within *wh-ever* clauses and argued that CFRs introduced by *whenever*, *wherever*, and especially *however*, are atypical and behave similarly to corresponding ‘universal concessive-conditional clauses’ (UCCs). I presented two original findings that have not been thoroughly researched before: first, I gave a detailed description of how *wh-ever* words competed with *whosoever* words, based on diachronic data and concluded that the structures of the two groups of words are different. Second, I proposed a syntactic account for the potential semantic ambiguity (the universal reading vs. the definite reading) in CFRs, arguing that the difference is caused by whether *-ever* is fully combined with the *wh*-base.

9. Conclusion: a non-synthetic approach to exocentric noun phrases

9.1 Summarising the new proposals

This thesis has provided a comprehensive examination of exocentric noun phrases (ENPs) in English. In Chapter 1 I defined the concept of ENP and sketched out the research methods I used in the following chapters. In Chapter 2 I briefly introduced previous studies of ENPs, with an emphasis on the ‘Fusion of Functions Theory’ (FFT) first proposed by Huddleston & Pullum et al. (2002) and refined by Payne et al. (2007). In the following chapters I focused on some of the most discussed ENPs, and each chapter is organised in a similar way: first I described, often with the help of corpora, the syntactic and semantic behaviour of a particular exocentric nominal construction, and then I critically reviewed mainstream theories which claimed to have successfully dealt with this construction. Finally, based on the data I extracted from corpora and the evaluation of previous studies, I proposed my own approach. Specifically, these new approaches are summarised as follows:

- (i) **Compound pronouns (Chapter 3):** the ‘compound phrase hypothesis’ indicates that compound pronouns (CoPros) are neither compounds nor pronouns – they are essentially NPs conjoined together as a lexical unit. Both parts of compound pronouns (i.e. the determinative part *some-*, *any-*, *every-*, etc. and the nominal part *-one*, *-thing*, etc.) still possess full syntactic functions, which can be proved by tests of coordination and modification. On the other hand, the morphological conjunction of the compound phrases does affect their syntax, as there will be no room for the premodifier of the second nominal part. The consequence of this influence is revealed in a process called ‘syntactic coercion’, in which the premodifier is coerced to postposition, resulting in the unique modification pattern (e.g. *something beautiful*). Nevertheless, it should also be acknowledged that a small portion of CoPros has fully converted into nouns, which means that in those

cases the syntactic functions of the determinative parts have been lost (though the meanings remain). As a result, we will also observe premodification in these CoPros, as in *beautiful something*.

- (ii) **Generic Constructions (Chapters 4 and 5):** There are at least three different readings of Generic Constructions: the human reading (termed as ‘Generic Human Constructions’ (GHCs)), the abstract reading and the concept reading (termed as ‘Generic Abstract Constructions’ (GACs)), each of which behaves distinctively in syntax. These variations can be accounted for by a unified proposal, namely ‘Determiner + Adjective (optional) + e_N ’, where e_N is an empty noun which only has a grammatical function. To distinguish these three readings, a syntactic device of ‘feature assignment’ is proposed, with four distinctive features [\pm human], [\pm count], [\pm plural] and [\pm generic], to be assigned in line with the context. The locus of the features is the phrase (e.g. *the rich*) rather than the adjectives (e.g. *rich*) for two reasons: first, adjectives may not appear in some Generic Constructions (e.g. *many* in *many agree with you*). Second, in constructions with the structure of ‘*the* + Adjective’ such as *the poor* and *the dead*, *the* has lost its function as a definite determinative. As a result, we should regard ‘*the* + Adjective’ as an idiom that operates on the phrasal rather than the lexical level.
- (iii) **Referential metonymy (Chapter 6):** unlike Warren (2006), who claims that referential metonymy represents a ‘head-modifier’ relationship which is realised through a process called ‘double exposure’, my own proposal argues instead that the metonymic NP reflects a ‘head-property’ relationship because although the property is an attributive element, it is not syntactically realised as a modifier in most cases. Also, referential metonymy is processed by a mechanism called ‘property emergence’, where the head remains covert, but the property emerges on the surface. The oddness of syllepsis arises because what is combined are not two identical NP heads, but an NP head and the emerging property of this NP.
- (iv) **Free relatives (Chapters 7 and 8):** my approach resembles other multidimensional theories (such as Graft Theory) with some improvements. First, contra Graft Theory, I argue that the shared element in transparent free relatives

(TFRs) is still the *wh*-word rather than the ‘transparent nucleus’ (TN). Second, in FRs where *wh*-words function as relative determinatives, the shared elements are both the *wh*-determinatives and the NPs following them. Third, historical evidence suggests the plausibility of multi-dominance in FRs. Chapter 8 may be the only comprehensive study of conditional free relatives (CFRs, i.e. FRs with *-ever* words) conducted from a syntactic, especially historical syntactic perspective. A comparison between *wh-ever* and *wh-soever* words reveals their structural difference, arguing that while *wh-soever* is phrasal, the majority of *wh-ever* words are lexical. This finding also inspires a syntactic solution to the different readings of CFRs (i.e. the definite reading and the universal reading): the universal reading is caused by *wh-ever* being lexical, whereas the definite reading arises when the relationship of the *wh*-word and *-ever* is less close and *-ever* does not exert its influence on the matrix clause.

Above is the answer to my first research question (i.e. ‘What are the correct analyses of ENPs?’). A prominent feature of these proposals is that they are rather distinctive, and none of them is universal. An analysis featuring empty nouns fits Generic Constructions or even constructions involving referential metonymy, but it definitely does not fit constructions with compound pronouns or free relatives, while multi-dominance accounts only for free relatives and not other constructions. Therefore, one may wonder about the viability of obtaining a universal theory that is applicable to all ENPs (i.e. the second research question): why do we not have a synthetic theory for ENPs? This question can be further divided into two questions: what is the problem with a synthetic theory? And, is there something special about ENPs that prevents a synthetic theory? I will explore the answers to these two questions in the following sections.

9.2 Why does a synthetic theory not work?

In Chapter 2 I introduced the ‘Fusion of Functions Theory’ (FFT) as the only approach

that claims to account for multiple kinds of ENPs, therefore I will use FFT as an example to demonstrate the possible problems with a synthetic theory. From Chapter 3 FFT was critically discussed in every chapter with various results. With regard to compound pronouns, FFT does not suit typical CoPros since it cannot successfully account for the independent modification of the second part, although it provides a good explanation for *once*, *twice* and *thrice*, constructions that can hardly be classified as CoPros. As for Generic Constructions, FFT fails to capture the syntactic/semantic features, which leads *the rich* and *the sublime* to have the same representation (note that the two phrases are quite different: *the rich* describes a human reference and is plural, whereas *the sublime* is singular and non-human). Moreover, there are some specific words that simply cannot be explained by FFT, such as *another* and the predeterminer modifiers (e.g. *all* in *all the students*). Referential metonymy is challenging in FFT, and despite the attempt I made in Chapter 6 to represent Warren's 'double exposure' within the framework of FFT, I have concluded that such a representation is remarkably problematic. Finally, free relatives are the constructions for which an FFT account is suitable, because the notion of multi-dominance is crucial to how the matrix clause and the relative clause are conjoined. In fact, however, any theory employing multi-dominance will be able to explain free relatives – FFT does not outdo its competitors such as Graft Theory or Parallel Merge.

The results summarised above indicate that FFT, in spite of its broad coverage, is not effective in explicating most of the ENPs that it claims to account for. Apart from the problems of explaining particular constructions, there are still some broader issues related to FFT that deserve some attention. They pertain to the design of FFT, rather than the application of it.

9.2.1 *The interaction between syntax and other disciplines*

In a recent paper Huddleston & Pullum (2019) argue that “[t]he use of node-sharing representations [i.e. FFT] that is made in *CGEL* is... purely a heuristic decision, enabling certain generalizations to be captured more perspicuously.” In my view,

however, the cost of this strategy is a loss of accuracy. I suggested some possible amendments, such as the addition of a feature assignment mechanism and the need for a new configuration to settle the ‘multiple fusion’ problem. A common characteristic of these amendments is that they involve some non-syntactic, especially semantic, considerations. For example, the features [\pm generic] and [\pm human] are clearly semantic, and they are not expressed in FFT and many other theories. While in *CGEL* Huddleston & Pullum et al. (2002) do talk a lot about the meanings of certain syntactic constructions, FFT concerns syntactic features only.

This would not be a serious defect in accounting for ENPs like Generic Constructions, as those constructions stand out syntactically. *The rich* is different from common NPs because of its plurality and the lack of a noun. But what if we cannot distinguish two constructions in syntax? Referential metonymy is such an example. Sometimes it is easy to tell that a metonymical construction is incongruous with grammatical rules, as in *The French fries is waiting* (*the French fries* refers to the customer ordering French fries) – *the French fries*, as indicated by the verb *is*, would be expected to be singular. But then, how about the following examples?

- (1) a. Look at the green trousers dance! (Bowerman 2019: 26)
- b. Cædmon is a poet and difficult to read. (Warren 2002: 123)

Those examples pose no syntactic issues. In (1a) *green trousers* is plural and so is *dance*. (1b) may be tricky because *read* often licenses an argument that is ‘readable’, such as *books* or *newspapers*. However, occasionally we can identify examples like (2).

- (2) McDunn looks at me levelly. *I still can't read him*; I'm not able to tell whether he thinks this is likely or not, whether he thinks this is evidence I'm not his man or he still thinks I am but I had help [sic]. (BNC: FP6)

Example (2) shows that a person may also be ‘read’, although the verb *read* here is used figuratively, meaning something close to ‘interpret’. Returning to (1b), theoretically, it

is perfectly grammatical. What motivates Warren (2002, 2006) to presume an empty head noun (which is not *Cædmon*), and leads me to list referential metonymy in the group of ENPs, is a semantic factor: most people, if not all, will understand *read Cædmon* as ‘read Cædmon’s poems’ instead of ‘interpret Cædmon’s mind’. Similarly, it is not the trousers, but a person, that dances in (1a). Grammaticality does not equal acceptability: the fact that (1a) is grammatical does not mean that *trousers* can be interpreted for its literal denotation.¹ Huddleston & Pullum et al. (2002) and most grammarians (except Warren) never attend to the problem of referential metonymy, but examples like (1a-b) indicate a need for syntactic solutions, motivated by semantic phenomena.²

Moreover, an important argument in my definition of ‘compound phrases’ is that morphology and syntax interact: morphology intervenes in the syntactic process. Plag (2018: 159-162) spends a section discussing whether compounding is a morphological or syntactic process, and the provisional conclusion is that the dispute is “unresolved” (Plag 2018: 162). But as Plag mentions, there are some scholars who take a compromise stance. For instance, Minkova & Stockwell (2009) distinguish ‘lexical compounds’ from ‘syntactic compounds’, and the latter “are formed by regular rules of grammar, like sentences, and they are not, therefore, listed in a dictionary” (Minkova & Stockwell 2009: 10). An example is *bookkeeper*: it is coined from the formula ‘N + keeper’, which is able to generate other words – *housekeeper*, *shopkeeper*, etc. For Minkova & Stockwell, *bookkeeper* is a morphological compound formed by syntactic rules. My proposal of compound phrases adds some new flavour to the compromise stance, though it must be pointed out that the concept of compound pronouns is essentially different from Minkova and Stockwell’s syntactic compounds: not only is a compound phrase (e.g. *something*) formed in a syntactic way, but its morphemes, after

¹ The relationship of grammaticality and acceptability has been studied at least from Spencer (1973). For a recent review, see Sprouse & Schütze (2019).

² Another example is the definite and universal reading of -*ever* relative words. A plethora of papers can be found from a semantic perspective, but I may be among the few who gives a syntactic account (see Section 8.5).

compounding, are still syntactically active.³

As the interaction between syntax, morphology, semantics and even pragmatics has become more researched, I wonder whether it is possible to maintain a ‘pure’ syntactic view. In this sense, FFT is oversimplified because it neglects extra-syntactic factors, which is one of the reasons why it fails to demonstrate effectiveness.

9.2.2 *Dynamic or static?*

In his reviewing report on Payne et al. (2007), Aarts (p.c.) raises two conceptual problems about FFT:

- i. What is the exact nature of fusion? Is it a process, or are we to regard fused structures as somehow ‘base-generated’, as it were, in the grammar?
- ii. Why have a fusion at all? Why not simply allow for empty heads?

Payne et al. reply, somewhat vaguely, in their Footnote 43 that FFT is not a process (or ‘reanalysis’). Under a dynamic view, a ‘fused modifier-head’ (e.g. *the rich*) will have two functions, modifier and head, generated simultaneously somewhere, combine to form a new single one (i.e. modifier-head), which is realised by the adjective *rich*, and the element that is supposed to realise the head function goes unexpressed. But there is a difference between FFT and reanalysis:

However, while both FF and reanalysis associate particular strings with two or more functions, in FF only a single tree structure is involved and one constituent is assigned a dual function in that single structure. (Payne et al. 2007: 598)

The nature of FFT, then, is static and the fused constructions are base-generated. For Payne et al., as well as Huddleston & Pullum et al. (2002), it would be incorrect to say

³ Note that syntactic compounds such as *bookkeeper* do not show this syntactic independency. For example, the parts of *bookkeeper* cannot be individually modified: *an interesting bookkeeper* can only be interpreted as someone who is interesting, but not **an [NP interesting book-] -keeper*.

Function A is fused ‘into’ Function B, but rather A is fused ‘with’ Function B, because the former preposition smacks of dynamism (a quick meta-analysis of Payne et al. (2007) shows interestingly that the collocation *fused with* occurs twice in this paper, but there is no occurrence of *fused into*).⁴ However, the authors seem to evade the second question: why do we need a base-generated, dual-functioning fused construction, rather than just assuming an empty head?

The answer may be found in Huddleston & Pullum (2020), where the authors discuss the theoretical roots of FFT:

CGEL’s assumptions are considerably closer to those of HPSG [i.e. Head-Driven Phrase Structure Grammar] and LFG [i.e. Lexical-Functional Grammar]... [These assumptions] depart from using ordinary constituent-structure trees in two key respects... [N]odes may in effect be shared between distinct parts of the graph: the continuous expansion of branching of trees is not required, and a node can have two distinct edges each connecting it to nodes closer to the root. (Huddleston & Pullum 2020: 217)

On the other hand, they also suggest that:

The departure from tree structures constituted by the uses of function fusion in *CGEL* is actually very slight, in a sense that can be made formally precise. (Huddleston & Pullum 2020: 219)

It seems that FFT derives from a compromise: while its assumptions are quite close to those of HPSG/LFG, its designers also want to retain the ordinary tree structures with ‘very slight’ departures. From an HPSG/LFG point of view, it is not unimaginable why the designers of FFT are reluctant to accept empty categories⁵ and dynamism. Empty elements are rarely mentioned in books and research papers using an HPSG/LFG perspective, and Kuiper & Nokes (2014: 172) remark that “indeed LFG theorists have

⁴ However, even though Huddleston & Pullum et al. avoid using ‘into’, the very verb *fuse* still has a dynamic meaning, which makes the static explanation of *fusion* difficult to understand.

⁵ Note that empty elements are different from ellipsis. Ellipsis is a common topic in Huddleston & Pullum et al. (2002), but as I mentioned before (cf. Section 4.3.4), Huddleston & Pullum et al. strongly oppose the ellipsis analysis.

provided arguments both for and against the existence of empty categories". Even though some theorists, like Bresnan (2001) and Berman (1997), allow an empty element such as a trace or a gap, it "marks the expected position of an argument that appears elsewhere in c-structure,⁶ not...a gap left by movement" (*ibid.*). Huddleston & Pullum et al. (2002) undoubtedly conform to these assumptions, as is clear from the conceptual index of *CGEL* in which the label 'empty categories/elements' is absent and 'movement' is mentioned only once, which refers to a verb of physical movement.

Therefore, it would be difficult to use ordinary tree diagrams (with minimum changes, of course) to account for exocentric constructions without introducing empty categories. FFT may have been created with this background in mind. It looks like a simplified version of an HPSG/LFG representation or a complicated version of an X-Bar Syntax tree structure.⁷ It enjoys the advantages from both schools: node-sharing becomes natural and straightforward, which is the legacy of HPSG/LFG, and X-Bar tree structures are simple and clear. Nevertheless, it also suffers from being a hybrid, and one serious problem, as I argued, is inaccuracy: it roughly depicts the syntax of ENPs, but the details have largely been neglected.

9.2.3 *Simplicity and oversimplification*

What I have discussed in Section 9.2.1 and 9.2.2 seems quite different, yet both sections demonstrate the efforts of FFT to be simple. It considers only syntactic matters, and it attempts to simplify LFG/HPSG by absorbing some configurations from X-Bar syntax. However, if a theory is simple enough to accommodate a wide range of syntactic

⁶ C-structure is one of the LFG structures which shows the category of the nodes (e.g. noun, verb), see Börjars et al. (2019: 22-40) for a detailed discussion.

⁷ In LFG 'function' and 'category' are shown in different structures: f-structure and c-structure respectively. Huddleston & Pullum et al. (2002) put these two kinds of information together in the same tree diagram, which is the reason why their framework is simplified compared with canonical LFG. On the other hand, generative grammar does not have the practice of displaying functional labels (e.g. subject, predicate) in tree diagrams, and in this sense Huddleston & Pullum et al.'s version of trees is more complicated. Note that this is not just a characteristic of FFT, but the theoretical framework of Huddleston & Pullum et al. (2002) in general.

phenomena, it will also be at risk of evading the details. To avoid oversimplification, in my view, it is necessary to represent those details: are the details worth showing, or are they just the trivia which are better ignored? My conclusion is that details really matter in ENPs, because in many cases the different types of ENPs are defined by the details. How can we show that *the rich* and *the sublime*, which are both constructed by the definite article *the* and an adjective, are different in number (after all, adjectives in Modern English do not inflect for number)? How do we explain the difference between *beautiful something* and *something beautiful*? Do they suggest that a modifier can be freely placed on either side of *something*? And how can we account for the definite reading and the universal reading in *wh-ever* relative clauses? Is it only for some semantic reasons? There are a lot of details contributing to the complexity of ENPs which cannot be accounted for comprehensively by a simple theory, because such a theory will represent the most typical constructions while ignoring the marginal, more complicated ones. This is clearly not a result we want to achieve.

Apart from the flaw of being oversimplified, another internal reason against a synthetic theory is the heterogeneity of ENPs. This will be discussed in the next section.

9.3 The heterogeneity of ENPs

Despite the common characteristic shown in all ENPs that the NP lacks a head noun, the category of ENPs is rather heterogeneous. An ENP could be lexical (e.g. compound pronouns), phrasal (e.g. Generic Constructions) or even (superficially) clausal (e.g. free relatives). Moreover, it can be argued that the missing head can be either visible (as in compound pronouns) or invisible (as in Generic Constructions). One significant reason for the chaos is that the derivation of ENPs can be very diverse, yet these variations may lead to the same consequence. In this thesis we can see at least four ways of forming an ENP, namely historical ellipsis, compounding, conjunction, and rhetoric, which will be summarised in the following sections.

9.3.1 Historical ellipsis

I call the derivation of Generic Constructions ‘historical ellipsis’ because Generic Constructions are the relics of the ‘substantival adjectives’ in earlier English, in which the ellipsis of head nouns does not cause problems in comprehension due to the rich inflections of adjectives (see Section 4.5 for details). On the other hand, noun ellipsis in Modern English is quite restricted: there must be some kind of antecedent and therefore the elliptical NPs cannot be generic. That is why we generally consider the missing head noun as an empty nominal element rather than a particular noun that is elided. However, this does not mean that Generic Constructions are not productive in Modern English. As I argued in Chapter 4, a conventional pattern has been established in ModE that ‘*the* (or a genitive pronoun) + adjective’ could refer to a general group of people or non-human entities. Newly coined words may thus appear in Generic Constructions in accordance with this pattern. For example, the word *unbelievable* is first recorded in English in 1548, yet we can find quite a few cases where it is part of the Generic Construction:

- (3) But three minutes later Captain Fuchs knew he was in real trouble when *the unbelievable* happened – the jumbo’s second starboard engine caught fire.
(BNC: CH2)

The difference between Generic Constructions in ModE and ‘substantival adjectives’ in OE is that Generic Constructions tend to operate at the phrasal level, i.e. adjectives cannot appear alone, as in *the unbelievable/*unbelievable happened*.

9.3.2 *Compounding*

A second way ENPs are derived is through a special kind of compounding. It is ‘special’ for two reasons: first, it is a process of historical compounding (i.e. words are conjoined during the historical development of the English language) which in Modern English has become non-productive. Second, the result of this process is not yet compounds,

but some (two in most cases) functionally independent words glued together. I introduced ‘the compound phrase hypothesis’ in Chapter 3, in which I argued for the dual status of compound pronouns (CoPros): words such as *something*, *nobody*, *everywhere*, etc. are morphologically lexical but syntactically phrasal, i.e. they are NPs in syntax. Therefore, instead of categorising them as ENPs, it would be better to regard them as NPs with special morphology (of course, there is a small portion of CoPros behaving as nouns, cf. Section 3.5). Note that in Chapter 3 one of the arguments for such a treatment is historical derivation: I showed in Section 3.2.3 that in earlier English, with an example quoted from the *Middle English Dictionary (MED)*, the determinative part and the nominal part are often separated ((18b) of Chapter 3, repeated here as (4)):

- (4) ...but it be *som body* that cometh from fer contre. ('but it be somebody that comes from far country') (*MED*, s.v. *som-bodi*)

In later chapters I identified further possible cases of compound phrases, such as *another* (cf. Section 3.5) and *whatsoever/whatever* (cf. Section 8.4.3). Not surprisingly, their parts are also detached originally.

- (5) And wolde algates han *a nother* wif. ('and would altogether possess another wife') (Chaucer c1355, quoted from *OED*, s.v. *another*,)
- (6) The pith...has much such a kind of texture, save onely that *which way soever* I set this light substance, the pores seem'd to be cut transversely... (= (36a) in Chapter 8)

There may be more cases which potentially qualify as compound phrases. For example, Österman (2001) also studies a series of ‘compound adverbs’ which combine *here*, *there*, *where*, etc. with various prepositions such as *to*, *of* or *after*. Some of these compound adverbs should arguably be granted the status of compound phrase. Take *thereto* and *thereof* as examples. I find the following sentence in the BNC:

- (7) The landlord hereby demises unto the Tenant ALL THAT messuage or dwelling-house with the outbuildings and garden *attached thereto* and *forming part thereof* known as Number 10 Downing Lane Old Fableland in the County of Humberside... (BNC: CDP)

If we acknowledge that in (7) we have a common verbal expression ‘attach to N’, where *to*-PP functions as the complement of the verb *attach*, and ‘part of N’, where *of*-PP functions similarly as the complement of the noun *part*, then it can be argued that *thereto* and *thereof* are not adverbs, but PPs in which the parts *-to* and *-of* are syntactically active as prepositions. Again, we can find historical support from corpora:

- (8) Mathathias..ofsloh..þæs cynincges ðegn þe hine ðær *to* neadode. (Ælfric c1000, quoted from OED, s.v. *thereto*).

This process of historical compounding results in a superficial change of word class: CoPros, because of their morphology, are incorrectly analysed as pronouns or determinatives in many grammars, with the head nouns missing. Instead, ‘the compound phrase hypothesis’ proposes NP status based on their syntactic behaviour.

Nonetheless, as the category of compound phrases expands, the definition I provided in Chapter 3 has gradually become insufficient: apart from CoPros, the new members of compound phrases are not exclusively NPs (e.g. *thereto* and *thereof* are PPs). Moreover, *another* and *whatsoever/whatever* are hardly qualified as any kind of phrases – they are merely lexical amalgams of different words. Hence, I will modify ‘the compound phrase hypothesis’ here and give a new definition that accommodates a wider range of cases:

THE COMPOUND PHRASE HYPOTHESIS

Compound phrases are single orthographic units whose parts are syntactically active and therefore should be treated as independent words. The syntax of compound phrases, however, is influenced by their pre-established morphology.

9.3.3 Clausal conjunction

In Section 7.4.3 I compared the Old English free relative pronoun *se ðe* and its Modern English counterpart *what*. The observation was that in Old English FRs the matrix clauses and the relative clauses could be easily separated because the two elements, *se* and *ðe*, belong to different clauses, while in Modern English the syntactic functions of those two words concentrate in a single word *what*. This problem occurred when interrogative pronouns started to turn into relative pronouns in the 12th century. Fischer (1992: 299-300) provides some examples which could be regarded as ‘primitive’ relative clauses introduced by *wh*-words:

- (9) Hwam mai he luue treweliche *hwa* ne luues his broder. (‘whom he can love truly, who(ever) does not love his brother.’)
- (10) Ne meahte hire Iudas.../ sweotole gecyþan be
 Not could her Judas, clearly tell about
 ðam sigebeame,/ on *hwylcne* se hæland ahafen wære...
 the victorious tree on which the Saviour raised was
 ‘Nor could Judas tell her clearly about the victorious tree, [tell her] on which [tree] the Saviour was raised up’
- (11) for ðan ic leng næbbe *hwæt* ic on his lacum
 because I long not-have what I in his service
 aspende
 could spend
 ‘because for some time I have had nothing to spend in his service’

According to the author, (9)-(11) are potentially ambiguous: (9)-(10) could be interpreted either as interrogative clauses or relative clauses (although Fischer points out that (8) is better analysed as an interrogative clause), and in (11) “*hwæt* stands somewhere between its use as an indefinite pronoun...and its use in indirect questions”

(Fischer 1992: 299). However, for me (11) looks very much like a primitive FR introduced by *what*, and in fact I wonder whether it would be more appropriate to translate it as ‘...I don’t have/have not what I could spend in his service’ (after all, *næbbe* is a combination of *ne* ‘not’ and *hæbbe* ‘have’). Note that in (9) and (10) the subordinate clauses can be independent from the matrix clauses because of the presence of antecedents (*he* in (9) and *sigebeame* in (10)), but in (11) the matrix clause and the subordinate clause are inseparable as both the verbs in the two clauses (*hæbbe* and *aspende*) require an object, which could only be fulfilled by the word *hwæt*. In other words, while we may say that in (9) two clauses *Hwam mai he luue treweliche* and *hwa ne luues his broder* are semantically linked by the wh-word *hwa* (either as a interrogative pronoun or as a relative pronoun), in (11) *hwæt* has become a ‘pivot’ where *for ðan ic leng næbbe hwæt* and *hwæt ic on his lacum aspende* are conjoined.

The result of this development is that ENPs are created if we think that the *wh*-word belongs either to the matrix clause or to the subordinate (relative) clause. As I have suggested before, this problem can only be properly resolved if we allow multi-dominance.

9.3.4 Extra-syntactic reasons

Finally, ENPs may be derived from non-syntactic sources, as in referential metonymy. Syntactic solutions, whether it be Warren’s (2006) ‘double exposure’ or my ‘property emergence’ account, can only represent, but not explain, the cause of metonymy, because the syntactic characteristics shown in a particular proposition are the result of some non-syntactic mechanism: the cause of metonymy can never be categorised as ellipsis, compounding or conjunction. The cause (or motivation) of referential metonymy, therefore, may be sought in other disciplines such as pragmatics and psycholinguistics. As I showed in Chapter 2, referential metonymy has attracted attention from many scholars from different backgrounds. For example, Langacker (1993: 30) recognises it as a “basically reference-point phenomenon”, while Fauconnier & Turner (1999) relate it to a mental operation called ‘conceptual integration’. There

are also attempts to account for metonymy with neurolinguistic techniques such as eye movements (Frison & Pickering 1999) or fMRI (Piñango et al. 2017). Moreover, as Steen (2005: 6) mentions, cognitive linguists go beyond accounting for metonymy as they show “the interest in predictions about behaviour”. This is one of the reasons I cast doubt on a ‘pure’ syntactic theory in Section 9.2.1: human languages (including English) do not seem to confine themselves to a particular set of rules; on the contrary, the rules of linguistic constructions (i.e. morphosyntax) could be the result of a wide range of mental processes.

9.4 Closing remarks: contributions and implications

In this thesis I consider my contribution to the study of noun phrases from three perspectives. First, it is a comprehensive survey of Exocentric Noun Phrases in English. The comprehensiveness does not only lie in the exploration of several kinds of ENPs at different levels (lexical, phrasal and clausal), but more importantly I investigated various types of a particular ENP, some of which are marginal, by including as many corpus data as possible. This will differentiate my analyses from some earlier studies in which only the most common and typical constructions are analysed. Second, I proposed new solutions based on those corpus data. In some cases my account was a modified version of an existing analysis. For instance, I adopt the empty noun (e_N) solution for Generic Constructions, but argue, in accordance with the need to distinguish three different readings (i.e. human, entity, concept, cf. Section 4.1.2.3), for a mechanism of feature assignment at the phrasal level. In other cases my analysis was completely new, like the syntactic solution to the different readings (i.e. definite, universal, cf. Section 8.5) of *wh-ever* free relatives. Third, in this thesis I established a new category which I labelled ‘compound phrase’. This is a single orthographic unit with independent syntactic functions assigned to its parts. I started with the analysis of compound pronouns, and gradually discovered and subsumed more cases under this category.

While I concentrated on the study of some representative ENPs, I have allowed

myself to neglect a few other types. For example, I did not explore so-called ‘partitive constructions’ (e.g. *some of the students*, for an analysis of English partitive constructions, see Keizer 2017), which are also treated as ENPs by Huddleston & Pullum et al. (2002). Moreover, although I have tried to include evidence from other disciplines such as semantics and pragmatics, my knowledge of these domains is limited. Also, as a beginner of Old English I sometimes struggled in carrying out my corpus research of OE syntax, which means that on many occasions I needed to rely on previous studies as a source of data. Finally, the study of ‘compound phrases’ is still in its infancy and subject to a lot more work, because it has not been the focus of this thesis. I hope a systematic study will be devoted to this new category in the future.

Despite some domains requiring further study, I believe that this thesis has shed new light on the syntax of English, not neglecting complexity and diversity, because as Pullum (2010: 19) observes: “[T]he pure and simple truth about English grammar is that it is rarely pure and never simple.”

Bibliography

- Aarts, Bas. 2007. *Syntactic Gradience: the Nature of Grammatical Indeterminacy*. Oxford: Oxford University Press.
- Aarts, Bas, Sylvia Chalker & Edmund Weiner. 2014. *The Oxford Dictionary of English Grammar* (2nd edn.). Oxford: Oxford University Press.
- Aarts, Flor. 1993. *Who, whom, that* and Ø in two corpora of spoken English. *English Today* 9(3), 19-21.
- Abusch, Dorit. 1989. Reflexives, reference shifters, and attitudes. In E Jane Fee & Kathryn Hunt (eds.) *Proceedings of the 8th West Coast Conference on Formal Linguistics*, 1-13. Stanford, California: CSLI.
- Abney, Steven. 1987. *The English Noun Phrase in its Sentential Aspect*. Doctoral dissertation, MIT.
- Algeo, John. 2006. *British or American English? A Handbook of Word and Grammar Patterns*. Cambridge: Cambridge University Press.
- Allen, Cynthia. 1980. Movement and deletion in Old English. *Linguistic Inquiry* 11(2), 261-323.
- Allerton, D. J. 1995. Problems of modern English grammar IV, *English Studies* 76(1), 81-90.
- Arnold, Doug & Andrew Spencer. 2015. A constructional analysis for the skeptical. In Stefan Muller (Ed.): *Proceedings of the 22nd International Conference on Head-Driven Phrase Structure Grammar, Nanyang Technological University (NTU), Singapore*. Stanford, CA: CSLI Publications.
- Aschenbrenner, Anne. 2014. *Adjectives as Nouns, Mainly as Attested in Boethius Translations from Old to Modern English and in Modern German*. München: Herbert Utz Verlag.

- Assmann, Anke. 2013. Three stages in the derivation of free relatives. *Linguistische Arbeitsberichte* 90. 203-245.
- Balteiro, Isabel. 2007. *The Directionality of Conversion in English: a dia-synchronic study*. Bern: Peter Lang.
- Barcelona, Antonio. 2003a. Metonymy in cognitive linguistics. In Hubert Cuyckens, Thomas Berg, Rene Dirven & Klaus-Uwe Panther (eds), *Motivation in Languages: Studies in Honour of Günter Radden*, 223-55. Amsterdam: John Benjamins Publishing Company.
- Barcelona, Antonio. 2003b. *Metaphor and Metonymy at the Crossroads: A Cognitive Perspective*. Berlin: Mouton de Gruyter.
- Baker, C. L. 1995. *English syntax*. Cambridge, Massachusetts: The MIT Press.
- Baker, Mark C. 2003. *Lexical Categories: Verbs, Nouns and Adjectives*. Cambridge: Cambridge University Press.
- Barnden, John A. 2010. Metaphor and metonymy: making their connections more slippery. *Cognitive Linguistics* 21(1), 1-34.
- Bauer, Laurie. 1983. *English word-formation*. Cambridge : Cambridge University Press.
- Bauer, Laurie, Rochelle Lieber & Ingo Plag. 2013. *The Oxford Reference Guide to English Morphology*. Oxford: Oxford University Press.
- Bauer, Laurie. 2016. Re-evaluating exocentricity in word-formation. In Daniel Siddiqi & Heidi Harley (eds.). *Morphological Metatheory*. Amsterdam: John Benjamins Publishing Company. 461-78.
- Bergsma, Fenna. 2019. Mismatches in free relatives – grafting nanosyntactic trees. *Glossa* 4(1). 119. 1-37.
- Berman, Judith. 1997. Empty Categories in LFG. In Miriam Butt & Tracy Holloway King (eds). *Proceedings of the LFG97 Conference*. 1-14. Stanford, CA: CSLI Publications.

- Bhatt, Rajesh. 1997. Matching effects and the syntax-morphology interface: evidence from Hindi correlatives. *MIT Working Papers in Linguistics* 31, 53-68.
- Biber, Douglas, Edward Finegan, Stig Johansson, Susan Conrad & Geoffrey Leech. 1999. *Longman Grammar of Spoken and Written English*. Harlow: Longman.
- Blake, Norman. 2002. *A Grammar of Shakespeare's Language*. Hampshire: Palgrave.
- Blank, Andreas. 1999. Co-presence and succession: A cognitive typology of Metonymy. In Klaus-Uwe Panther & Günter Radden (eds), *Metonymy in Language and Thought*, 169-92. Amsterdam: John Benjamins Publishing Company.
- Blöhdorn, Lars M. 2009. *Postmodifying Attributive Adjectives in English: An Integrated Corpus-based Approach*. Frankfurt am Main; Oxford: Peter Lang.
- Bloomfield, Leonard. 1933. *Language*. New York: Henry Holt and Company.
- Bolinger, Dwight. 1967. Adjectives in English: attribution and predication. *Lingua* 18. 1-34.
- Borer, Hagit, & Isabelle Roy. 2010. The name of the adjective. In Patricia Cabredo Hofherr & Ora Matushansky (eds.) *Adjectives: Formal analyses in syntax and semantics*. Amsterdam: John Benjamins Publishing Company.
- Börjars, Kersti & Burridge, Kate. 2001. *Introducing English grammar*. London: Hodder Education.
- Börjars, Kersti, Rachel Nordlinger & Louisa Sadler. 2019. *Lexical-functional Grammar*. Cambridge: Cambridge University Press.
- Bregener, Carl. 1928. *A Contribution to the Study of the Conversion of Adjectives into Nouns in English*. Lund: Gleerupska University.
- Bresnan, Joan & Jane Grimshaw. 1978. The syntax of free relatives in English. *Linguistic Inquiry* 9(3). 331-91.
- Brezina, Vaclav. 2018. *Statistics in Corpus Linguistics*. Cambridge: Cambridge

University Press.

Broadwell, George Aaron. 2008. Turkish suspended affixation is lexical sharing. In Miriam Butt & Tracy Holloway King (eds). *Proceedings of the LFG07 Conference*. 198-213. Stanford, CA: CSLI Publications.

Bowerman, Josephine. 2019. What's really going on with the ham sandwich? *International Review of Pragmatics* 11, 22-55.

Burnard, Lou. 2007. *Reference guide for the British National Corpus (XML edition)*. <http://www.natcorp.ox.ac.uk/docs/URG/>. [accessed 1 February 2020].

Bury, Dirk & Ad Neeleman. 1999. *Projection of Free Relatives*. Manuscript, University College London.

Byrd, E. Keith, Randall S. McDaniel & Robert B. Rhoden. 1980. Television program and disability: a ten year span. *International Journal of Rehabilitation Research* 3(3): 321-26.

Caponigro, Ivano. 2000. Free relatives as DPs with a silent D and a CP complement. In Vida Samiian (ed.), *Proceedings of WECOL 2000*, Fresno, Cal: California State University

Caponigro, Ivano & Lisa Pearl. 2008. Silent prepositions: evidence from free relatives. In Anna Asbury, Jakub Dotlačil, Berit Gehrke, and Rick Nouwen (eds), *The Syntax and Semantics of Spatial P*, 365-385, Amsterdam: Benjamins.

Caponigro, Ivano & Anamaria Fălăuș. 2018. Free choice free relatives in Italian and Romanian. *Natural Language and Linguistic Theory* 36, 323-63.

Caponigro, Ivano. 2019. In defense of *what(ever)* free relative clauses they dismiss: a reply to Donati and Cecchetto (2011). *Linguistic Inquiry* 50(2), 356-71.

Carter, Ronald & Michael McCarthy. 2006. *Cambridge Grammar of English: A Comprehensive guide*. Cambridge : Cambridge University Press.

Chafe, Wallace L. 1970. *Meaning and the Structure of Language*. Chicago: University

of Chicago Press.

- Chalker, Sylvia. 1984. *Current English grammar*. London: Macmillan.
- Cinque, Guglielmo. 2010. *The syntax of Adjectives: A Comparative Study*. Cambridge, Massachusetts: MIT Press.
- Close, R.A. 1975. *A Reference Grammar for Students of English*. London: Longman.
- Citko, Barbara. 2000. *Parallel Merge and the Syntax of Free Relatives*. Doctoral dissertation. State University of New York at Stony Brook.
- Citko, Barbara. 2005. On the nature of Merge: External Merge, Internal Merge and Parallel Merge. *Linguistic Inquiry* 36(4). 475-496.
- Costea, Emanuela. 2014. *A Representative Corpus of Historical English Registers (ARCHER)*.
<http://www.helsinki.fi/varieng/CoRD/corpora/ARCHER/updated%20version/introduction.html>. [accessed 1 February 2020].
- Croft, William. 1993. The role of domains in the interpretation of metaphors and metonymies. *Cognitive Linguistics* 4(4), 335-70.
- Culicover, Peter W. & Ray Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Davies, Mark. 2004-. *British National Corpus (from Oxford University Press)*.
<https://www.english-corpora.org/bnc/>. [accessed 31 October 2018].
- Davies, Mark. 2008-. *The Corpus of Contemporary American English (COCA)*.
<https://www.english-corpora.org/coca/>. [accessed 5 December 2019].
- Davies, Mark. 2010-. *The Corpus of Historical American English (COHA)*.
<https://www.english-corpora.org/coha/>. [accessed 11 July 2019]
- Davies, Mark. 2018-. *The 14 Billion Word iWeb Corpus*. <https://www.english-corpora.org/iweb/>.

corpora.org/iWeb/. [accessed 31 October 2018].

Davies, Mark. 2017. *Early English Books Online Corpus*. <https://www.english-corpora.org/eebo/>. [accessed 13 August 2019].

Dayal, Veneeta. 1997. Free relatives and *ever*: Identity and free choice readings. In Aaron Lawson (ed), *SALT VII*, 99-116, Ithaca, NY: Cornell University.

Denison, David. 1999. Syntax. In Suzanne Romaine (ed.) *The Cambridge History of the English Language, Volume 4*. Cambridge: Cambridge University Press.

Denroche, Charles. 2014. *Metonymy and Language: A New Theory of Linguistic Processing*. London: Routledge.

Dekeyser, Xavier. 1984. Relativizers in Early Modern English: a dynamic quantitative study. In Jacek Fisiak (ed.) *Historical syntax*. Berlin: Mouton.

De Smet, Hendrik & Freek Van de Velde. 2013. Serving two masters: form-function friction in syntactic amalgams. *Studies in Language* 37(3). 534-565.

Di Sciullo, Anne-Marie & Edwin Williams. 1987. *On the Definition of Word*. Cambridge, Massachusetts: MIT Press.

Dirven, René & Ralf Pörings. 2002. *Metaphor and Metonymy in Comparison and Contrast*. Berlin: Mouton de Gruyter.

Donati, Caterina & Carlo Cecchetto. 2011. A unified account for relativization constructions. *Linguistic Inquiry* 42(4), 519-60.

Downing, Bruce. 1973. Correlative Clauses in Universal Grammar. *Minnesota Working Papers in Linguistics and Philosophy of Language* 2, 1-17.

Dryer, Matthew S. 2004. Noun phrases without nouns. *Functions of Language* 11(1), 43-76.

Emonds, Joseph E. 1987. The Invisible Category Principle. *Linguistic Inquiry* 18(4): 613-32.

Falkum, Ingrid Lossius, Marta Recasens & Eve V. Clark. 2017. ‘The moustache sits down first’: on the acquisition of metonymy. *Journal of Child Language* 44(1), 87-119.

Fauconnier, Gilles. 1994. *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge : Cambridge University Press.

Fauconnier, Gilles. 1997. *Mappings in Thought and Language*. Cambridge: Cambridge University Press.

Fauconnier, Gilles & Mark Turner. 1999. Metonymy and conceptual integration. In Klaus-Uwe Panther & Günter Radden (eds), *Metonymy in Language and Thought*, 77-90. Amsterdam: John Benjamins Publishing Company.

Ferris, Connor. 1993. *The Meaning of Syntax: A Study in the Adjectives of English*. London: Longman.

Fillmore, Charles J., Lee-Goldman, Russell R. & Rhomieux, Russell. 2012. The FrameNet Constructicon. In Hans C. Boas and Ivan A. Sag (eds.), *Sign-based Construction Grammar, CSLI Lecture Notes* 193. 309–372, Stanford: CSLI Publications.

Fischer, Olga. 1992. Syntax. In Norman Blake (ed.) *The Cambridge History of the English Language*, Volume 2. Cambridge: Cambridge University Press.

Fischer, Olga, Hendrik de Smet & Wim van der Wurff. 2017. *A brief history of English syntax*. Cambridge: Cambridge University Press.

Freeman, Margaret H. 2003. Poetry and the scope of metaphor: toward a cognitive theory of literature. In Antonio Barcelona (ed), *Metaphor and Metonymy at the Crossroads: A Cognitive Perspective*, 253-82. Berlin: Mouton de Gruyter.

Frisson, Steven. & Martin J. Pickering. 1999. The processing of metonymy: evidence from eye movements. *Journal of Experimental Psychology* 25(6), 1366-83.

Gawron, Jean Mark. 2001. Universal concessive conditionals and alternative NPs in

- English. In Cleo Condoravdi & Gerard Renardel de Lavalette (eds), *Logical Perspectives on Language and Information*. Stanford: CSLI Publications
- Gelderen, Elly van. 2010. *An Introduction to the Grammar of English* (2nd edn.). Amsterdam ; Philadelphia : John Benjamins Publishing.
- Giegerich, Heinz J. 2004. Compound or phrase? English noun-plus-noun constructions and the stress criterion. *English language and linguistics* 8(1). 1-24.
- Giegerich, Heinz J. 2009. Compounding and lexicalisation. In Rochelle Lieber & Pavol Štekauer (eds.) *The Oxford Handbook of Compounding*. 178-200. Oxford: Oxford University Press.
- Giegerich, Heinz J. 2015. *Lexical structures: Compounding and the modules of grammar*. Edinburgh: Edinburgh University Press.
- Gjesdal, Anje Müller. 2013. The influence of genre constraints on author representation in medical research articles: the French Indefinite Pronoun *On* in IMRAD research articles. *Discours* 12, 3-23.
- Glass, Lelia. 2014. Deriving the two readings of English Determiner + Adjective. In Urtzi Etxeberria, Anamaria Fălăuș, Aritz Irurtzun & Bryan Leferman (eds.) *Proceedings of Sinn und Bedeutung* 18: 164-181.
- Glass, Lelia. 2019. Adjectives relate individuals to states: evidence from the two readings of English Determiner + Adjective. *Glossa* 4(1): 24. 1–32.
- Grimshaw, Jane. 1977. *English wh-constructions and the theory of grammar*. Doctoral dissertation. University of Massachusetts.
- Goossens, Louis. 2002. Metaphtonymy: the interaction of metaphor and metonymy in expressions for linguistic action. In René Dirven & Ralf Pörings (eds.), *Metaphor and Metonymy in Comparison and Contrast*, 349-78. Berlin: Mouton de Gruyter.
- Görlach, Manfred. 1991. *Introduction to Early Modern English*. Cambridge: Cambridge University Press.

Grosu, Alexander & Fred Landman. 1998. Strange relatives of the third kind. *Natural Language Semantics* 6, 125-70.

Grosu, Alexander. 2003. A unified theory of ‘standard’ and ‘transparent’ free relatives. *Natural Language & Linguistic Theory* 21, 247-331.

Grosu, Alexander. 2007. ‘Direct’ versus ‘indirect’ approaches to transparent free relatives. In Gabriela Alboiu, Andrei A. Avram, Larisa Avram and Daniela Isac (eds.), *Pitar Mos: A Building with a View. Papers in Honour of Alexandra Cornilescu*, 107–123. Bucharest, Romania: Bucharest University Press.

Grosu, Alexander. 2010. On the pre-theoretical notion phrasal head: ignoring the left periphery is always at your own risk. In Anna Maria Di Sciullo & Virginia Hill (eds). *Edges, Heads and Projections: Interface Properties*. Amsterdam: John Benjamins

Grosu, Alexander. 2014. Transparent free relatives: two challenges for the grafting approach. In Anna Bondaruk, Grete Dalmi & Alexander Grosu (eds.) *Advances in the Syntax of DPs: Structure, Agreement and Case*. Amsterdam: John Benjamins.

Grosu, Alexander. 2016. The semantics, syntax, and morphology of Transparent Free Relatives revisited: a comparison of two approaches. *Natural Language & Linguistic Theory* 34, 1245-1280.

Günther, Christine. 2013. *The Elliptical Noun Phrase in English*. New York: Routledge.

Günther, Christine. 2018. The rich, the poor, the obvious: arguing for an ellipsis analysis of ‘adjectives used as nouns’. In Alex Ho-Cheong Leung & Wim van der Wurff (eds.) *The Noun Phrase in English: Past and Present*. Amsterdam: John Benjamins Publishing Company. 77-112.

Hallman, Peter. 2004. NP-interpretation and the structure of predicates. *Language* 80 (4), 707-47.

Harbert, Wayne. 1983. A note on Old English free relatives. *Linguistic Inquiry* 14(3).

549-553.

- Haser, Venera. 2003. Metaphor in semantic change. In Antonio Barcelona (ed), *Metaphor and Metonymy at the Crossroads: A Cognitive Perspective*, 171-94. Berlin: Mouton de Gruyter.
- Haspelmath, Martin. 1997. *Indefinite Pronouns*. Oxford: Clarendon Press.
- Haumann, Dagmar. 2010. Adnominal adjectives in Old English. *English language and linguistics* 14(1): 53-81.
- Heller, Daphna & Lynsey Wolter. 2011. On identification and transworld identity in natural language: the case of -ever free relatives. *Linguistics and Philosophy* 34, 169-99.
- Hernández, Salvador Valera. 1999. Many questions and few answers: on conversion in English. *Revisita Alicantina de Estudios Ingleses* 12: 181-98.
- Hewson, John. 1991. Determiners as heads. *Cognitive Linguistics* 2(4): 317-37.
- Hirschbuhler, Paul. & Rivero, María-Luisa. 1983. Remarks on free relatives and matching phenomena. *Linguistic Inquiry* 14(3). 505-520.
- Hope, Jonathan. 2003. *Shakespeare's Grammar*. London: Arden Shakespeare.
- Horobin, Simon, & Jeremy Smith. 2002. *An Introduction to Middle English*. Edinburgh: Edinburgh University Press.
- Hostetter, Aaron K. 2019. *Judith*. <https://oldenglishpoetry.camden.rutgers.edu/judith/> [Accessed January 15, 2020]
- Huddleston, Rodney. 1984. *Introduction to the Grammar of English*. Cambridge: Cambridge University Press.
- Huddleston, Rodney. & Geoffrey K. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Huddleston, Rodney. & Geoffrey K. Pullum. 2005. *A student's Introduction to English*

Grammar. Cambridge: Cambridge University Press.

Huddleston, Rodney. & Geoffrey K. Pullum. 2020. Modern and traditional descriptive approaches. In Bas Aarts, Jill Bowie & Gergana Popova (eds.) *The Oxford Handbook of English Grammar*, 201-21. Oxford: Oxford University Press.

Hudson, Richard A. 1987. Zwicky on heads. *Journal of Linguistics* 23, 109-32.

Hudson, Richard A. 2004. Are determiners heads? *Functions of Language* 11(1), 7-42.

Iatridou, Sabine, Elena Anagnostopoulou, & Roumyana Izvorski. 2001. Observations about the form and meaning of the perfect. In Michael Kenstowicz (ed.) *Ken Hale: A life in language*, 189-238. Cambridge, Massachusetts: MIT Press.

Izvorski, Roumyana. 2000. Free adjunct free relatives. In Billerey and Lillehaugen (eds.) *WCCFL 19 Proceedings*. 232-245. Somerville, MA: Cascadilla Press

Jackendoff, Ray. 1992. Mme. Tussaud meets the Binding Theory. *Natural Language and Linguistic Theory* 10, 1-31.

Jacobson, Pauline. 1995. On the Quantificational Force of English Free Relatives. In Emmon Bach, Eloise Jelinek, Angelika Kratzer & Barbara H. Partee (eds.) *Quantification in Natural Languages*. Amsterdam: Springer.

Jäkel, Olaf. 1999. Metonymy in Onomastics. In Klaus-Uwe Panther & Günther Radden (eds), *Metonymy in Language and Thought*, 211-33. Amsterdam: John Benjamins Publishing Company.

Jespersen, Otto. 1924. *The Philosophy of Grammar*. London: George Allen & Unwin Ltd.

Jespersen, Otto. 1933. *Essentials of English grammar*. London: George Allen And Unwin Ltd.

Jespersen, Otto. 1919-1949. *A Modern English Grammar on Historical Principles I-VII*. London: Allen & Unwin.

- Jin, Jing. 2013. *Functions of Chinese classifiers: A Syntax-semantics interface account*. Doctoral dissertation. The Hong Kong Polytechnic University.
- Katamba, Francis. 2005. *English Words: Structure, History, Usage* (2nd edn.). London: Routledge.
- Kayne, Richard S. 2015. *Once and Twice*. *Studies in Chinese Linguistics* 36(1). 1-20.
- Keizer, Evelien. 2007. *The English Noun Phrase: the Nature of Linguistic Categorization*. Cambridge: Cambridge University Press.
- Keizer, Evelien. 2017. English partitives in Functional Discourse Grammar: types and constraints. *Glossa* 2(1): 16. 1-40.
- Keizer, Evelien. 2020. Noun phrases. In Bas Aarts, Jill Bowie & Gergana Popova (eds.) *The Oxford Handbook of English Grammar*. Oxford: Oxford University Press. 335-57.
- Kester, Ellen-Petra. 1996a. Adjectival inflection and the licensing of empty categories in DP. *Journal of Linguistics* 32, 57-78.
- Kester, Ellen-Petra. 1996b. *The Nature of Adjectival Inflection*. Utrecht: OTS.
- Kishimoto, Hideki. 2000. Indefinite pronouns and overt N-raising. *Linguistic Inquiry* 31, 557-66.
- König, Ekkehard. 1985. On the history of concessive connectives in English. Diachronic and synchronic evidence. *Lingua* 66, 1-19.
- Kuiper, Koenraad & Jacqui Nokes. 2014. *Theories of Syntax: Concepts and Case Studies*. London: Palgrave MacMillan.
- Lakoff, George. 1974. Syntactic Amalgams. In M. W. La Galaxy et al. (eds.) *Proceedings of the Tenth Regional Meeting of the Chicago Linguistic Society*. Chicago: Chicago Linguistic Society. 321–344.
- Lakoff, George. 1978. *Women, Fire, and Dangerous Things: What categories Reveal*

- about the Mind*. Chicago, IL: The University of Chicago Press.
- Lakoff, George & Mark Johnson. 1980. *Metaphors We Live by*. Chicago: Chicago University Press.
- Lakoff, George. 1987. Image metaphors. *Metaphor and Symbolic Activity*, 2(3), 219-22.
- Langacker, Ronald W. 1993. Reference-point constructions. *Cognitive linguistics* 4(1), 1-38.
- Larson, Richard K. 1985. Bare-NP adverbs. *Linguistic Inquiry* 16 (4). 595-621.
- Larson, Richard K. 1987. "Missing prepositions" and the analysis of English free relative clauses. *Linguistic Inquiry* 18(2), 239-266.
- Larson, Richard K. 1998. Events and modification in nominals. In Devon Strolovitch and Aaron Lawson (eds), *SALT VIII*, 145- 168. Ithaca, NY: Cornell University.
- Larson, Richard K. & Franc Marušič. 2004. On indefinite pronoun constructions with APs: reply to Kishimoto. *Linguistic Inquiry* 35(2). 268-87.
- LaTerza, Ivana. 2015. Adjectives and determiners. *Lingua* 168: 85-103.
- Lauwers, Peter. & Dominique Willems. 2011. Coercion: definition and challenges, current approaches, and new trends. *Linguistics* 49(6). 1219-35.
- Leech, Geoffrey. 1992. Corpora and theories of linguistic performance. In Svartvik (ed.) *Directions in Corpus Linguistics*, 105-122. Berlin: Mouton de Gruyter.
- Leech, Geoffrey. 2015. Descriptive grammar. In Douglas Biber & Randi Reppen. (eds.) *The Cambridge Handbook of English Corpus Linguistics*, 146-160. Cambridge: Cambridge University Press.
- Lehrer, Adrienne. 1986. English classifier constructions. *Lingua* 68: 109-48.
- Leu, Thomas. 2005. Something invisible in English. *University of Pennsylvania Working Papers in Linguistics* 11 (1), 143-54.

- Leuschner, Torsten. 1996. ‘Ever’ and universal quantifiers of time: observations from some Germanic languages. *Language Sciences* 18, 469-84.
- Levine, Robert D. 2017. *Syntactic Analysis: An HPSG-based Approach*. Cambridge: Cambridge University Press.
- Li, Yen-Hui Audrey. 1992. Indefinite Wh in Mandarin Chinese. *Journal of East Asian Language* 1, 125-55.
- Lohmann, Arne. 2018. *Cut* (N) and *cut* (V) are not homophones: lemma frequency affects the duration of noun-verb conversion pairs. *Journal of Linguistics* 54, 753-77.
- Longobardi, Giuseppe. 2008. The structure of DPs: some principles, parameters and problems. In Mark Baltin & Chris Collins (eds) *The handbook of contemporary syntactic theory*. Oxford: Blackwell Publishers Ltd.
- Los, Bettelou. 2002. The loss of the indefinite pronoun *man*: syntactic change and information structure. In Teresa Fanego, María José López-Couso & Javier Pérez-Guerra (eds.) *English Historical Syntax and Morphology*, 181-202. Amsterdam: John Benjamins.
- Los, Bettelou. 2015. *A historical Syntax of English*. Edinburgh: Edinburgh University Press.
- Lyons, Christopher G. 1991. English nationality terms: evidence for dual category membership. *Journal of literary semantics* 20(2): 97-116.
- Mathews, P.H. 2014. *The Concise Oxford Dictionary of Linguistics*. Oxford: Oxford University Press.
- McCarthy, John J. 1982. Structure and expletive infixation. *Language* 58(3): 574-90.
- McCawley, James D. 1988. Adverbial NPs: bare or clad in see-through grab? *Language* 64(3), 583-90.
- McCawley, James D. 1998. *The syntactic phenomena of English* (2nd edn.). Chicago:

The Chicago University Press.

McEnery, Tony, Richard Xiao and Yukio Tono. 2006. *Corpus-based Language Studies*. London: Routledge.

McIntosh, Colin., Ben Francis & Richard Poole. 2009. *Oxford Collocations Dictionary for students of English (2nd edn.)*. Oxford: Oxford University Press.

Meinunger, André. 2015. Complex numeral expressions: a plea for grafts. *Syntax* 18(2). 103-123.

Meyer, Charles. 2002. *English Corpus Linguistics: An Introduction*. Cambridge : Cambridge University Press.

Middle English Dictionary. 2020. University of Michigan Library. [accessed 1 February, 2020]

Minkova, Donka. & Robert Stockwell. 2009. *English Words*. Cambridge: Cambridge University Press.

Minugh, David. 2007. The filling in the sandwich: internal modification of idioms. In Roberta Facchinetti (ed.) *Corpus Linguistics 25 Years on*. Amsterdam: Rodopi.

Mitchell, Bruce. 1985. *Old English Syntax*. Oxford: Clarendon Press.

Moltmann, Friederike. 1992. *Coordination and comparatives*. Cambridge, Massachusetts: Massachusetts Institute of Technology. (Doctoral dissertation.)

Moshavi, Adina. 2018. On the possible grammaticalization of נַכְנָה as an indefinite pronoun in biblical Hebrew. *Journal of Northwest Semitic Languages* 44(1), 41-60.

Nevalainen, Terttu. 2000. Early Modern English lexis and semantics. In Roger Lass (ed.) *The Cambridge History of the English Language, volume 3*. Cambridge: Cambridge University Press.

Nevalainen, Terttu. 2006. *An Introduction to Early Modern English*. Edinburgh:

Edinburgh University Press.

- Nerbonne, John. & Tony Mullen. 1998. Null-headed nominals in German and English. In Schuurman, I., van Eynde, F. & Schelkens, N. (eds.). *Computational linguistics in the Netherlands 1998*. Amsterdam-Atlanta (GA): Rodopi.
- Nerlich Brigitte, David. D. Clarke & Zazie. Todd. 1999. ‘Mummy, I like being a sandwich.’ Metonymy in language acquisition. In K. Panther & G. Radden (eds), *Metonymy in language and thought*, 361–83. Amsterdam: John Benjamins.
- Nunberg, Geoffrey. 1979. The non-uniqueness of semantic solutions: polysemy. *Linguistics and Philosophy* 3, 143-84.
- Nunberg, Geoffrey. 1995. Transfers of meaning. *Journal of Semantics* 12, 109-32.
- Nunberg, Geoffrey. 2006. The pragmatics of deferred interpretation. In Lawrence R. Horn & Gregory Ward (eds.) *The Handbook of Pragmatics*, 344-64. Oxford: Blackwell Publishing Ltd.
- Nunes, Jairo. 2001. Sideward movement. *Linguistic Inquiry* 32(2). 303-344.
- Onions, C.T. 1904. *An Advanced English Syntax*. London: Swan Sonnenschein & Co., Ltd.
- Oxford English Dictionary (3rd edn.).* 2018. <http://www.oed.com>. [Accessed 20 October, 2018].
- Panagiotidis, Phoevos. 2002. *Pronouns, Clitics and Empty nouns*. Amsterdam: John Benjamins Publishing Company.
- Panagiotidis, Phoevos. 2003. Empty nouns. *Natural Language and Linguistic Theory* 21: 381-432.
- Panther, Klaus-Uwe, Linda L. Thornburg & Antonio Barcelona. 2009. *Metonymy and Metaphor in Grammar*. Amsterdam: John Benjamins Publishing Company.
- Papafragou, Anna. 1996. On metonymy. *Lingua* 99, 169-95.

- Patterson, Gary & Ivano Caponigro. 2015. The puzzling degraded status of who free relative clauses in English. *English Language and Linguistics* 20(2). 341-352.
- Payne, John. 1993. The headness of noun phrases: slaying the nominal hydra. In Greville G. Corbett, Norman M. Fraser & Scott McGlashan (eds.) *Heads in Grammatical Theory*, 114-39. Cambridge: Cambridge University Press.
- Payne, John., Rodney Huddleston & Geoffrey Pullum. 2007. Fusion of functions: the syntax of *once*, *twice* and *thrice*. *Journal of Linguistics* 43. 565-603.
- Petit, Daniel. 2012. On the Latvian indefinite pronoun *kaût* *kas*. *Baltic Linguistics* 3, 101-150.
- Phillipps, K.C. 1970. *Jane Austen's English*. London: Andre Deutsch Limited.
- Piñango, Maria M., Muye Zhang, Emily Foster-Hanson, Michiro Negishi, Cheryl Lacadie & Todd Constable. 2017. Metonymy as referential dependency: psycholinguistic and neurolinguistic arguments for a unified linguistic treatment. *Cognitive Science* 41, 351-78.
- Pinker, Steven. 1994. *The Language Instinct: How the Mind Creates Language*. New York: William Morrow and Company.
- Plag, Ingo. 2003. *Word-formation in English*. New York: Cambridge University Press.
- Plag, Ingo. 2018. *Word-formation in English* (2nd edn.). New York: Cambridge University Press.
- Powell, Arthur F. 1967. Forms and uses of nouns of nationality. *ELT Journal* XXI(2), 159-65.
- Pullum, Geoffrey. K. 1975. People deletion in English. *Working papers in linguistics* 14: 95-101.
- Pullum, Geoffrey & James Rogers. 2008. Expressive power of the syntactic theory implicit in *The Cambridge Grammar of the English Language*. Presented to the Linguistics Association of Great Britain (online at

<http://www.lel.ed.ac.uk/~gpullum/EssexLAGB.pdf>). [accessed 1 February 2020]

- Pullum, Geoffrey K. 2010. The truth about English grammar: rarely pure and never simple. In Tien-en Kao and Yao-fu Lin (eds.), *A New Look at Language Teaching & Testing: English as Subject & Vehicle*, 16–39. Taipei, Taiwan: Language Training and Testing Center.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, & Jan Svartvik. 1985. A *Comprehensive Grammar of the English Language*. London: Longman.
- Radden, G.M.N. & René Dirven, 2007. *Cognitive English grammar*, Amsterdam: John Benjamins.
- Radford, Andrew. 1993. Head hunting: on the trail of the nominal Janus. In Greville G. Corbett, Norman R. Fraser & Scot McGlashan (eds.) *Heads in Grammatical Theory*, 73–113. Cambridge: Cambridge University Press.
- Ralli, Angela & Mario Andreou. 2012. Revisiting Exocentricity in Compounding: evidence from Greek and Cypriot. In In F. Kiefer, M. Ladani & P. Siptar (eds.), *Current Issues in Morphological Theory*, 65-82. Amsterdam: John Benjamins.
- Rami, Dolf. 2015. The multiple uses of proper nouns. *Erkenn* 80, 405-32.
- Raumolin-Brunberg, Helena. 1991. *The Noun Phrase in Early Sixteenth-century English: A Study Based on Sir Thomas More's Writings*. Helsinki: Société Néophilologique.
- Riemer, Nick. 2002. When is metonymy no longer a metonymy? In René Dirven & Ralf Pörings (eds.), *Metaphor and Metonymy in Comparison and Contrast*, 379-406. Berlin: Mouton de Gruyter.
- Ringe, Don & Ann Taylor. 2014. *The Development of Old English*. Oxford: Oxford University Press.
- Rissanen, Matti. 2000. Syntax. In Roger Lass (ed.) *The Cambridge History of the English Language, Volume 3*. Cambridge: Cambridge University Press.

Rizzi, L. 1986. Null objects in Italian and the theory of *pro*. *Linguistic Inquiry* 17. 501-57.

Rundblad, G. & D. Annaz. 2010. Development of metaphor and metonymy comprehension: receptive vocabulary and conceptual knowledge. *British Journal of Developmental Psychology* 28, 547–63.

Rydén, Mats. 1966. *Relative constructions in early sixteenth century English. With special reference to Sir Thomas Elyot*. Uppsala : Almqvist & Wiksell.

Saab, Andrés. 2018. Nominal ellipsis. In Jeroen van Craenenbroeck & Tanja Temmerman (eds.) *The Oxford Handbook of Ellipsis*. Oxford: Oxford University Press. 526-61.

Sadler, Louisa & Arnold, Douglas J. 1994. Prenominal adjectives and the phrasal/lexical distinction. *Journal of Linguistics* 30. 187-226.

Säily, Tanja. 2018. *Helsinki Corpus of English Texts*.

<http://www.helsinki.fi/varieng/CoRD/corpora/HelsinkiCorpus/>. [accessed 1 February 2020].

Sanchez-Stockhammer, Christina. 2018. *English compounds and their spelling*. Cambridge: Cambridge University Press.

Schelfhout, Carla, Pieter-Arno Coppen & Nelleke Oostdijk. 2004. Transparent free relatives. In Sylvia Blaho, Luis Vicente & Mark de Vos (eds.), *Proceedings of CONSOLE XII*, available at
http://www.sole.leidenuniv.nl/content_docs/ConsoleXII2003pdfs/schelfhout-2003.pdf

Schütze, Carson T. & Richard Stockwell. 2019. Transparent free relatives with *who*: Support for a unified analysis. *Proceedings of the Linguistic Society of America* 4(40). 1-6.

Seaton, Anne. 2005. Explaining *oneself*. *English Today* 83. 8-15.

- Sedgefield, Walter John. 1900. *King Alfred's Version of the Consolations of Boethius Done to Modern English, with an Introduction*. London: Clarendon Press.
- Şerban, Maria. 2017. What can polysemy tell us about theories of explanation? *European Journal of Philosophical Science* 7, 41-56.
- Šimík, Radek. 2010. Free relatives at the interface. In Jan-Wouter Zwart & Mark de Vries (eds.) *Structure Preserved: Studies in Syntax for Jan Koster*, 321-28. Amsterdam: John Benjamins Publishing Company.
- Šimík, Radek. 2017. *Free Relatives*. Manuscript. Available from <https://ling.auf.net/lingbuzz/003729/current.pdf>
- Sinclair, John. 1996. EAGLES preliminary recommendations on Corpus Typology. *EAGTCWG-CTYP/P*. Pisa: ILC-CNR.
- Sonnenschein, E.A. 1916. *A New English Grammar*. Oxford: Oxford University Press.
- Sprouse, Jon & Carson T Schütze. 2020. Grammar and the use of data. In Bas Aarts, Jill Bowie & Gergana Popova (eds.) *The Oxford Handbook of English Grammar*, 40-58. Oxford: Oxford University Press.
- Steen, Gerard. 2005. Metonymy goes cognitive-linguistic. *Style* 39(1), 1-11.
- Stockwell, Richard. 2018. *A View of Free Relatives from Minimalist Grammars*. Handout in Workshop on Long-Distance Dependencies, Humboldt-Universität zu Berlin.
- Strang, Barbara M. H. 1969. *Modern English Structure (2nd edn)*. London: Edward Arnold.
- Suñer, Margarita. 1984. Free relatives and the matching parameter. *The Linguistic Review* 3. 363-387.
- Sweet, Henry. 1900. *A New English Grammar Part I: Introduction, Phonology and Accidence*. Oxford: Oxford University Press.

- Tredinnick, Victoria Ann. 2005. *On the Semantics of Free Relatives with -Ever*. Doctoral dissertation. University of Pennsylvania.
- Van Bergen, Linda. 2015. *Pronouns and Word Order in Old English: With Particular Reference to the Indefinite Pronoun Man*. London: Routledge.
- Van de Velde, Freek. 2011. Left-peripheral expansion of the English NP. *English Language and Linguistics* 15(2). 387-415.
- Van Eynde, Frank. 2006. NP-internal agreement and the structure of the noun phrase. *Journal of Linguistics* 42, 139-86.
- Van Longendonck, Willy. 1994. Determiners as heads? *Cognitive Linguistics* 5(3), 243-59.
- Van Riemsdijk, Henk C. 2000. Free relatives inside out: transparent free relatives as grafts. In Bosena Rozwadowska (ed.). *PASE Papers in Language Studies: Proceedings of the 1999 PASE Conference*. Wroclaw: University of Wroclaw.
- Van Riemsdijk, Henk C. 2001. A far from simple matter: syntactic reflexes of syntax–pragmatics misalignments. In Robert M. Harnish and István Kenesei (eds.), *Semantics, Pragmatics and Discourse: Perspectives and Connections. A Festschrift for Ferenc Kiefer*. 21–41. Amsterdam: John Benjamins.
- Van Riemsdijk, Henk C. 2006. Free relatives. In Martin Everaert & Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax, Volume 1*. 338-382. Malden, MA, USA: Blackwell Publishing.
- Van Riemsdijk, Henk C. 2017. Free relatives. In Martin Everaert & Henk van Riemsdijk (eds.) *The Wiley Blackwell Companion to Syntax (2nd edn), Volume 3*. 1665-1710. Hoboken, NJ, USA: John Wiley & Sons, Inc.
- Visser, Frederik Theodoor. 1963. *An Historical Syntax of the English Language*. Leiden: E. J. Brill.
- Vries, Mark de. 2006. The syntax of appositive relativization: on specifying

- coordination, false free relatives, and promotion. *Linguistic Inquiry* 37(2), 229-270.
- Wahl, Otto F. 1992. Mass media images of mental illness: a review of literature. *Journal of Community Psychology* 20, 343-352.
- Wallis, Sean. 2020. Grammar and corpus methodology. In Bas Aarts, Jill Bowie & Gergana Popova (eds.) *The Oxford Handbook of English Grammar*, 59-83. Oxford: Oxford University Press.
- Warren, Beatrice. 2002. An alternative account of the interpretation of referential metonymy and metaphor. In René Dirven & Ralf Pörings (eds.) *Metaphor and metonymy in comparison and contrast*, 113-32. Berlin: De Gruyter Mouton.
- Warren, Beatrice. 2004. Anaphoric pronouns of metonymic expressions. *Text in Metaphorik.de* 7, 1-7.
- Warren, Beatrice. 2006. *Referential metonymy*. Stockholm: Almqvist & Wiksell.
- Weiβ, Helmut. 2002. Indefinite pronouns: Morphology and syntax in cross-linguistic perspective. In Horst J. Simon & Heike Wiese (eds.) *Pronouns – Grammar and Representation*, 85-108. Amsterdam: John Benjamins Publishing Company.
- Wescoat, Michael Thomas. 2002. *On lexical sharing*. Doctoral dissertation. Stanford University.
- Wescoat, Michael Thomas. 2007. Preposition-determiner contractions: an analysis in optimality-theoretic lexical-functional grammar with lexical sharing. In Miriam Butt & Tracy Holloway King (eds). *Proceedings of the LFG07 Conference*. 439-59. Stanford, CA: CSLI Publications.
- Yoo, Eun-Jung. 2008. Transparent relative clauses in English. In Stefan Müller (ed.) *Proceedings of the 15th International Conference on Head-Driven Phrase Structure Grammar*. 294-304. Stanford, CA: CSLI Publications.
- Zwicky, Arnold M. 1985. Heads. *Journal of Linguistics* 21, 1-29.

