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UNIVERSITY OF SOUTHAMPTON
Faculty of Humanities

**“Him and me” or “he and I”:
a Minimalist analysis of case variation in
English conjunction**

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ABSTRACT

FACULTY OF HUMANITIES

Modern Languages

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“HIM AND ME” OR “HE AND I”: A MINIMALIST ANALYSIS OF CASE VARIATION
IN ENGLISH CONJUNCTION

by Annis Shepherd

This thesis argues that case variation in English conjunction is best analysed as being the result of underspecification in the morphosyntactic features of lexical items (LIs). This supports the argument made by Adger and Smith (2005, 2010), Adger (2006), Biberauer and Richards (2006), Biberauer and Roberts (2005) *inter alia*: namely, that morphosyntactic variation does not require any variation-specific mechanisms and can be explained within a Minimalist framework by recourse to either morphosyntactic features or PF-based operations.

An examination of the existing studies of case variation in conjunction shows that there is little consensus regarding which case forms are grammatical and the precise nature of the attested variation: whilst some assume that only ACC+ACC combinations are grammatical, others claim that all combinations are possible regardless of their syntactic position; and the proposals based on the possibility of intra-speaker variation are contradicted by those which assume that only inter-speaker variation exists.

A new data set is collected in order to resolve this empirical uncertainty. It shows that NOM+NOM, NOM+ACC and ACC+ACC combinations are grammatical in subject position, but that only ACC+ACC combinations can be generated in object position. Furthermore, both inter- and intra-speaker variation is attested, with some speakers accepting all three subject-position variants and others accepting only one or two. Having shown that none of the existing analyses can satisfactorily account for both how all variants are generated and for the presence of inter- and intra-speaker variation, I develop an alternative using optional feature underspecification (Adger 2006) to show that all variants can be generated within a single grammar (thereby accounting for the intra-speaker variation) and that this grammar can be restricted to account for the attested inter-speaker variation.

The contribution made by this thesis to our overall linguistic knowledge is three-fold. Firstly, it robustly establishes the pattern of attested case forms in English conjunction and demonstrates that both inter- and intra-speaker variation can be observed. Secondly, I identify the mechanisms of Case and φ -feature assignment/agreement within conjoined phrases, and finally, I show how the Minimalist Program can accommodate both inter- and intra-speaker variation within the existing constraints of the programme.

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Declaration of Authorship

I, Annis Shepherd, declare that this thesis and the work presented in it are my own and have been generated by me as the result of my own original work.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has been previously submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where this thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Signed:

Dated:

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Glossary of terms

- **+**: indicates conjunction of two items (for present purposes, pronouns). When used with Person/Number, + does not show linear order, but only syntactic conjunction. In other words, 1.SING+3.SING could represent any one of *I and he*, *he and I*, *him and me*, *me and him* etc.. When used with case forms, however, it does represent linear order: there is a crucial difference between NOM+ACC and ACC+NOM.
- **ACCEPTABLE/GRAMMATICAL**: in keeping with standard Minimalist usage of these terms, a structure/combination is acceptable if it is used/could be used by a native speaker and there are no factors (linguistic or extra-linguistic) preventing its use. A structure/combination is grammatical if there are no **linguistic** factors preventing its generation (e.g. there are no unvalued uninterpretable features and it does not contravene any linguistic principles or language-specific parameter settings).
- **ACC**: accusative case morphology, possibly the result of the value of a syntactic uCase feature.
- **COMBINATION**: two distinct pronominal forms with assigned morphological case features, conjoined by *and*. E.g. *he and they* and *him and them* are different combinations, as are *we and you* and *you and we*. Similar COMBINATIONS belong in the same GROUP.
- **GROUP**: a group of combinations includes every possible combination containing the same two abstract lexical items, irrespective of case marking and word order. The φ -features of the two conjuncts are the same for every combination in a group, but the Case features need not be. E.g., the group of 3.PL+2 includes the combinations *you and they*, *they and you*, *you and them* and *them and you*.
- **MATCHED/UNMATCHED CASE**: a combination has matched case if both conjuncts bear the same overt morphological case markers, and unmatched

case if they do not. When two conjuncts show unmatched case, this is also referred to as CASE MISMATCH.

- NOM: nominative case morphology, possibly the result of the value of a syntactic uCase feature.
- OBJECT POSITION: the Complement position of either VP or PP (either the direct or indirect object of the verb).
- SUBJECT POSITION: a conjunction phrase in subject position is one that fills the Specifier position of TP and is understood to be the subject of a finite verb.
- TOKEN: every time that a specific combination arises in a corpus.

Chapter 1

Introduction

In the years since the Minimalist Programme (Chomsky 1995a,b, 2000 *et seq.*) gained widespread interest, the field of theoretical syntax has seen many changes and the advances in our understanding have been significant. There are still some areas which need further work, one of which is morphosyntactic variation. Whilst the programme entails particular explanations in general for how such variation can be accounted for, there is still considerable work to be done with regard to determining the extent to which theory can be implemented.

In this thesis, therefore, I investigate exactly this, with regard to the variation attested in the case forms of conjoined pronouns in English. This is a context in which multiple variant forms can be observed, but about which there is little consensus regarding how best to account for the generation of the attested variants. I develop an analysis whereby variation is shown to be the result of the interaction between small differences in the lexical (featural) specification of pronouns and the general syntactic mechanisms that apply within and beyond conjunction phrases, thereby showing that the Minimalist argument that variation is (at least in part) the result of morphosyntactic feature specification (Adger and Smith 2005, 2010; Biberauer and Richards 2006; Biberauer and Roberts 2005 *inter alia*) is applicable to this context.

The contribution made by this thesis to wider linguistic theory is three-fold. Firstly, I robustly establish the pattern of attested case forms in English conjunction (something about which there is currently little consensus due primarily to the methodological challenges inherent to investigations of the structure). Secondly, I identify the mechanisms of Case and φ -feature assignment/agreement within conjoined phrases. Finally, I show how the Minimalist Program can accommod-

ate both inter- and intra-speaker variation within the existing constraints of the programme.

1.1 Linguistic variation

Linguistic variation has been much discussed over previous decades across many different fields of linguistics, from studies of phonological variation (e.g. Labov 1969) to analyses of morphosyntactic and discourse variation (for example, Henry 1995 and Dines 1980 respectively). In this thesis, I consider only morphosyntactic variation seen within a single language, not to that which can be observed between different languages, nor to other types of linguistic variation, such as phonological variation.

1.1.1 What is variation?

According to Wolfram (1991: 22), there has been little discussion of how to define what does and does not classify as variation since the topic was originally raised by Labov (1966b). Some researchers, for example Jacobson (1989), state that we should not even attempt to find a universal definition of the term, but should rather leave it to the discretion of each linguist to determine which factors are important in his own study. As a result, studies of “variation” can use very different definitions to develop analyses of (nominally) the same phenomenon. In order to eliminate any potential confusion arising through this lack of discussion, this section is devoted to considering some of the most frequent assumptions and producing an explicit definition of what variation is considered to be for the purposes of this thesis.

Linguists often refer to “variation” without clarifying which structures they believe show variation. Many works on variation do not provide an explicit definition of what they mean by the term, and those definitions that do exist frequently have subtle but crucial distinctions between them. Some existing ones are as follows:

1. (a) “The existence of observable differences in the way a language is used in a speech community.” Trask (1998: 333).
- (b) “A variable [that] can be set up on the basis of an equivalence in discourse function” Cheshire (2005: 85).

- (c) “A single unit which has a range of forms” Adger (2006: 502).
- (d) [Variation requires either] “referential equivalence (‘saying the same thing’) or functional equivalence (‘doing the same thing’)” Campbell-Kibler (2010: 425).
- (e) “[...] the criteria for treatment as a linguistic variable: several distinct linguistic forms are possible, and they are mutually exclusive (only one may be chosen at a time); the forms fulfil exactly the same linguistic function [...]; and a ‘potential environment of use’ can be easily defined by identifying all instances of that broad function” Hoffmann and Sigley (2013: 121–122).
- (f) [Variation refers to] “[...] differences in (frequency of) use under different linguistic conditions; differences between styles or registers of use; change over time; differences between regional varieties; differences between social groups; and differences in use by one individual on different occasions” Yamazaki and Sigley (2013: 17).

Whilst there is some disagreement over the precise details of the definition, several claim that semantic equivalence is an important factor. What is notable, however, is that the majority of these definitions do not discuss whether two variant structures need to be derived from the same lexical resources or not. Some studies of variation (for example Biberauer and Richards 2006) appear to assume that they do, whereas others (such as Adger and Smith 2005) seem not consider this to be an important factor, in the same way as many sociolinguists (such as Garcia 1985 and Cheshire 2005).

In this thesis, I adopt a definition that satisfies the most restrictive requirements of others, and hereafter assume that morphosyntactic variation can be defined as follows:

2. MORPHOSYNTACTIC VARIATION:

The existence of multiple syntactic structures that express the same proposition and use the same lexical resources¹.

Under this definition, the sentences in examples (3) and (4) show variation. The

¹As will become clear, the importance of equivalence of lexical resources largely depends on the definition of the term “lexical resource”. In the theoretical framework adopted here (see section 2.3), it is assumed that one variant cannot contain more words than another (i.e., “He’s not as clever as she is” and “He’s not as clever as *what* she is” are not variants) but that the words used do not have to have the same features as each other (e.g. “he” and “him” are variants of each other).

sentences in (5) are not variants of each other because they use different lexical resources, and neither are those in (6) as they express different propositions.

3. (a) Leave Tony alone. He didn't do **anything**.
(b) Leave Tony alone. He didn't do **nothing**.
4. (a) Mark wants you to send your work to both **him and Maria**.
(b) Mark wants you to send your work to both **himself and Maria**.
5. (a) Give **me** your old shoes.
(b) Give your old shoes **to me**.
6. (a) **Show** Tony your toys.
(b) **Give** Tony your toys.

1.1.2 Different types of variation

To further complicate matters, there are several different types of morphosyntactic variation. When a linguist refers to variation, s/he is normally referring to a specific type of variation, be it cross-linguistic, dialectal, intra-speaker or inter-speaker². These different types of variation have very different properties, and it is therefore important to provide a definition of each type individually, in order for the reader to fully appreciate the nature of the variation that the analysis developed in this thesis is designed to account for (and the types of variation that it is not).

Cross-linguistic

A significant proportion of syntactic research focusses on cross-linguistic variation, which aims to determine the ways in which languages differ from each other and how these differences can be explained. An example of how languages may vary from each other is in whether or not they permit the use of null subjects: the English examples show where they are not possible and their direct translation into Italian, in which both null and overt subjects are acceptable, shows the potential variation.

²These are the terms adopted in this thesis, although numerous others are used. All other terms, however, can be broadly divided into these categories, or are synonyms for one or other of them.

7. English

- (a) I am happy.
- (b) *Am happy.

8. Italian

- (a) Io sono felice.
I am happy.
'I am happy'.
- (b) Sono felice.
Am happy.
'I am happy'.

Dialectal

Dialectal³ variation occurs within one language, usually (although not necessarily) on a geographical basis.

An example of this type of variation is the use of verbal *-s* with present tense *be* in Buckie English:

- 9. (a) Nearly all the houses **is** bought with the English. (Adger and Smith 2010: 1110)
- (b) Nearly all the houses **are** bought by the English.

In general, researchers investigating this type of variation focus on one particular linguistic community and treat all the speakers within that community as having internal grammars which closely resemble each other. Divisions may be made within the community in terms of age/education/linguistic background etc., but this is usually only done in sociolinguistic analyses, not generative ones.

³In this thesis, I use the term **dialectal variation**, on the understanding that it includes what others may have referred to as regional or geographical variation. As I do not consider this form of variation in any more detail than is covered in this section, the subtle differences between the three are irrelevant.

Intra-speaker

Intra-speaker variation is an area which has received increasingly more attention as our understanding of the mechanisms causing variation has improved. It involves the variation which can be observed within one speaker's grammar. For example, it is possible for many speakers to accept both sentences below, without perceiving any difference in semantic content⁴.

10. (a) **She and Tom** have been talking about it.
- (b) **Her and Tom** have been talking about it.

Due to the difficulties in gathering sufficient data from a single speaker to enable analysis of less common structures, it is relatively common to use data taken from a number of speakers to study intra-speaker variation (see, for example, Adger and Smith 2005), as long as the methodology employed permits the researcher to be sure that any variation seen within the sample is present within the language of a single speaker, and not just between individuals.

Studies of intra-speaker variation generally attempt to explain why multiple variants are acceptable within the grammar of one speaker, through identifying the mechanisms involved in producing two or more options that have the same semantic interpretation but different morphophonological representations. In the same way as studies of dialectal variation, the vast majority of studies of intra-speaker variation concentrate on the way that a speaker can use both a non-standard or dialectal construction and the standard equivalent, or why two non-standard variants are both available in a particular dialect. Few, however, have examined cases of intra-speaker variation in which two or more variants are available to a wide range of speakers, with seemingly little relationship between each variant and a specific linguistic community, region or other social factors.

Inter-speaker

A subtly different type of variation to cross-linguistic and dialectal variation, inter-speaker variation will prove to be important in this thesis. In contrast to intra-speaker variation, where the variation can be seen within the grammar of a single speaker, inter-speaker variation represents the variation seen between

⁴This does not mean that they accept both variants in every context: the second may well be viewed as more informal and therefore as being inappropriate in some situations.

the grammars of different speakers. If the examples below are representative of inter-speaker variation, we might expect Speaker A to be able to generate both sentences (thereby also demonstrating intra-speaker variation), and Speaker B to be able to generate the second, but not the first.

11. (a) I'm fine thanks, and **yourself**?
- (b) I'm fine thanks, and **you**?

Inter-speaker variation is rarely investigated in its own right, but is often indirectly considered through the mediums of either cross-linguistic or dialectal variation. It is subtly different from either of these however, as the differences between speakers do not need to be linked to dialect: even two individuals from the same background may have different grammars. The important point to notice here is the contrast between inter- and intra-speaker variation. Accounts of intra-speaker variation show how the variants can be generated by the same grammars, whilst accounts of inter-speaker variation demonstrate how the differences between grammars result in separate speakers producing different variants to each other. This distinction will prove important when it comes to analysing the data collected for this thesis.

Definitions of the different types of variation

To summarise, the different types of variation are:

12. (a) CROSS-LINGUISTIC VARIATION
The variation seen between separate languages.
- (b) DIALECTAL VARIATION
The variation seen within a single language, attributable to the existence of multiple varieties of the same language.
- (c) INTRA-SPEAKER VARIATION
The variation seen within the grammar of a single speaker.
- (d) INTER-SPEAKER VARIATION
The variation seen between the grammars of different speakers.

As this thesis focusses on inter- and intra-speaker variation, the other two types of variation will not be discussed in any more detail than this. Our brief discussion of them has highlighted the differences between cross-linguistic vs. dialectal, and

inter- vs. intra-speaker variation. We conclude this section with formal definitions of morphosyntactic inter- and intra-speaker variation.

13. MORPHOSYNTACTIC INTER-SPEAKER VARIATION

The existence of multiple syntactic structures that express the same proposition and use the same lexical resources, with the grammar of different speakers containing different variants.

14. MORPHOSYNTACTIC INTRA-SPEAKER VARIATION

The existence within the grammar of an individual speaker of multiple syntactic structures that express the same proposition and use the same lexical resources.

1.2 Case variation in conjoined pronouns

Minimalist theory greatly constrains the possibilities for explaining any instances of morphosyntactic intra-speaker variation⁵. However, there are relatively few detailed examples of how the theory can be applied in practice. In this thesis, I therefore aim to produce a detailed working example of how it can be done, using the variation in morphological case markings of English conjoined pronouns, as in the examples below.

15. (a) **He and she** are going to the bank later.
 (b) **Him and her** are going to the bank later.

I demonstrate that there are many native speakers for whom both variants in (15) are equally acceptable (although there may be others for whom only one of the two is possible). As such, this must be treated as a form of intra-speaker variation⁶.

Haspelmath (2004, 2007) defines conjunction as being coordination involving the coordinator *and*, where coordination is the existence of “syntactic constructions in which two or more units of the same type are combined into a larger unit and still have the same semantic relations with other surrounding elements” (Haspelmath

⁵This will be discussed in more detail in section 2.4.

⁶I return to the question of whether there are other grammatical variants and whether there is also attested inter-speaker variation in chapters 4 and 5.

2007: 1)^{7,8}. This terminology will be adopted throughout this thesis.

This is a particularly interesting form of morphosyntactic variation for several reasons. Firstly, the grammaticality of some of the variants is obviously linked to the syntactic structure of a conjunction phrase, as they are not possible in a non-conjoined phrase (as shown in 16)⁹. However, it is as yet unclear why the presence of a conjunction should alter the case marking process or how it gives rise to variation.

16. (a) **He and I** are going to the bank later.
- (b) **He** is going to the bank later.
- (c) **Him and me** are going to the bank later.
- (d) ***Him** is going to the bank later.

Secondly, it is an issue that has primarily been investigated in terms of conjunction or case assignment, rather than from the perspective of variation (the primary exception to this trend being Parrott 2007). This thesis therefore approaches the phenomenon from a different angle, which enables me to produce a somewhat different analysis to those already in existence.

Thirdly, this is a complex phenomenon. For example, there appears to be a distinction between ungrammatical variants and those which are unacceptable but still appear to be grammatical (see sections 4.6 and 5.7.2), so it must be carefully determined why a speaker rejects any given combination. There are also many factors influencing when variation is and is not possible, some of which are syntactic (e.g. the syntactic position of the whole conjoined phrase) and some of which are not (such as which pronouns form the conjuncts, in particular

⁷Although whether or not it is necessary for the two conjuncts to be of the same syntactic category is debatable: the Coordination of Likes Constraint was developed in Chomsky (1957), but arguments have since been put forward to suggest that this does not hold (de Vries 2005; Progovac 1998a), due to the possibility of conjunction phrases such as *He is a lovely boy and so caring*, where a DP and an AdjP are conjoined. As this thesis is concerned with the conjunction of pronominal DPs only, we will not discuss this issue further, but refer the reader to the cited works for further discussion.

⁸This terminology may be seen as somewhat confusing, given the trend to also use the term conjunction to refer to both coordination and subordination (Haspelmath 2004: 6). It should be noted that no reference is made in this thesis to subordination and that any use of the term conjunction is used in the sense outlined by Haspelmath.

⁹Although case variation is possible in certain types of uncoordinated structures, for example *It was I* and *It was me*. This is not the focus of this investigation, and so we will discuss it no further here, although I return to it in section 6.7. See Emonds (1986) and Sobin (1997) for a discussion of the links between conjunction and other types of case variation.

when one conjunct is *I*). Furthermore, it is a structure about which some non-linguists are also likely to have strong opinions, as a result of the prescriptive norms surrounding its use. This makes this thesis somewhat of a rarity: it discusses theoretical morphosyntactic theory, but also relates closely to an area of minor public interest.

Finally, it seems possible (although further investigation is needed to determine the validity of this claim) that this structure sees both inter- and intra-speaker variation: that is, speaker A may allow a greater degree of variation than speaker B (inter-speaker), but both use more than one variant (intra-speaker). This allows me the possibility of adding to Minimalist variation theory, as there are few, if any, other analyses that can account for the existence of both types of variation within the same structure.

1.3 Research questions

This thesis aims to make three primary contributions, two of which are empirical and one of which is theoretical. An examination of the existing literature on the topic (see chapter 3) shows that there is little consensus on what degree of case variation is possible in English conjoined pronouns, with some authors stating that all possible variants are equally acceptable and others claiming that only accusative case forms are a natural part of the grammar with all other forms being acquired through prescriptive pressure. It is therefore necessary to determine which case forms are actually possible in English.

It is furthermore important to discover whether this variation is representative of inter- or intra-speaker variation, as this is equally unclear. As we saw in section 1.1.2, the consequences of this differentiation are crucial for any analysis, with intra-speaker variation requiring the variants to be generated within the same grammar and inter-speaker variation allowing the possibility of the variation being the result of separate grammars. This is an issue that has rarely been discussed, with most existing analyses referring solely to “variation” and not specifying which type of variation their analysis is designed to accommodate. As a result, the presence of intra-speaker variation would immediately make some of the existing analyses impossible to implement.

As will be made clear in chapter 2, Minimalism greatly constrains the possible ways of accounting for morphosyntactic variation. Where it was once assumed

that variation-specific mechanisms (e.g. the variable rules hypothesis – see Labov 1969) were the cause of all variation, it is now believed that syntactic variation is the result of morphosyntactic feature specifications.

To summarise, the research objectives that form the basis of this thesis are as follows:

17. (a) What degree of case variation is attested in English conjoined pronouns?
- (b) Is this the result of inter- or intra-speaker variation (or both)?
- (c) How can the attested pattern of variation be accounted for within a Minimalist framework?

Answering these questions will enable me to make a contribution towards the issue raised at the beginning of this introduction regarding the feasibility of applying Minimalist theory to some of the instances of morphosyntactic variation that prove hardest to accommodate within the approach.

1.4 Thesis outline

In chapters 2 and 3, I situate my thesis within the context of existing research. Chapter 2 focusses on Minimalism and variation, containing a discussion of morphosyntactic variation: how it has been accounted for historically and the mechanisms available within a Minimalist framework, as well as some Minimalist analyses that have been proposed to account for intra-speaker variation. Chapter 3 then concentrates on conjunction, opening with a discussion of the facts that any theory of conjunction needs to account for (including, but not restricted to, case variation), moving on to consider the many syntactic structures that have been proposed for a conjunction phrase (henceforth &P) and showing that the recursive complement analysis (Kayne 1994; Johannessen 1998) can account for the facts more convincingly and in a more theory-neutral way than the rest. This chapter then concludes with an investigation into the analyses that have been proposed for case variation in conjunction and the data that these analyses can account for.

The discussion in these chapters shows that there is little consensus, not only with regard to how best to analyse case variation in conjunction, but also about which variants are and are not possible in English. Furthermore, only one (Quinn 2005)

considers the nature of the variation, with all of the rest assuming that it is the result of either inter- or intra-speaker variation and proceeding accordingly. It becomes clear that the different analyses can account for different data sets, and as such, implicitly or explicitly, make contradictory claims regarding what is and is not grammatical.

We cannot, then, evaluate the empirical adequacy of the different approaches without further information regarding which case forms are grammatical in which syntactic positions. To this end, I seek to determine exactly which variants can be used and the nature of any attested variation. This will allow us test the claims made by the existing theories, by determining which can most satisfactorily account for the data.

Due to the complex nature of this phenomenon, there is no single methodology that will enable me to gather all the data necessary to achieve this goal. I therefore adopt a two-part methodology. In chapter 4, I discuss the first stage of my data collection – a study of two online corpora, the British National Corpus and the Corpus of Global Web-based English. I give the reasons for undertaking a corpus study, the rationale behind the use of those two corpora in particular, and discuss the conclusions that can be drawn from the data collected. Chapter 5 then covers the second part of my data collection, an acceptability judgement test completed by 35 native speakers of British English. The data collected from the judgement test, when combined with the corpus study results, allow me to show that there are three grammatical variants in subject position (NOM+NOM, NOM+ACC and ACC+ACC) but only one possibility in object position (ACC+ACC). I am also able to demonstrate that both inter- and intra-speaker variation can be observed within the data, as there are some speakers who accept all three variants (intra-speaker) and others who accept only one or two (inter-speaker). I conclude this section with a discussion of why certain data (such as any combinations involving *and I*) are not included in my analysis, claiming that they are generated in a different way to all other combinations and showing that this is likely to be a morphological transformation along the lines of Parrott's (2007) Morphological Readjustment Rules.

In chapter 6, I revisit the claims made by the existing analyses and show that none of them can satisfactorily account for both the generation of all attested variants and the existence of both inter- and intra-speaker variation. I therefore pursue a number of alternative analyses, combining Case theory, the structure of &P developed by Johannessen (1998) and a Minimalist approach to variation based on Adger (2006) and show that one analysis in particular can account for

all the data whilst relying on comparatively few theoretical assumptions. I extend this chapter by discussing how the attested inter-speaker variation can also be accounted for within this approach and conclude it with a brief investigation into how the analysis could be extended to other instances of the use of non-standard case forms. I also consider other syntactic contexts in English where non-standard case forms can be observed, and show that some of them can be explained using the same mechanisms that are used in the analysis developed in this chapter, whilst others appear to be the result of lexically-specific transformations in the morphological component.

In chapter 7, I consider the extent to which I have met the research objectives outlined in section 1.3 and show that I have made a contribution towards syntactic theory in a number of areas, including how intra-speaker variation can be accounted for within a Minimalist framework and how agreement (both Case and φ -feature) is likely to work in English conjunction.

Chapter 2

Variation and Minimalism

In this chapter, we begin to consider morphosyntactic variation in more detail. I discuss some older and/or non-generative analyses, as a way of emphasising the differences between approaches and therefore the importance of considering the theoretical motivation behind developing any account of how variation functions. This leads me to consider the specific details of the Minimalist Program and the theoretical framework adopted in this thesis. The chapter concludes with an investigation into the constraints that are placed by the theoretical framework on any account of variation, by considering whether either of the two original analyses discussed in section 2.2 can be adapted or whether newer feature-based accounts are more appropriate. This puts us in a good position to then consider conjunction and case variation in more detail in chapter 3.

2.1 Chapter outline

In section 2.2, I briefly discuss the importance of considering both the theoretical framework in which different analyses are produced and any changes that may need to be made in order to adopt them into another framework. I then move on to outline two of the original analyses (Labov 1969 and Kroch 1989) proposed to account for linguistic variation.

In section 2.3, I consider the Minimalist Program (Chomsky 1995b *et seq.*) and outline the most pertinent assumptions that will be made as part of the theoretical framework adopted in this thesis. In particular, I discuss: the structure of the language faculty (section 2.3.1); morphosyntactic features (section 2.3.2); and

C/case theory (section 2.3.3).

This chapter concludes with a discussion of how variation can be accounted for within the Minimalist framework developed in section 2.3. I consider the constraints that are placed on any analyses by the theoretical framework, as well as considering whether either of the two analyses discussed in section 2.2 can be adapted for use within this framework. Finally, I discuss two alternative analyses that exploit the possibilities afforded by manipulating the properties of morpho-syntactic features.

2.2 Variation

I open this section with a gentle reminder that there are many linguists (not just those using a generative approach) who study variation, meaning that not all studies of variation are designed with the same aims in mind as the ones under consideration here. Different theoretical frameworks have very different aims and make different assumptions about what is and is not possible. It is therefore important, when considering the merits and weaknesses of any given theory, to ensure that it is considered with reference to the framework in which it was produced, and to consider whether it can feasibly be adapted for use within another framework. Theories about variation have been produced by Minimalists (e.g. Adger and Smith 2005; Henry 1995), by those adopting a Distributed Morphology framework (Parrott 2007), by sociolinguists (Cornips 1998; Tagliamonte 1998; Martinez-Sanz 2011) and many others besides.

Morphosyntactic variation exists within a single language in (at least) two forms: different morphological representations of the same LI (as in 18); and different word orders corresponding to the same semantic interpretation (19: Afrikaans example taken from Biberauer and Richards 2006: 50).

18. (a) Give it to **me** or Louise later.

(b) Give it to **myself** or Louise later.

19. **Afrikaans**

(a) Ek weet dat sy dikwels Chopin gespeel **het**.

I know that she often Chopin played has.

“I know that she has often played Chopin.”

- (b) Ek weet dat sy **het** dikwels Chopin gespeel.
 I know that she has often Chopin played.

“I know that she has often played Chopin.”

Biberauer and Richards (2006) give many examples of both forms of variation from languages other than English. Due to reasons of scope, only the first form of variation will be considered in any detail in this thesis.

One issue that has been raised by the majority of those studying variation in any detail is the divide in both methodological techniques and theoretical aims (Cornips and Corrigan 2005b). However, as Chomsky (2001) states, investigations from different theoretical perspectives do not need to detract from each other; rather, they should be mutually supportive. I consider the merits and disadvantages of the methodologies that are most pertinent to this thesis in section 4.3.

It is perhaps unsurprising that there is little consensus between the different theoretical fields as to the best way to account for variation. However, some relatively recent works (see, for example, Hudson 2007 and Cornips and Corrigan 2005a) suggest that the time has now come to unify the approaches and provide a more universal hypothesis which takes extralinguistic factors into account, whilst continuing to provide a generative-style explanation of the mechanisms licensing variation. Whilst this thesis aims only to provide a generative account of the mechanisms underlying one specific type of morphosyntactic variation, the production of a more universal hypothesis is a laudable goal.

When variation was first shown (Labov 1969) to be of real interest to linguists, two theories were initially developed to explain its systematic nature: VARIABLE RULES (Labov 1969) and COMPETING GRAMMARS (Kroch 1989). As we will see, neither of these analyses can be implemented in their original form within a Minimalist framework, as they both depend upon operations that are unique to variation, rather than supporting the concept that variation is the by-product of other syntactic operations. It is however worth considering them, as they are the root of many current theories of variation (Henry 1995, for example, was developed from Labov 1969).

2.2.1 Variable rules

The Variable Rules analysis was developed in one of the first papers to acknowledge that dialectal variation is not random, but rather acts in a systematic and principled way, in much the same way as crosslinguistic variation (Labov 1969). Prior to the development of this analysis, it was assumed that whilst some syntactic rules were known to be obligatory, others were optional with no systematic nature to when these optional rules were applied. Once this supposedly random nature had been disproved, an analysis accounting for the systematic properties of variation was needed.

Labov proposed that, whilst optional rules were not a viable explanation for dialectal variation due to their inability to account for the systematic nature of variation, not all linguistic rules could be analysed as categorical either, as this would not allow for any variation at all. The logical explanation was seen to be a third type of rule, a variable one. It was suggested that these variable rules contain both linguistic and extralinguistic information, allowing a speaker to know the probability with which a rule will be applied in any given context. Each linguistic rule governing the use of a structure was argued to include both an “input variable”, controlling the overall frequency with which the rule is applied, and “variable constraints”, which alter this frequency depending on the syntactic and phonological environment. In the case of categorical rules, the input variable would be set so that the rule applied at all times, but in the case of variable rules, the value of the input could be changed depending on, for example, the linguistic context of the speech act or the register being used.

Cedergren and Sankoff (1974) provided a model for calculating the probabilities involved in the variable input and variable constraints. They showed that the probability of any given variant appearing can be calculated from frequencies seen in language use by taking all of the different possible influencing factors into account. By focussing on the differences between individual speakers and taking their social background into account, they suggested that it was indeed possible to assign rule probabilities to variable rules in the way suggested by Labov.

2.2.2 Competing grammars

The original alternative to Variable Rules was the Competing Grammars hypothesis. Building on Bickerton (1971), Kroch (1989, 1994, 2001) provides an explan-

ation for how languages that are undergoing change can show optionality in ways that stable languages do not. Kroch (1994: 2–3) gives examples of the changes between modern and Middle English, providing data showing the frequencies with which the different variants were used at different points in time:

20. (a) Quene Ester looked **never** with swich an eye.
 (b) Queen Esther **never** looked with such an eye.

As an analysis based on the desire to explain unique characteristics of languages undergoing diachronic change, the original emphasis of this analysis is somewhat different from that of Variable Rules, but it has frequently been applied to synchronic morphosyntactic variation. Kroch proposes that variation arises when a speaker possesses two or more grammars, in the same way that variation can be seen between the grammars of two different speakers. These grammars are incompatible and enter into competition with each other. Using the Blocking Effect¹ (Aronoff 1976), Kroch shows that there are parallels between morphological doublets and syntactic variants and therefore proposes that, whilst the Blocking Effect does not prevent alternation between variant structures, it does render them fundamentally unstable and therefore causes language change.

2.3 Minimalism

Before we can continue with our investigation into how best to account for morphosyntactic variation, it is necessary to make some decisions regarding the theoretical framework that will be adopted for the remainder of this thesis.

In this thesis, I am adopting a broadly Minimalist approach (Chomsky 1995b *et seq.*). As Hornstein, Nunes, and Grohmann (2005: 6) state:

“(...) one important item on the minimalist agenda is to find ways of understanding what constitutes a more-or-less natural, more-or-less parsimonious, or more-or-less elegant syntactic account. (...) There may be many alternative ways of empirically realizing these notions. If so, there will be no unique minimalist approach; rather, we’ll have a family of minimalist programs, each animated by similar general concerns”

¹Which states that doublets and other formatives which are not functionally distinguished should not exist.

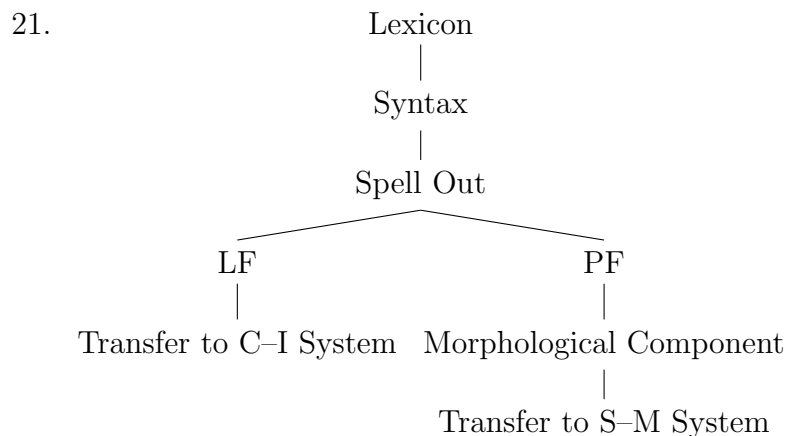
So what features does a minimalist approach have? It is widely assumed (c.f. Hornstein et al. 2005) that in part, it roughly corresponds to Occam’s Razor: if all other things are equal, less is more. In other words, two operations are better than three, three theoretical notions are better than four, and so on. Furthermore, the concept of “least effort” is prioritised: syntactic theory should reflect the fact that grammars are organised to rely on minimal effort and maximal resources. As a result, shorter movements are to be preferred over longer ones, fewer rules are more desirable than a greater number and movement occurs only when it must.

It is also necessary to discuss the specific theoretical framework that I am adopting in this thesis. Given that there are many possible frameworks that can be argued to be “minimalist”, some of the theoretical assumptions made in this thesis may well be directly contradicted by those made in other minimalist analyses. In the remainder of this section, I therefore provide some arguments for why I am making specific assumptions.

2.3.1 Structure of the language faculty

The language faculty (FL) is the system of the brain that deals with language production and comprehension. It transforms a mental concept into a structure that can be used by the brain systems concerned with comprehension and sound production.

Although there are several different models of FL in existence (see, for example, Reinhart 2006 and Jackendoff 2002), this thesis adopts one that Boeckx (2006: 80) claims to be generally accepted within the Minimalist Program, albeit with an extended conception of PF. This model is shown in (21).



The traditional Minimalist Y-model focuses on the role of syntax and its interfaces, and therefore provides no information about the internal structure of PF. Scheer (2011) discusses the issues caused by the propensity of some Minimalists to claim that operations occur “within PF” without having an in-depth understanding of the structure of PF itself and the contradictions within existing literature surrounding what PF actually is. For some, PF is an interface, and as such, no operations can take place “in” PF, but rather have to occur at some point after the syntactic derivation has been sent to the Sensori-Motor system. For others, it is a system in its own right that contains a morphological component (among other things), in the sense of Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999). In this context, it is possible to claim that operations take place within PF. In this thesis, I adopt a broadly Distributed Morphological approach, meaning that I assume that the lexicon is formed of lexical items (LIs) – bundles of morphosyntactic features, and not words in the traditional sense. These LIs are then replaced by Vocabulary Items (VIs) after Spell-Out in the morphological component.

All of the terms in the diagram are commonly used, but as different frameworks use some of them in subtly different ways, I include a brief description of what is intended by their use here for the sake of clarity.

- **LEXICON:** Insertion of Lexical Items (LIs) into the numeration.
 - The input from the lexicon is made up of bundles of morphosyntactic features². These bundles are commonly referred to as LIs.
 - There are no phonological features present at this point in the derivation process (Halle and Marantz 1993).
- **SYNTAX:** LIs are formed into a hierarchical structure by Merge (both Internal and External) and Agree.
- **SPELL-OUT:** The syntactic structure is sent to Logical Form (LF) and Phonetic Form (PF) for semantic and phonological interpretation.³

²We return to the concept of features in section 2.3.2.

³Whilst the Y-model in (21) is habitually used to represent a non-cyclic version of Spell-Out (Chomsky 1995b), it is now generally believed that Spell-Out is more likely to be cyclic (Chomsky 2000). In other words, rather than the entire syntactic structure being derived and then sent to PF and LF once complete, parts (or phases) of the structure are derived and then sent immediately to the interfaces. The exact nature of Spell-Out does not have any impact on my analysis: cyclic Spell-Out can be accommodated as easily as the version indicated in the diagram above. For this reason, I will not discuss the nature of Spell-Out further, leaving the reader to adopt whichever version s/he prefers.

- PF: the system of transformations that make the hierarchical syntactic structure legible to the interface with the sensori–motor system (as per Embick and Noyer 2007).
 - Operations that occur within PF do not affect either syntactic structure or the semantic interpretation, but only the phonological representation of the structure in question.
- MORPHOLOGICAL COMPONENT:
 - Morphological transformation rules are applied to LIs (Halle and Marantz 1994).
 - Vocabulary Items (VIs) with phonological features replace LIs, with the precise VI depending on morphosyntactic feature values and any VI-specific rules. Extra-linguistic information has an influence here, with different VIs being inserted depending, for example, on the register of speech. See Halle and Marantz (1994); Harley and Noyer (1999).
 - Hierarchical syntactic structure is linearized (Embick and Noyer 2001), and the phonological representation of VIs is altered by the application of specific phonological rules to the structure (Halle and Marantz 1994).
- TRANSFER TO SENSORI–MOTOR (S–M) SYSTEM: Structure is transferred to the S–M system.
- LF: Structure is transferred to the Conceptual–Intentional (C–I) system. As syntax is optimized for interpretation at LF (Richards 2008), no additional mechanisms or transformations apply at LF.

2.3.2 Morphosyntactic features

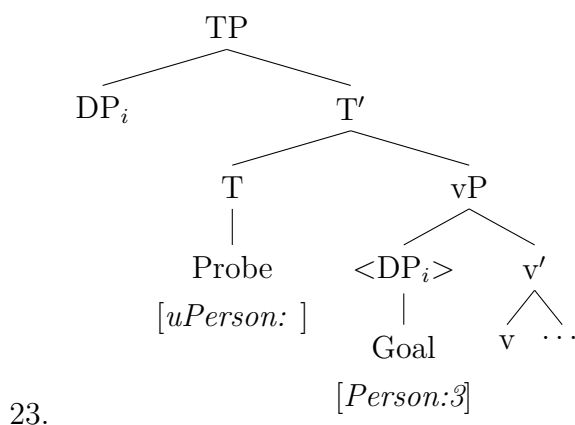
Under the representation of FL adopted here, syntax operates by Merging bundles of morphosyntactic features. There is an extensive body of literature surrounding the status and function of features in generative linguistics: see, *inter alia*, Adger and Svenonius (2011), Corbett (2012) and Pesetsky and Torrego (2001, 2004, 2007). Here, I summarise the key points (mainly taken from Chomsky 2000, 2001) that are relevant to this thesis, and direct the reader to the cited works for more details.

Adger and Svenonius (2011: 31) give a clear description of the Minimalist understanding of what a feature is:

22. Features:

- (a) Syntax builds structure through recursive application of Merge.
- (b) The smallest element on which Merge operates is a syntactic atom.
- (c) A syntactically relevant property of a syntactic atom which is not shared by all syntactic atoms and which is not derivable from some other property is a feature.

Morphosyntactic features are generally believed to have the following structure: each feature is made up of an attribute and a value, written in the form [Attribute: Value]. In the features shown in the tree in (23), the attribute is *Person*, and the value is \mathcal{I} ⁴.



As stated in section 2.3.1, LIs are formed of bundles of morphosyntactic features⁵. There are two types of feature: interpretable and uninterpretable. Interpretable features have an inherent value that cannot be changed: for example, a pronominal LI with the interpretable feature [Person:3] can only ever refer to *he*, *she*, *it* or *they*. Uninterpretable features (marked in this thesis by a prefix of *u*–, as in *uCase* and *u φ*), however, do not have any value upon insertion. In order for the derivation not to crash at Spell–Out, these features must gain values through entering into an Agree relationship with an LI bearing interpretable features of the same nature

⁴There is some dispute over whether feature values are binary in nature (see, for example, Corbett 2012). If this is the case, then the feature [Person] (among others) needs to be re-evaluated, as it is commonly believed to have three values: 1, 2 and 3. In this thesis, features are not assumed to be binary, but little would need to be changed by the reader who wished to adopt a binary analysis.

⁵Depending on the framework adopted, some would argue that LIs also contain other types of feature, such as phonological ones. As our interest lies purely in morphosyntactic features, no other type of feature will be discussed in this thesis, and it should be understood that *features* refers uniquely to morphosyntactic features. In line with the broadly DM approach adopted here, I assume that LIs do not contain phonological features when they enter the derivation, but that they are inserted with Vocabulary Items instead.

(Chomsky 2001). It is said that the uninterpretable feature **PROBES** within its c-command domain for its interpretable counterpart on the other LI, the **GOAL**.

Under this understanding of Case theory, uCase does not have an interpretable counterpart – as Case does not bear any semantic content, there can be no interpretable Case feature (Richards 2008: 142). As a result, Case features are believed to function somewhat differently from other features: see section 2.3.3 for more detail on Case theory.

The presence or absence of an **interpretable** feature changes the meaning of the LI. However, whether or not an **uninterpretable** feature is present, or what value it takes need not alter the semantic interpretation of the LI. It is therefore possible to alter which uninterpretable features are present in an LI without impacting on its meaning (Adger 2006). A difference in which features (interpretable or uninterpretable) are present in an LI may however have an impact on its phonological representation. Adger (2006) proposes that it is possible for LIs to be underspecified for uninterpretable features: the only features that an LI has to contain are those which are necessary for either syntactic or semantic reasons. We return to the implications of this proposal in chapter 6, after discussing it in considerably more detail in section 2.4.3.

All of the above is a relatively common implementation of Minimalist feature theory, based on Chomsky (1995b) *et seq.*. One area on which there is little consensus, however, is which features actually exist. For a time, new features were regularly proposed, in much the same way as happened with parameters. Higginbotham (1998) and, more recently, Corbett (2012) dispute the legitimacy of this, however, arguing that there can only be a limited inventory, and that only those that need to exist should be posited. Quite which features meet this criterion, however, is also a matter of dispute. Taking φ -features as an example, it is commonly assumed that these are Person, Number and Gender. However, Adger (2006) rejects these, and adopts Author, Participant and Singular instead, citing Halle (1997) and Harley and Ritter (2002) as the rationale behind this decision. In this thesis, I refer to Person and Number features, but nothing crucial hinges on this choice.

2.3.3 Case

In this section, we consider the concept of C/case⁶, discussing the different types of C/case and showing that there are many conflicting views regarding how DPs receive their morphological case forms. Given that this thesis considers case variation, the exact details of C/case theory are crucial to the analyses developed in chapter 6.

Whilst syntactic Case is universal, morphological case is language-specific, with some languages (e.g. Italian, Spanish and Icelandic) showing considerably more overt case morphology than other languages such as English (Chomsky 1995b). There is a long-standing debate about the status of morphological case in English, with some (such as Hudson 1995) suggesting that it does not exist in English at all. These linguists argue that the different pronoun forms (e.g. *I* and *me*) are assigned with regard to the syntactic position they fill and therefore have no relation to either syntactic Case or morphological case as seen in other languages. This is not an argument adopted here, as I show (in chapter 6) that there are times when the different morphological forms that appear in conjunction can only be explained by differentiating between those triggered by syntactic Case feature values, and those that are not.

Morphological case

In and of itself, morphological case is relevant solely to the morphological component and subsequent elements of the language faculty. In earlier versions of syntactic theory (e.g. Chomsky 1995b), it was assumed that there was a direct relationship between morphological case and syntactic Case, with the former being determined by the value of Case features. Some researchers (e.g. Marantz 1991; McFadden 2004; Sigurdsson 2012) now argue that syntactic Case is completely unrelated to morphological case, whilst others assume an indirect relationship between the two (for example, Schütze 2001).

Let us examine one argument in favour of completely separating morphological and syntactic c/Case. McFadden (2004) considers the Chomskyan assumption that morphological case realisations are the result of a direct relationship with syntactic Case feature values, and suggests that this direct relationship cannot be maintained due to the systematic nature of the mismatches that have been repor-

⁶Following convention, I refer to (syntactic) Case and (morphological) case. As will become clear, this distinction is crucial.

ted (by *inter alia* Yip, Maling, and Jackendoff 1987; Marantz 1991; Sigurdsson 2012). He argues that it is possible to completely separate the concepts of syntactic Case and morphological case, with morphological case existing solely in the morphological component of the language faculty. The morphological case of a DP is never determined by the value of its syntactic Case feature, but rather by the syntactic structure of the phrase that has been transferred to the morphological component.

He proposes that:

24. A DP is assigned dependent accusative case if it is c-commanded by a local filled Spec-vP (McFadden 2004: 192)
25. If the conditions for the assignment of accusative are not met for a DP (and no non-structural⁷ case has been assigned), then the DP will receive nominative form (McFadden 2004: 195)

McFadden suggests that morphological case forms are in fact morphosyntactic feature complexes (e.g. dative = [+ case, + oblique, + inferior], accusative = [+ case, + inferior]). Nominative has only a [+ case] feature as it is (under this analysis) the unmarked case form. Given the general consensus that the default case form should be the unmarked case, this implies that nominative should be the default case in English (as indeed it is in languages such as German and Icelandic) but there are convincing arguments that accusative is the default case form in English (see Schütze 2001). It is unclear how this issue can be resolved, as changing the feature complexes of English case forms to make accusative the unmarked form would result in the arguments for the case assignment criteria discussed above invalid.

It would seem, therefore, that it is not possible to adopt this instantiation of morphological case for use with conjoined pronouns. I therefore resort to the more common assumption that there is no single link between morphological and syntactic c/Case and that there are several possible ways in which a DP can receive morphological case. There are several such ways, including:

26. (a) Through assignment by a syntactic head.

⁷McFadden's *non-structural case* arises through a relationship with a specific syntactic structure (e.g. the complement of certain PPs is dative in English) and does not influence case assignment to any other DPs.

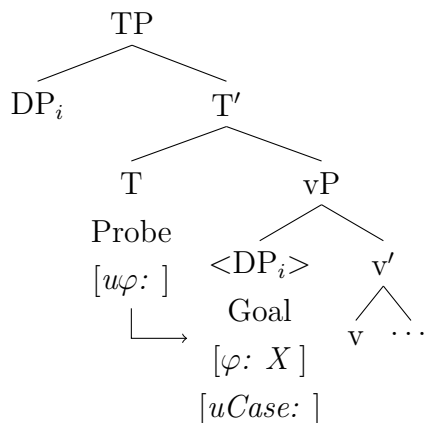
- i. I.e., NOM is assigned by T and ACC is assigned by v (Chomsky 2001, McFadden 2004, *inter alia*). For the sake of clarity, I continue to refer to syntactic Case and uCase features being valued through the probe–goal relationship between a DP and T or v.
 - ii. Other examples of this might be quirky and inherent case.
- (b) By “matching a semantically related constituent” (Schütze 2001: 209) – e.g. a left–dislocated DP can match the case of its corresponding argument.
 - (c) By feature percolation/spreading from a head to the other constituents in its projection (Schütze 2001).
 - (d) By default – when no other mechanisms have assigned the DP any case form.

In the rest of this section, I examine the most pertinent of these possibilities. The reader is referred to works such as Marantz (1991), McFadden (2004) and Sigurdsson (2012) for further details on other types of case and how they interact with each other.

Syntactic Case

Following Chomsky (1981), much work based on the Principles and Parameters framework (and therefore much Minimalist work) presumes that DP arguments are assigned syntactic Case (Marantz 1991). Chomsky (2001: 6) argues that syntactic Case is realised as a morphosyntactic feature, and that these features and φ -features (i.e., Person, Number and Gender) are intrinsically linked. As a goal is only active for probing when it has at least one uninterpretable feature, the u φ -features on T can only probe a DP for its φ -features if it has a uCase feature. DPs have interpretable φ -features, which enter into a probe–goal with the uninterpretable φ -features on either T or v, as shown below⁸.

⁸The values of these features is irrelevant for the purposes of Case assignment, so no value has been given in the example.



Uninterpretable Case (henceforth uCase) features have no interpretable counterpart. They therefore cannot enter into a probe–goal relationship, and so Case valuation has to occur in a different manner. Chomsky’s (2001) suggestion is that it is a ‘reflex’ of φ -feature checking: when T or v probe for the DP goal to check their φ -features, the Case feature on the DP is valued according to the nature of the probe. If the probe is (finite) T, then nominative⁹ Case is assigned, if it is v, then accusative Case is assigned.

Default case

Schütze (2001) shows that there are several environments in English (such as left dislocation, ellipsis and gapping) where ACC pronouns appear, but where they cannot be generated in any of the ways discussed in (26) other than through assuming the existence of a default. Along with others (e.g. Marantz 1991), he therefore proposes that default case exists, and that it is a morphological mechanism that allows DPs that do not have a syntactic Case feature to receive a morphophonological realisation.

There are two prevalent views on how default morphological forms function (Aronoff 2013): one in which the default form is the most basic and exists in any context where it is not replaced by a more complex form; and another where it takes on an “elsewhere” property (i.e., it is used only as a last resort, where no other form is generated). Schütze (2001) argues that default case is a last resort: if a DP has a uCase feature, it receives the morphological case form relevant to its syntactic

⁹There are numerous names for the different case forms, such as nominative/accusative and subjective/objective. It has been suggested that one set of terms be used for syntactic Case forms and another for morphological case. I do not adopt this distinction here, arguing instead that accusative forms can be generated either syntactically or morphologically. Henceforth, nominative = NOM and accusative = ACC.

Case, elsewhere it receives default case in the morphological component. Given the assumption made in this thesis (see section 2.3.1) that the syntax uses Lexical Items that are only specified for morphosyntactic features and that Vocabulary Items (with phonological features) are inserted in the morphological component (Late Insertion), I assume that default case forms are “elsewhere” forms. If an LI has a valued uCase feature, it is replaced by the appropriate VI. If it does not, there is a default VI that is inserted at this point to allow a phonological representation to be produced.

In this thesis, I adopt the suggestion that default morphological case is possible where a DP does not have a uCase feature. In these contexts, syntactic Case cannot determine the morphological case on the DP, but the DP still needs morphological case. The DP therefore receives default morphological case in the morphological component, to allow it to be legible to the S–M system. Following Schütze (2001: 210–216), I assume that ACC is the default morphological case form in English.

Case theory summary

For the purposes of this thesis, the following assumptions about C/case will be made:

28. (a) Syntactic Case and morphological case are different – syntactic Case is universal and syntactic; morphological case is language-specific and based in the morphology (although linked to the syntax);
- (b) Morphological case can be assigned to a DP through a direct relationship with the value of its syntactic uCase feature (although there are other ways that a DP can receive morphological case: see 26);
- (c) Default case is possible when the DP does not have a valued uCase feature. Such DPs are assigned ACC (in English) in the morphological component.

2.4 Minimalist variation

So what impact does the theoretical framework outlined above have on our understanding of morphosyntactic variation and how it should be accounted for?

In this section, I discuss the constraints that are placed on any analysis by such a framework. I then return to Variable Rules and Competing Grammars (as discussed in section 2.2), to consider the attempts that have been made to use these analyses within a Minimalist framework, and conclude with a discussion of two other Minimalist accounts that use morphosyntactic features instead of any variation-specific mechanism.

2.4.1 Minimalist constraints on variation

In essence, the ultimate goal of Minimalist variation theory is to show that morphosyntactic variation is not the result of any variation-specific operation, but rather a natural by-product of some general syntactic structures or operations. As briefly discussed at the beginning of section 2.3, the possible locations for variation are highly constrained within the Minimalist framework, although the concept has its roots in much earlier work.

“The availability of variation [is restricted] to the possibilities which are offered by one single component: the inflectional component.” (Borer 1984: 3)

Chomsky (2001: 2) adds to this by stating that “parametric variation is restricted to the lexicon, and insofar as syntactic computation is concerned, to a narrow category of morphological properties, primarily inflectional”. In other words, whilst variation within the lexicon and morphological variation are not problematic for Minimalism, morphosyntactic variation has to be linked to either the lexicon or the morphological component.

In other words, within a Minimalist framework morphosyntactic variation must be explained in one of two¹⁰ ways.

29. (a) Uninterpretable morphosyntactic features:

- i. **Underspecification of which uninterpretable features form part of the Lexical Items, and therefore enter the derivation process:** as uninterpretable features do not have an

¹⁰Camacho (2008) notes a third possibility, namely the position in which copies of an item surface. However, as this only affects word order variation, it cannot be a viable explanation for the variation under consideration in this thesis and so will not be discussed further.

impact on the semantic interpretation of an LI, but may influence its morphophonological representation, it may be possible to change which uninterpretable features an LI contains, thus triggering morphosyntactic variation.

ii. **Which operations are used to value uninterpretable features:** if the syntax does not care how uninterpretable features are valued, it may be possible to explain morphosyntactic variation by showing that a particular feature can be valued in more than one way.

(b) **PF-based operations:** i.e., surface¹¹ variation has no link to underlying variation within the syntactic structure, but is the result of optionality within the morphophonological component.

The issue for Minimalism is to determine whether all instances of surface variation can be accounted for using one or other of these mechanisms. As suggested in chapter 1, much work has been done into the theoretically possible ways of accounting for variation, but there is a comparatively small number of in-depth analyses showing how the theory can be applied to reality (with Adger 2006, Biberauer and Richards 2006 and Barbiers 2005 being the exception rather than the rule). It is hoped that this thesis can add to this body of work, by showing that case variation in English conjunction can be accounted for in one of the ways outlined in (29).

2.4.2 Minimalist adaptations of older generative analyses

We have seen that, in a Minimalist framework, linguistic variation has to be linked to either morphosyntactic features (29a) or PF-based operations (29b). The question, then, is how (indeed, if) the variable rules and competing grammars analyses can be adapted for use within Minimalist theories.

The variable rules analysis (Labov 1969) is still used today by many researchers, and has been an influential part of variationist research for several decades (Anttila 2002)¹². However, it is difficult to implement a variable rules-type analysis within

¹¹Variation which may initially appear to be morphosyntactic but can instead be shown to be morphophonological.

¹²For an in-depth discussion of the contributions made by the variable rules analysis to our understanding of variation from a sociolinguistic perspective, I refer the reader to Garcia (1985). As our interest is not in the sociolinguistic factors influencing variation, we pursue it no further here.

a Minimalist framework. Linguistic rules have largely been replaced by parametric theory, although some, e.g. Newmeyer (2004), argue that linguistic rules are just as viable a theory as parameters¹³. Whether this devalues the variable rules analysis largely depends on whether or not we agree with Hinskens, van Hout, and Wetzels (1997: 24) when they claim that “variable rule analysis is in fact a statistical technique for modelling discrete choices (...) as such, the statistical technique is not dependent on the rule concept at all”.

An additional point that needs consideration is how likely it is that performance-based probabilistic information is included in the grammar at all. It is contrary to Minimalist thought to include such information in the grammar itself: Chomsky (1995b) is explicit in stating that the competence–performance divide must be maintained, and that the grammar should contain only competence-based information. It is therefore impossible to include probabilities or variable constraints as part of the mechanisms behind variation. Indeed, there has been little discussion about where in the language faculty (FL) such rules are believed to apply. It would seem that they must be part of the syntax itself, as this is where other linguistic rules apply, but if pragmatic and extralinguistic information can alter the nature of the rules, this cannot be the case (at least within a Minimalist analysis).

Parts of the variable rules analysis would be relatively easy to reconcile with Minimalism: Henry (1995) provides an account of where variable linguistic rules are replaced with variable parameter settings, and it is easy to see how this could be extended to features, for example through having variably strong or weak EPP features. It is less clear, however, how Labov’s (1969) probabilistic information could be encoded in a Minimalist framework, for the reasons discussed above (although Adger 2006 provides one possible explanation: see section 2.4.3 for an in-depth discussion of this paper).

In the same way as Variable Rules, the Competing Grammars hypothesis (Kroch 1989 *et seq.*) is still used today (e.g. Fuss and Trips 2002 and Pintzuk 2002). There are some comments that need to be made regarding its suitability for use within a Minimalist framework such as the one outlined above.

One issue which has the potential to diminish the influence of this analysis is the status of the Blocking Effect. Many of the more recent works which discuss the role of Competing Grammars (e.g. Pintzuk, Tsoulas, and Warner 2000; Henry 2005) consider the applicability of the approach as a whole, but do not discuss

¹³For further information, the reader is referred to Newmeyer (2004) and Roberts and Holmberg (2009), who present the opposing sides of the debate.

its foundations. However, it has recently been shown (Roberts 2007) that syntactic doublets exist in languages such as Russian, and moreover, exist in a stable relationship with each other. This means that we cannot adopt the Blocking Effect for use with syntactic doublets, which undermines the entire foundation of the analysis. Embick (2008) maintains that a competing grammars approach can continue to be used for morphosyntactic variation, as the Blocking Effect is not a fundamental part of this analysis. His SINGLE OUTPUT property, which states that “an input N to a derivation yields a single output”, leads him to conclude that “if there is one input N to a syntactic derivation, and we find two distinct forms derived from this N, then there must be distinct grammars at play” (Embick 2008: 65). It would seem possible, therefore to dismiss this argument as a reason for rejecting Competing Grammars.

As an analysis developed specifically to explain unstable forms of variation, it is unclear whether it can be extended to include all types of syntactic variation. This analysis suggests that all variation which is explained by grammatical competition must be fundamentally unstable. This leads to two possible conclusions: either all forms of variation are unstable; or there are some forms of variation which cannot be explained by this analysis. It is difficult to answer which of these conclusions is more likely: there are several forms of variation which are known to have co-existed for centuries (including case variation in conjunction, which can be found in the works of Shakespeare), but it is impossible to know whether one form will eventually win out over the others.

It must be asked whether, for each form of variation, it is necessary to produce an entirely new grammar to account for every possible linguistic structure, or whether we instead produce several different grammars which interact, meaning that for each structure we may have two or more options, but that these interact with each other depending on the structures involved in the production of a sentence. It is also unclear how we could alter which option is adopted in any given speech act: we know that variation is not random or freely available, but this analysis cannot account for its systematic nature in the same way as Variable Rules can.

In addition to these issues, it must also be asked how theoretically desirable it is to have multiple grammars (competing or otherwise). Whilst we know that it is possible for an individual to possess more than one grammar (thanks to studies of bilingualism), it would seem more desirable to account for variation within a single grammar, and return to the concept of multiple grammars only as a last resort. Roberts (2007) suggests that having a different grammatical option means having a different parameter setting. Pintzuk et al. (2000) also state that it is no longer

assumed that an entirely new grammar is required for each new option (although whether this was ever the intention of Kroch is debatable), and that a grammatical option involves a choice of lexical items with different morphosyntactic features. Roeper (1999) argues that certain aspects of child language development can be explained most effectively through the postulation of multiple grammars, and suggests that the majority of competing grammars are deleted during the acquisition process. Rather than assume that multiple grammars are necessary, it is therefore perhaps a worthwhile endeavour to attempt to determine what these “grammatical options” might look like within a Minimalist framework. Given the facts about morphosyntactic variation outlined in section 2.4, it seems probable that they would have to be linked to morphosyntactic features, potentially representing either different ways of checking the features or different featural specifications of the LIs. Both of these ideas will be investigated further in chapter 6.

It would seem that, when applied within the framework adopted in this thesis, both analyses have to hinge on the use of morphosyntactic features. Whether this means variation in terms of the nature of the features themselves, in how they are checked, or even in which features an LI is specified for, is less clear. As a result, I move now to consider some more recent analyses, where researchers working within a Minimalist framework have exploited morphosyntactic features to show how variation can occur.

2.4.3 Alternative feature-based Minimalist accounts

I explained at the beginning of this section that all syntactic variation in Minimalism must be the result of either morphosyntactic features (29a) or operations in PF (29b). Given how little is known about which operations are possible in PF and the belief that PF-based operations cannot affect the syntactic derivation process, few Minimalists have pursued the latter route in any detail.

Any variation that can be shown to have its roots in the syntax (rather than solely in the morphological component) must be the result of operations triggered by features, since all the syntactic operations of C_{HL} are universal. It would seem to be the case that feature-triggered variation is the result of either the way in which features are valued (Biberauer and Richards 2006), or the underspecification of which morphosyntactic features an LI contains (Adger 2006). These two possibilities are explored in more detail in the remainder of this section.

Optionality

The concept of “true optionality” arose as a result of the observation that semantically vacuous movement is problematic for any framework (such as the Minimalist one adopted here: see section 2.3) that assumes a feature-driven approach to movement where movement must be triggered, and triggered movement is obligatory (Biberauer and Richards 2006). Operations such as optional movement should only occur if their existence means that the derived phrase receives a different interpretation (Chomsky 2001: 34), as shown in the German example (30) (Biberauer and Richards 2006: 36).

30. German

- (a) Er hat **oft** ein Buch gelesen.
He has often a book read.
“He often read a (non-specific) book.”
- (b) Er hat ein Buch **oft** gelesen.
He has a book often read.
“There’s a book that he often read.”

However, Biberauer and Richards (2006) argue that there are many contexts where optionality in word order can occur without any alteration in interpretation at LF (as in the Afrikaans examples below: ex. 3 in the original text), and that therefore it is necessary to explain how true syntactic optionality (resulting in word order variation) is possible under certain conditions.

31. Afrikaans

- (a) Ek weet dat sy dikwels Chopin gespeel **het**.
I know that she often Chopin played has.
“I know that she has often played Chopin.”
- (b) Ek weet dat sy **het** dikwels Chopin gespeel.
I know that she has often Chopin played.
“I know that she has often played Chopin.”

Their proposal is that the combination of the economy principles of Last Resort (“don’t do too much”, c.f. Collins 2008) and Full Interpretation (“don’t do too little”, c.f. Chomsky 1995b) means that an operation ω is equally economical as another operation ω' that can apply at the same stage of the derivation as long

as both result in a well-formed structure. In other words, as long as all syntactic requirements are met, both ω and ω' are equally valid operations and can be used interchangeably. Given that the two operations are completely separate from each other, there is no reason why they should not result in different derivations and therefore different representations at PF. This therefore explains the existence of semantically vacuous optionality, as in (31).

Richards (2008) develops this idea further, stating that:

“Due to the maximally underspecified nature of UG, inherent points of optionality should emerge wherever UG lacks specified instructions for their resolution, such as the manner in which a given feature is satisfied or lexicalized.” (Richards 2008: 140)

It is thus implied that this analysis can be extended to account for word form variation as well as word order variation. It would seem that if there are multiple ways in which an uninterpretable morphosyntactic feature (whether an EPP-feature, as in Biberauer and Richards 2006, or some other feature) can be checked, then variation can occur freely without resulting in semantic changes.

As long as one accepts that Last Resort and Full Interpretation are the only economy principles relevant for use in a Minimalist framework (something which is not uncontested: see Collins 2008 for a discussion of other economy principles that are widely used within Minimalist analyses), this concept is an appealing one. It explains how (some forms of) variation can be accounted for without introducing any mechanisms that are specific to variation, as it relies only on morphosyntactic features and the possible ways in which they can be satisfied, although it must be asked whether all forms of variation can be deemed the result of multiple ways of satisfying the same feature. I suggest that further investigation is required to determine how many cases of variation can be explained using this mechanism: Richards (2008) suggests that it may apply equally in the narrow syntax and at the PF-interface. However, neither Biberauer and Richards (2006) nor Richards (2008) claim that **all** forms of morphosyntactic variation can be explained using this concept, meaning that it is still necessary to consider other alternatives.

Underspecification of morphosyntactic features

The other possible explanation of variation involving morphosyntactic features is that some LIs are underspecified for which uninterpretable features they contain.

As explained in section 2.3.2, any uninterpretable feature that is not required for syntactic reasons can be omitted from an LI without altering its semantic content, but the omission may change which VI the LI maps onto in the morphological component. As long as the uninterpretable feature *can* be checked, the omission (or underspecification) is optional.

Adger (2006) (and others, such as Adger and Smith 2005, 2010) examines the issue of intra-speaker morphosyntactic variation within a Minimalist framework. The basic motivation behind this analysis is raised by the desire to re-analyse the widespread assumption that variation is either free (i.e., random, with no semantic change or driving factor) or driven by context. Adger uses this article to examine the possibility that in cases where there appears to be principled variation, context is only an influencing factor, and not the driving one. He proposes that there is a way of using feature agreement to not only show that morphosyntactic variation can occur, but that it occurs in predictable probabilities which can be shown to mirror proportions found in real language use. If it can be shown that context does not always have an impact, there must be a calculable probability that it will, and it may also be the case that different combinations of factors will have different results. This is a concept which, although relatively new to variationist linguistics, is derived from other scientific fields such as biology, and so may not be as radical as it at first appears to be.

It must at this point be acknowledged that other linguists have explored the idea of calculating probabilities before now. Labov (1969) acknowledged the role that probability would have in his framework, whilst Cedergren and Sankoff (1974) provided one way of calculating them. The difference with Adger's approach is that the probabilities are not encoded into the grammar or the lexicon: they are, instead, derived from the nature of uninterpretable features and do not require any more information to be encoded into language than is already believed to be there. At least in theory, this is a highly attractive development, as questions have frequently been raised over whether encoding probability into the lexicon would make it more complex to learn. Whether or not this is the case (something which has been hotly debated), it would seem to be more minimal to be able to derive the probabilities from existing linguistic context which is externally motivated (as features are) than to have to justify them individually.

The basic argument behind Adger's proposal is based on feature agreement and the underspecification of features. He argues that a child will use its PLD to create an algorithm based on Maximal Generalization, with three factors playing an important role: Reject Optionality, Reject Synonymy and Minimize Lexicon. In

other words, the algorithm will search for each feature individually. If successful, it will end there, if not, it will search for groups of two features. This is best explained by an example (Adger (2006: 518–519)):

1. (a) *[*usingular* = +] am/are/is
- (b) [*usingular* = –] are
- (c) *[*uparticipant* = +] am/are
- (d) *[*uparticipant* = –] is/are
- (e) [*uauthor* = –] are
- (f) *[*uauthor* = +] am/are

In this example, [*usingular* = –] *are* and [*uauthor* = –] *are* are accepted by the algorithm, with the others being rejected by Reject Optionality. At this point, the algorithm begins again, this time considering the interaction of two features:

1. (a) [*usingular* = +, *uparticipant* = +] am/are
- (b) [*usingular* = –, *uparticipant* = +] are
- (c) [*usingular* = +, *uparticipant* = –] is
- (d) [*usingular* = –, *uparticipant* = –] are
- (e) [*uparticipant* = +, *uauthor* = –] are
- (f) [*uparticipant* = +, *uauthor* = +] am/are
- (g) [*usingular* = +, *uauthor* = +] am
- (h) [*usingular* = –, *uauthor* = +] are
- (i) [*usingular* = +, *uauthor* = –] are
- (j) [*usingular* = –, *uauthor* = –] are

Thanks to Minimize Lexicon, some of these can be eliminated, as they lead to the same LIs. This results in the following algorithm:

1. (a) [*usingular* = +, *uparticipant* = –] is
- (b) [*usingular* = +, *uauthor* = +] am
- (c) elsewhere: are

Reject Synonymy results from cases such as (1a), where it can be seen that there are still two possible LIs, despite greater feature specification. Adger proposes that in cases such as these, one of the two options is eliminated.

However theoretically pleasing, this is not a completely uncontraversial analysis. Firstly, there are several assumptions made, two of which are rather large. For example, whilst Adger states that context and extra-linguistic factors may have an influence on variation, his entire analysis is based on the premise that these factors can be controlled for and that it is possible to analyse language without considering them. Adger states that this is a reasonable assumption to make, as the corpus he uses is already a form of control for factors such as geographical area and family background, and it has apparently been shown that factors such as age and social status do not influence the use of *was/were*. Hudson (2007) disputes this, in the belief that it should be impossible to separate context and variation. Personally, whilst I agree with Hudson that context and extra-linguistic factors must be considered to be an integral part of variation, I feel that Adger is justified in his attempt, as at no point does he claim that they are not, he merely proposes that in order to discover whether combinatorial variability could be a viable analysis, we must control other factors.

The second assumption made is that semantically equivalent lexical items are chosen randomly. In the course of his analysis, Adger states that he believes it is a reasonable assumption to make, as individual occurrences are in general isolated from each other, and so retrieval should not be affected by factors such as proximity. He also gives other reasons why this should not be an issue. Whilst this would appear to be reasonable, I would still question whether it is ever possible to state that LIs are chosen completely randomly, as this would surely imply that we should see the same frequencies of any given LI with any given speaker, and I believe this to not be the case.

In and of itself, this article proposes an interesting analysis which merits in-depth consideration in any discussion of variation, as it fits nicely within a Minimalist framework, and appears to be able to account for probabilities without necessitating more information to be encoded in the grammar than can be motivated by other factors. However, it also raises some other questions which also need to be considered in any discussion of intra-speaker variation.

Firstly, Adger raises the question of whether it is possible to assume that a community of speakers will have sufficiently similar i-languages to make it realistic to use a corpus of several different speakers to study intra-speaker variation. He does

not consider this in much detail, stating merely that if the community all seem to use any given structure in the same way, then it is possible to do so. This does, however, pose some interesting problems for the methodology of my investigation: can intra-speaker variation be viably investigated based on a group of people, or would it be better to consider a number of individual speakers in their own right? Whilst this might seem the better option, it poses issues of gaining sufficient data on any given structure from one speaker, and also raises the question of how many speakers would need to show a particular trait before it can be considered to be more than just accidental. I do not currently have a solution to this, but it is something which will need to be resolved and discussed in some detail, in order to justify my decision.

In addition to this, Adger also touches briefly on the topic of language change. It appears to be more and more likely that linguistic variation and diachronic language change must be linked in some way or other, and involve similar processes. This then raises the question of whether any theory of linguistic variation needs to address, to some extent, the topic of language change. Is it sufficient to emulate Adger and state simply that any theory would or would not resolve certain issues in language change, or does it need to be shown that the theory can also been applied in full to explain it? I suspect the former, but I believe that it is no longer desirable to treat the two issues as completely separate.

2.5 Chapter summary

In this chapter, we have reviewed some of the major theoretical details that will be assumed in this thesis. We have seen the impact that adopting a Minimalist framework will have on the analysis that we must assume, and clarified the theoretical stance that will be taken on Case and feature theory that will have a direct effect on my analysis. We have also reviewed some of the principal theories developed to explain linguistic (and especially morphosyntactic) variation.

We have seen that there are (at least) two ways of using morphosyntactic features to account for linguistic variation within the theoretical assumptions outlined in section 2.3. What, then, of the alternative discussed in section 2.4: alterations in the mapping of the structure to PF? Given how little is known about the internal structure and mechanisms of PF, many linguists (e.g. Scheer 2011) have called for caution in assigning (apparently) syntactic issues such as morphosyntactic variation to this component (although see works such as Parrott 2007 for an attempt

to account for such variation in PF). If it can be shown that morphosyntactic features cannot be used to explain all forms of syntactic variation, then we will have to reassess whether it is more theoretically desirable to return to this concept, or to alter our theoretical assumptions to allow for another possibility within the syntax itself. Until such a point is reached, however, I feel it is better to focus our attention on determining the extent to which variation can be explained through the use of features alone, as this is the most theoretically desirable option.

Chapter 3

Conjunction

Having considered the existing literature about Minimalism and variation in the previous chapter, it is time now to discuss conjunction. In this chapter, I discuss the data that a theory of conjunction (in any language) needs to be able to account for, and then consider a number of the existing theories of the syntactic structure of a conjunction phrase. I show that there are theoretical challenges inherent in adopting some of these theories within the framework developed in chapter 2, but that three others have potential. By comparing the ability of these three to account for the issues raised in Progovac (1998a) (as discussed in section 3.2.1), I conclude that the most likely structure of &P is the “recursive complement” structure (Kayne 1994; Johannessen 1998). I then move on to discuss the explanations that have been produced to account specifically for case variation in conjunction. This investigation shows that there are many contradictions in the existing literature with regard to the case forms that they can account for, and whether they assume (explicitly or implicitly) that any attested variation is inter- or intra-speaker. This leads me to conclude that, before I can reach any decision regarding which analysis is most appropriate, it is necessary to produce a more detailed overview of which case forms are possible in each syntactic position and the nature of any attested variation. This is therefore the aim of chapters 4 and 5.

3.1 Chapter outline

This chapter begins with an overview of some of the different syntactic structures that have been proposed for conjoined phrases, giving details of their theoretical

implementation and evaluating them against the criteria for a successful analysis provided in Progovac (1998a). After each, we consider briefly any implications that adopting that particular theory has for our assumptions about case assignment. Section 3.3 considers some of the major works that have specifically discussed how case is assigned in conjunction, and how non-standard case forms can arise in this context. We see that some linguists feel that the generation of non-standard case is not learnt during the language acquisition process, but is instead the result of hypercorrection or other learnt behaviours (Emonds 1986; Parrott 2007), whilst others attempt to provide an explanation accounting for how all case forms are generated by the grammar (e.g. Johannessen 1998; Quinn 2005). This discussion will, when combined with the understanding of Minimalism and variation gained in the previous chapter, provide me with a stable base from which to begin my own investigation into case variation in conjoined pronouns in English.

3.2 Syntactic structure of conjunction phrases

Conjoined structures behave differently from non-conjoined structures in many ways (including, but not limited to, case assignment). In order to understand why, the underlying syntactic structure of a conjunction phrase needs to be determined. There is no universally accepted analysis of this: one commonly adopted structure is that of an endocentric structure where the conjunction (henceforth, &) projects to form &P (Kayne 1994; Johannessen 1998). Many contest this (e.g. Borsley 2005; te Velde 2006) claiming that & cannot be a functional head in the same way as *v* or *T*, stating that an alternative analysis is required, as it is not a lexical head either (as discussed by Chomsky 1970 and Hale and Keyser 1993, lexical heads are commonly assumed to include *V*, *N*, *A* and *P* only). I therefore discuss some alternatives, such as when & is assumed to be an adjunct (e.g. Munn 1993) and multi-dimensional analyses like that of de Vries (2005).

3.2.1 Factors to consider

There are many factors that any theory of the syntactic structure of conjunction¹ needs to be able to account for. Some of the most important (as discussed by Progovac 1998a) are:

¹Note: like many other analyses, this thesis concentrates on the conjunction of DPs, rather than of VPs, AdjPs etc., and as such, all factors considered in this section focus on DPs.

The conjunction and the second conjunct form a syntactic constituent, but the first conjunct and the conjunction do not:

There are several ways of showing that this is the case. Ross (1967) was one of the first to make this explicit, using prosody to do so.

32. (a) Mark ran away, and he didn't even stop to pick up his wallet.
 (b) Mark ran away. And he didn't even stop to pick up his wallet.
 (c) *Mark ran away and. He didn't even stop to pick up his wallet.

Collins (1988a,b) and Munn (1993) use extraposition to make the same point:

33. (a) Chloe bought apples and pears at the store.
 (b) Chloe bought apples at the store, and pears.
 (c) *Chloe bought pears at the store, apples and.

Zoerner (1995) shows that the conjunction and the final conjunct can undergo substitution with an alternative structure (34), again indicating that they form a syntactic constituent².

34. (a) He saw [_{&P} Bill [_{&P} Mary [_{&'} and Tom]]]
 (b) He saw [_{&P} Bill [_{&P} Mary [_{&'} etc.]]]

The entire phrase must form a syntactic constituent:

As standard constituency tests show, the conjunction and its conjuncts form a syntactic constituent.

35. (a) [Tom and Mary] love me.
 (b) It is [Tom and Mary] that love me. (*Cleft sentence*)
 (c) [They] love me. (*Substitution*)

The first conjunct c-commands the second, but the second does not c-command the first:

²In these examples, and the rest of this section, the terminology *&P* and *conjunction phrase* is used to indicate a syntactic unit made up of two or more conjuncts and an uncertain number of conjunctions (null or overt). It does not (in this section, at least) indicate any link to theory-specific terminology, nor is it meant to indicate the syntactic relationship between the different elements. This relationship and theory-specific details are discussed in section 3.2.2.

Collins (1988c) and Munn (1993) produce evidence from quantification (e.g. *Every girl and her boyfriend were at the party*) and negation scope (for example, *No father or any of his children will go*) – both of which are standardly analysed as requiring a c-command relationship (see, for example, Barss and Lasnik 1986) – to show that the first conjunct must c-command the second, but not vice versa.

It has been suggested (e.g. by Progovac 1998a), that the arguments given by Collins (1988c) and Munn (1993) to argue in favour of c-command between conjuncts provide insufficient evidence as they can all be explained in other ways, and that the first conjunct therefore does not c-command the second. For example, Progovac (1998a: 3) claims that whilst the Principle C binding condition (Chomsky 1995b) can explain the difference in grammaticality between (36a) and (36b), it cannot explain why (36c) is ungrammatical. She therefore argues that some form of pragmatic principle is necessary to explain the ungrammaticality of (36b) and (36c), not any violation of Principle C.

36. (a) John_i's dog and he_i/him_i went for a walk.
 (b) *He_i/him_i and John_i's dog went for a walk.
 (c) *He_i finally arrived. John_i's dog went for a walk.

She furthermore presents an argument that the quantifier raising argument (Munn 1993: see 37 below) can be accounted for by the application of the Leftness Condition (38) or some sort of pragmatic factor (although she gives no further details of what this might entail).

37. (a) Every man_i and his_i dog went to mow a meadow.
 (b) *His_i dog and every man_i went to mow a meadow.

38. LEFTNESS CONDITION (Chomsky 1976: 342)

A variable cannot be the antecedent of a pronoun to its left.

Bianchi (2001) shows that the Leftness Condition can explain much of the same information as c-command, but that it cannot be used within the framework adopted in this thesis (see section 2.3): the Leftness Condition uses linear ordering to form syntactic constraints, this directly contradicts the belief that linear word ordering occurs only in the morphophonological component, by which point all syntactic operations must have been completed, and therefore that no condition or operation relying on linear word order can affect the syntax.

Progovac's argument essentially appears to be that there is no reason to believe that there is any c-command relationship between the conjuncts, as all evidence provided by other authors can be explained in other ways. However, some of her alternatives cannot be adopted in the framework used in this thesis, meaning that we have to rely on using c-command relationships to explain the issues raised by Collins and Munn. I therefore return to the possibility that their conclusion is correct and that the first conjunct c-commands the second, but not vice versa.

Conjunction doubling is possible:

Whilst English always has at least one conjunction fewer than it has conjuncts, there are some languages (e.g. French and Greek) where the number of conjunctions can be equal to the number of conjuncts, as shown below. It is also possible when there are more than two conjuncts.

39. French

Paul connait et Marie et Karine.
Paul knows and Marie and Karine.

“Paul knows both Marie and Karine.”

It would therefore initially seem that any syntactic structure should have equal numbers of & heads as it does conjuncts, to allow for this. However, the precise status of the initial conjunction is the subject of some debate: Mouret (2004) argues that the first conjunction in situations of conjunction doubling should be analysed as a true conjunction, whilst others propose that it is in fact an adjunct adverb such as *both* in English (Johannessen 1998; Kayne 1994) or a distributive focus particle (de Vries 2005). For this reason, I do not consider an inability to explain conjunction doubling as a valid reason to reject a structure outright, although one which can explain it would be a stronger contender than one which cannot.

Non-standard case forms and case variation are accepted in many languages and are subject to cross-linguistic patterns:

As we will see, there is much disagreement over the extent to which some so-called “non-standard” case forms (and by extension, case variation) are acceptable in English, primarily due to the difficulties inherent in gathering data on a structure that is as heavily influenced by prescriptive norms as this one. There is no doubt, however, that some non-standard case forms and variation are acceptable in English (and some other languages), and therefore any theory regarding the syntactic

structure of &P (in these languages, at least) will have to be able to account for how multiple case forms can be generated.

Agreement:

It is widely acknowledged that, in most cases, a conjunction phrase forces plural agreement, even when both conjuncts are singular:

40. (a) [A man] and [a boy] are having a race.
 (b) *[A man] and [a boy] is having a race.

By all appearances, then, we either need to explain how a conjunction phrase is automatically plural, or how the combination of two [Number:singular] features can result in a single [Number:Plural] feature on T. The situation is made more complex, however, when we acknowledge that (in English, at least) singular verbal agreement is possible with a post-verbal subject &P:

41. There is/are [a man and a boy] having a race.

Babyonyshev (1997) (as discussed in Progovac 1998a) accounts for this variable agreement with postverbal subjects by suggesting that whilst preverbal subjects move overtly to TP and check their features in TP, postverbal subjects move covertly (in LF), either as a whole &P (ensuring plural agreement) or with the first conjunct only moving (singular agreement). However, the concept of covert movement is now questioned within a Minimalist framework, meaning that we need to account for this phenomenon in some other way. I return to this and discuss how other features such as φ - and EPP-features are checked in conjunction phrases in sections 6.3.1 and 6.4, using Agree to show that this is not an insurmountable issue.

Subcategorization and the Coordination of Likes Constraint:

It has often been asked whether conjuncts have to adhere to the subcategorization requirements of the head to which they are merged, and whether the conjuncts have to be of the same syntactic category. According to the Coordination of Likes Constraint (Chomsky 1957), syntactically different categories cannot be conjoined, as shown in (42):

42. (a) The writer [_{PP} of the book] and [_{PP} of the play]
 (b) *The writer [_{PP} of the book] and [_{CP} that I know]

However, it has since been shown (Sag, Gazdar, Wasow, and Weisler 1985) that there are many exceptions to the Coordination of Likes Constraint (see 43) and it is now felt that it is not a valid constraint (Progovac 1998a).

43. Jenny has become [_{DP} a mother] and [_{AdjP} very busy]

It would therefore seem that conjuncts do not have to be of the same syntactic category as each other. Furthermore, as Gazdar, Klein, Pullum, and Sag (1985) clearly show, there are cases where the second conjunct does not obey the subcategorization requirements of the head, although the first conjunct has to:

44. (a) You can depend on [my assistant] and [that he will be on time]
 (b) You can depend on [my assistant]
 (c) *You can depend on [that he will be on time]

We can therefore conclude that whilst a conjunction phrase may take on some of the characteristics of one or both of its conjuncts, it does not need to inherit all of them. Furthermore, the second conjunct would appear to have a less direct relationship with the remainder of the clause, suggesting that it may be more deeply embedded within the conjunction phrase than the first conjunct (a conclusion that is broadly in line with the argument that the first conjunct asymmetrically c-commands the second).

Section summary

We have seen that there are many factors regarding conjunction that any theory of the syntactic structure of a conjunction phrase should be able to account for. The main ones are as follows:

45. (a) The conjunction and the second conjunct form a syntactic constituent, the conjunction and the first conjunct do not;
 (b) The entire conjunction phrase forms a syntactic constituent;
 (c) The first conjunct c-commands the second;
 (d) Conjunction doubling is possible cross-linguistically;
 (e) Non-standard case forms are possible in conjunction phrases where they are not possible in non-conjoined phrases;

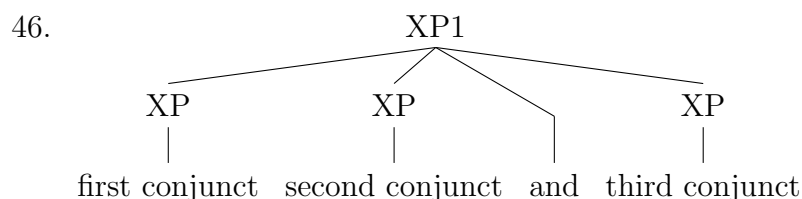
- (f) Case variation is possible cross-linguistically;
- (g) Pre-verbal conjunction phrases force plural verbal agreement, whilst post-verbal conjunction phrases allow for some variation in terms of verbal agreement;
- (h) The first conjunct has to obey the phrase head's subcategorization requirements, but the second does not.

3.2.2 Syntactic structure

In this section, we discuss some of the different syntactic structures that have been proposed for a conjunction phrase. Some of these are compatible with Minimalist theory, whilst others are not. I analyse them in terms of both their suitability within a Minimalist framework and the extent to which they can accommodate the factors outlined in (45).

Flat structure

When discussions first began concerning the structure of conjunction phrases, it was generally assumed (Chomsky 1981, as discussed in Munn 1993; Progovac 1998a) that conjunction is somehow different to other types of phrase structure, and forms a “flat” structure, such as that in (46):



Few Minimalist theories now adopt this structure for conjunction, due to its violation of Bare Phrase Structure (in that the structure is not endocentric) and the belief that Merge is a binary operation. It also fails to comply with several of the criteria discussed at the beginning of this section: the constituency of the conjunction and its subsequent conjunct and c-command relations, to name but two. Flat structure will therefore not be discussed any further.

Multidimensional analyses

One proposal that has been made to make flat structure compliant with the idea of binary branching is the idea that conjunction phrases are multidimensional (e.g. de Vries 2005). De Vries provides evidence that conjunction is both collective and distributive. In (47) (ex.20, in the original work, using different names for clarity), de Vries argues that there are two ways of interpreting the first example (i.e., either all three lift the box together, or they all do so separately) but that there are six possible interpretations of the second, as shown in table 3.1 (adapted from table 1 in the original, where + indicates a collective connection and , represents a distributive connection).

47. (a) Tom, Andy and Mike lifted the box.
 (b) Tom and Andy and Mike lifted the box.

Reading No.	(T & A & M)	((T & A) & M)	(T & (A & M))
1	T,A,M	(T,A),M	T,(A,M)
2	T+A+M	(T+A)+M	T+(A+M)
3		(T+A),M	
4		(T,A)+M	
5			T,(A+M)
6			T+(A,M)

Table 3.1: Possible readings of *Tom and Andy and Mike lifted the box*

De Vries uses this evidence (among others) to suggest that the conjunction heads are connected. Given that he explicitly argues that there is no c-command relationship between the first and second conjuncts (an argument that is not upheld in this thesis – see section 3.2.1) and that there is a degree of symmetry between the two conjuncts, he uses the concept of behindance (Goodall 1987; Moltmann 1992; van Riemsdijk 1998 *inter alia*) to adapt the recursive complement analysis. In this analysis, there are two types of (binary) Merge: one based on dominance (d-merge) and another based on behindance (b-merge). DP_2 and & are b-merged to form &', &' and DP_1 are d-merged to form &P. To repeat the spacial metaphor used by de Vries, the two conjuncts are now behind each other in a three-dimensional structure.

48. (a) Alice saw Bill
 Jane saw Bill
 (b) (Alice, Jane) saw Bill

- (c) Alice and Jane saw Bill

Conceptually, this is an interesting analysis, in that it accounts for the apparent pragmatic equality between the conjuncts (i.e., that in the example above, neither Alice nor Jane has any prominence over the other: both have an equal relationship to Bill). However, whilst this analysis can explain why the second conjunct does not c-command the first, it cannot explain why the first appears to c-command the second (given that the analysis was developed to account for the author's belief that there is no c-command relationship between the two conjuncts). Neither can it explain the apparent constituency of the conjunction and the second conjunct. Furthermore, introducing a multidimensional structure greatly complicates the grammar, and it is to be questioned how desirable this is: de Vries claims that parataxis is also generated using b-merge rather than d-merge, meaning that it is not limited solely to use in conjunction, but still to a relatively constrained range of structures.

Perhaps most problematic is that it is unclear how probe-goal relationships would work between elements that have been b-merged. De Vries explicitly states that b-merge prevents c-command. Under the theoretical framework adopted in this thesis, an uninterpretable feature probes for a suitable goal **within its c-command domain** (see section 2.3.2). If there is no c-command relationship, the features of the second conjunct should not be valid goals for any probing uninterpretable feature contained in an LI higher than &'. However, there is evidence from Romance languages such as French and Italian that the Person and Gender features of the second conjunct can influence the relevant uninterpretable features of T, v and Adj (where applicable), as is shown in the following Italian examples.

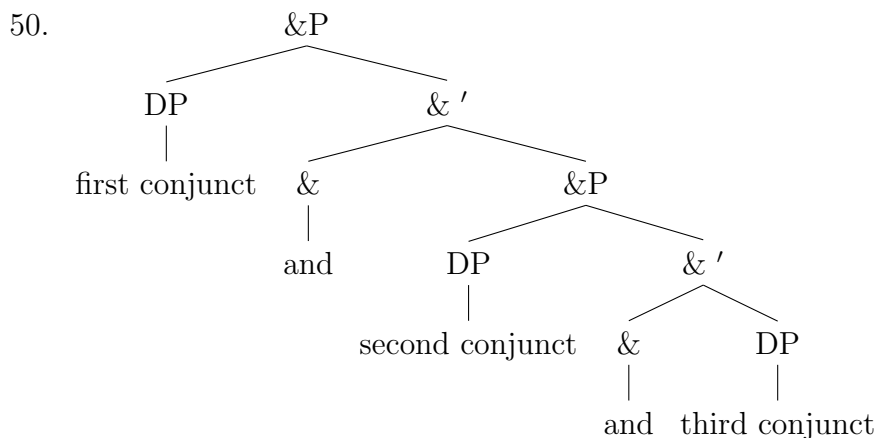
49. Italian

- (a) Maria_{FEM} e suo fratello_{MASC} sono arrivati_{MASC,PL}
 Maria_{FEM} and her brother_{MASC} are arrived_{MASC,PL}.
 'Maria and her brother have arrived'.
- (b) Marco_{MASC} e sua sorella_{FEM} sono arrivati_{MASC,PL}
 Marco_{MASC} and his sister_{FEM} are arrived_{MASC,PL}.
 'Marc and his sister have arrived'.
- (c) Maria_{FEM} e sua sorella_{FEM} sono arrivate_{FEM,PL}
 Maria_{FEM} and her sister_{FEM} are arrived_{FEM,PL}.
 'Maria and her sister have arrived'.

Clearly, then, there must be some form of agreement (whether direct or indirect) between the second conjunct and the larger phrase in which it is contained and short of completely eliminating the relationship between c-command and agreement, it is difficult to see how this could be accounted for within de Vries' analysis. For both theoretical and empirical reasons, therefore, we abandon this analysis and proceed to examine some alternatives.

&P with a recursive complement

In this proposed structure (Kayne 1994; Johannessen 1998), the conjunction projects to head a phrase, with the first conjunct filling the specifier position and subsequent conjuncts filling a complement position, as shown below.



This structure is endocentric, and therefore resembles all other syntactic phrases, unlike flat structure and the multidimensional approach. Borsley (2005: 466–470) argues that the second and third conjuncts in such structures do not form proper coordinate structures, I would question the validity of this argument. This structure does however explain why the first conjunct and the conjunction do not seem to form a constituent, whilst the conjunction and second (or third) conjunct do and why the entire conjunction phrase also appears to be a constituent. It also correctly predicts that each conjunct c-commands every conjunct to its right. It is, however, hard to see how conjunction doubling could be accounted for under this theory, unless we propose (as does Kayne 1994) that the first conjunction in a conjunction doubling context is not a true conjunction, but rather an adjunct adverb.

This is one of the few analyses that has been explored in detail regarding non-standard case forms: Johannessen (1998) considers its use across multiple lan-

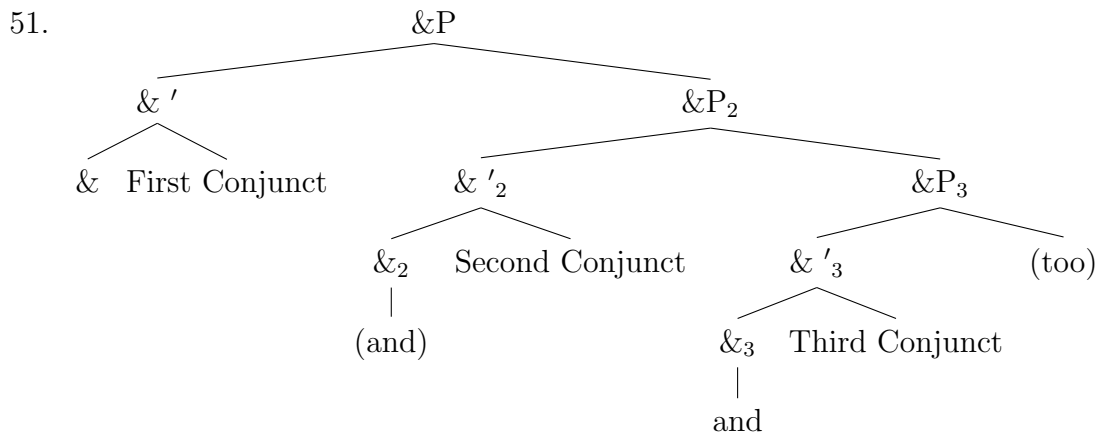
guages. In brief, Johannessen suggests that there are three possible types of case marking: Unbalanced Coordination (UC – conjuncts have different case forms), Extraordinarily Balanced Coordination (EBC – conjuncts have the same case, but not the one which would be expected given the syntactic position of &P) and Ordinary Balanced Coordination (OBC – both conjuncts have the case that would be expected from the syntactic position of &P). She uses agreement between &P and T and Spec–head agreement between &P and the first conjunct to explain how NOM is generated on the first conjunct, and claims that the second conjunct always receives default ACC case (unless prescriptive norms are involved). She additionally suggests that some languages block Case assignment to &P, thereby explaining how ACC can be produced on the first conjunct. This part of the analysis is discussed in more detail in section 3.3.

It is not clear how the issues of subcategorization and agreement (as discussed above) can be accounted for under this analysis: I suggest that it will largely depend on which features we ascribe to &P and how they are checked, but this is an issue that I return to in section 3.2.3.

This analysis appears to have some potential – it does not require any major theoretical leaps, and as long as a way can be found to resolve the subcategorisation and agreement issues, it appears to be able to account for the majority of areas highlighted in section 3.2.1.

&P with a recursive specifier

An obvious alternative to the above proposal is that the conjunction projects, but that the conjuncts fill a complement position in their own &P, as shown in (51). Here, however, the recursion occurs in the specifier of &P, not the complement (Collins 1988a,b,c).



Collins develops this analysis based on evidence from conjunction adverbs such as “perhaps”, “maybe” and “certainly”, and shows (given that these adverbs modify *and*, not the conjuncts) that & would appear to be the phrase head.

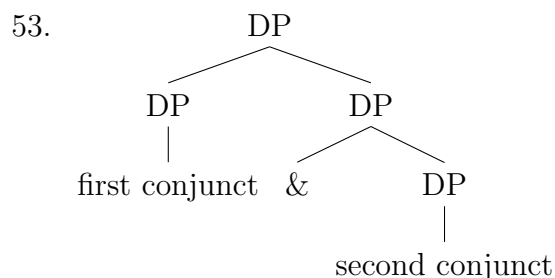
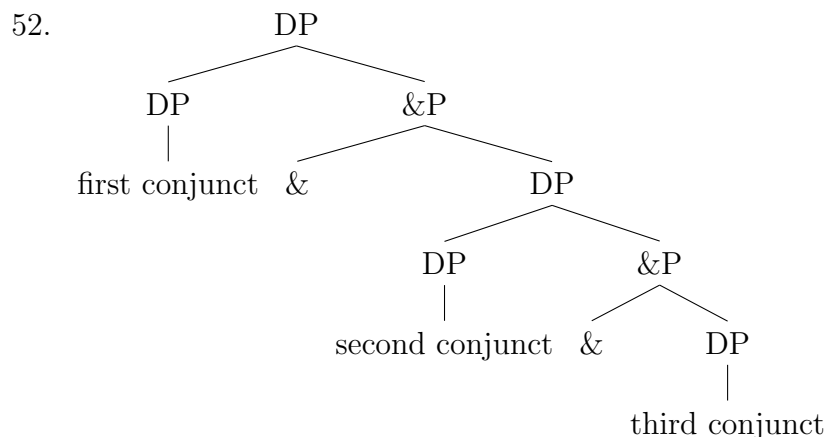
This approach is also endocentric, can easily account for conjunction doubling, and explains both the differences in constituency between the first and second conjuncts and the lack of c-command relationships between the two. It also shows that the entire conjunction phrase is a syntactic constituent.

To my knowledge, no analysis has been developed to explain how non-standard case forms and case variation could be accounted for using this structure, and Collins himself has nothing to say on the subject, apart from a statement that the conjunction cannot assign case to either conjunct (as the adverb can intervene between the two, breaking adjacency). However, there is nothing in the theoretical framework adopted in this thesis that requires adjacency between the case assigner and the element it is assigning case to, so this argument is irrelevant under Minimalism.

The main problem with this analysis is that it is unclear why the specifiers of &P should be to the right of the & head, when this goes against all that is commonly assumed about specifier positions in English. Progovac (1998b) proposes some possible reasons for this, as well as an alternative (leftwards) structure, but does not develop either in any detail. It is also unclear how the subcategorization requirements and Agreement checking mechanisms would work under this analysis, but it could be argued that it would work in the same way as in the recursive complement analysis, which is discussed in section 3.2.3.

A conjunct is an adjunct

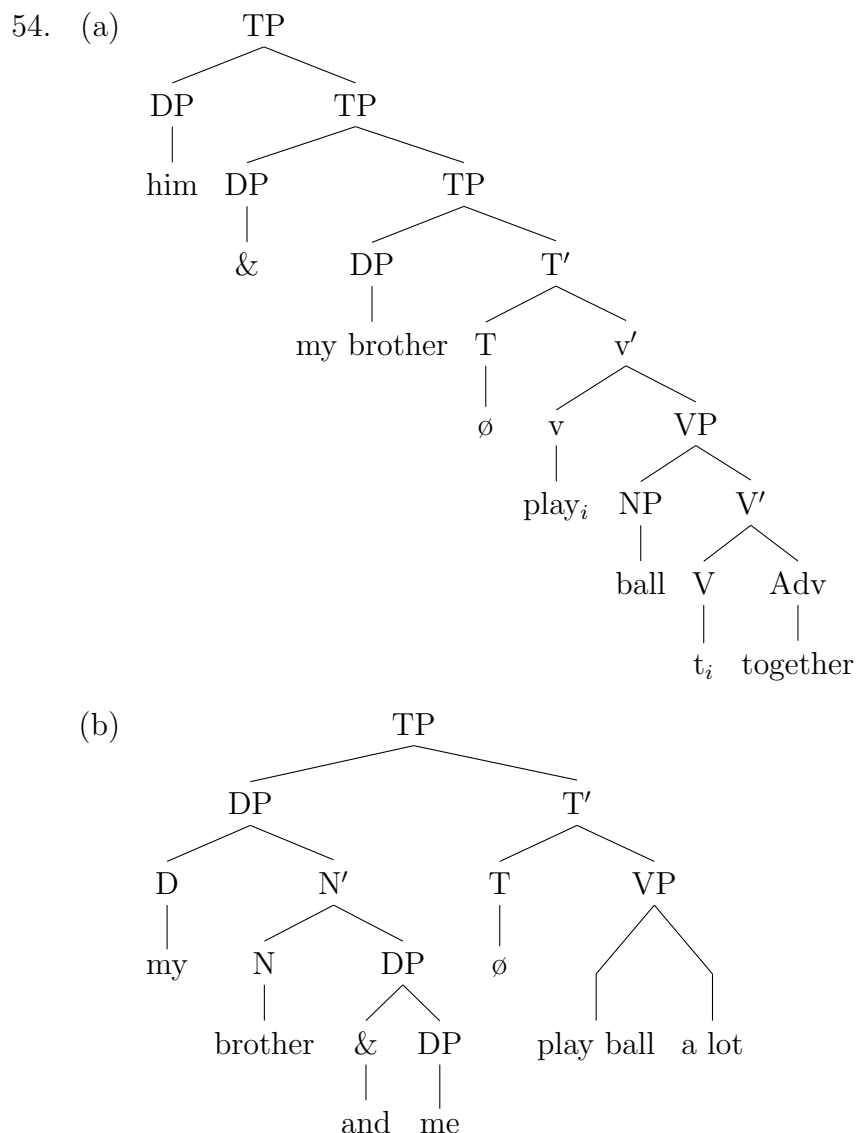
Moving away from the idea that & projects to head a phrase with the conjuncts as its specifier and complement, we consider now the possibility that a conjunct is an adjunct. Analyses developed under this concept propose that each conjunction and additional conjunct are adjoined to the initial conjunct, as shown in (52), taken from Munn (1993), and (53), taken from te Velde (2006)³.



te Velde (2006: 29–30) develops one possible account for how accusative case forms can be produced in subject position using this analysis, proposing that the conjunction phrase can be merged in two different ways, either as recursive specifiers of TP (54a) or as a DP (54b). When merged as recursive specifiers of TP, the first conjunct cannot be NOM for two reasons: firstly, it cannot enter into a Probe–Goal relationship with T, as this would involve probing from the head to its specifier, something which does not happen (Chomsky 2000, 2001); and secondly because the Defective Intervention Effect (Chomsky 2000: 123) means that the uninterpretable φ -features on T have already been checked by the closer, second,

³There are several differences between the two analyses, not least of which is that te Velde (2006) proposes that his structure is formed from the top, with the first conjunct being selected first and both & and the second conjunct being merged to it. As all other phrases are presumed to be merged from the bottom up, this proposal seems counter-intuitive and as such is considered in no further detail here. It is included for the purpose of showing an alternative (nominally Minimalist) structure to that of Munn (1993).

conjunct⁴. When merged as a DP, the second conjunct cannot enter into a Probe–Goal relationship with T, so receives default ACC case.



This analysis can account for the presence of three or more conjuncts more easily than the “& as a functional head” analysis, in that there is nothing to prevent the adjunction of several conjuncts (without the need for multiple empty & positions). It also explains the conformance with the subcategorization requirements of the head – i.e., why a conjunction with DP conjuncts behaves like a DP (or a conjunction with VP conjuncts behaves like a VP, etc.) and why (55) is grammatical whilst (56) is not.

55. He ran away from [_{DP} the noise and the laughter]

⁴Note: this is my analysis, not te Velde’s, who uses the lack of a Spec,head relationship to achieve the same result. As we saw in section 2.3.3, it is no longer believed that Case is assigned through a Spec,head relationship and, as such, te Velde’s analysis cannot stand.

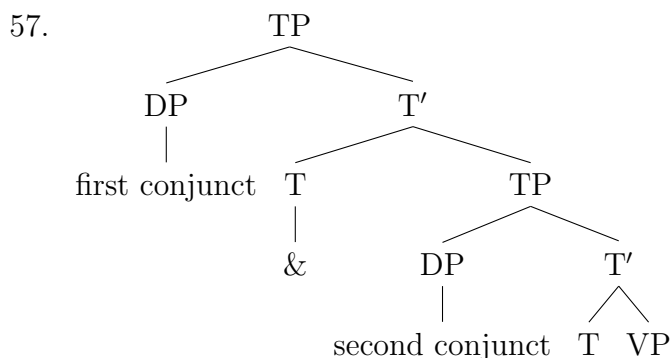
56. *He ran away from [_{VP} yelling and laughing]

Under an analysis where & is a functional head, this would presumably have to be explained through feature projection from the first conjunct, as both *the noise and the laughter* and *yelling and laughing* would be &Ps; in this analysis, it comes for free as the former is a DP and the latter, a VP.

It is unclear how this analysis could account for conjunction doubling: whilst it is conceivable that the first conjunct is also merged with an &P, this then negates the argument above for why a conjunction phrase behaves like its non-conjoined counterparts. If, however, the first conjunction in these contexts is actually an adverb, this is irrelevant. Perhaps more problematic is that it is also not immediately obvious why preverbal conjunction phrases would necessitate plural verbal agreement under this analysis, as we would expect the [uNumber:] feature on T to be checked by the [Number:] feature on the first conjunct DP.

A conjunction is a head without a phrase

The final possibility discussed by Progovac (1998a,b) is that a conjunction is a head, but that it does not project to &P. Rather, it can head a second layer of other types of phrases such as TP. Camacho (1997) develops the structure below, based on this possibility⁵.

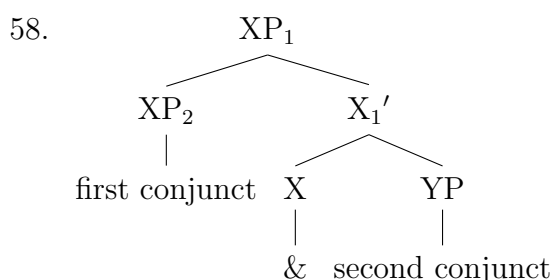


However, this analysis has a major flaw when considered from a Minimalist perspective, in that it necessitates a head with traits that are not shared by any other functional head: all other heads project to their own phrase, rather than to an additional layer of an existing phrase. If Hale and Keyser (1993: 53) were correct when they stated that “each lexical head projects to a phrasal level and determines within that projection an unambiguous system of structural relations holding

⁵Presumably, & can also head the second layer of v, when the conjunction is in object position.

between the head, its categorial projections and its arguments”, the concept of a head without a phrase would be inadmissible. In addition to this, the conjuncts (and the conjunction) do not form a constituent under this analysis, meaning that any constituency tests (as outlined in section 3.2.1) predict the opposite structure to the one proposed here.

An alternative possibility that functions along similar lines is that proposed by Zhang (2006), who suggests that a conjunction and its projection share the category of its “external conjunct” (the first conjunct, or DP_1 , in the terminology used in this thesis), and that the syntactic structure⁶ is as shown below.



Zhang claims that one major strength of this analysis is that it does not rely on any construction-specific syntactic category or structure: under this analysis, a “conjunction phrase” has the same internal structure as, for example, a possessive DP. However, the concept of a “category-less” head is theoretically dubious: to my knowledge, no other such heads have been proposed, and I cannot see why the novel concept of a “category-less” head is any more desirable than having a construction-specific category. Zhang develops her analysis based on the premise that having an &P is problematic in terms of explaining why &P behaves like a DP when its first conjunct is a DP (for example). However, I suggest that this may be indicative of a larger issue than just syntactic category: as I discuss in some detail in section 6.3.1, the morphosyntactic features of the conjuncts also appear to be “shared” with another element (leaving aside, for the time being, whether this is &, T or something else entirely). It therefore seems more desirable to attempt to find an analysis that can encompass both category and feature sharing, rather than one that requires separate mechanisms for both.

As a result of the theoretical issues inherent in adopting this analysis under a Minimalist framework, we will not consider this idea any further in this thesis, but will return to others which are more easily compatible with the theoretical

⁶Of English conjunction, anyway. Zhang also claims that some languages (e.g. Chinese) use category sharing between the conjunction and the second conjunct, not the first. As I focus on English conjunction in this thesis, I consider only the relevant proposal.

framework adopted.

Section conclusion

Given the discussion above, it would appear that we are left with three possible analyses that can plausibly account for the majority of the factors discussed in (45) whilst conforming with the framework outlined in section 2.3: namely the “recursive complement”, “recursive specifier” and adjunction analyses. The relative strengths and weaknesses of these analyses with regard to the features of conjunction phrases (as outlined by Progovac 1998a: see section 3.2.1) are summarised in table 3.2.

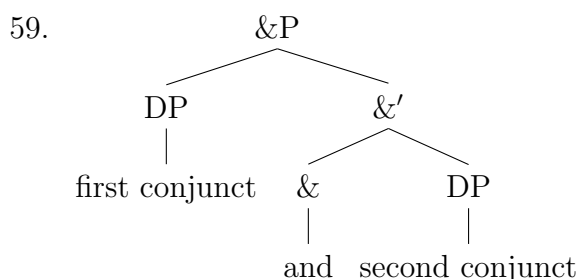
Factor	Recursive complement	Recursive specifier	Adjunction
& + second conjunct = constituent	Yes	Yes	Yes
Entire phrase = constituent	Yes	Yes	Yes
C-command	Yes	Yes	Yes
Conjunction doubling	No	Yes	No
Agreement	Depending on features of &	Depending on features of &	No
Subcategorization	Depending on features of &	Depending on features of &	Yes
Non-standard case forms	Yes	No developed analysis	Yes
Case variation	Inter-speaker	No developed analysis	Inter-speaker

Table 3.2: Comparison of syntactic structure analyses

All three analyses can account for the constituency of the entire conjunction phrase, and of & and the second conjunct, and for the apparent c-command relationship between the two conjuncts. Only the recursive specifier analysis can explain the possibility of conjunction doubling if the first conjunction in these contexts is a true conjunction (rather than a conjunction adverb, for example), but given the uncertainty surrounding this issue, it is an insufficient reason to disregard the other two analyses. Both the adjunction and recursive complement analyses can account for (a degree of) case variation and use of non-standard case forms, whilst it can plausibly be suggested that the argument developed by Johannessen (1998) could be extended to the recursive specifier analysis as well. The apparent inability of the adjunction analysis to explain why the conjunction

of two singular DPs should result in plural verbal agreement is problematic, but this issue can potentially be explained by the other two possibilities depending on the featural specification of & (although as yet no detailed account has been produced for this). Other than conjunction doubling, there appears to be little difference in the explanatory power of the recursive specifier and recursive complement analyses. However, adopting the recursive specifier analysis would require explaining why the specifier of & should merge to the right of &, when all other specifiers merge to the left of their head in English.

From here on, I adopt the “recursive complement” analysis (as shown in 59), as it is the most theory-neutral of those that appear to be able to account for the majority of facts about conjunction (as outlined in section 3.2.1)⁷.



3.2.3 Unexplained issues

If we assume that the underlying syntactic structure of &P is as shown in (59), some of the issues discussed in (45) need to be explained in an alternative way. These factors include:

60. (a) How conjunction doubling is possible in many languages;
- (b) Why a preverbal conjunction phrase triggers plural verbal agreement, even when both conjuncts are singular;
- (c) How an &P satisfies the subcategorization requirements of the head to which it is merged;
- (d) How case variation is possible

I will briefly address the first three points here, giving a potential explanation for each, before moving on to provide a detailed explanation for case variation in the remainder of this thesis.

⁷It should be noted that the analysis developed in chapter 6 would require only minimal re-working for use with either the adjunction or the “recursive specifier” analyses, should the reader find them more convincing.

As discussed above, whilst it is generally acknowledged that conjunction doubling is possible in many languages, there is some debate about the syntactic status of the first conjunction: it may be a true conjunction (Mouret 2004); or alternatively it may be an adjunct adverb (Kayne 1994). Given that the structure of &P adopted in this thesis does not allow for a phrase-initial conjunction, we are forced to assume that it is an adjunct adverb.

As shown in table 3.2, the extent to which this analysis can account for the subcategorization requirements of the head to which &P is merged and the plural verbal Agreement triggered by its presence depends on the features that we assume it to have. Johannessen (1998) suggests that & bears no features of its own (as it is a purely functional category), but that it instead inherits its features from the specifier of the phrase through Spec-head Agreement. The features on the complement are irrelevant for the features of the &P as a whole, and have no role to play in any Agree relation.

However, this argument cannot explain why two singular conjuncts (e.g. *he and I*) necessitate a plural verb form. If & inherits its features from the first conjunct, the conjunct in the specifier position (*he*, in the example given) should project its features onto &P through Spec-head agreement. However, this would mean that the &P should, in this context, take a [Number:Singular] feature, and that therefore the verb form should also be singular. Clearly, this is not the case, yet the recursive complement analysis cannot easily account for this. There is no precedent for both the specifier and the complement projecting features to &P, but this would appear to be the only way of resolving this anomaly as the analysis developed by Johannessen (1998) stands.

One possible alternative explanation is that &P is minimally specified: i.e., it has only those features that are needed, but does not have a full set of interpretable features in the same way, for example, as a DP does. If we assume that it has an interpretable [Number:Plural] feature, we can explain how it triggers obligatory plural verbal agreement when a preverbal subject (although more work would need to be done to explain the optional verbal agreement when the conjunction phrase is a postverbal subject), as this would allow the [uNumber:] feature on T to probe for &P as its goal, which would also satisfy Case checking requirements. At first glance, however, this may be the only interpretable feature that an &P requires.

I return to the issue of Number agreement, along with a discussion of the other φ -features, in section 6.3.1. At that point, I investigate both possibilities outlined above in more depth, considering the ramifications that adopting either would

have on any proposed analysis.

With regard to the subcategorization requirements of the head to which &P is merged, we cannot simply say that a head can select for &P in the same way that it does for DP or VP, as this would make sentences such as those in (61) grammatical, which they are not.

61. (a) *You can depend on [_{&P}that my assistant will be presentable and that he will always be on time].
 (b) *Relying on [_{&P}Mark will be there and that he will want to help] is a silly idea

It would therefore appear that &P must somehow obtain the syntactic category of the first conjunct (as we showed in section 3.2.1 that the second conjunct does not have to meet the subcategorization requirements of the head). It may be the case that either &P is effectively transparent to a head searching for the category of the phrase, and so it is the category of the first conjunct that is used, or that &P somehow inherits the category of its specifier (i.e., the first conjunct). Chomsky (2013: 46) briefly develops one explanation along these lines, stating that & cannot act as a category label, and therefore the label of the first conjunct is used instead, whilst & remains the head of its own phrase.

We leave these issues here (although I return to them, and Agreement in particular, once the specific details of the analysis required have been established in chapters 4 and 5, in section 6.3.1), but have included this discussion to show that there are explanations that could be adopted alongside the recursive complement analysis to account for all of the factors discussed in (45) except case variation. The remainder of this thesis will be devoted to providing a detailed account of this issue.

3.2.4 Summary: conjunction theory

We have seen that there are several different accounts for how conjoined phrases could be structured. The debate centres around whether or not & projects to form a phrase of its own, and the extent to which it licenses or blocks case assignment. It is generally accepted that, for theoretical reasons, flat structure is less than ideal and should be rejected. I also rejected a multidimensional analysis and the proposal that & is a head that does not project to a phrase, again on theoretical grounds.

This left us with three potentially viable possibilities: & is an adjunct; &P has a recursive specifier; and &P has a recursive complement. We saw that the adjunction analysis is less convincing than the other two, and that there appears to be little difference between the recursive specifier and recursive complement analyses in terms of their ability to explain non-standard case forms and case variation. As the recursive complement analysis can account convincingly for more of the factors discussed in (45) than the recursive specifier analysis and is more theory-neutral than some of the others discussed in this section, it will be adopted in the remainder of this thesis.

3.3 Case assignment in conjunction

Having determined the assumptions that will be made in this thesis regarding the underlying syntactic structure of a conjunction phrase, I move now to consider the arguments that have been made about how case is assigned in conjunction.

The fact that conjoined pronouns do not appear to obey normal case assignment rules is much discussed⁸, with some linguists suggesting that the presence of the conjunction blocks case assignment to the second DP, but that case is assigned to the first conjunct as it would be to an uncoordinated DP (Parker, Riley, and Meyer 1990), whilst others (such as Dalrymple and Kaplan 2000) propose that case properties are fixed for both conjuncts separately. There is no agreement on whether every possible combination of conjuncts is possible in English, or whether there are constraints on which specific ones can be conjoined, or the order in which they must be joined. Peterson (2004) claims that any combination of case, in any order, is possible, whereas Quinn (2005) believes that this is not the case, as some combinations never appear.

The accounts proposed for the variation seen in conjoined pronouns' case values range from syntactic ones explaining how it is possible to assign different features to the individual conjuncts (Dalrymple and Kaplan 2000) to ones proposing hypercorrection and the impact of levels of frequency (Boyland 2001). Some link this form of variation with other contexts in which pronouns show case variation (Peters 2013), whilst others consider it in conjunction with other forms of variation that are unrelated to case (Parrott 2007). I now investigate some of the most detailed proposals in more detail.

⁸And has been for over half a century, with the first linguistic (as opposed to grammar-based) account being produced (to my knowledge) by Klima (1964).

3.3.1 Hypercorrection and prescriptivism

Many linguists (for example Emonds 1986; Boyland 2001) have considered the role of hypercorrection and prescriptivism in explaining non-standard case assignment⁹. It has frequently been claimed that prescriptive norms have an impact on which case forms are adopted in conjoined phrases: indeed many reference grammars (and nowadays, websites) cover the topic of case in conjunction. An internet search of the string *he and I vs him and me* results in literally millions of hits, many discussing the prescriptive rules about the topic. A random selection of quotes includes:

62. (a) “Find the verb in the sentence. If the verb already has a subject, then you can’t use nominatives, and you’ll find that what you’re looking for are objectives. If the verb does not have a subject, then what you’re looking for are nominatives.” (<http://languageandgrammar>)
- (b) “If you are not good with grammar concepts like subject and objects, there is still a very easy way to decide whether to use I or me: try out the sentence with just I or me (or if you need a plural, we or us – “we” is equivalent to “I” and “us” is equivalent to “me.”)” (<http://elearnenglishlanguage.com>)
- (c) “So whether you say you and I or you and me in co-ordinate phrases depends on whether they function as subjects or objects in the sentence (...) Note that in colloquial informal British English, people often use you and me as subjects, even though it is known to be incorrect.” (www.bbc.co.uk)

As a result of these prescriptive norms, a child who produces a sentence such as *Him and me don’t like each other any more* may be corrected and told to say *He and I don’t like each other*. The result is that many speakers claim to only use nominative forms in subject position “because anything else is wrong”, even if they do in fact unconsciously use accusative forms as well.

Hypercorrection occurs when a speaker overextends a prescriptive rule and applies it in an inappropriate context. This is another analysis which has frequently been applied to the use of non-standard case forms in conjunction. Take the child in the example above. It is possible, having been corrected for saying *Tom and*

⁹I.e., where case markings other than those which would be used in non-conjoined phrases are used.

me don't like each other, that he might overextend this rule and come to believe that *and me* is always wrong, and begin to use *and I* in all contexts, including in object position. We might therefore expect him to start producing sentences such as *Mum gave sweets to Tom and I*.

There are two general theories regarding how prescriptive norms and hypercorrection become part of a speaker's language. It has been suggested (Boyland 2001, among others) that a child only acquires one option, and then at some point in life acquires the other, prescriptively (or hyper-) correct, option. The second possibility (Labov 1966a) is that the child acquires both variants as part of his natural language, regardless of whether both form a natural part of his caregiver's language. This second option results in the necessity of the grammar being able to generate both variants, meaning we must be able to account for true intra-speaker variation in this context.

One analysis that invokes prescriptive pressures as being the reason for the possibility of non-standard case forms is that of Emonds (1986), who claims that there are two distinct dialects in English: Normal Usage (NU) and Prestige Usage (PU). Emonds suggests that PU is not a natural form, but rather one which has to be explicitly learnt and is imposed through "para-linguistic cultural institutions of the dominant socio-economic class" (Emonds 1986: 93). PU appears in five contexts: conjoined subjects; subjects of understood predicates; predicate nominals; first person demonstratives; and appositives to subjects. According to his analysis, nominative forms can only be used in NU when they are directly governed by Infl, otherwise they appear in the accusative form. Conjoined subjects must therefore be accusative, as they are never directly governed by Infl. According to this analysis, nominative forms in conjoined phrases (whether in subject or object position) are only seen in PU, are therefore not part of natural language, and so are of little interest to linguistics.

Like Emonds (1986), Angermeyer and Singler (2003) propose that there are in fact three dialects of English (Vernacular, Standard and Polite), and which dialect a speaker uses depends on factors such as their class and level of education. Each dialect triggers use of different word orders and case assignment, with one using only accusative forms, the second using nominative forms in subject and accusative in object positions, and the third overextending this to allow nominative forms in the object position as well as the subject. The authors suggest that speakers of Standard and Polite dialects may also allow the use of accusative forms in both subject and object positions, allowing for some level of intra-speaker variation.

Quite how desirable it is, however, to dismiss all forms of case variation in conjunction simply as being *learnt* forms and therefore of little interest to theoretical linguistics, is questionable. I feel that a prescriptivism-based analysis does not allow us to explain the seemingly systematic nature of when case variation is and is not possible in English conjoined pronouns. Furthermore, even if a structure is acquired through overt instruction, rather than being a part of a speaker's original i-language, that structure still needs to be generated somehow once it has been acquired.

To my mind, this analysis is better suited to explain anomalous results in a data set, rather than all attested variants. I will therefore consider the impact of prescriptive judgements on my data, but as I argue that even structures that have been altered by a prescriptive judgement still need to be generated somehow, any prescriptively-influenced structures cannot be ignored and need to be included in any analysis.

3.3.2 Grammatical viruses

Like Emonds (1986), Sobin (1997, 2009) also assumes that the normal case form in conjunction is ACC, regardless of whether the phrase appears in subject or object position. He proposes the existence of “grammatical viruses” to explain the deviant case seen in prestige constructions (using only 1.SING and 3.SING pronouns for data). In other words, only (63a) is generated syntactically – sentences like (63b) are the result of a virus.

63. (a) Mary and **me**¹⁰ left early.

(b) Mary and **I** left early.

A grammatical virus is “a device that can read grammatical structure and affect it, though it is grammar external” (Sobin 1997: 319). In order to explain the data collected for his study, he proposes two viruses: the “and I” and the “that she” rules, where the “and I” rule values all pronouns following *and* as NOM, and the “that she” rule also values all pronouns preceding *and* as NOM. This enables him to explain the presence of NOM forms in both subject and object position, relying on default case assignment to explain the possibility of ACC case in either syntactic position. Sobin gives various details of the properties of grammatical

¹⁰Emphasis inserted.

viruses, such as their lexical specificity and their lack of sensitivity to hierarchical constituency. One of the other characteristics of grammatical viruses is that they can be overextended, but this raises the question of how to limit the overextension of these viruses, so that they account for all, and only, the constructions that appear. Many of these properties, when considered within the framework adopted in this thesis, suggest that grammatical viruses are the result of some kind of interface effect, rather than being syntactic in nature.

In its initial form, this is a theory which is not easily reconciled with a Minimalist framework such as the one adopted in this thesis, as it allows extra-linguistic “rules” to be stipulated without any link to existing syntactic mechanisms. As an explanatory device, this type of stipulation is less theoretically satisfactory than an analysis which depends solely on structures and operations that have independent motivation, such as Merge and Agree. However, there are ways that this could be adapted using mechanisms from Distributed Morphology. It would seem that one of these ways would be something similar to Parrott’s (2007) Morphological Readjustment Rules.

3.3.3 Morphological Readjustment Rules

Based on English observational data¹¹ (and considering only the conjunction of 1st and 3rd person pronouns with a lexical DP), Parrott (2007: 252–253) makes the following claims regarding the grammaticality of case forms in conjunction:

64. (a) Mismatched 1.SING “object forms (OFs) in NOM subject coordinates”¹²:
 - i. X and me
 - ii. me and X
- (b) Mismatched 3.SING OFs in NOM subject positions:
 - i. X and him/her
 - ii. him/her and X

¹¹Parrott bases his analysis solely on observational data. Whilst he explicitly states that unattested forms may still be possible, his analysis then appears to presume that these forms are not generated and therefore do not need to be explained. To my mind, this is a potentially important methodological issue and raises questions regarding the empirical strength of his analysis.

¹²Parrott differentiates between SUBJECT FORMS (e.g. *I, he* etc.) and OBJECT FORMS (e.g. *me, him* etc.) and NOM SUBJECT and ACC/DAT/OBL OBJECT coordinates, presumably to emphasise that the case forms that are typically associated with NOM or ACC morphological case can be generated without direct links to the Case of the syntactic position in which they are generated.

- (c) Mismatched 1.SING subject forms (SFs) in ACC/DAT/OBL object coordinates:
 - i. X and I
 - ii. *I and X
- (d) Mismatched 3.SING SFs in ACC/DAT/OBL object coordinates:
 - i. *X and she/he
 - ii. she/he and X
- (e) Mismatched 1.PL/3.PL OF pronouns in subject coordinates:
 - i. X and them
 - ii. Xⁿ, us, and X
 - iii. *us/them and X
- (f) Mismatched 1.PL/3.PL SF pronouns in object coordinates:
 - i. *X and we/they
 - ii. *we/they and X

Adopting a Distributed Morphology approach to case theory, Parrott assumes that there are no uCase features, but that case features are assigned to LIs in the morphological component according to language-specific rules. He claims that OFs in subject position are to be expected, as NOM case features are only assigned to DPs that are in the specifier of finite T in the morphological component and that ACC/OBL features are assigned by default elsewhere.

However, this does not explain why NOM forms are possible in either subject or object position conjunction phrases¹³. Parrott accounts for these by claiming that speakers can learn additional Vocabulary Items for pronominal DPs as a direct result of explicit prescriptive instruction or prolonged exposure. These VIs are constrained by their linear adjacency to a coordinate head *and*, not to the hierarchical position of finite T, and allow speakers who possess them to produce *and I* and *he/she and* in both subject and object positions, but no other NOM forms in either syntactic position. Parrott furthermore suggests that it may be possible for some speakers to learn an additional VI such that any DPs inside &P and linearly adjacent to finite T can also be NOM (although he states that he is not convinced that there are any speakers who possess this VI).

This analysis has its strengths in terms of its flexibility – if speakers can (with enough determination and/or exposure) in principle learn any additional VI, then

¹³Parrott himself claims that they are grammatical in object position, and it seems unlikely that anyone would claim that, for example, *X and I* would be impossible in subject position.

all case forms should in theory be possible although not all forms will be acceptable to all speakers. It can clearly account for both inter- and intra-speaker variation, should both types of variation be shown to exist. However, the limitations of the methodology used to produce this analysis are a concern. Given that the analysis developed can account only for how first conjunct *he/she* and second conjunct *I* are generated in conjunction with a lexical DP, it must be asked whether additional VIs need to be stipulated in order to account for how other NOM pronouns are generated – for example, it does not seem correct to claim that *he and she are inseparable even though his parents hate her* is ungrammatical, but yet it could not be generated by Parrott’s proposed grammars, as whilst *he and* can be generated by an additional VI, there is no way for a speaker to generate a NOM DP in the second conjunct position other than *I*. Further investigation is required in order to determine whether all variation can be reduced down to either ACC+ACC, *he/she and* and *and I*, as this runs contrary to the assumptions made in other works such as Quinn (2005) and Johannessen (1998). Until its empirical adequacy can be determined, it is difficult to judge the merits of this analysis, but it instinctively seems that it would be better suited to contexts with only one or two possible variants (as otherwise the number of additional VIs could become unwieldy).

3.3.4 Relative Positional Coding

This analysis was developed in response to the hypothesis that morphological case is not directly determined by syntactic Case (McFadden 2004). In an attempt to discover how it is determined, Quinn (2005) examines a range of semantic and syntactic analyses of deviant case in English (including case in conjunction), and shows that syntactic Case checking cannot account for all the attested case forms in her corpus.

Quinn’s data (gathered from written questionnaires administered to 90 speakers of New Zealand English) suggest that there is intra-speaker variation to be seen with regard to the use of non-standard case forms: something which is either ignored or specifically denied by most other studies. Moreover, she uses a much wider range of English data than most others, considering all the different pronouns (except *you*) and their conjunction with both other pronouns and full DPs.

Quinn develops an analysis that relies on a combination of violable case constraints, the concept of Relative Positional Coding and a proposed tendency towards the use of an invariant case form (ACC). The definitions given are as follows

(Quinn 2005: 3–6):

65. (a) ARGUMENT CASE: “The overt case form of any structural argument of a predicate must comply with the structural linking between cases and arguments in the θ -structure.”
- i. I.e., subject position &P takes NOM, object position &P takes ACC.
- (b) POSITIONAL CASE: “The overt case form of an argument noun phrase appearing as the specifier of an agreement-related functional head at Spell-Out must match the case/agreement features of this functional head, **iff** the position of the noun phrase at Spell-Out differs from its θ -position.”
- i. I.e., subject position &P takes NOM, object position &P takes ACC **iff** it has raised to Spec,VP.
- (c) DEFAULT CASE: “The overt case form of **any noun phrase not influenced by the Pos-Case constraint** must match the default case of a language.”
- i. I.e., object position &P takes ACC **iff** it has remained in Spec,VP.
- (d) RELATIVE POSITIONAL CODING 1: “If a constituent A asymmetrically c-commands a constituent B in a given syntactic construction, then A must be **gracile**, and B must be **robust**.”¹⁴
- i. Can explain the production of NOM+*I* in object position and NOM+ACC in both subject and object position (unless NOM=*I*).
- (e) RELATIVE POSITIONAL CODING 2: “If a constituent A asymmetrically c-commands a constituent B in a given syntactic construction, then B must be **more robust** than A.”¹⁵
- i. Can explain the production of NOM+*they* in both subject and object position (unless NOM=*I*).
- (f) INVARIANT STRONG FORM: “The morphological form of a **strong pronoun form** must be **invariant** in all contexts. There is a separate Invariant constraint for each pronoun.”¹⁶
- i. Can explain the possibility of ACC forms in both subject and object positions.

¹⁴Where the gracile/robust distinction regulates how the pronouns can be syntactically distributed (Quinn 2005: 152). Gracile pronouns = *me, he, she, we, they*, robust pronouns = *I, him, her, us, them*.

¹⁵Where *they* is more robust than *me, he, she, we*.

¹⁶Invariant pronoun forms = *me, him, her, us, them*.

In brief, then, this analysis predicts that the following case forms are possible:

66. (a) In subject position:
- i. ACC+ACC
 - ii. NOM+ACC where NOM is not *I*
 - iii. NOM+NOM
- (b) In object position:
- i. ACC+ACC
 - ii. NOM+*they* where NOM is not *I*
 - iii. NOM+*I*
 - iv. NOM+ACC where NOM is not *I*

Quinn uses the interaction of these case constraints, Relative Positional Coding and the invariant strong form to explain the possibility of intra-speaker variation, as a single speaker can use all of these constraints within their morphological component. For example, a speaker A who uses Argument Case can produce NOM+NOM in subject position, and ACC+ACC in object position. Thanks to RPC1, speaker A can produce most NOM+ACC combinations in subject position (with the exception of any combinations involving either *me* in the second conjunct position or *I* as the first conjunct). RPC2 means that speaker A can produce *me and they* and *NOM and they* (where NOM does not equal *I*) in both subject and object position. Finally, the invariant strong form allows speaker A to produce ACC+ACC combinations in subject position. Speaker A can therefore produce several variants.

As a way of separating morphological case forms from the concept of an abstract Case feature, this would seem to be a more comprehensive analysis than Parrott (2007), which would not be able to account for a large proportion of the data found in Quinn's study.

However, this analysis is incredibly complex, relying as it does on three case constraints, two Relative Positional Coding constraints and the possibility of an Invariant Case form. Whilst the concept of multiple ways of assigning case is common (see the discussion of *C/case* in section 2.3.3), the Relative Positional Coding constraints are unique (to my knowledge) to this analysis. It seems to me that these constraints are more descriptive than explanatory: there does not appear to be any reason behind their production other than that they allow the correct predictions to be made. Whilst this is undoubtedly more desirable than an analysis

which makes incorrect predictions, an explanatory analysis would be inherently stronger than this descriptive one. Furthermore, it is not clear why it is necessary to propose three different types of pronoun forms (strong/weak, robust/gracile, nominative/objective) which correspond to just two variant phonological forms for each pronoun (*I/me* etc.).

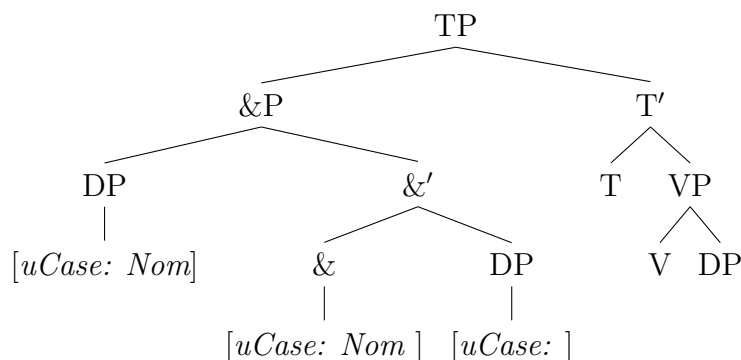
The empirical validity of this analysis can be easily tested by verifying which case forms are grammatical and in which positions, as it predicts that several which have been presumed ungrammatical by others (e.g. NOM+ACC in object position) are grammatical. I do not dismiss this analysis outright, but due to its complexity and largely descriptive nature, I will only return to it should all other analyses prove empirically inadequate.

3.3.5 Links to syntactic structure

As stated in section 3.2.2, Johannessen (1998) develops an in-depth cross-linguistic analysis of how case is assigned in conjoined structures (using examples taken from existing research, the media and some older literature such as the works of Shakespeare). She proposes that there are two forms of deviant case use: one of which she terms Unbalanced Coordination (UC, when only one conjunct shows deviant case, e.g. *her and I* in either subject or object position); and the other, Extraordinarily Balanced Coordination (EBC, where both conjuncts show the opposite case to the one which would be expected, for example, accusative in subject position). She suggests that UC is the easiest form of case assignment to explain, with EBC and combinations where both conjuncts show the expected case being considerably more complex.

Cases of UC are explained as follows. &P is case marked through its relationship with T or v (as explained in section 2.3.3. & then inherits these features, as the head of the phrase. Equally, the first conjunct (in Spec,&P) acquires the same case features, through Spec-head agreement. The second conjunct (in the complement position) does not acquire these features, however, as it does not enter into the necessary Spec-head relationship.

67.



Johannessen suggests that this conjunct is not case-marked at all, but rather receives default case. In English, she suggests that the default case is ACC, and any occurrences of NOM in the complement of & are the result of hypercorrection due to the influence of prescriptive norms, as proposed by Emonds (1986). She does not, however, explain how these hypercorrect forms are generated by the grammar.

To account for cases of EBC, Johannessen suggests that some languages block case assignment to &P¹⁷, meaning that these languages have to make use of default case to value their Case feature. She accounts for Ordinary Balanced Coordination (OBC, where both conjuncts bear the same case as would be expected of a non-coordinated pronoun) by stating that in these languages, case assignment proceeds as with UC, but with an additional stipulation that both conjuncts must bear the same case, although no details are given about how this constraint would function.

There are several issues in implementing this analysis within the latest understanding of the Minimalist framework, not least that Spec-head agreement relationships have largely been replaced by the Probe-Goal relationship (as outlined in section 2.3). In addition to this, more detail is needed regarding the language-specific stipulation that both conjuncts must bear the same case – is this a morphological or syntactic stipulation, and how does it function?

Under this analysis, whilst it is possible to account for the existence of variant structures, it can only be the result of inter-speaker variation as any attempt to use this account for intra-speaker variation would necessitate a grammar that allows optional blocking by & of Case to the DP conjuncts and optional stipulations that both conjuncts must bear the same case.

¹⁷Although see Shorrocks (1992) for an argument against the concept that &P can block case assignment.

3.3.6 Analysis comparison

It is obvious that there is little consensus between the different accounts not only in how best to account for the use of non-standard case forms in conjunction, but also in which case forms are possible. Temporarily leaving aside the differences (and theoretical adequacy) of the analyses from the predictions that they make, we can see that the different types of analysis allow very different data sets to be explained. It may therefore be possible to eliminate some accounts purely on the basis that they are empirically inadequate.

68. (a) Conjunction breaks standard Case-assignment relationships and only allows generation of ACC – all other case forms are not part of a speaker's natural grammar (Emonds 1986; Parrott 2007; Sobin 1997).
 - i. We might expect to see a far higher proportion of ACC+ACC combinations in both subject and object position than any other set of combinations.
 - ii. All speakers should accept ACC+ACC combinations, regardless of whether or not they accept any others.
- (b) Syntactic Case constraints interact with other syntactic/morphological constraints. Quinn's (2005) theory of Relative Positional Coding predicts that:
 - i. ACC+ACC, NOM+NOM and NOM+ACC (if NOM is not *I*) should be possible in subject position.
 - ii. ACC+ACC, NOM+*they/I* (where NOM is not *I*), and NOM+ACC (again, where NOM is not *I*) should be possible in object position.
 - iii. Variation can only be intra-speaker.
- (c) & is a functional head that affects how Case is assigned to its DP conjuncts. Johannessen (1998) claims that:
 - i. NOM+NOM, NOM+ACC and ACC+ACC combinations are grammatical in subject position, but only ACC+ACC is grammatical in object position.
 - ii. All variation is inter-speaker.

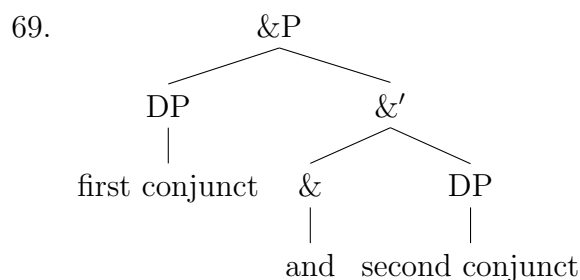
We have seen that all of the existing analyses have some theoretical issues that need resolving before they can be used in a Minimalist framework, but the different empirical claims are also a concern. It is therefore necessary to determine exactly which case forms are possible in conjunction, what degree of variation exists, and

whether the variants are representative of inter- or intra-speaker variation, as each of these factors will have an impact on the analyses that can be adopted.

3.4 Chapter summary

In this chapter, we have added to the understanding of the Minimalist framework and variation theory gained in chapter 2 with a discussion of both the syntactic structure of conjunction phrases and the theories that have been proposed to account for case variation in conjunction.

In section 3.2, I examined six competing theories about the syntactic structure of conjunction phrases: flat structure; a multidimensional analysis; &P with a recursive complement; &P with a recursive specifier; conjuncts as adjuncts; and phraseless conjunction heads. We saw that, for theoretical reasons, we cannot easily adopt flat structure, a multidimensional analysis or phraseless conjunction heads, and decided to therefore leave these three accounts to one side for the purposes of this thesis. We determined that the remaining three analyses could be adopted within a Minimalist framework, although none of them are perfect. We explored how they could account for deviant case, but not case variation, as only one of them has a well-developed account of this. Given its relatively theory-neutral position and its ability to account more satisfactorily than the others for the facts about conjunction explored in section 3.2.1, we have adopted the recursive complement analysis, and henceforth assume that the structure of &P is as shown in (69).



Section 3.3 deals with some of the accounts that have been proposed to account specifically for case variation in conjunction: namely, prescriptivism and hyper-correction, grammatical viruses, morphological readjustment rules, Relative Positional Coding and the interaction between case assignment and the syntactic structure of &P. We have seen that these accounts are based on very different accounts regarding which case forms are possible in conjoined phrases and whether

the attested variation is present in a single grammar or represents differences between speakers. Before we can decide which analysis is most appropriate, it is therefore necessary to determine the facts about these issues. Chapters 4 and 5 are therefore dedicated to producing a reliable overview of the possible case forms and the nature of any attested variation.

Chapter 4

The Corpus Study

In chapter 3, we saw that it is currently difficult to evaluate any existing analyses on their empirical merits, as there is no consensus regarding which case forms are grammatical, the syntactic positions they are grammatical in, and whether any attested variation is inter- or intra-speaker. In this chapter, I therefore begin the task of establishing the pattern of attested case forms in English conjunction. We will see that, in order to do this robustly, it is necessary to adopt a two-part methodology (consisting of a corpus study and an acceptability judgement test). I explain why this is an appropriate decision to make, and discuss the corpus study and the data it produces in detail. This allows me to draw some preliminary conclusions about which combinations appear to be grammatical, and puts me in a good position to undertake an acceptability judgement test (see chapter 5).

4.1 Chapter outline

We saw in the previous two chapters that there is little consensus on the best way to analyse case variation in English conjoined pronouns, nor on the best way to reconcile intra-speaker variation with the theoretical implications of adopting a Minimalist framework. We also saw that one major issue preventing this lack of consensus is the disagreement regarding which case forms are possible in conjunction phrases and whether any variation is the result of inter- or intra-speaker variation.

Given this lack of consensus, it is not currently possible to judge an analysis on its empirical adequacy. The different assumptions and data collection techniques

used in the existing literature make it impossible to use their data and be sure that it is representative: many use only singular pronouns, whilst others use only 1st and 3rd person DPs; some focus on data taken from corpora whilst others use only acceptability judgement data. As a result, it is necessary to produce a new data set including every possible combination in order to produce as unbiased an overview as possible. Once this has been done, it should then become possible to decide on the empirical adequacy of the existing analyses, and therefore determine whether any of them provide suitably detailed accounts of how case variation exists in English conjunction.

Case variation in conjunction is an extremely complex phenomenon, with factors as wide-ranging as syntactic structure (e.g. Johannessen 1998) and hypercorrection (Emonds 1986 *inter alia*) allegedly influencing either the grammaticality or acceptability of the variants. It is difficult to gain sufficient information about when variation is and is not possible using only one method of data collection, as the influence of all of these factors need to be controlled if reliable data are required. In order to overcome this problem, I have adopted a two-part methodology to gather the data used in this thesis, undertaking both a corpus study and an acceptability judgement test. In this chapter, I discuss the first of the two methods, explaining the rationale behind selecting this particular method and outlining the data gathered from it. I discuss my other form of data collection, the judgement test, in chapter 5.

4.2 Analyses being tested

We saw in section 3.3.6 that the existing analyses can be broadly divided into three groups, based on how they suggest case is assigned in conjunction phrases. I showed that each of these three groups makes very different arguments regarding which case forms should be grammatical, and whether any variation should be inter- or intra-speaker. Depending on the data gathered in this thesis, it should therefore be possible to determine which type of analysis is most likely to be correct. The different arguments made are shown in (68), repeated here as (70):

70. (a) Conjunction breaks standard Case-assignment relationships and only allows generation of ACC – all other case forms are not part of a speaker’s natural grammar (Emonds 1986; Parrott 2007; Sobin 1997).
 - i. We might expect to see a higher proportion of ACC+ACC combin-

ations in both subject and object position than any other set of combinations.

- ii. All speakers should accept ACC+ACC combinations, regardless of whether or not they accept any others.
- (b) Case constraints interact with other syntactic/morphological constraints. Quinn's (2005) theory of Relative Positional Coding predicts that:
- i. ACC+ACC, NOM+NOM and NOM+ACC (if NOM is not *I*) should be possible in subject position.
 - ii. ACC+ACC, NOM+*they/I* (where NOM is not *I*), and NOM+ACC (again, where NOM is not *I*) should be possible in object position.
 - iii. Variation is intra-speaker.
- (c) & is a functional head that affects how Case is assigned to its DP conjuncts. Johannessen (1998) claims that:
- i. NOM+NOM, NOM+ACC and ACC+ACC combinations are grammatical in subject position, but only ACC+ACC is grammatical in object position.
 - ii. All variation is inter-speaker.

Some of these arguments are contradictory, and so any data supporting one may remove support for another. The nature of any attested variation will also support some theories more than others. Furthermore, with the exception of Quinn (2005), none of the existing analyses provides a comprehensive description of the patterns that can be observed in case in conjunction (and Quinn's findings are contradicted by those of other researchers). In this chapter and the following one, I present data gathered specifically for this thesis, with the aim of determining the extent to which the existing theories can satisfactorily account for the patterns that can be seen when the entire pronominal paradigm is considered.

In order to reduce this study to a manageable size, it was necessary to make some decisions on which data to include and which to exclude. Only combinations with two conjuncts are included in the study. This is because combinations involving three conjuncts are even rarer than combinations of two, and so do not generate enough tokens in the corpus study to enable any sort of analysis. We would therefore be reliant solely on the data from the judgement tests, greatly increasing the number of combinations to be tested. Furthermore, only NOM and ACC pronouns are considered in this study, as including genitive pronouns adds an additional level of complexity. Variation in the conjunction of possessive DPs (e.g. *It was my and her birthday* vs. *It was mine and her birthday*) is a complicated study

in its own right, and will have to remain undiscussed until a later date. Finally, only combinations involving the conjunction of two pronominal DPs are tested. The primary reason for this was the hypothesis (Johannessen 1998; Grano 2006) that combinations involving a pronoun and a lexical DP (e.g. *his mother*, *Maria* or *the friends*) behave differently to those involving two pronouns. Including this type of conjunction phrase, whilst desirable for the sake of producing a comprehensive analysis, would make the study infeasibly large, and has therefore been deemed to be outside the scope of this investigation. I return to this topic briefly in section 6.7.1, to determine whether it seems possible to extend the analysis developed in this thesis to account for the entire range of DP conjunction.

4.3 Mixed methodologies

As I briefly discussed in section 3.3, existing accounts of how case is assigned in conjunction phrases rely on a number of different methodologies to collect relevant data, primarily corpus studies and acceptability judgement tests. It is likely that these methodological differences are one of the reasons why they argue that different case forms are grammatical.

A number of works have been published recently about the importance of using an appropriate methodology in linguistic research (see, for example, Cornips and Corrigan 2005b and Keller 2000), with several concluding that it may sometimes be necessary to adopt more than one method of data collection, especially when investigating phenomena that are influenced by several areas of linguistics (e.g. syntax, phonology and pragmatics), as is the situation with case variation in conjunction. In this section, I give details of the methodologies used in this thesis and the rationale behind their adoption, but I refer the reader to the works in Ender, Leemann, and Wälchli (2012) and Maguire and McMahon (2011) for further discussion of alternative methodologies.

Four specific pieces of information are needed to facilitate an in-depth analysis of case variation in conjunction and leave us in a position to evaluate the validity of the analyses discussed in section 3.2.2. They are:

71. (a) A detailed understanding of which combinations are and are not grammatical/acceptable in English, and the syntactic positions in which they are grammatical.
- (b) Knowledge of which combinations are ungrammatical, and which are

unacceptable but still grammatical.

- (c) An overview of where morphosyntactic variation is possible (i.e., when more than one combination in a group is grammatical in the same syntactic structure¹).
- (d) Whether the attested variation is representative of inter- or intra-speaker variation.

Whilst the analyses discussed in section 3.3.5 each address one or more of these pieces of information, none of them can provide all four.

The literature surrounding morphosyntactic variation shows that there are two principal methods used to collect data of the sort required for this study: acceptability judgement tests; and corpus studies (whether of a pre-existing or newly created corpus). I discuss the merits of judgement tests in section 5.2, but focus here on corpus studies: the data they can and cannot provide us with, and the importance of selecting an appropriate corpus.

Using a corpus enables me to gain an understanding of which combinations speakers use and the contexts in which they are produced. It also allows me to test the full range of combinations: as there are 64 different ways of combining the five morphologically-distinct pronouns in English², testing every combination of conjunctions of two pronouns in both subject and object position would involve a participant in a judgement test rating at least 128 sentences, not including any filler sentences or replicating any of the combinations in order to produce reliable results. As Schütze (1996: 184) proposes that the number of filler sentences should be at least equal to the number of test sentences (and ideally double), and it is necessary to test each combination at least three times to ensure reliable results, participants should accordingly be presented with at least 750 sentences: an unrealistic demand, given that if each sentence takes ten seconds to judge, each participant will need over two hours to complete the test. There is no such limit, however, on the number of searches that can be undertaken in a corpus study, as this is constrained only by the time of the researcher.

However, a corpus study alone cannot provide all the data needed to undertake this

¹Note: variation between two combinations with the same case features but different word orders (e.g. *him and me* and *me and him*) are not considered in any detail in this thesis. The focus here is on **case** variation, not word-order variation.

²Classing *you* as only one pronoun, as there is often no way of distinguishing between singular and plural usage other than through semantic context, and using *he* to represent *she* and *it* as well: *it* was not tested at all as it does not show overt case morphology, and thus was not felt to have anything to add that was not already covered by *he/she* and *you*. The distinction between *he* and *she* will be discussed shortly.

study. For example, it cannot indicate whether a combination does not appear in the corpus because it is ungrammatical, or simply because there is an alternative structure which expresses the same concept and is generally preferred³. Generative syntactic analyses require information both about which forms are grammatical, but also about which are ungrammatical. An alternative method is therefore required to identify which combinations do not appear in the corpus because they are ungrammatical, and which because there is a preferred way of expressing the concept.

As I discuss in more detail in section 5.7.1, there are also several factors which influence the acceptability of a combination but not its grammaticality. From a corpus study, however, we cannot determine which combinations are not present because they are ungrammatical, and which are unacceptable but still grammatical.

The other factor that a corpus study can show only occasionally is whether the variation seen is intra- or inter-speaker variation: even when it shows that variation exists, it is rare that a corpus shows variation within the language of an individual speaker, as (generally speaking) participants in the corpus will have contributed only one or two valid tokens.

4.4 Pilot corpus study

Before beginning the main corpus study, I performed a brief preliminary investigation. This consisted of internet searches of all possible combinations in various syntactic contexts (subject, object and indirect object). The approximate number of tokens for each combination was then recorded⁴. Only general observations from this study are reported here as more methodologically robust techniques were used to gather the data discussed in this thesis, but the investigation can easily

³Many linguists (e.g. Sobin 1997 and Parrott 2007) claim that (1a) should be grammatical, but as we will see, the combination *them and him* in subject position does not appear in the corpus study, possibly due to the need for a very strong contextual reason not to simply use (1b).

- i. (a) **Them and him** drank wine together all night.
- (b) **They** drank wine together all night.

⁴As the numbers of “hits” for each search string frequently exceeded one million, it was not realistic to provide accurate counts (a serious methodological flaw of using the internet/Google). Instead, I counted the number of viable tokens in each syntactic position on the first five pages and extrapolated an approximate total number from this.

be repeated by any interested parties.

As a corpus, the internet has some advantages, but these are outweighed by major disadvantages. Whilst it is true that its size greatly facilitates investigation into uncommon structures such as conjoined pronouns, it is impossible to discover the origins of the language found: the producer may not be a native speaker or might be making stylistic changes to the language they are using in order to create a particular impression. There are also ethical issues to be considered, as it would be exceedingly difficult to gain the consent of all those whose language is being analysed. I felt, therefore, that whilst it was a suitable tool for preliminary investigations, it was important to find an alternative corpus for my main data set.

There are however some conclusions that could be drawn from the pilot investigation. Firstly, there appears to be no difference between the use (and therefore the probable acceptability) of any given combination when alternating between *he* and *she* (72): I therefore eliminated the possibility that gender plays a role in licensing case variation in conjoined structures and decided to treat all 3.sing pronouns as a homogeneous group⁵.

- 72. (a) **He and I** are going running later.
- (b) **She and I** are going running later.
- (c) *I will show it to **he and they** later⁶.
- (d) *I will show it to **she and they** later.

Secondly, conjoined phrases in direct and indirect object positions (i.e., complements of V or P) appear to be differentiated solely in terms of levels of frequency of use, and not by the acceptability of a combination. In (73), the first sentence is (to my ear, at least) more acceptable than the other two, but all three are (relatively) acceptable sentences and the other two could easily be made more so by having a context which, for example, puts the two conjuncts into some level of conflict.

⁵With the exception of 3.sing & 3.sing combinations, where one was rendered as *he/him* and the other as *she/her*, to avoid confusion, as *he_i and he_j* would seem semantically implausible (and thus presumably unacceptable), despite the fact that the two conjuncts are referring to different people.

⁶Judgements given here are representative of the absence (and therefore the provisionally presumed ungrammaticality) of this combination in the pilot test. No judgements on the grammaticality of any combinations were made on the basis of this preliminary investigation, only the observation that there is no observable distinction between *he* and *she*.

73. (a) I'll see **you and them** tomorrow.
 (b) I'll give it to **you and them** tomorrow.
 (c) It's something for **you and them** to sort out between you.

I therefore decided to treat all “object position” conjunction phrases as part of the same group, irrespective of whether they are direct or indirect objects. Doing otherwise would add a level of complexity that seems unnecessary, given that this appears to be an issue that is irrelevant to the grammaticality of the combinations.

There are also some combinations that seem to be semantically implausible. For example, it is difficult to see any situation in which *we and I* could be a viable combination, for reasons that have nothing to do with the case marking of the pronouns. Conjuncts need to be semantically distinct from each other to be logically separated: as the semantic content of *I* cannot be separated out from that of *we*, it cannot be conjoined with it. These combinations were checked against an internet search to verify that they did not produce any meaningful tokens: when they did not, semantically implausible combinations were eliminated from the study.

4.5 Choosing the corpora

There are many different corpora in existence, with the majority focussing on providing information about a specific aspect of language such as diachronic change or dialectal differences (Yamazaki and Sigley 2013). As such, care must be taken when selecting a corpus for use in a study it was not designed for, to ensure that it is suitable for the research aims of the project (Bauer 2002).

In order to collect sufficient data of reliable quality that could be supplemented by a judgement test, I needed a corpus with as many as possible of the following characteristics (ranked in order of perceived importance):

74. (a) **Entirely British English, or with the ability to subdivide the corpus by dialect**

To my knowledge, no investigation has been done into how British English differs from other dialects with regard to case variation in conjunction. As all of the participants in the judgement task were British English speakers, limiting the corpus data to British English enables me to reduce dialect-specific inter-speaker variation. It is not possible

to eliminate this form of variation entirely without limiting all data to a regional dialect, but this would make data collection extremely difficult, as it would involve creating a new corpus and finding a very specific set of participants. Limiting both to a national “dialect” is the most effective compromise that I can make.

(b) **A large number of tokens**

Whilst combinations such as *you and I* and *me and him* are relatively common, there are others (e.g. *we and they* and *they and you*) which are much less frequently used. The risk of using a comparatively small corpus is that there will be many combinations that do not appear at all, and as discussed, it is impossible to know from a corpus alone whether a combination does not appear because it is ungrammatical, or simply because it is rarely used and the corpus is not big enough. The bigger the corpus, the greater the possibility of it having tokens for rare combinations. It is impossible to quantify how big is “big enough”: all that can be said is that it needs to be as big as possible.

(c) **Accessible either for free or at low cost**

For reasons of practicality, only a corpus which is open to all for no cost, or for a nominal sum, could be considered for use in this study. This also means that it will be possible for other researchers to replicate my results, should they wish to verify them or gain further information on my data.

(d) **High proportion of spoken/informal language**

It has been suggested that case variation in conjunction is most prevalent in spoken, informal language (although it can be seen in all forms of some speakers’ language). Whilst corpora focussing on written, standard or formal English are therefore likely to show a degree of variation, it is likely that some combinations will appear in much lower frequencies in these corpora, and rare combinations are likely to have even fewer tokens than would otherwise be expected. If nothing else, this tendency needs to be considered when analysing my data.

(e) **As recent as possible**

Whilst arguments have been made (e.g. Johannessen 1998; Angermeyer and Singler 2003) that this is a stable form of synchronic variation that has been in existence for centuries, it is widely assumed that the frequency with which it appears is susceptible to change. In order to minimise the implications of this debate (which is ongoing) it would seem to make sense to use the most recent data available. Further-

more, this would mean that the participants in the judgement test are likely to be contemporaries of the speakers that contributed to the corpus, removing another potential area of unconnected inter-speaker variation.

Table 4.1 gives details of a selection of corpora that could potentially be used in this study (facts about the different corpora taken from Xiao 2008). Only corpora that are either uniquely British English or can be divided to allow collation of British English data only have been included: as this is the most important criteria discussed in the list above, only corpora that meet it will be considered.

Corpus	Period covered	Size (words)	Type of language	Access
British National Corpus (BNC)	1991–1994	100 million	90% written, 10% spoken	Open access
Corpus of Global Web-based English (GloWbE)	2013	1.9 billion (across all countries)	Written (inter-net)	Open access
Bank of English (COBUILD)	1991	650 million	25% spoken, 70% British English	At cost
Lancaster-Oslo-Bergen Corpora (LOB/FLOB)	1961/1991	1 million	100% written	At cost
International Corpus of English (ICE)	1990–1994	1 million	60% spoken	At cost
London–Lund Corpus (LLC)	1953–1987	0.5 million	100% spoken	Open access
Cambridge and Nottingham Corpus of Discourse in English (CANCODE)	1994–2001	5 million	100% spoken British and Irish	Restricted access
Spoken Corpus of the Survey of English Dialects	1948–1961	800,00	Spoken, “traditional” dialects	At cost

Table 4.1: Comparison of different corpora

Of these corpora, I feel that LOB/FLOB, ICE, LLC, CANCODE and the Survey of English Dialects may all be too small to allow for sufficiently detailed analysis. Additionally, the LLC and the Survey of English Dialects are considerably older than the rest, and will therefore not be considered further. Due to the access problems (access is usually limited to researchers publishing with Cambridge University Press and members of Cambridge ESOL) and the mixed British and Irish

data, CANCODE is also not suitable for use. The cost consideration linked to LOB/FLOB and the Bank of English means that these corpora would only be considered if the remaining corpora were shown to be unfit for purpose.

The apparent size of GloWbE is deceptive: it contains samples from multiple national dialects, but it is possible to separate out British English from the others. Its recency makes it an appealing choice, but the fact that all language is taken from the internet is cause for some concern: as discussed in section 4.4, using language taken from the internet has its drawbacks. Reluctant to use this corpus on its own, I therefore decided to also include data taken from the BNC. The age and largely written nature of the data included in this corpus mean that it is also less than ideal, but it is to be hoped that by considering data from both corpora, I can gain a realistic overview of current usage of case variation in English conjunction.

Having identified every possible combination of English pronouns, each one was entered into the BNC and GloWbE search functions, and the number of tokens found in subject and object positions (as defined in the definitions list at the beginning of this thesis) was counted manually. However, not every token was included in the count: those that met the criteria below were ignored.

- When it was not clear which syntactic position the phrase occupied, for example, when the phrase was isolated and not in any context, or interrupted part way through the phrase (e.g. “*Yeah he and I, he, he, that’s two people...*”⁷).
- When the phrase was a dislocated structure, part of a structure involving ECM, or was not in an A-position (e.g. “*Did he tell you he wanted us, him and me, to be together again?*”).
- When the conjuncts formed part of a “set phrase” (i.e., “*...the still passive acceptance of the them and us syndrome.*”).

These tokens were not included as it was felt that they probably behave in a different way to conjoined pronouns in A-positions with regard to case assignment and could therefore bias my data.

⁷Examples given are taken from the BNC.

4.6 Corpus study data

In the remainder of this chapter, I present the most important findings from the corpus study and any implications that they have for my thesis. All tables in this chapter should be understood as follows, where COMBINATION refers to two distinct pronominal forms with assigned morphological case features, conjoined by *and* and a GROUP of combinations includes every possible combination containing the same two abstract lexical items, irrespective of case marking and word order.

- TOTAL: the number of tokens found for each combination in specific syntactic positions (i.e., subject and object).
- PERCENTAGE: the percentage of tokens in each group realised as a particular combination.
 - For example, of the combinations in the group 1.SING+3.SING in subject position, 90% were realised as *he and I*, 3% as *him and me* and 7% as *me and him*.

The entirety of the data gathered from the corpus study can be found in table 4.2.

I begin the data analysis section of this thesis by considering whether there are any conclusions that can be drawn on the basis of the corpus study alone. This will enable us to determine which data need to be clarified or investigated further through the judgement tests.

Groups	Case values	Combinations	Subject position			Object position		
			BNC Total	%	GloWbE Total	BNC Total	%	GloWbE Total
1.sing & 2	Nom + ?	I and you	1	0.3%	6	0	0.5%	2
	? + Nom	You and I	309	90%	1006	20	10%	181
	Acc + ?	Me and you	14	4%	19	24	12%	98
	? + Acc	You and me	20	6%	65	156	78%	650
1.sing & 3.sing	Nom + Nom	He and I	172	91%	336	1	3%	6
	Nom + Nom	I and he	1	0.5%	4	0	0	0
	Acc + Acc	Him and me	4	2%	3	18	47%	39
	Acc + Acc	Me and him	10	5%	42	19	50%	83
	Nom + Acc	He and me	0	0	1	0	0.3%	0
	Acc + Nom	Me and he	0	0	0	0	0	0
	Acc + Nom	Him and I	2	1%	11	0	3%	10
	Nom + Acc	I and him	0	0	0	0	0	0
1.sing & 3.pl	Nom + Nom	They and I	3	75%	14	0	74%	0
	Nom + Nom	I and they	1	25%	3	0	16%	0
	Acc + Acc	Them and me	0	0	0	3	50%	20
	Acc + Acc	Me and them	0	0	2	3	50%	17
	Nom + Acc	They and me	0	0	0	0	0	0
	Acc + Nom	Me and they	0	0	0	0	0	0
	Acc + Nom	Them and I	0	0	0	0	0	0
	Nom + Acc	I and them	0	0	0	0	0	0
3.sing & 2	Nom + ?	He and you	5	10%	9	0	14%	0
	? + Nom	You and he	40	78%	46	0	72%	1
	Acc + ?	Him and you	0	0	1	8	30%	16
	? + Acc	You and him	6	12%	8	19	70%	46
3.sing & 3.sing	Nom + Nom	She and he	8	35%	9	0	26%	0
	Nom + Nom	He and she	14	61%	17	0	50%	0
	Acc + Acc	Her and him	0	0	1	5	33%	9
	Acc + Acc	Him and her	1	4%	3	10	67%	18
	Nom + Acc	She and him	0	0	4	0	12%	0
	Acc + Nom	Him and she	0	0	0	0	0	0
	Acc + Nom	Her and he	0	0	0	0	0	0
	Nom + Acc	He and her	0	0	0	0	0	0

3.sing & 1.pl	Nom + Nom	We and he	0	2	13%	0	0	0
	Nom + Nom	He and we	4	100%	73%	0	0	0
	Acc + Acc	Us and him	0	0		1	20%	12 30%
	Acc + Acc	Him and us	0	1	7%	4	80%	28 70%
	Nom + Acc	We and him	0	0		0	0	0
	Acc + Nom	Him and we	0	0		0	0	0
	Acc + Nom	Us and he	0	0		0	0	0
	Nom + Acc	He and us	0	1	7%	0	0	0
	Nom + Nom	They and he	0	5	19%	0	0	0
	Nom + Nom	He and they	9	100%	81%	0	0	0
3.sing & 3.pl	Acc + Acc	Them and him	0	0		3	30%	8 24%
	Acc + Acc	Him and them	0	0		7	70%	26 76%
	Nom + Acc	They and him	0	0		0	0	0
	Acc + Nom	Him and they	0	0		0	0	0
	Acc + Nom	Them and he	0	0		0	0	0
	Nom + Acc	He and them	0	0		0	0	0
	Nom + ?	We and you	0	8	23%	0	0	0
	? + Nom	You and we	0	26	74%	0	0	0
	Acc + ?	Us and you	0	0		3	38%	48 35%
	? + Acc	You and us	0	1	3%	5	63%	90 65%
1.pl & 3.pl	Nom + Nom	They and we	7	41%	63%	0	0	0
	Nom + Nom	We and they	10	59%	33%	0	0	0
	Acc + Acc	Them and us	0	0		6	40%	65 46%
	Acc + Acc	Us and them	0	1	2%	9	60%	74 53%
	Nom + Acc	They and us	0	1	2%	0	0	1 1%
	Acc + Nom	Us and they	0	0		0	0	0
	Acc + Nom	Them and we	0	0		0	0	0
	Nom + Acc	We and them	0	0		0	0	0
	Nom + ?	They and you	2	22%	24%	0	0	0
	? + Nom	You and they	7	78%	75%	0	0	0
3.pl & 2	Acc + ?	Them and you	0	0		1	14%	14 21%
	? + Acc	You and them	0	1	1%	6	86%	53 79%

Table 4.2: Corpus Study data

4.6.1 General observations

It would appear that there are relatively few differences between the data gathered from the two different corpora. For example, in the BNC data, 50% of the tokens from the group 1.SING+3.PL in object position are the combination *them and me*, whilst the other 50% are *me and them*. In the GloWbE data, the first combination produces 54% of the data, and the second the other 46%. This high level of similarity in percentage rates continues for virtually all groups, with the one exception being 1.PL+3.PL in subject position. This indicates that the data should be relatively reliable and are not influenced by the age of the BNC data or the written (internet-based) nature of the GloWbE corpus.

There are many combinations for which no tokens were found at all in the corpus. As already mentioned, there are two possible explanations for this. Firstly, it is possible that a combination has no tokens because it is ungrammatical in English, and so cannot be generated by a native speaker. I propose, however, that an alternative explanation is that the combination is grammatical, but is rarely used (possibly because there is a more “natural” way of expressing the same concept, as discussed in section 4.3), or is perceived as unacceptable for some reason. This is a known problem with corpus studies, and so the relevant combinations will be investigated further in the judgement tests.

There are also some combinations for which there are only very few (i.e. one or two) tokens. On the basis of the corpus study alone, it is impossible to know whether these tokens are representative of grammatical but rarely used combinations, or whether instead these tokens are speech errors and not indicative of any underlying acceptability. The grammaticality of these combinations ideally also need to be verified through the judgement tests.

4.6.2 Observations about specific sets of combinations

Contrary to the claims of Johannessen (1998) but as we would expect if following any of the other proposed analyses, combinations showing case mismatch (i.e., NOM+ACC or ACC+NOM) appear to be much less frequently used than matched case combinations (NOM+NOM or ACC+ACC).

As table 4.3 shows, there are very few tokens for any mismatched case combinations, with *she and him* forming the largest proportion of its group at only 12% of the tokens generated for all combinations in its group. Furthermore, it is noticeable that (with the exception of *him and I*) the only mismatched combinations present in either corpora are NOM+ACC⁸. If we exclude the tokens for *him and I* from consideration, we can see that there is only one token for any mismatched case combination in object position. It needs investigating whether this is because such combinations are ungrammatical, or whether their absence is due to some

⁸With the exception of ACC*and I* combinations, which are discussed separately: see section 5.8.

Groups	Combinations	Subject position			Object position		
		BNC		GloWbE	BNC		GloWbE
1.sing & 3.sing	He and me	0		1 0.3%	0		0
	Me and he	0		0	0		0
	Him and I	2	1%	11 3%	0	10	7%
	I and him	0		0	0		0
1.sing & 3.pl	They and me	0		0	0		0
	Me and they	0		0	0		0
	Them and I	0		0	0		0
	I and them	0		0	0		0
3.sing & 3.sing	She and him	0		4 12%	0		0
	Him and she	0		0	0		0
	Her and he	0		0	0		0
	He and her	0		0	0		0
3.sing & 1.pl	We and him	0		0	0		0
	Him and we	0		0	0		0
	Us and he	0		0	0		0
	He and us	0		1 7%	0		0
3.sing & 3.pl	They and him	0		0	0		0
	Him and they	0		0	0		0
	Them and he	0		0	0		0
	He and them	0		0	0		0
1.pl & 3.pl	They and us	0		1 2%	0	1	1%
	Us and they	0		0	0		0
	Them and we	0		0	0		0
	We and them	0		0	0		0

Table 4.3: Case mismatches

other factor. The use of *him* and *I* in both subject and object position indicates either that *I* behaves differently to other nominative pronouns (as suggested by Parrott 2007), or that other ACC+NOM combinations are rarely used, but are acceptable in both syntactic positions. These two possibilities are investigated further through the judgement test.

It can be seen from table 4.4 that NOM+NOM combinations in subject position⁹ can be found in one or both corpora for every possible combination. Some combinations (e.g. *we* and *he* and *I* and *they*) appear only a few times, whilst others (such as *you* and *I* and *he* and *I*) appear much more frequently. There are insufficient data to conclude that all NOM+NOM combinations are grammatical in subject position, but if the judgement test can show that the less frequently used combinations are accepted by the majority of speakers, this may be a justifiable conclusion to reach.

Table 4.4 also shows that nominative case forms appear very rarely in object position, and then only in the combinations *he* and *I*, *you* and *I* and *you* and *he*,

⁹NOM+*you* combinations are also included in this table, as they have a contribution to make regarding the status of the NOM DP.

Groups	Combinations	Subject position				Object position			
		BNC		GloWbE		BNC		GloWbE	
1.sing & 2	I and you	1	0.3%	6	0.5%	0		2	0.2%
	You and I	309	90%	1006	92%	20	10%	181	19%
1.sing & 3.sing	He and I	172	91%	336	85%	1	3%	6	4%
	I and he	1	0.5%	4	1%	0		0	
1.sing & 3.pl	They and I	3	75%	14	74%	0		0	
	I and they	1	25%	3	16%	0		0	
3.sing & 2	He and you	5	10%	9	14%	0		0	
	You and he	40	78%	46	72%	0		1	2%
3.sing & 3.sing	She and he	8	35%	9	26%	0		0	
	He and she	14	61%	17	50%	0		0	
3.singl & 1.pl	We and he	0		2	13%	0		0	
	He and we	4	100%	11	73%	0		0	
3.sing & 3.pl	They and he	0		5	19%	0		0	
	He and they	9	100%	22	81%	0		0	
1.pl & 2	We and you	0		8	23%	0		0	
	You and we	0		26	74%	0		0	
1.pl & 3.pl	They and we	7	41%	27	63%	0		0	
	We and they	10	59%	14	33%	0		0	
2 & 3.pl	They and you	2	22%	16	24%	0		0	
	You and they	7	78%	50	75%	0		0	

Table 4.4: NOM+NOM combinations

with the last only having one token. If we argue that the single token for *you and he* was a speech error and that the non-existence of other NOM forms indicates ungrammaticality rather than low preference (something that still requires further investigation), this supports the hypothesis that *I* is functioning in a different way to other nominative pronouns. If, however, we can show that it is representative of a rare but still grammatical combination, any analysis will need to account for how nominative pronouns can appear in object position (which only Quinn 2005 can currently do). It must still be explained, whatever the status of *you and he*, how the nominative 3.SING pronoun is generated in *he and I* in object position. It is clear that further investigation is needed into this issue, as it may have important ramifications for our analysis.

We now consider the position of ACC+ACC combinations. Table 4.5 shows that these combinations are almost certainly grammatical in object position: every single combination was produced more than eight times in the GloWbE corpus alone. The grammaticality of ACC+ACC combinations in subject position is less clear. Believed to be grammatical by most researchers (indeed, claimed by some, e.g. Sobin 1997, to be the only form generated by the grammar itself - see section 3.3), these forms are clearly much less frequently produced than NOM+NOM combinations in subject position.

In fact, the only clearly ACC+ACC combinations¹⁰ that are produced with any

¹⁰ACC+YOU combinations are included in table 4.5 to show the use of ACC DPs in these

Groups	Combinations	Subject position				Object position			
		BNC		GloWbE		BNC		GloWbE	
1.sing & 2	Me and you	14	4%	19	2%	24	12%	98	11%
	You and me	20	6%	65	6%	156	78%	650	70%
1.sing & 3.sing	Him and me	4	2%	3	0.7%	18	47%	39	28%
	Me and him	10	5%	42	11%	19	50%	83	60%
1.sing & 3.pl	Them and me	0		0		3	50%	20	54%
	Me and them	0		2	11%	3	50%	17	46%
3.sing & 2	Him and you	0		1	1%	8	30%	16	25%
	You and him	6	12%	8	13%	19	70%	46	73%
3.sing & 3.sing	Her and him	0		1	3%	5	33%	9	33%
	Him and her	1	4%	3	9%	10	67%	18	67%
1.pl & 2	Us and you	0		0		3	38%	48	35%
	You and us	0		1	3%	5	63%	90	65%
3.singl & 1.pl	Us and him	0		0		1	20%	12	30%
	Him and us	0		1	7%	4	80%	28	70%
3.sing & 3.pl	Them and him	0		0		3	30%	8	24%
	Him and them	0		0		7	70%	26	76%
1.pl & 3.pl	Them and us	0		0		6	40%	65	46%
	Us and them	0		1	2%	9	60%	74	53%
3.pl & 2	Them and you	0		0		1	14%	14	21%
	You and them	0		1	1%	6	86%	53	79%

Table 4.5: ACC+ACC combinations

regularity are *him and me* and *me and him*. It is therefore necessary to investigate ACC+ACC combinations in subject position further, as it is not possible to reach a reliable conclusion regarding their grammaticality based on these data alone. These data do suggest, however, that the argument made by Sobin (1997) and Parrott (2007) that ACC+ACC is the default combination in both subject and object position may be wrong, as we might expect a far higher proportion of ACC+ACC combinations in subject position to be produced if this were the case.

Finally, we can see in table 4.6 that regardless of case, SING+SING combinations are produced far more frequently than either SING+PL or PL+PL combinations, in both subject and object positions. From these data, it would appear that there is little difference between SING+PL and PL+PL combinations, with the latter being produced more frequently in object position than the former, and with both being produced equally frequently in subject position. As a result, we might expect participants in a judgement test to rate SING+SING combinations as more acceptable than either SING+PL or PL+PL ones, due to the effect of hearing them more frequently¹¹. This difference in acceptability will need to be carefully separated from any differences in the underlying grammaticality of the

combinations. However, the morphological case of *you* is unclear: these tokens could be representative of either ACC+ACC, ACC+NOM or NOM+ACC combinations.

¹¹Of course, it is equally possible that these combinations are produced more frequently because they are perceived as being more acceptable: it is impossible to tell from either the corpus study or the judgement test data which is the case.

combinations.

Order	Subject position		Object position	
	BNC	GloWbE	BNC	GloWbE
SING+SING	212	431	53	165
SING+PL	17	45	21	111
PL+PL	17	43	15	140

Table 4.6: Total number of singular and plural tokens in each corpus

In summary, there are some combinations about which it is possible to say conclusively that they must be grammatical, on the basis of the corpus study data alone¹². They are shown in table 4.7 – any combination not included in the table, or any blank cells, should be taken to indicate that there are insufficient data in the corpora to determine the grammaticality of the relevant combinations.

¹²A combination is taken to be grammatical when there are more than four tokens in either corpus.

Groups	Combinations	Subject position				Object position			
		BNC		GloWbE		BNC		GloWbE	
1.sing & 2	I and you	1	0.3%	6	0.5%				
	You and I	309	90%	1006	92%	20	10%	181	19%
	Me and you	14	4%	19	2%	24	12%	98	11%
	You and me	20	6%	65	6%	156	78%	650	70%
1.sing & 3.sing	He and I	172	91%	336	85%	1	3%	6	4%
	I and he	1	0.5%	4	1%				
	Him and me	4	2%	3	0.7%	1	47%	39	28%
	Me and him	10	5%	42	11%	19	50%	83	60%
	Him and I	2	1%	11	3%	0		10	7%
1.sing & 3.pl	They and I	3	75%	14	74%				
	Them and me					3	50%	20	54%
	Me and them					3	50%	17	46%
3.sing & 2	He and you	5	10%	9	14%				
	You and he	40	78%	46	72%				
	Him and you					8	30%	16	25%
	You and him	6	12%	8	13%	19	70%	46	73%
3.sing & 3.sing	She and he	8	35%	9	26%				
	He and she	14	61%	17	50%				
	Her and him					5	33%	9	33%
	Him and her					10	67%	18	67%
	She and him	0		4	12%				
3.sing & 1.pl	He and we	4	100%	11	73%				
	Him and us					4	80%	28	70%
	Us and him					1	20%	12	30%
3.sing & 3.pl	They and he	0		5	19%				
	He and they	9	100%	22	81%				
	Him and them					7	70%	26	76%
	Them and him					3	30%	8	24%
1.pl & 2	We and you	0		8	23%				
	You and we	0		26	74%				
	Us and you					3	38%	48	35%
	You and us					5	63%	90	65%
1.pl & 3.pl	They and we	7	41%	27	63%				
	We and they	10	59%	14	33%				
	Them and us					6	40%	65	46%
	Us and them					9	60%	74	53%
3.pl & 2	They and you	2	22%	16	24%				
	You and they	7	78%	50	75%				
	Them and you					1	14%	14	21%
	You and them					6	86%	53	79%

Table 4.7: Seemingly grammatical combinations – corpus study data

4.6.3 Observations about ordering preferences

One possible way to account for why some combinations do not appear in either corpus, even though we have reason to believe they may be grammatical, becomes

apparent on examination of the corpus study data: ordering preferences. Speakers appear to have relatively consistent preferences about the order in which they place certain conjuncts. This is an observation which has been made by many other linguists: Quinn (2005) and Angermeyer and Singler (2003), among others, develop analyses to account for these preferences.

It can be seen from table 4.8 that there is a slight preference, when conjoining 3.SING+3.SING pronouns, to place the masculine DP in the first conjunct position and the feminine DP in the second. It is not possible, due to the limited amount of data, to reach a firm conclusion regarding this preference, but the data that we do have give relatively consistent results.

Combinations	Subject position				Object position			
	BNC		GloWbE		BNC		GloWbE	
She and he	8	35%	9	26%	0		0	
He and she	14	61%	17	50%	0		0	
Her and him	0		1	3%	5	33%	9	33%
Him and her	1	4%	3	9%	10	67%	18	67%
She and him	0		4	12%	0		0	
Him and she	0		0		0		0	
Her and he	0		0		0		0	
He and her	0		0		0		0	

Table 4.8: 3.SING+3.SING combinations

When there are tokens of conjunctions of a singular and a plural pronoun, there appears to be a preference for the plural pronoun to be the second conjunct, as shown in table 4.9. The exception to this pattern is *they and I*, but we have already seen that *I* may function differently from all other pronouns, so this could form part of the same pattern.

There appears to be an overwhelming trend for 1.SING pronouns in subject position conjunctions to be realised as *I* in the second conjunct. 1.SING+2 is realised as *you and I* 90%, and 1.SING+3.SING as *he and I* 91% of the time.

In groups involving a second person conjunct, there is a consistent preference for *you* to be in the first conjunct, regardless of whether the conjunction phrase is in subject or object position, and whether nominative or accusative case markings appear. The only exception to this are 1.SING+2 combinations. However, we have seen numerous times over the course of this chapter that *I* may behave differently from other nominative pronouns: a possibility that we investigate further in the judgement tests (in section 5.8 in particular).

Groups	Combinations	Subject position				Object position			
		BNC		GloWbE		BNC		GloWbE	
1.sing & 3.pl	They and I	3	75%	14	74%	0		0	
	I and they	1	25%	3	16%	0		0	
	Them and me	0		0		3	50%	20	54%
	Me and them	0		2	11%	3	50%	17	46%
	They and me	0		0		0		0	
	Me and they	0		0		0		0	
	Them and I	0		0		0		0	
	I and them	0		0		0		0	
	We and he	0		2	13%	0		0	
	He and we	4	100%	11	73%	0		0	
3.sing & 1.pl	Us and him	0		0		1	20%	12	30%
	Him and us	0		1	7%	4	80%	28	70%
	We and him	0		0		0		0	
	Him and we	0		0		0		0	
	Us and he	0		0		0		0	
	He and us	0		1	7%	0		0	
	They and he	0		5	19%	0		0	
3.sing & 3.pl	He and they	9	100%	22	81%	0		0	
	Them and him	0		0		3	30%	8	24%
	Him and them	0		0		7	70%	26	76%
	They and him	0		0		0		0	
	Him and they	0		0		0		0	
	Them and he	0		0		0		0	
	He and them	0		0		0		0	

Table 4.9: Combinations of a singular and a plural pronoun

To summarise, the following order preferences are indicated by the corpus data¹³:

75. (a) Masculine DPs are generated in first conjunct position when conjoined with a feminine DP;
- (b) 1.SING DPs are realised as *I* in second conjunct position ;
- (c) Singular DPs are generated in first conjunct position when conjoined with a plural DP;
- (d) *You* is generated in first conjunct position.

4.7 Chapter summary

In this chapter, we have discussed one of the two ways in which the data used in this study were collected: the corpus study. We saw that, due to the complex

¹³Note that these are tendencies only. Combinations which do not follow these tendencies can still be found in the corpora, but less frequently than those that do

nature of case variation in conjunction, it is virtually impossible to rely on one form of data collection alone, and that a combination of methods was necessary. After an overview of why a corpus study was an appropriate choice, we considered some existing corpora, and chose two corpora (BNC and GloWbE) based on their ability to meet the criteria laid out in (74). We then looked briefly at the methodology chosen to extract all relevant data from these corpora.

From the data gathered from these two corpora, we can draw some initial conclusions. It would appear that ACC+ACC combinations are grammatical in object position and may also be in subject position (although the latter needs further investigation), whilst NOM+NOM combinations seem to be ungrammatical in object position but grammatical in subject position. NOM+ACC combinations may also be grammatical in subject position but not object position, whilst ACC+NOM combinations do not appear in either corpus (with the exception of ACC+I) and so may be ungrammatical. It should be noted that these are only interim conclusions, and will all be examined further through the judgement test.

These conclusions mean that we can make some observations about the arguments made in section 3.3.6, where we considered what the existing theories about case assignment in conjunction phrases would lead us to believe about which case forms should be possible. A fundamental part of several analyses (Emonds 1986; Sobin 1997; Parrott 2007) was the concept that only ACC+ACC combinations can be generated by the grammar itself, with any combinations involving NOM being the result of other factors. If this is true, we would expect to see at least as many ACC+ACC combinations as any others, but this proved not to be the case. NOM+NOM combinations are the most commonly produced in subject position, suggesting that this is the default (if there is such a thing). The arguments made by Quinn (2005) and Johannessen (1998) about which combinations are grammatical (see section 3.3) are, so far, all supported by the data. The other predictions made by these analyses cannot be tested using just the data from the corpus study.

As suggested by Quinn (2005) and Parrott (2007) (see section 3.3), *I* seems to behave differently from other nominative pronouns, although further investigation is required in order to determine exactly how different it is. There are also indications of several different types of word order preferences, which may influence the acceptability of some combinations. These two factors will need careful consideration when analysing the judgement test data, as they may make certain combinations seem unacceptable even if they are grammatical.

As discussed in section 4.3, there are some forms of information that a corpus study cannot provide. Whilst it would appear that there is a degree of permissible variation (for example, multiple tokens of *he and you*, *you and he* and *you and him* were found in both corpora in subject position), it is not possible to tell whether it is representative of inter- or intra-speaker variation, as insufficient tokens were recorded from each speaker in the corpora to provide us with this information. The corpus data also cannot tell us whether unattested combinations (such as *them and you* in subject position) did not appear because they are ungrammatical, unacceptable but still grammatical, or both acceptable and grammatical but rarely

used. Although we can draw some conclusions from this data set, it is only by supplementing it with additional data that we will be able to form a reliable picture of what case variation is possible in English conjunction and reach a conclusion regarding the other arguments made by the analyses discussed in chapter 3.

Chapter 5

The Acceptability Judgement Test

In the previous chapter, we saw that whilst the corpus study provided some valuable data that allowed the production of some tentative conclusions, more are required to fully determine the range of possible variation and determine which of the existing theories discussed in section 3.2.2 is most satisfactory from an empirical perspective. We saw in section 4.6.2 that whilst we can rule out the analyses of Emonds (1986), Sobin (1997) and Parrott (2007) as they cannot account for the generation of all attested variants and there are several theoretical issues inherent in adopting these analyses, as discussed in section 3.2.1. We need further information, in particular about the status of NOM+ACC and ACC+NOM combinations, and the nature of any attested variation to determine whether Quinn (2005) or Johannessen (1998) is the most empirically satisfactory account, before dealing with any remaining issues with this analysis.

In this chapter, I discuss the second stage of my data collection: the acceptability judgement test. This test allows me to determine that there are three possible variants in subject position: NOM+NOM, NOM+ACC and ACC+ACC, and that only ACC+ACC combinations are grammatical in object position. Furthermore, I show that the attested variation is both inter- and intra-speaker, with some speakers accepting all three subject position variants, whilst others accept only one or two. The discussion in this chapter enables me to determine the empirical adequacy of the analyses discussed in section 3.3 and begin to develop an alternative – the subject of chapter 6.

5.1 Chapter outline

This chapter opens with a discussion of the reasons behind undertaking a judgement test and an outline of the data that this test needs to provide me with in order to allow me to achieve my research objectives (see section 1.3). In section 5.3, I describe the methodological decisions made and the reasons for making them. I then move on to discuss my preliminary study (section 5.4) and the methodological changes made to the main study as a result of the preliminary one (section 5.5). I outline which combinations I have chosen to test, based on the results of the corpus study data and any strong indications from the preliminary study in section 5.6. The main body of the chapter (section 5.7) is then devoted to a discussion of the data collected in the main study. I show that we can state with a reasonable degree of certainty that there are three possible variants (NOM+NOM, NOM+ACC and ACC+ACC) in subject position, and that only ACC+ACC combinations are grammatical in object position. Furthermore, I show that both inter- and intra-speaker variation are attested. This chapter then concludes with a discussion of *and I*: it has become increasingly clear throughout this chapter and the previous one that *I* behaves differently from other NOM pronouns. I show in section 5.8 that *and I* is generated in a different way to all other combinations, possibly as a result of an additional Vocabulary Item in the morphological component (as suggested by Parrott 2007).

5.2 Why a judgement test?

The judgement test was needed as a data source for two reasons. Firstly, as explained in section 4.3, it is impossible to know whether combinations that were unattested in the corpus study are not seen because they are ungrammatical, unacceptable, or exceedingly rare but still grammatical and acceptable. Equally, it is unclear whether combinations that only have one or two tokens are ungrammatical with the tokens being representative of speech errors, or whether they sufficiently rare to only appear once or twice whilst still being grammatical. Acceptability judgement tests allow us to gain information about combinations that are not frequently generated (whether because they are ungrammatical or unacceptable) as well as those that are. Whilst it is possible, using only the data from the corpus study, to make tentative hypotheses about possible patterns of grammaticality, it is necessary to supplement them with the corpus study data to ensure that any patterns observed are genuine.

In order to complement the corpus study data, the judgement task must allow me to investigate the truth of the following hypotheses:

76. (a) Certain combinations are unacceptable or ungrammatical, whilst others that were unattested in the corpus study are acceptable (and therefore

presumably grammatical¹).

- (b) Combinations with only a few tokens in the corpus study are either grammatical but rare, or are representative of speech errors, as no participants accept them.
- (c) Some of the attested variation represents intra-speaker variation, as some or all speakers accept two or more variants of the same structure.
- (d) Some of the attested variation represents inter-speaker variation, as different speakers accept different variants.

In short, the primary aim of this test is to show when the use of different variants is and is not permitted, and whether the attested variation is the result of inter- or intra-speaker variation. Information on gradient acceptability, whilst useful for understanding the impact of obscuring factors such as prescriptivism and pragmatic factors, is not a major aim.

Judgement tests are perhaps the most commonly used method in theoretical linguistics for gathering data (Schütze 1996: xi), with the methods used for eliciting such judgements ranging from a linguist determining informally whether a certain structure is acceptable in their own personal grammar to carefully structured, formal experiments testing the judgements of many people. Some (e.g. Bard, Robertson, and Sorace 1996; Wasow and Arnold 2005) have questioned the validity of informal grammatical intuitions as a source of data for methodological reasons, but Marantz (2005) disputes this, claiming that many linguists use informal judgements to represent, rather than replace, data that could be gathered through formal experiments and that they are therefore a valid form of data in some situations.

Whilst informal intuitions may be suitable for gathering data on sentences such as (77) for which it can be predicted that all English speakers will have the same reaction, it is debatable whether they are equally suitable for gaining judgements on structures which are more controversial.

77. (a) He is a lively child.
 (b) *Child lively is he a.

Due to the potential differences in judgements between speakers for these more controversial structures, it is necessary to control the experimental procedure more carefully, in order to gain reliable results. Case variation in conjunction is one such controversial context – an informal survey of several speakers' judgements of phrases such as *she and him are fighting again* is likely to show this extremely quickly – and it is primarily for this reason that the judgements used in this study have been gathered through a formal test.

¹I assume that if combinations are consistently rated as being acceptable, they are also fundamentally grammatical (but are not necessarily ungrammatical because they are consistently judged as unacceptable).

5.3 Judgement test methodology

There are many different ways of designing a judgement test. It is important to select a methodology that is appropriate to the task, as it has the potential to greatly affect the data that can be collected. In this section, therefore, I cover some of the methodological choices that have been made, and the reasons for making them.

Over the past few decades, much work has been done on magnitude estimation as a method of eliciting linguistic judgements. Convincing arguments have been produced, for example, by Bard et al. (1996), Keller (2000) and Cowart (1997) regarding the merits of this methodology. However, the primary aim of magnitude estimation is to gain information about gradience in judgements: something which is only of secondary importance to this study. As many studies (e.g. Buchstaller and Corrigan 2011) have found the implementation of magnitude estimation to be problematic, it was decided that the potential gains were insufficiently great to make magnitude estimation a useful data collection technique in this particular study.

For several decades, it has been debated whether linguists should provide their own acceptability judgements, or whether their advanced knowledge of the subject matter alters their judgements so that they are no longer representative of the judgements of other native speakers. Spencer (1973) found that non-linguists agreed with linguists only 50% of the time. Whilst many linguists still use their own intuitions, those who conduct formal experiments to elicit judgements from others habitually exclude anyone who has had formal training in linguistics. For this reason, the participants in my study were not linguists, and had received no formal instruction in theoretical syntax².

It is common practice when eliciting judgements to use a three-point scale, with stimuli usually being rated *, ? or $\sqrt{}$ ³ signalling complete unacceptability, questionable acceptability and complete acceptability respectively (Sprouse and Almeida 2010). When finer levels of gradience need to be marked, frequently used symbols include ??, % and *?. However, there is usually little discussion of the boundaries between the different levels, resulting in disparity between judgements and confusion over what each symbol actually means (Bard et al. 1996). In order to avoid this issue, the participants in my study were provided with a numerical Likert scale, to facilitate the understanding that the ratings fall on a spectrum, rather than being discrete points (see Schütze and Sprouse 2011 for further discussion on the merits of Likert scales). The rating scale given to participants in both the pilot and main studies had an even number of points: as I am interested in whether a structure is acceptable or not, having a respondent tell me that a structure is neither acceptable nor unacceptable does not give me the information that I need. However, forcing them to give me a yes/no answer was likely to be

²Two participants had some basic knowledge of language acquisition theory, but not of syntax or morphology.

³Although when reporting judgements, completely acceptable phrases are frequently left unmarked, rather than being overtly marked with $\sqrt{}$.

equally unproductive, as sentences such as *I'm fine thanks, and yourself?* (one of the filler sentences used in the pilot study) is not, at least for me, acceptable, but neither is it completely unacceptable. Different rating scales were used in the pilot and main studies: the specific scales are discussed in sections 5.4 and 5.5.

One problem that is difficult to overcome with judgement tests is the bias introduced by prescriptive judgements (Bard et al. 1996). As is well known (see section 3.3.1), speakers who use structures such as those in (78) may (particularly as children) be told that these structures are incorrect, and that nominative forms must be used.

78. (a) Me and him are going on holiday next week.
(b) Them and him are always fighting.

This may result in speakers reporting judgements on a grammar based on prescriptive rules rather than their intuitive judgements through a desire to give the “correct” responses. It is difficult to induce participants in a judgement test to ignore these prescriptive rules, and respond on the acceptability of all forms in their grammar, not just the prescriptively correct ones. A number of ways have been suggested that might help overcome this, including: the elicitation of indirect grammaticality judgements (Buchstaller and Corrigan 2011); giving explicit directions for whether prescriptive rules should be considered an adequate reason for rejecting a sentence (Schütze 1996); and clarifying the difference between **unacceptable** and **ungrammatical** sentences (Spencer 1973).

In order to overcome this issue, my participants were informed prior to starting the test that the aim was to investigate informal, spoken English, and not formal or written English. The wording of the instructions⁴ given was also chosen carefully: Buchstaller and Corrigan (2011) show that participants who are strongly influenced by prescriptive norms may not admit to using a structure themselves, but allowing them to judge on indirect acceptability (i.e., asking them whether a sentence sounds “natural” allows them to say that it does, without having to admit to using an “incorrect” structure themselves) can overcome this prescriptive influence⁵. Finally, I conducted a brief qualitative interview immediately after the participants had completed the pilot test⁶ in which they were asked to clarify their judgements on certain stimuli and were questioned about their attitudes towards

⁴The full instructions and a list of stimuli used in the final study are included in Appendix A.

⁵Although this can cause issues of its own, as it may introduce inter-speaker variation into the equation. When speakers are asked to report on solely their own language, any attested variation can be attributed to intra-speaker variation alone. When they are able to report on both their own, and others' language, it becomes possible that they are reporting inter-speaker variation. For this reason, among others, a qualitative interview section was added to the pilot judgement test, in order to allow clarification to be sought about which form of variation was being reported.

⁶It was not felt necessary to include this section in the main test, as even those participants who claimed to only use the prescriptively “correct” forms did not consistently reject “incorrect” forms.

“correct” use of language. This enabled me to determine whether they were rejecting combinations based on prescriptive rules, or because they were genuinely ungrammatical to that speaker.

In order to make the number of stimuli manageable for the participants, it was not realistic to test every possible combination. As previously discussed (see section 4.3), there are 64 different combinations of two conjoined pronouns in English, so it would be necessary to present a participant with at least 128 stimuli (one for each combination in both subject and object position), although each participant would ideally be presented with every combination in both syntactic positions at least three times, to allow me to check for consistency. As it is recommended to have approximately equivalent numbers of stimuli and filler sentences (Schütze 1996), the test would consist of a minimum of 260 sentences (and ideally several hundred more, if each combination was tested multiple times). Furthermore, it would not have been possible to split the test into several smaller ones – as part of my aim is to determine the level of attested intra-speaker variation, the same speakers had to be able to rate every combination in multiple groups. Obviously, this is an unrealistic number of combinations for any one speaker to rate, and so it was necessary to choose which needed to be tested, and which could reasonably be omitted. Due to the slightly different methodologies used for the pilot and final judgement tests, the number of stimuli tested were different: the reader is directed to the discussion of each test for further information on how many stimuli were used and which combinations were included.

5.4 Pilot/preliminary study

Before beginning the main study, I undertook a small preliminary study with 11 participants⁷. Each participant met with me in person and rated 100 stimuli, following which I conducted a short qualitative interview about the stimuli, the structure and the participants’ attitude towards prescriptive norms. This allowed me to identify whether my participants were classifying stimuli as unacceptable because they were ungrammatical, or because the participants were reacting to prescriptive norms (or any other reason). This meant that I could account for some of the anomalous results and did not have to assume that those judgements necessarily formed part of the speaker’s I-language.

The rating scale was based on the one used in Ross (1979), as discussed in Schütze (1996). Each point on the rating scale given to the participants was given a formal description, as follows:

1. The sentence sounds fine. I would have no problem using it myself.

⁷The participants were native speakers of British English, both male and female, aged between 19 and 50. They came from a range of social backgrounds and had levels of education ranging from two who left school at 17 to others with postgraduate degrees.

2. The sentence doesn't sound quite right to me, but I hear other people use similar ones a lot. I might use it myself occasionally.
3. The sentence really doesn't sound right. It's possible that other people might use it, but I'm not sure I've ever heard it. I wouldn't use it myself.
4. The sentence sounds completely wrong. I can't imagine anyone ever using it, and certainly never would do myself.

The criteria for choosing which combinations to test in the pilot study were as follows. Most combinations that frequently appeared in the corpus studies (e.g. *you and I* in subject position, for which there were 309 tokens in the BNC alone – see table 4.7) were excluded as they are assumed to be universally acceptable, although some were included, in order to verify whether the attested variation is inter- or intra-speaker. Any combination that produced no tokens and had no similarities to any other combination that produced tokens (primarily NOM combinations in object position) was also excluded. Many combinations which had only one or two tokens were tested, as it was impossible to tell from the corpus study whether these were representative of speech errors or genuinely grammatical but rarely attested combinations. Combinations which had few or no tokens, but which were predicted to be grammatical following the initial analysis of the corpus study data (such as *we and he* in subject position – this combination had only two tokens in GloWbE and none in BNC, but all other NOM+NOM combinations can be argued to be universally acceptable) were also tested. This allowed me to identify 28 matched case combinations. There were only two tokens of any combination showing unmatched case in the BNC, leading me to hypothesise that it is ungrammatical in English⁸. However, as this goes radically against the conclusions of some other researchers (e.g. Johannessen 1998), this needed investigating more thoroughly. As it would be necessary to add another 48 stimuli (and the same number of filler sentences, taking the total to nearly 100 additional sentences) in order to investigate each possibility, I decided to include all combinations that used *I* (as this appeared, on the basis of the BNC data, to be the pronoun form that permits the most variation) and another ten randomly selected mismatched combinations. An online randomiser (Research Randomizer: Urbaniak and Plous 2011) was used to select which ten combinations would be used.

In order to distract participants' attention from the structure under investigation and thereby reduce the possibility of bias, it is common practice to include a number of "filler" sentences in any judgement test. In my pilot study, I included 40 fillers which contained either a structure which is either colloquial or can be subject to prescriptive judgements. They included non-standard uses of reflexives; colloquial *like* as a filler; and *what* in comparative phrases, as in the examples below.

79. (a) I'm fine thanks, and yourself?

⁸The GloWbE corpus was released after the pilot study had been completed. As a result, only data from the BNC were considered when preparing the pilot, but information from both was used to plan the main study.

- (b) They're really, like, funny.
- (c) You seem much more relaxed than what I am.

This use of colloquial and prescriptively “incorrect” English was designed to reflect my interest in informal language and also enabled me to verify the extent to which prescriptive norms influenced my participants: by querying ratings given to fillers, I could determine whether prescriptivism was causing changes in judgements.

The stimuli and fillers were given a number between 1 and 100. These numbers were then entered into Research Randomizer and five different lists were created of random orders of numbers. These five lists were then used to present the sentences to the participants. Randomising the order in which the sentences were presented is another way of avoiding bias: it has been suggested that participants may change their responses to the same stimulus depending on when it is presented in a test, and that the best way to avoid this bias is to present the stimuli in different orders to each participant (Schütze 1996). The order in which the stimuli were presented was recorded and approximately even numbers of participants were presented with each list.

The data gathered from the pilot test are shown in table 5.1.

Groups	Combinations	Subject position					Object position				
		Number of ratings				Average rating	Number of ratings				Average rating
		1	2	3	4		1	2	3	4	
1.sing & 2	I and you	0	4	3	4	3.0	0	1	5	5	3.4
	You and I						3	6	2	0	1.9
	You and me	6	3	2	0	1.6					
	He and I	7	3	1	0	1.5	1	3	5	2	2.7
	I and he	0	1	4	5	3.5					
	Him and me	2	6	2	1	2.2					
1.sing & 3.sing	Me and him	5	3	3	0	1.8					
	He and me						0	5	4	2	2.7
	Me and he	3	3	4	1	2.3					
	Him and I	9	1	1	0	1.3	3	6	2	0	1.9
	I and him	1	4	3	3	2.7					
	They and I	2	5	2	2	2.4	1	2	4	4	3.0
	I and they	2	1	7	1	2.6					
1.sing & 3.pl	Them and me	1	4	5	1	2.6					
	Me and them	0	1	8	2	3.1					
	Them and I	6	0	3	2	2.1	2	3	5	1	2.5
	I and them	0	3	7	1	2.8	1	0	6	4	3.2
3.sing & 2	Him and you	4	2	4	1	2.2					
	Her and him	1	3	7	0	2.6					
3.sing & 3.sing	Him and her	1	3	6	1	2.6					
	She and him						1	3	2	5	3.0
	Her and he	2	3	6	0	2.4					
	We and he	0	7	3	1	2.5					
	Us and him	0	4	6	1	2.7	1	7	3	0	2.2
3.sing & 1.pl	Him and us	0	4	5	2	2.8					
	Us and he	0	2	5	4	3.2					
	He and us	0	3	7	1	2.8	0	4	7	0	2.6
	They and he	4	1	5	1	2.3					
	Them and him	2	4	4	1	2.4					
3.sing & 3.pl	Him and them	0	2	7	2	3.0					
	They and him	1	2	7	1	2.7					
	Them and he						1	1	3	6	3.3
	We and you	5	1	5	0	2.0					
1.pl & 2	You and we	4	3	2	2	2.2					
	Us and you	3	3	4	1	2.3					
	You and us	3	2	3	3	2.6					
	Them and us	2	5	3	1	2.3					
1.pl & 3.pl	Us and them	2	5	4	0	2.2					
	We and them						0	3	4	4	3.1
	Them and you	3	2	5	1	2.4	4	3	3	1	2.1
3.pl & 2	You and them	7	3	1	0	1.5					

Table 5.1: Pilot judgement test results

A brief examination of these data show that there are many combinations for which we have, at best, inconclusive results, and further investigation is required into these combinations. There are others, however, where over 70% of respondents agree that they are either acceptable or unacceptable: these are shown in table 5.2. Only combinations for which any conclusions can be reached are shown in this table, so the absence of a combination should be taken to mean that either the pilot test produced no reliable results about it, or that it was not tested in the pilot.

Groups	Combinations	Subject position				Object position			
		Number of ratings				Number of ratings			
		1	2	3	4	1	2	3	4
1.sing & 2	I and you					0	1	5	5
	You and I					3	6	2	0
	You and me	6	3	2	0				
	He and I	7	3	1	0				
1.sing & 3.sing	I and he	0	1	4	5				
	Him and me	2	6	2	1				
	Me and him	5	3	3	0				
	Him and I	9	1	1	0	3	6	2	0
1.sing & 3.pl	They and I	2	5	2	2	1	2	4	4
	I and they	2	1	7	1				
	Me and them	0	1	8	2				
	I and them	0	3	7	1	1	0	6	4
3.sing & 1.pl	We and he	0	7	3	1				
	Us and him	0	4	6	1	1	7	3	0
	Us and he	0	2	5	4				
	He and us	0	3	7	1				
3.sing & 3.pl	Him and them	0	2	7	2				
	They and him	1	2	7	1				
	Them and he					1	1	3	6
1.pl & 3.pl	We and them					0	3	4	4
3.pl & 2	Them and you					4	3	3	1
	You and them	7	3	1	0				

Table 5.2: Conclusive pilot judgement test results

We can see that some combinations which appeared relatively frequently in the GloWbE corpus have been judged by many speakers as being unacceptable in this test (for example, *him and her* and *she and him* in subject position). As it is unlikely that all of the corpus tokens for these combinations are the result of speech errors, it could be concluded that there were some fundamental flaws in the methodology used to collect the pilot test data. These were carefully considered, and many changes were made to the final task in order to eliminate them (and thereby ensure that any cases where some speakers perceived a combination as being unacceptable when others clearly accepted it could be reliably attributed to inter-speaker variation rather than methodological issues). These changes are discussed in section 5.5.

There are, however, other combinations that appear frequently in the corpora and were judged to be acceptable in the pilot test (e.g. *me and him* and *they and I* in subject position). I feel it is therefore justifiable to claim that these combinations are grammatical (for the majority of speakers, at least: inter-speaker variation is investigated in section 5.7.2), meaning they did not require further investigation in the main study.

The qualitative interview raised two issues: firstly, the degree to which the participants had been corrected to meet prescriptive norms (usually as a child), and whether this overt correction continues to have an impact on their language as an adult; and secondly, their opinion on conjoined pronouns – how natural or otherwise they sound, and whether it is a structure that they use on a regular basis.

Virtually all of my participants were aware of the existence of a prescriptively “correct” way to use conjoined pronouns⁹. Four (participants 3, 4, 9 and 11) said that they always made a conscious effort to use nominative forms in subject position¹⁰, whilst others (participants 5 and 6 in particular) claimed to never change their language from what felt natural, even when they knew it was not prescriptively correct. Only one (participant 11) showed awareness of hypercorrection, stating that it irritated her when others used nominative forms in object positions. The influence of prescriptivism was to be expected, and it was for this reason that the topic was raised (when participants did not raise it themselves), in order to determine the extent to which it influenced individuals. Interestingly, the ratings given by the participants did not necessarily match what they claimed to find acceptable in the qualitative discussion. This was perhaps to be expected, given the known propensity of acceptability judgement test participants to claim to use a more prescriptively correct version than they actually do, but it did mean that I decided not to include this part of the pilot test methodology in the main study, as it was felt to be of only limited use.

Of the participants in my study, four (2, 3, 5 and 6) disliked the use of conjoined pronouns in general, with participants 5 and 6 being particularly vehement and claiming to never use them at all. Another two (9 and 11) stated that they would accept SING+SING conjunction in certain contexts, but otherwise disliked the structure. The other five participants said that they had no strong opinions, and would use the structure in some contexts. This dislike was taken into consideration when analysing the data gathered as part of the main study: see section 5.7 for further discussion of this issue. It is interesting to note, however, that the

⁹Although the precise belief regarding what these prescriptive norms are varied greatly from one participant to another, with some stating merely that they believed that there was a “correct” format, but they could never remember what it was and others referring to the case forms of uncoordinated pronouns (i.e., NOM in subject position and ACC in object position) as being the only “correct” form.

¹⁰These participants appeared to want to justify this effort, usually by explaining the rule that they followed when constructing their sentence: “you take away ‘and’ and use the form that would be right without it” etc.. For some, a conscious effort was needed to decide which form to use, whilst others claimed that it was instinctive, based on frequent childhood correction. All were adamant that they never used accusative forms in subject position, regardless of the thought process behind the use of nominative forms.

opinions expressed in the interview section once again did not always tally with the judgements given in the pilot study: despite saying that she actively disliked the structure, participant 3 only rejected 30% of the combinations (i.e., gave them a rating of either 3 or 4), whilst participant 9 (who stated a mild dislike, but had very strong prescriptive judgements) rejected 82% of all combinations. Of those who expressed the most dislike for the structure, participants 5, 9 and 6 rejected respectively 78%, 82% and 88% of the combinations, in contrast to participants 10 and 3 (18% and 30% respectively). The rates of rejection ranged from 18% to 88%. As a result of the opinions expressed in the pilot study, I paid close attention to the nature of the context of the stimuli used in the main study, ensuring that the use of the conjunction phrase was justified by placing the two conjuncts into some form of conflict and providing a detailed context to demonstrate why the conjunction phrase was necessary.

5.5 Methodological changes

As a result of feedback from, and improvements upon, the pilot test, the methodology of the main test was slightly different. This test used a six-point scale and only the first and last points were labelled rather than every point having a separate description, with 1 being “completely unnatural” and 6 being “completely natural”. I used the terminology “natural/unnatural” due to suggestions made by a number of pilot test participants that it does not have the same connotations (for a non-linguist) that “grammatical” or “acceptable” does: both of these terms were felt to have a close association with being “correct” in the sense of what people feel they *should* or *ought* to say, rather than what they actually *would* say. By using “natural”, my participants may have (partially) overcome their tendency to respond based on their understanding of prescriptive norms and therefore given me more instinctive reactions.

The six-point scale gave me a better idea of the gradient judgements of my participants: although I am primarily interested in whether a combination is grammatical or not, the gradient judgements gave me an indication of the degree to which other factors may be obscuring the acceptability of a combination (i.e., if a combination is grammatical but with factors affecting its acceptability, I would expect it to be judged as less natural than a completely acceptable one, but more natural than an ungrammatical one). The mean rating, the spread of ratings and the most common rating all had the potential to provide me with interesting data: we would expect a marginally acceptable combination to not only have a lower mean rating than a completely acceptable one, but also a greater spread between ratings, as there is likely to be a greater degree of inter-speaker variation in terms of acceptance of this type of combination than there is for completely acceptable/unacceptable combinations.

In contrast to the pilot test, this was an anonymous online judgement test, using Survey Gizmo (www.surveygizmo.com). It was not necessary for me to perform the tests in person, as I no longer needed to conduct the qualitative interviews

(having got sufficient information from the pilot tests), and using an online survey made it easier to reach a wider audience and therefore get more participants.

It was decided that it was unnecessary to collect information on the background of the participants: as some were directly invited to take part, I am confident that it was completed by a range of ages, genders, socio-economic backgrounds and education levels, meaning that it should represent a cross-section of the population. However, as my aim was not to determine whether any of these characteristics had an impact on which combinations were used, it was not felt to be necessary to attempt to match characteristics to responses. This would, however, be a possible aim for any future research into the topic.

I used a Latin Square design, producing a master list of all of the combinations that I wanted to test and splitting them into two separate lists. One list was judged by 17 participants, the other by 18¹¹.

I felt that it was only realistic to test 100 stimuli, including fillers, in each list. Although I would ideally have used at least equal numbers of stimuli and fillers in order to distract the participant from my real objectives, this would have reduced the number of testable combinations too far to enable me to gather sufficient data: there were therefore 60 stimuli and 40 fillers in each list, resulting in a master list of 120 stimuli and 80 fillers. Three stimuli were created for each combination, to ensure reliable conclusions could be drawn, enabling me to test 40 combinations. I also repeated each non-anaphoric reflexive combination (used for the fillers) three times.

5.6 Combinations tested in the main study

Given that there are 128 possible combinations (when both syntactic positions are considered), and only 40 could be tested within the practical limits of the experimental task, it was necessary to decide which were the most important ones to test. In order to make this decision, some compromises had to be made, as even eliminating the combinations about which firm conclusions could be drawn on the basis of the corpus study left too many still to be tested.

In this section, I discuss in detail some ways in which the combinations can be formed into sets that have one factor in common¹² (e.g. those which use *I* as the first conjunct or all ACC+ACC combinations). I examine the existing data for any

¹¹More participants began the survey, but not all completed it. Only data from participants who completed the test have been included in the discussion below. Furthermore, six participants (22, 44, 47, 53, 66 and 68) were excluded from the study, as they systematically rejected virtually all stimuli, suggesting that they disfavour conjunction and therefore rejected all stimuli on this basis. A number of participants in the pilot study presented similar results, and gave this as the reason for their rejection of all stimuli when questioned.

¹²Note: upon investigation, some of these sets appear to be irrelevant – i.e., to not be genuine sets. I include them to show that there are ways other than those finally adopted in which the existing data could have been analysed.

patterns that can be seen within these sets, and highlight any combinations that do not fit these patterns. Any conclusions drawn on the basis of these data are tentative: when I state that a particular set will not be investigated any further, it is still possible that some combinations from that set will be investigated (for a reason other than their membership in that set). As a result, any possible inter-speaker variation within the set should still be visible.

5.6.1 ACC+NOM combinations

There are no tokens for ACC+NOM combinations in either corpus (apart from *him and I* in both subject and object positions)¹³.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
Him and I	1%	3%	✓	0%	7%	✓
Them and I	0%	0%	✓	0%	0%	?
Me and he	0%	0%	?	0%	0%	?
Her and he	0%	0%	?	0%	0%	?
Him and she	0%	0%		0%	0%	
Us and he	0%	0%	*	0%	0%	
Them and he	0%	0%		0%	0%	*
Him and we	0%	0%		0%	0%	
Them and we	0%	0%		0%	0%	
Me and they	0%	0%		0%	0%	
Him and they	0%	0%		0%	0%	
Us and they	0%	0%		0%	0%	

Table 5.3: ACC+NOM case mismatch

Of the combinations tested in the pilot judgement tests, both combinations using *and I* were considered to be acceptable in subject position and *him and I* in object position, but the other ACC+NOM combinations were either clearly rejected or gave inconclusive results. I investigate the possibility that *and I* behaves differently to other NOM pronouns shortly. Due to the otherwise complete absence of ACC+NOM combinations in either subject or object position in either corpus, I suggest that they are ungrammatical and as such, do not investigate them any further.

¹³In this table and all subsequent ones in this section, the corpus study data are represented by the percentage of tokens for each combination in its group (see table 4.2), and the pilot test data are summarised by ✓ = generally acceptable, * = generally unacceptable and ? = questionable acceptability/no clear consensus.

5.6.2 NOM+ACC combinations

Some researchers (e.g. Quinn 2005) assume/argue that this type of combination should be grammatical in subject position. However, with the exception of *she and him* and *they and us*, there is little data from either corpus to support whether or not this is a justifiable assumption, and the pilot test results suggest the opposite. The (virtually) complete lack of corpus tokens for these combinations in object position when combined with their almost universal rejection in the pilot judgements indicates, however, that NOM+ACC combinations are probably ungrammatical in object position.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
I and him	0%	0%	?	0%	0%	
I and them	0%	0%	*	0%	0%	*
He and me	0%	0.3%		0%	0%	?
She and him	0%	12%		0%	0%	
He and her	0%	0%		0%	0%	
He and us	0%	7%	*	0%	0%	*
He and them	0%	0%		0%	0%	
We and him	0%	0%		0%	0%	
We and them	0%	0%		0%	0%	*
They and me	0%	0%		0%	0%	
They and him	0%	0%	*	0%	0%	*
They and us	0%	2%		0%	1%	

Table 5.4: NOM+ACC combinations

In order to clarify whether my data are misleading or whether the assumptions made by other researchers are incorrect, it is necessary to test some NOM+ACC combinations in subject position.

5.6.3 NOM+NOM combinations

NOM+NOM combinations are typically assumed to be grammatical in subject position, and ungrammatical in object position, and this is precisely what my data show.

Whilst subject-position *I and he* and *I and they* were rejected in the pilot study, tokens for both can still be found in both corpora. I think it is therefore safe to assume that NOM+NOM combinations are grammatical in subject position for the majority of speakers. The complete lack of tokens for any NOM+NOM combinations other than *he and I* in object position leads me to suggest that they are ungrammatical in object position, with the *he and I* tokens being the result of either the *and I* phenomenon or speech error.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
I and he	0.5%	1%	*	0%	0%	
He and I	91%	85%	✓	3%	4%	?
She and he	35%	26%		0%	0%	
He and she	61%	50%		0%	0%	
I and they	25%	16%	*	0%	0%	
They and I	75%	74%	✓	0%	0%	*
He and we	100%	73%		0%	0%	
We and he	0%	13%	✓	0%	0%	
He and they	100%	81%		0%	0%	
They and he	0%	19%	?	0%	0%	
We and they	59%	33%		0%	0%	
They and we	41%	63%		0%	0%	

Table 5.5: NOM+NOM combinations

5.6.4 ACC+ACC combinations

According to the majority of existing studies, this set should be grammatical in both subject and object positions. Indeed, some researchers (e.g. Parrott 2007, Sobin 1997) assume that this should be the default form for conjuncts, with NOM+NOM being the more complex form¹⁴.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
Me and him	5%	11%	✓	50%	60%	
Him and me	2%	0.7%	✓	47%	28%	
Her and him	0%	3%	*	33%	33%	
Him and her	4%	9%	*	67%	67%	
Me and them	0%	11%	*	50%	46%	
Them and me	0%	0%	?	50%	54%	
Him and us	0%	7%	?	80%	70%	
Us and him	0%	0%	?	20%	30%	✓
Him and them	0%	0%	*	70%	76%	
Them and him	0%	0%	?	30%	24%	
Us and them	0%	2%	?	60%	53%	
Them and us	0%	0%	?	40%	46%	

Table 5.6: ACC+ACC combinations

The data collected from the corpora are insufficient to support the claim about the grammaticality of ACC+ACC combinations in subject position, however, as only *me and him* and (possibly) *him and her* are produced in any great quantity.

¹⁴What this means, syntactically, depends on the specific details of the mechanisms adopted in the relevant analyses. It is not an issue that is relevant at this point.

Furthermore, the results from the pilot test do not show any patterns, suggesting either that the combinations included in table 5.6 do not have anything in common with each other or that the methodological problems in the pilot test have skewed the results. As clear patterns could be seen in the NOM+NOM, NOM+ACC and ACC+NOM sets of combinations, I suggest that that the second possibility is more likely. To confirm this, the combinations in this set need further investigation in the main study.

The predicted grammaticality of object–position combinations in this set is supported by the number of tokens found for each combination in the corpora, with every combination being produced. I therefore suggest that this set is grammatical in object position, and as such, will not investigate it any further.

5.6.5 SING+SING combinations

Syntactically, there is no reason for this set to behave any differently to SING+PL or PL+PL, but it is possible that speakers for some reason find these combinations more acceptable than others (as suggested by many participants in the preliminary judgement studies¹⁵).

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
I and he	0.5%	1%	*	0%	0%	
He and I	91%	85%	✓	3%	4%	?
He and she	61%	50%	✓	0%	0%	
She and he	35%	26%		0%	0%	
Me and him	5%	11%	✓	50%	60%	
Him and me	2%	0.7%	✓	47%	28%	
Him and her	4%	9%	*	67%	67%	
Her and him	0%	3%	*	33%	33%	
I and him	0%	0%	?	0%	0%	
He and me	0%	0.3%		0%	0%	?
He and her	0%	0%		0%	0%	
She and him	0%	12%		0%	0%	*
Him and I	1%	3%	✓	0%	7%	✓
Me and he	0%	0%	?	0%	0%	
Her and he	0%	0%	?	0%	0%	?
Him and she	0%	0%		0%	0%	

Table 5.7: SING+SING combinations

¹⁵Note: the references to the information given by participants in the preliminary study are included to give the reader a **possible** explanation regarding why I feel that the information given in the preliminary investigation may not fully represent the underlying grammar of my participants. They are not intended to be a definitive answer: given the limitations on how people can report on their unconscious grammars, qualitative interviews have only limited use in determining speakers' I-languages.

The data shown in table 5.7 suggest there may be no conclusions to draw regarding the general acceptability of SING+SING combinations, as the only observable patterns relate to the case forms of the conjuncts, and not the fact that they are all SING. I therefore dismiss this set from future consideration, as it would appear that claims about the grammaticality of one SING+SING combination are unlikely to be able to be extended to other SING+SING combinations.

5.6.6 SING+PL and PL+SING combinations

There were very mixed participant reactions in the pilot study regarding whether SING+PL combinations are acceptable, as many stated categorically that they disliked conjoining a singular pronoun with a plural one, whilst others claimed to have no preference. I therefore wondered whether combinations in these sets would show any patterns of acceptability in the main study.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
I and they	25%	16%	*	0%	0%	
I and them	0%	0%	*	0%	0%	*
Me and they	0%	0%		0%	0%	
Me and them	0%	11%	*	50%	46%	
They and I	75%	74%	✓	0%	0%	*
They and me	0%	0%		0%	0%	
Them and I	0%	0%	✓	0%	0%	?
Them and me	0%	0%	?	50%	54%	
He and we	100%	73%		0%	0%	
He and us	0%	7%	*	0%	0%	*
Him and we	0%	0%		0%	0%	
Him and us	0%	7%	?	80%	70%	
We and he	0%	13%	✓	0%	0%	
We and him	0%	0%		0%	0%	
Us and he	0%	0%	*	0%	0%	
Us and him	0%	0%	?	20%	30%	✓
He and they	100%	81%		0%	0%	
He and them	0%	0%		0%	0%	
Him and they	0%	0%		0%	0%	
Him and them	0%	0%	*	70%	76%	
They and he	0%	19%	?	0%	0%	
They and him	0%	0%	*	0%	0%	
Them and he	0%	0%		0%	0%	*
Them and him	0%	0%	?	30%	24%	

Table 5.8: SING+PL and PL+SING combinations

There are some combinations in each set that are clearly grammatical (e.g. *he and*

they in subject position and *him and us* in object position). Clearly, therefore, it cannot be claimed that SING+PL or PL+SING combinations are ungrammatical (although some members of these sets may well be, but for other reasons). Note, however, that with the exception of *they and I* in subject position, SING+PL combinations appear consistently more frequently than their PL+SING counterparts. I discussed this observation with regard to the corpus study data in section 4.6.3 and will return to it again in section 5.7.1, where I discuss the impact that it may be having on the perceived acceptability of PL+SING combinations.

5.6.7 PL+PL combinations

Many participants in the pilot study said that they really did not like using combinations from this set as they could not see any reason to separate the conjuncts rather than using a single PL pronoun.

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
We and they	59%	33%		0%	0%	
They and we	41%	63%		0%	0%	
Us and them	0%	2%	?	60%	53%	
Them and us	0%	0%	?	40%	46%	
We and them	0%	0%		0%	0%	*
Them and we	0%	0%		0%	0%	
Us and they	0%	0%		0%	0%	
They and us	0%	2%		0%	1%	

Table 5.9: PL+PL combinations

The pragmatic infelicity of this set could plausibly explain why there are so few tokens of these combinations in either corpus. However, given how frequently NOM+NOM combinations in subject position, and ACC+ACC ones in object position are produced, there is no reason to suppose that PL+PL combinations are inherently ungrammatical: they may, however, be only marginally acceptable, meaning that any contexts used to test them in the main judgement test need to be carefully constructed.

5.6.8 “*And I*”

As identified in the corpus study, *I* seems like it may function somewhat differently to other NOM pronouns.

From the corpus study and pilot test data, it would appear that any combination with *I* as the second conjunct is acceptable in subject position (although the

Combinations	Subject position			Object position		
	Corpus study 1	Corpus study 2	Pilot Test	Corpus study 1	Corpus study 2	Pilot Test
You and I	90%	92%		10%	19%	✓
He and I	91%	85%	✓	3%	4%	?
They and I	75%	74%	✓	0%	0%	*
Him and I	1%	3%	✓	0%	7%	✓
Them and I	0%	0%	✓	0%	0%	?

Table 5.10: *And I*

production rates of ACC+*I* are significantly lower than for NOM+*I*, they were perceived as equally acceptable in the pilot test results), reinforcing the possibility that *and I* is somehow functioning differently from other NOM second conjuncts. The status of *and I* in object position is slightly less clear, as the production rates are considerably lower than in subject position, and only *you and I* and *him and I* were consistently judged as being acceptable. I feel that it may be worth verifying whether the difference between *he and I* and *him and I* is replicated for *they and I* and *them and I*, as this might indicate that the case of the first conjunct is still subject to syntactic assignment. I otherwise suggest that *and I* is generated differently to other NOM pronouns, and return to some potential ways of analysing this in section 5.8.

5.6.9 Section summary

I have shown that there are several ways of dividing the combinations into sets that may allow us to reduce the number of combinations that need to be tested. The most productive route of inquiry appears to be by case form, as patterns can be observed between (for example) NOM+NOM combinations that cannot be seen between SING+PL ones. However, thanks to the corpus study data, it would seem that tentative conclusions can be drawn about ACC+ACC and ACC+NOM combinations in both subject and object position, NOM+NOM combinations in subject position and NOM+ACC in object position, leaving only NOM+ACC combinations to be investigated in any detail. Rather than focussing solely on NOM+ACC combinations, however, I decided to test entire groups of combinations, as this enabled me to achieve my other research objective (determining the nature of any attested variation) whilst investigating a number of NOM+ACC combinations at the same time. I also included a number of *+you* combinations, in case they could give us any additional information.

The combinations selected were manually divided into two lists. It was decided to keep all three stimuli for the same combination in one list, to enable verification that consistent ratings were being given. All combinations within a group were also kept together, so that the responses given could be used for analysis of both inter- and intra-speaker variation. Any combinations that were not part of a group were then split between the two lists to make the number of stimuli in

List 1	List 2
He and me (s)	You and he (s)
I and they (s)	He and you (s)
They and I (s)	You and him (s)
Me and them (s)	Him and you (s)
Them and me (s)	He and they (s)
I and them (s)	They and he (s)
Them and I (s)	Him and them (s)
Me and they (s)	Them and him (s)
They and me (s)	He and them (s)
He and she (s)	Them and he (s)
She and he (s)	Him and they (s)
Him and her (s)	They and him (s)
Her and him (s)	We and you (s)
He and her (s)	You and we (s)
Her and he (s)	Us and you (s)
Him and she (s)	You and us (s)
She and him (s)	They and I (o)
Them and I (o)	I and they (o)
We and they (o)	He and she (o)
They and we (o)	She and he (o)

Table 5.11: Lists for judgement test

each list approximately even. The list of combinations is shown in (5.11), and the stimuli can be seen in Appendix A.

5.7 Main test results

In this section, I discuss the results of the main judgement test, and consider the conclusions that can be drawn both from these data alone, and from when they are added to the corpus study data collated in chapter 4. The analysis of the judgement test data is split into several parts, due to the need to determine all of the different types of information described at the beginning of this chapter. Initially, the responses of all of the participants are considered together, showing whether each tested combination was considered to be generally acceptable or unacceptable and the degree of consensus between speakers about these ratings. Whilst generalising across the responses of participants may appear like I am seeking to reduce any observable variation, this is not the case. It is simply a mechanism to allow me to determine the patterns that can be seen in the data set as a whole, before I move onto the second stage of my data analysis: looking for patterns within the data of individual speakers. In this section, the responses given by each participant are considered (although only the most pertinent observations are discussed here) both on their own and in comparison with other participants. This allows me to determine the extent of both inter- and intra-speaker variation.

This analysis, when combined with the analysis of the corpus study data discussed in chapter 4, enables me to reach a conclusion regarding which combinations are grammatical in English, the degree of variation that is possible and the nature of this variation. This allows me to reach a conclusion regarding which of the existing analyses discussed in section 3.3 is most empirically satisfactory.

5.7.1 Group data

From the results of the judgement test (shown in tables 5.12 and 5.13), there are some conclusions that can be drawn with a relatively strong degree of certainty. There are others that are less definite, but which, when combined with corpus study data, can be made with a relatively high degree of confidence.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
I and they	33	12	7	1	0	1	1.6
They and I	32	13	7	2	0	0	1.6
Them and I	3	6	9	18	6	9	3.9
He and she	29	13	7	6	1	0	1.9
She and he	25	15	7	6	1	0	1.9
We and they	30	17	3	0	0	1	1.5
They and we	35	12	3	1	0	0	1.4

Table 5.12: Judgement test data: combinations in object position

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
He and me	5	12	11	7	9	7	3.5
I and they	11	17	6	9	3	5	2.8
They and I	4	4	3	9	13	18	4.5
Me and them	5	11	9	10	12	4	3.5
Them and me	10	14	7	11	8	1	2.9
I and them	16	11	11	6	3	4	2.6
Them and I	7	9	7	11	10	7	3.6
Me and they	14	11	15	4	4	3	2.6
They and me	11	10	11	6	10	3	3.1
You and he	1	9	4	6	11	23	4.6
He and you	1	4	9	7	12	21	4.6
You and him	4	2	1	9	16	22	4.8
Him and you	5	4	16	14	11	4	3.6
He and she	1	8	7	7	13	15	4.3
She and he	2	8	4	12	7	18	4.3
Him and her	3	10	6	8	13	11	4.0
Her and him	9	14	9	10	5	4	3.0
He and her	2	12	9	10	10	8	3.7
Her and he	16	13	8	6	4	4	2.6
She and him	4	9	3	13	13	9	4.0
Him and she	15	17	6	7	3	3	2.5
He and they	4	12	9	3	11	15	3.9
They and he	6	14	11	5	9	9	3.4
Him and them	8	19	10	9	3	5	2.9
Them and him	13	11	13	9	6	2	2.8
He and them	6	12	16	12	8	0	3.1
Them and he	8	22	13	5	5	1	2.6
Him and they	10	22	11	7	4	0	2.5
They and him	5	9	18	7	11	4	3.4
We and you	10	10	11	6	11	6	3.4
You and we	12	18	8	4	7	5	2.8
Us and you	11	15	9	12	5	2	2.8
You and us	6	5	16	10	7	10	3.7

Table 5.13: Judgement test data: combinations in subject position

Firm conclusions

On examination of the data, it is possible to state immediately that there are some combinations that are clearly ungrammatical (table 5.14) and others that are equally clearly grammatical (table 5.15).

In table 5.14, I have highlighted the combinations that appear to be ungrammatical, based on the results of this judgement test. All of these combinations received low mean ratings, with the majority of participants rating them on the lower end of the scale. It is interesting to note that (with the exception of *I and them*) all

of these combinations were either ACC+NOM in subject position or NOM+NOM in object position: both groups that were predicted to be ungrammatical based on the corpus study and pilot test results.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
I and them (s)	16	11	11	6	3	4	2.6
Me and they (s)	14	11	15	4	4	3	2.6
Her and he (s)	16	13	8	6	4	4	2.6
Him and she (s)	15	17	6	7	3	3	2.5
Them and he (s)	8	22	13	5	5	1	2.6
Him and they (s)	10	22	11	7	4	0	2.5
I and they (o)	33	12	7	1	0	1	1.6
They and I (o)	32	13	7	2	0	0	1.6
He and she (o)	29	13	7	6	1	0	1.9
She and he (o)	25	15	7	6	1	0	1.9
We and they (o)	30	17	3	0	0	1	1.5
They and we (o)	35	12	3	1	0	0	1.4

Table 5.14: Apparently unacceptable combinations

It is not immediately clear why *I and them* was judged to be ungrammatical in subject position, as the corpus study data and results from other similar combinations (see discussion below) suggest that NOM+ACC combinations should be grammatical. However, we have seen (sections 4.6.3 and 5.6) that *I* appears to behave differently from other NOM pronouns. I therefore suggest that the overwhelming preference to put *I* as the second conjunct (see section 4.6.3) may be influencing the perceived acceptability of *I and them*, but not its underlying grammaticality.

All six of the combinations in table 5.15 have a comparatively high mean rating, with the bulk of responses for each being 4, 5 or 6. Whilst there is a greater spread of ratings for these combinations than for the ungrammatical ones shown in table 5.14, I suggest that there are more reasons to find a grammatical combination unacceptable than there are to find an ungrammatical combination acceptable¹⁶, and so this is hardly surprising.

¹⁶We will see, for example, that there are some speakers who reject conjoined pronouns entirely and others who consistently reject all NOM+ACC combinations, as well as observable patterns with regard to the orders in which speakers prefer different pronouns. See sections 5.7.2, 6.6.3 and 6.6.4 for more detail on these issues.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
They and I (s)	4	4	3	9	13	18	4.5
You and he (s)	1	9	4	6	11	23	4.6
He and you (s)	1	4	9	7	12	21	4.6
You and him (s)	4	2	1	9	16	22	4.8
He and she (s)	1	8	7	7	13	15	4.3
She and he (s)	2	8	4	12	7	18	4.3

Table 5.15: Apparently acceptable combinations

The combinations discussed in this section are the only ones for which there is a clear consensus on their acceptability. It is important to recognise at this point that it is unlikely that the disagreement between participants regarding the acceptability of the other combinations is solely the result of methodological flaws: whilst this may be an influencing factor for some combinations, it cannot be the case for the test as a whole, otherwise we would not expect any clear patterns to be emerging from the data.

Observable trends

This section shows that there are some trends that can be clearly observed. Given that the corpus study and pilot test data indicated (see section 5.6) that individual combinations behaved most like others where the conjuncts bear the same case forms (i.e., *she and him* is more likely to behave like another NOM+ACC combination than a SING+SING one), I investigate in this section whether the same general trend can be observed in the data from the main judgement test. As stated in section 5.6, this would be a desirable result, as it would indicate that any attested variation is indeed morphosyntactic rather than phonological and that a feature-based analysis may be the most appropriate path to follow.

An examination of the results for all NOM+NOM combinations tested in object position (table 5.16) shows that virtually all participants rejected these combinations: out of over 300 relevant ratings, there were only two ratings of 6 and two of 5, whilst there were 184 ratings of 1 and 82 ratings of 2. In other words, over 80% of the responses given for NOM+NOM combinations in object position were either 1 or 2, suggesting overall rejection of this type of combination. More tellingly still, there was not a single speaker who consistently accepted these combinations: the high ratings were given by different speakers to different stimuli, suggesting that they were more likely to be the result of participant error than truly representative of the stimulus' acceptability. As there is very little difference between the responses for each combination and there is only one NOM+NOM combination that has any tokens in either corpus (*he and I*)¹⁷, I feel it is justifiable to extend the results from this test to all NOM+NOM combinations in object position, and

¹⁷In section 5.8, I discuss some ways in which *and I* could be generated in both subject and object positions without assuming that all other NOM DPs are grammatical. I suggest that *he and I* in object position may be the result of overextension of the way in which *and I* is

suggest that they are all ungrammatical in English.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
I and they	33	12	7	1	0	1	1.6
They and I	32	13	7	2	0	0	1.6
He and she	29	13	7	4	1	0	1.8
She and he	25	15	7	6	1	0	1.9
We and they	30	17	3	0	0	1	1.5
They and we	35	12	3	1	0	0	1.4

Table 5.16: NOM+NOM combinations in object position

The responses for ACC+NOM combinations in subject position (table 5.17) give a strong indication that these combinations are also unacceptable to the vast majority of speakers..

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
Them and I	7	9	7	11	10	7	3.6
Me and they	14	11	15	4	4	3	2.6
Her and he	16	13	8	6	4	4	2.6
Him and she	15	17	6	7	3	3	2.5
Them and he	8	22	13	5	5	1	2.6
Him and they	10	22	11	7	4	0	2.5

Table 5.17: Judgement test data: ACC+NOM combinations in subject position

The results for these combinations are not as clearly ungrammatical as NOM+NOM in object position, but there is still a clear trend to mark them as unacceptable, with over 50% of responses being either 1 or 2 (this rises still higher when *them and I*¹⁸ is excluded from this) compared to under 20% being rated as 5 or 6. Whilst this could be an example of inter-speaker variation (as would be the case if there were some speakers who consistently accepted, and others who consistently rejected, these combinations), an examination of the responses of individual participants shows that it is not the same participants accepting every combination: for example, participant 60 rates the three stimuli for *me and they* as 5, 1 and 6, but rates *him and she* as 2, 1 and 6, making it unclear whether he is accepting or rejecting the combinations. Not a single participant consistently accepted every ACC+NOM combination (i.e., gave them all consistent ratings of either 5 or 6),

generated.

¹⁸The data suggest that speakers do not have particularly strong instincts about this combination, with roughly even numbers of participants in the judgement test giving it every possible rating. This could be indicative of conflict between the combination's grammaticality and acceptability: speakers who treat *I* differently from other NOM pronouns may well accept this combination on that basis, whilst others find it comparatively unacceptable on the basis of its underlying grammaticality. I propose to exclude this combination from any consideration regarding the grammaticality of ACC+NOM combinations, as I believe that the presence of *and I* has influenced some or all of my participants.

but many consistently rejected them. I therefore propose (with the exception of combinations involving *I*) that all ACC+NOM combinations in subject position are ungrammatical, with any responses that contradict this being the result of participant fatigue and other non-linguistic factors. It should be noted that ACC+NOM combinations cannot be accounted for by any of the analyses considered in section 3.2.2, and that the corpus study data also support this conclusion, so this is an unsurprising result.

We saw in table 5.15 that there are several NOM+NOM combinations in subject position that are clearly acceptable, but there are others that are more ambiguous. All of the subject position NOM+NOM combinations that were used in this judgement test are shown below, in table 5.18.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
I and they	11	17	6	9	3	5	2.8
They and I	4	4	3	9	13	18	4.5
He and she	1	8	7	7	13	15	4.3
She and he	2	8	4	12	7	18	4.3
He and they	4	12	9	3	11	15	3.9
They and he	6	14	11	5	9	9	3.4

Table 5.18: NOM+NOM combinations in subject position

Given that it is generally assumed that NOM+NOM combinations are grammatical in subject position, the corpus study data indicate their grammaticality and the majority of these combinations are perceived as being acceptable, I propose that all NOM+NOM combinations are grammatical in subject position. I suggest that the general dislike of SING+PL and PL+SING combinations when compared to SING+SING combinations (identified in both the corpus study and the pilot test: see sections 4.6.3 and 5.4 respectively) may account for the comparatively low rate of acceptance of *he and they* and *they and he*. It has become increasingly clear that *I* behaves differently from other nominative pronouns and is much preferred in second conjunct position than in first¹⁹. The low acceptability of *I and they* is therefore unsurprising and almost certainly not linked to the case forms of the DPs.

We have seen that NOM+NOM combinations are grammatical in subject position, whilst ACC+NOM ones appear to be ungrammatical (with the exception of ACC*and I*, which are henceforth assumed to function differently and are discussed in section 5.8). ACC+ACC combinations (table 5.19) also appear to be grammatical, once acceptability issues are taken into account.

¹⁹It is probable that this is linked to the prescriptive rules surrounding *I* (see section 3.3.1). Given how conscious some speakers are of the prescriptive use of *and I*, it seems plausible that this will have an impact upon the use of *I and* as well as *and me*.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
Me and them	5	11	9	10	12	4	3.5
Them and me	10	14	7	11	8	1	2.9
Him and her	3	10	6	8	13	11	4.0
Her and him	9	14	9	10	5	4	3.0
Him and them	8	19	10	9	3	5	2.9
Them and him	13	11	13	9	6	2	2.8

Table 5.19: ACC+ACC combinations in subject position

Once again, the limited acceptability of SING+PL combinations may have a role to play in explaining the lower perceived acceptability of these combinations than either *him and her* or *her and him*, as does the apparent preference for using a feminine pronoun as the second conjunct when conjoined with a masculine one in accounting for why *her and him* is less acceptable than *him and her* (see section 4.6.3 for the rationale behind claiming that these ordering preferences exist and section 6.6.4 for further discussion of how they can be explained within a generative analysis). Once these factors are taken into account, and the corpus study data outlined in section 4.6 have been considered, I suggest that all ACC+ACC combinations are grammatical in subject position.

There does not appear to be much consensus between speakers regarding the acceptability of NOM+ACC combinations in subject position (with the exception of *I and them*)²⁰. As table 5.20 shows, even when a combination received few ratings of 1 and/or 6, the participants consistently rated the stimuli with an approximately even spread between the other possibilities.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
He and me	5	12	11	7	9	7	3.5
I and them	16	11	11	6	3	4	2.6
They and me	11	10	11	6	10	3	3.1
He and her	2	12	9	10	10	8	3.7
She and him	4	9	3	13	13	9	4.0
He and them	6	12	16	12	8	0	3.1
They and him	5	9	18	7	11	4	3.4

Table 5.20: NOM+ACC combinations in subject position

This suggests that there may be a conflict between the acceptability and grammaticality of this type of combination. Clearly ungrammatical combinations (such as those in table 5.14) received far fewer ratings of 5 and 6, whilst obviously acceptable combinations (as outlined in table 5.15) received fewer ratings of 1 and

²⁰This lack of consensus could explain why NOM+ACC combinations appeared much less frequently than either NOM+NOM or ACC+ACC combinations in the corpus study: if there are speakers who do not find this set acceptable, they are likely to be produced less frequently than combinations which are more widely perceived as being acceptable.

2. I therefore hypothesise that these combinations are in general grammatical, but that they may be perceived as less acceptable than either NOM+NOM or ACC+ACC combinations, at least by some participants, or that they are grammatical for some speakers but not for others. This will be investigated in section 5.7.2, to see whether any data gathered from individual speakers can be used to confirm this hypothesis.

The one data set that has yet to be discussed in any detail involves combinations using *you*, as shown in table 5.21.

Combinations	Number of ratings						Mean rating
	1	2	3	4	5	6	
You and he	1	9	4	6	11	23	4.6
He and you	1	4	9	7	12	21	4.6
You and him	4	2	1	9	16	22	4.8
Him and you	5	4	16	14	11	4	3.6
We and you	10	10	11	6	11	6	3.4
You and we	12	18	8	4	7	5	2.8
Us and you	11	15	9	12	5	2	2.8
You and us	6	5	16	10	7	10	3.7

Table 5.21: Combinations involving *you* (all in subject position)

Given the conclusions reached above regarding the grammaticality of NOM+NOM, NOM+ACC and ACC+ACC combinations in subject position, we would expect all of the combinations shown in table 5.21 to be grammatical: as *you* does not show contrastive case morphology, we can only use the case of the other conjunct to predict grammaticality, and both NOM and ACC are potentially grammatical in both first and second conjunct position. It is therefore unsurprising that all of the combinations tested that involve *you* appear to be generally accepted. It would seem, therefore, that combinations involving *you* have little to add to our understanding of how case is assigned in conjunction: I therefore suggest that *you* behaves like all other English pronouns (with the exception of *I*: see section 5.8), but with morphophonologically identical forms regardless of case.

To summarise the findings of this section: it would appear that NOM+NOM, NOM+ACC and ACC+ACC combinations are grammatical in subject position, and only ACC+ACC combinations are grammatical in object position. Clearly, therefore, case variation is possible in subject position, but it is still unclear whether this is the result of inter- or intra-speaker variation.

Grammaticality and acceptability

Whilst there is at times an apparent discrepancy between the grammaticality and the acceptability of some combinations (as appears to be the case for many NOM+ACC combinations in subject position), the reasons for this are usually clear

when other data are considered. For example, the data from both the corpus study and the judgement test indicate that speakers have preferences regarding the order in which conjuncts are used. The ones seen in the corpus study were summarised in section 4.6.3 and are shown in this chapter to also have an influence on the perceived acceptability of certain combinations. Angermeyer and Singler (2003); Grano (2006); Parker, Riley, and Meyer (1988); Woolford (1999) and Quinn (2005) *inter alia* develop different hierarchies regarding the order in which different pronouns are used that could be applied to this issue: none will be discussed at this point in time due to restrictions in the scope of this thesis, although we will see in section 6.4.4 that feature hierarchies may play a role in other ways in conjunction as well.

It is of course possible that the attested ordering preferences may be the result of something other than a pronominal hierarchy: one alternative explanation is that conjuncts are ordered to minimise ambiguity or so-called “garden path” sentences (as exemplified in 80 by the conjunction of a feminine pronoun with a lexical DP).

80. (a) **Maria and her** have been fighting ever since she got here.
 (b) **Maria and her** parents have just moved in next door.

As the cause of these ordering preferences does not affect the underlying grammaticality of the combinations in question, but merely alters their perceived acceptability, I go no further into the topic here. It is sufficient to have highlighted that they need to be considered when analysing data such as these.

5.7.2 Individual data

In this section, I consider some conclusions that can be drawn from an examination of the data provided by individual speakers that cannot necessarily be seen in the group data. In (76), I identified the information that the judgement test data needed to provide. We have been able to reach a conclusion regarding which case forms are possible and the syntactic positions in which they are possible (thereby showing that variation is possible, at least in subject position), but we still have not identified whether the attested variation is inter- or intra-speaker: this section addresses this issue.

Looking at the data provided by each participant enables us to see which combinations are accepted by individual speakers. Table 5.22 gives the summarised results for each participant.

Participant Number	NOM+NOM	NOM+ACC	ACC+ACC	ACC+NOM
4			*	*
8	*	*	*	*
9				
11	*		*	*
12	✓		✓	*
15	*	*	*	*
16	✓	✓	✓	
17	✓			
18	✓		*	*
19	*		*	*
20			*	
21			*	*
24	*		*	*
27	✓	✓		*
28	✓	✓	✓	*
29	✓	✓		
31		*	*	*
32	✓	✓		
36	✓	*	✓	
37	✓	✓	✓	
38		*	*	*
39	✓	✓	✓	
41		*	*	*
42			✓	*
43				
45		*	*	*
46	✓		*	*
49	*	*	*	*
56		*	*	*
60	✓	✓		
61	✓		✓	
62	✓	✓	✓	*
63	✓		✓	
67		*	*	*
69	✓	*		*

Table 5.22: Individual acceptability preferences of subject–position case forms

The responses given for each combination were examined to determine the average rating for that combination, at which point the combinations were grouped by case form (i.e., NOM+NOM, NOM+ACC, ACC+NOM and ACC+ACC) and a decision made regarding whether the participant accepted that set of case forms or not²¹. A

²¹The data for participants 4 – 32 are based solely on their acceptance or rejection of the 3.SING+3.PL group, as the majority of the combinations rated by this group involved *you*, which does not show contrastive morphological case and as such, cannot be used for data in this section. As several participants in the pilot study stated a dislike of conjoining a singular and a plural pronoun and the corpus study suggested a more widespread tendency to avoid

majority of ratings of 5 or 6 was taken to show overall acceptance whilst a majority of 1 and 2 showed general rejection. Sets where there was no clear acceptance or rejection (i.e., either when the majority of ratings were 3 or 4, or when there was no clear majority of any kind) are shown by a blank cell.

We can see that there are several participants (e.g. 8 and 49) who do not accept any case sets and others (such as 43) who do not produce clear judgements on any sets (suggesting, perhaps, that these participants did not engage with the test and gave random responses, rather than following the instructions they were given). Once these participants have been removed from consideration (a justifiable move, given the tendency observed in the pilot judgement task for some speakers to reject all forms of conjunction due to a dislike of the structure), there are several conclusions that can be drawn.

Firstly, virtually every speaker who rejected NOM+NOM combinations also rejected all other combinations. The only possible exception to this is participant 42, who clearly accepts ACC+ACC combinations, but did not provide a consistent judgement of NOM+NOM combinations. However, the judgements given by this participant were relatively inconsistent, with several combinations being given ratings of both 2 and 5. It is possible, therefore, that this participant was reacting to some other (unidentified) factor and that this reaction is influencing his judgements more than the case forms of the conjuncts. Given that only one participant showed this trend, I feel that it is justifiable to state that all participants who accept any form of conjunction accept NOM+NOM combinations.

The second observation is that no participants accepted ACC+NOM combinations, adding weight to the conclusion (see section 5.7.1) that ACC+NOM combinations are ungrammatical. There were a few participants for whom it was impossible to draw a conclusion regarding whether this set was acceptable or unacceptable. However, many of these participants either rated very few combinations as unacceptable (suggesting that they may have a greater tolerance for ungrammaticality than many other speakers) or gave the majority of ratings as 3 or 4. In addition, participants 36 – 69 had *them and I* as one of their ACC+NOM combinations, and we know from both the corpus study and the group judgement data that combinations involving *I* as the second conjunct behave differently from other combinations.

The data provide clear evidence of intra-speaker variation. As table 5.23 shows, there are a number of participants who accepted all three grammatical variants. It is therefore necessary for any analysis of conjunction (in English, at least) to be able to account for intra-speaker variation and the generation of three variants within a single grammar.

such combinations (see section 4.6.3), it is possible that the judgements attributed to these participants are more negative than would have been the case if they had judged a wider range of combinations. This methodological issue does not have an impact on the point being made in this section, however.

Participant Number	NOM+NOM	NOM+ACC	ACC+ACC	ACC+NOM
16	✓	✓	✓	
28	✓	✓	✓	*
37	✓	✓	✓	
39	✓	✓	✓	
62	✓	✓	✓	*

Table 5.23: Participants who accept three of the four potential variants

There is also evidence of inter-speaker variation. We have already seen that some speakers permit three variants in subject position, whilst others do not accept any form of conjunction. In addition to this, we can tentatively identify three more groups of participants: one which allows NOM+NOM and NOM+ACC but not ACC+ACC (table 5.24); another which accepts NOM+NOM and ACC+ACC but not NOM+ACC (table 5.25); and a third which accepts only NOM+NOM (table 5.26).

Participant Number	NOM+NOM	NOM+ACC	ACC+ACC	ACC+NOM
27	✓	✓		*
29	✓	✓		
32	✓	✓		
60	✓	✓		

Table 5.24: Participants who accept NOM+NOM and NOM+ACC

Participant Number	NOM+NOM	NOM+ACC	ACC+ACC	ACC+NOM
12	✓		✓	*
36	✓	*	✓	
61	✓		✓	
63	✓		✓	

Table 5.25: Participants who accept NOM+NOM and ACC+ACC

Participant Number	NOM+NOM	NOM+ACC	ACC+ACC	ACC+NOM
17	✓			
18	✓		*	*
46	✓		*	*
69	✓	*		*

Table 5.26: Participants who do not accept variation

It is interesting to note that, whilst there are multiple speakers who clearly reject all combinations but NOM+NOM ones, the data are less defined for the participants shown in tables 5.24 and 5.25. These speakers clearly accept two of the three grammatical variants, but only one (participant 36) outright rejects the third. It is therefore not possible to determine with any degree of certainty whether these speakers accept or reject the third variant. As a result, there are two possible

ways to analyse the data: firstly, that the speakers in these groups have the same grammar as those in table 5.23 and can generate all three grammatical variants, but for some reason find one less acceptable than the others; or alternatively, that speakers in these groups can only generate two of the three possible variants. It is impossible to know, from these data, which hypothesis is more likely to reflect reality. As the primary goal of this thesis is to account for how all attested variants are accounted for within a single grammar (i.e., the intra-speaker variation), I do not dedicate any more time to determining which of these possibilities represents reality: I investigate how both could be accounted for in section 6.6.3, thereby leaving open the discussion for further research.

To summarise, it is necessary for a theory of case in English conjunction to be able to explain how a single speaker can generate NOM+NOM, NOM+ACC and ACC+ACC combinations. Whilst not all speakers accept all three variants, the existence of multiple speakers who do means that we ideally need to be able to account for the existence of all three within a single grammar²².

It is obvious that not only are these variants the result of intra-speaker variation, but that there is also variation to be seen between different speakers (not only in terms of whether or not they accept specific combinations, but also in terms of the number of variants that they accept and their preferences for certain variants over others). Any analysis must therefore also be able to account for these inter-speaker differences.

5.8 “And I”

We have seen in both this chapter and the previous one that *I* appears in positions where no other NOM DP is found, namely as ACC+*I* in both subject and object positions. Given that no other ACC+NOM combinations appear to be acceptable in either subject or object position, I suggest that these combinations may be generated in a different way to all others. I therefore argue that ACC+NOM combinations are in general ungrammatical in both subject and object position, apart from *and I* combinations.

The apparently NOM case of *I* cannot in theory be linked to the value of its syntactic uCase feature, as we assume that there is no way for NOM to be generated on either conjunct in object position (as NOM is assigned as a result of a probe-goal relationship between a DP and T: see sections 2.3.3 and 6.4). It cannot be the result of default morphological case either, as this is believed to be ACC in English (Schütze 2001). If it is not linked to either the syntactic Case of the DP or default case, we must find an alternative explanation for how these combinations are produced: they are too common to be explained away as being speech errors, and as such must be generated somehow by the grammar.

²²The other possibility being that these speakers possess multiple grammars, a concept discussed and rejected in section 2.2.

One possibility is that *and I* is being generated as a linguistic chunk²³. A linguistic chunk is a sequence of words or other linguistic elements that is retrieved as a complete unit from the lexicon, without needing to be generated by the grammar each time that it is used (Weinert 2010; Conklin and Schmitt 2012; Wray 2012). As such, it is not analysed by the grammar in the same way as other phrases, and so may feasibly use word forms, such as nominative forms in object position, that would normally be expected to cause the derivation to crash (Wray and Perkins 2000; Wray 2002). The use of *and I* as a chunk (as suggested by Angermeyer and Singler 2003 and Boyland 2001, *inter alia*) is one potential explanation for why combinations such as *them and I* are perceived as being acceptable by many speakers, even though other ACC+NOM combinations are ungrammatical: the first conjunct is generated in the same way as all other combinations (explaining why NOM+*I* combinations appear to be ungrammatical in object position) and then *and I* is inserted without being analysed in any way. This would explain the lexical specificity of the construct: if *and I* is generated as a chunk, we would not expect other NOM pronouns to function in the same way.

An alternative possibility, taken from Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999), is that any combinations involving *and I* are generated in exactly the same way as all others, but then a lexically-specific transformation occurs in the morphological component. I propose that some speakers may have two possible VIs for Caseless 1.SING pronouns **when in the complement position of &** that allows them to choose between morphologically default ACC and lexically determined²⁴ NOM forms. This variation could be the result of the Subset Principle (Halle 1997), which claims that competition between multiple eligible VIs is generally “won” by the VI with the most matching features. By extension, therefore, we might expect to see variation when two VIs have the same number of matching features. This proposal bears some similarity to the one developed in Parrott (2007) (see section 3.3.3 for a detailed discussion of this analysis), with the major difference being that Parrott proposes that all combinations, not just those involving *and I*, are generated in this way. As my primary objection to Parrott’s analysis was the extent to which it would have to be extended to account for the generation of all combinations, rather than the theoretical concept itself, this seems like a plausible explanation for how *and I* is generated. I therefore suggest that this is the correct analysis, although it may be possible to argue for that *and I* is a chunk, should the reader so desire.

5.9 Chapter summary

In this chapter, I have extended upon the results and conclusions drawn from the corpus study data discussed in chapter 4 by undertaking an acceptability

²³Or formulaic sequences/lexical bundles, depending on the terminology adopted: there are some theoretical differences between these terms, but for the purposes of this thesis, the basic definition will suffice. See Wray and Perkins (2000) for a discussion of the differences between the terms.

²⁴I.e., the NOM form is only possible when & is present as well

judgement test. After a discussion of the advantages of a judgement test and considering the specific information that this test needed to provide, I reviewed the methodology adopted for both a pilot and the main study, showing how the two differed and why.

It is clear that there is a potentially confusing distinction between what is **grammatical** and what is **acceptable**, and that this distinction needs to be carefully considered when determining the grammaticality of certain combinations. One factor that appears to influence the acceptability of some combination is the clear preference that speakers have for specific conjunct orders: *you* is generally used as the first conjunct and a plural pronoun is placed in second conjunct position when conjoined with a singular one. These are trends, rather than absolute rules, but they appear to influence the perceived acceptability of non-conforming combinations.

As a result of this test (in combination with the corpus study data), I have shown that variation exists in all parts of the pronominal paradigm, with NOM+NOM, NOM+ACC and ACC+ACC combinations being used in subject position. ACC+NOM combinations do not appear to be possible in either subject or object position. There is less variation in object position, with the only combinations other than ACC+ACC ones that are available being those using *I* as the second conjunct. From now on, this thesis focusses on case variation in subject position.

I have also shown evidence of both inter- and intra-speaker variation. There are some speakers who accept all three of the variants outlined above (NOM+NOM, NOM+ACC and ACC+ACC), whilst others only accept one (or possibly two). There were also some participants in my judgement test who appeared not to accept any, suggesting that they may reject the structure entirely. This suggestion is supported by evidence from the pilot test, when several participants stated that they actively disliked pronominal conjunction and rarely, if ever, used it. It is therefore necessary to account for two things: i) how all three variants can be generated within a single grammar; and ii) how the grammar of some speakers is constrained to allow the generation of only one or two variants.

Chapter 6

Case in Conjunction

We saw in chapters 4 and 5 that both inter- and intra-speaker variation are possible, with some speakers accepting three different variants in subject position: NOM+NOM, NOM+ACC and ACC+ACC. There is little evidence of variation in object position, with speakers accepting only ACC+ACC combinations. In this chapter, I consider how best to account for this variation within the theoretical framework outlined in section 2.3, showing that none of the analyses discussed in section 3.3 can satisfactorily account for both the generation of all and only the attested variants, and for the existence of both types of variation. I therefore develop five alternative analyses and show that one in particular can explain both how the variants are generated and that both inter- and intra-speaker variation can be accounted for by the same analysis.

6.1 Chapter outline

In this chapter, I return to the existing accounts of case assignment in conjunction, showing in section 6.2 that they are unable to account for all of the data presented in chapters 4 and 5. I highlight in section 6.3 the uncertainty regarding the ways in which (both interpretable and uninterpretable) morphosyntactic features interact in conjunction phrases, and show that the interpretable features of both conjuncts can agree (whether directly or otherwise) with the uninterpretable features of T.

In section 6.4, I develop five alternative syntactic accounts based on the probe-goal relationship between T and either the functional head & or the first conjunct (DP₁) and show that, when combined with optional feature underspecification (Adger 2006), it is possible to account for the generation of all attested variants within a single grammar whilst blocking the generation of any unattested variants. I compare these analyses in section 6.5, showing that whilst they all rely on a number of theoretical assumptions, these assumptions are not the same for all. I argue in favour of the analysis developed in section 6.4.4, which claims that DP₁

and DP₂ form a chain (triggered by the presence of &) and that T probes DP₁ directly. This analysis allows me to account for the generation of all attested variants within the grammar of a single speaker, whilst adopting only the most justifiable theoretical assumptions concerning case and conjunction.

I then consider how best to resolve any undiscussed issues (such as how the attested inter-speaker variation can be accounted for) in section 6.6 and conclude this chapter with a brief discussion of areas into which my analysis could be extended, such as other contexts in which non-standard case forms can be used in English.

6.2 Conflicts between existing accounts and the data

In section 3.3, I reviewed a number of competing accounts regarding how best to explain the mechanisms behind case assignment in conjunction phrases. It is possible to divide these accounts into groups based on the claims that they make regarding which case forms should be grammatical and the nature of any variation that they can account for. These groups were summarised in (68), repeated here as (81).

81. (a) Conjunction breaks standard Case-assignment relationships and only allows generation of ACC – all other case forms are not part of a speaker's natural grammar (Emonds 1986; Parrott 2007; Sobin 1997).
 - i. We might expect to see a far higher proportion of ACC+ACC combinations in both subject and object position than any other set of combinations.
 - ii. All speakers should accept ACC+ACC combinations, regardless of whether or not they accept any others.
- (b) Syntactic Case constraints interact with other syntactic/morphological constraints. Quinn's (2005) theory of Relative Positional Coding predicts that:
 - i. ACC+ACC, NOM+NOM and NOM+ACC (if NOM is not *I*) should be possible in subject position.
 - ii. ACC+ACC, NOM+*they/I* (where NOM is not *I*), and NOM+ACC (again, where NOM is not *I*) should be possible in object position.
 - iii. Variation can only be intra-speaker.
- (c) & is a functional head that affects how Case is assigned to its DP conjuncts. Johannessen (1998) claims that:
 - i. NOM+NOM, NOM+ACC and ACC+ACC combinations are grammatical in subject position, but only ACC+ACC is grammatical in object position.
 - ii. All variation is inter-speaker.

In chapters 4 and 5, I showed that the following conclusions can be drawn about case in English conjunction:

82. (a) Possible case forms in subject position:
 - i. NOM+NOM
 - ii. ACC+ACC
 - iii. NOM+ACC
 - iv. ACC *and I*¹
- (b) Possible case forms in object position:
 - i. ACC+ACC
 - ii. ACC *and I*
- (c) Both inter- and intra-speaker variation are attested in subject position.
 - i. All speakers who accept any form of conjunction² accept NOM+NOM combinations.
 - ii. Some may then also accept either NOM+ACC or ACC+ACC combinations, but not both (although the data is unclear about this point: see section 5.7.2).
 - iii. Some accept all three variants.

Given that not all speakers accept ACC+ACC in subject position, we are forced to conclude that the statement common to Emonds (1986), Sobin (1997) and Parrott (2007)³ – that ACC is the default form in both syntactic positions – is unlikely to be correct and therefore that these analyses are empirically unsatisfactory. This conclusion is further supported by the apparent distinction between NOM+ACC and ACC+NOM combinations, which would be difficult to explain under any of these analyses. This leaves us to decide between Quinn (2005), te Velde (2006), Angermeyer and Singler (2003) and Johannessen (1998).

Quinn (2005), Angermeyer and Singler (2003) and te Velde (2006) all make incorrect claims regarding which combinations can be produced – contrary to the conclusions drawn from my data, Quinn suggests that NOM forms are possible in object position under certain circumstances, whilst te Velde claims that ACC+NOM combinations are possible in subject position. In addition, te Velde's analysis cannot account for intra-speaker variation. In contrast to the other two analyses, Angermeyer and Singler (2003) do not incorrectly predict that any grammatical combinations are ungrammatical, but their analysis also cannot explain how NOM+ACC combinations can be generated.

¹See section 5.8 for a discussion of why I consider these combinations to function differently to all others, and a proposal of how they might be generated.

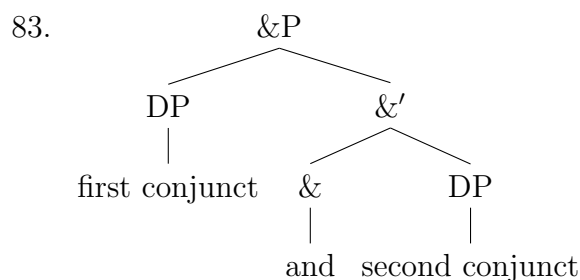
²As discussed in section 5.7.2, there are some speakers who reject all forms of pronominal conjunction, regardless of the case forms involved. I assume that these speakers find pronominal conjunction unacceptable rather than ungrammatical, but there is no way of determining (from the data collected in this study) what their underlying grammars might look like.

³See section 3.2.2 for details and discussion of all references made in this chapter.

The main empirical issue with Johannessen’s (1998) analysis is that it cannot account for intra-speaker case variation: as we have seen, English exhibits variation between NOM+NOM, NOM+ACC and ACC+ACC combinations in subject position, potentially within the grammar of a single speaker. Under Johannessen’s analysis, this would entail English variably blocking and allowing case assignment to &P, as well as the optional stipulation that both conjuncts need to bear the same Case feature.

It would seem, therefore, that on empirical grounds alone, none of the existing analyses can satisfactorily account for the generation of all of the attested case forms (and exclude the production of any unattested ones) as well as for the possibility of both inter- and intra-speaker variation. In the remainder of this chapter, I develop some alternative analyses that draw on case theory, the syntactic structure of &P and a Minimalist understanding of intra-speaker variation.

Until now, little has depended on the syntactic structure assumed for &P – as discussed in section 3.2.2, there are several proposed structures in existence. We saw that three analyses – the recursive complement analysis (Kayne 1994; Johannessen 1998), the recursive specifier analysis (Collins 1988a,b,c) and the adjunction analysis (Munn 1993; te Velde 2006) – could account for the majority of facts about conjunction as outlined in Progovac (1998a) and discussed in section 3.2.1 – the apparent constituency of & and the second conjunct; the c-command relationship between the first and the second conjuncts etc. – within the theoretical framework adopted in this thesis (see section 2.3). In section 3.2.2, I argued that the recursive complement analysis was the most empirically satisfactory and theory-neutral of the various possibilities. The following structure of &P is therefore assumed in the remainder of this thesis.



6.3 Features in conjunction

One issue that I have yet to discuss is that there are at least two morphosyntactic features other than Case that are intrinsically involved in the Agree relationship between &P and T (or v): φ and EPP-features. There is also some confusion regarding whether & has inherent features of its own, or whether it somehow obtains features from its conjuncts. In this section, therefore, I discuss these two issues, covering the first in section 6.3.1 and the second in section 6.3.2.

6.3.1 Features other than Case

If we assume Case theory as outlined in section 2.3.3, Case and EPP-features are intrinsically linked – a uCase feature makes the relevant features on a DP a viable target for φ -feature probing, and the EPP can be satisfied as a reflex of this probing. As long as there is a uCase feature on the DPs, therefore, we do not need to consider the EPP-feature in any detail⁴. The one issue that needs to be considered is that it is generally only the DP whose features are probed that moves to satisfy the EPP-feature. However, as the Coordinate Structure Constraint states, extraction from &P is impossible: the entire &P moves to satisfy the EPP, not just one conjunct.

84. COORDINATE STRUCTURE CONSTRAINT (Ross 1967: 98–99)

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

The situation with regard to how φ -features affected the agreement morphology of T is considerably more complicated than the satisfaction of the EPP-feature appears to be. In order to investigate this issue more thoroughly, it is necessary to consider each φ -feature individually and in multiple languages⁵. This causes problems in its own right: as English does not have sufficient verbal morphology to determine the impact of different φ -feature values, it is necessary to examine other languages. However, I have been unable to find any languages with well-developed verbal morphology that also permit case variation in conjunction, meaning the value of data taken from morphologically well-developed languages depends on the reader's belief surrounding the universality of the structure. I proceed with the assumption that the same patterns would be seen if English showed the relevant verbal morphology on the basis that Number agreement appears to behave in roughly the same way in both sets of languages (in general, not just with regard to conjunction). There is an alternative possibility: namely, that it is the limited amount of overt verbal morphology that makes case variation in English conjoined pronouns possible, and that the φ -features of languages with limited verbal morphology behave somehow differently from those with well-developed morphology. However, whilst I believe the first half of this hypothesis may be accurate, I see no reason to suggest that φ -features behave differently purely on this basis. I therefore proceed on the assumption that evidence from other languages can be transferred across to English, but nothing crucial hinges on this assumption.

As we saw in section 3.2.1, &P triggers obligatory [Number:Pl] on T unless it is a post-verbal subject (at which point T can be either plural or agree with DP₁):

⁴As we will see in section 6.4, this inter-dependency has the potential to cause issues for the analyses developed in this thesis. I discuss a possible way of resolving the issues created in section 6.6.2.

⁵Whilst I have considered several languages, the data in this section do not represent a thorough cross-linguistic survey and therefore should not be taken as such.

85. (a) [_{&P}A man and three women] *was/were waiting in the queue.
 (b) [_{&P}Three women and a man] *was/were waiting in the queue.
 (c) There ?was/?were [_{&P}a man and three women] waiting in the queue.
 (d) There *was/were [_{&P}three women and a man] waiting in the queue.

The distinction in acceptability of singular verbal agreement between (85c) and (85d) suggests that the φ -features of DP₁ may be more closely linked to T than those of DP₂ (whether through direct agreement or indirect through their relationship with &P). However, it is clear that both conjuncts must somehow be related, otherwise we would expect obligatory singular agreement when DP₁ is singular, which is clearly not the case (as demonstrated by 85a).

Person features provide further evidence that both conjuncts agree either directly or indirectly with T. Even though this is seen more clearly in Romance languages (with French used in the examples here) than in English due to the different morphological distinctions in these languages, we intuitively know that *Marie and I* refers to *we*, not *she* or *I* (indicating that the same may be happening in English as in the French examples given here, even though there is no overt verbal morphological evidence to support this).

86. French

- (a) Marie_{3.SING} et moi_{1.SING} sommes_{1.PL} belles
 Marie_{3.SING} and I_{1.SING} are_{1.PL} beautiful.
 ‘Marie and I are beautiful’.
- (b) Marie_{3.SING} et toi_{2.SING} êtes_{2.PL} belles
 Marie_{3.SING} and you_{2.SING} are_{2.PL} beautiful.
 ‘You and Marie are beautiful’.
- (c) Marie_{3.SING} et sa sœur_{3.SING} sont_{3.PL} belles
 Marie_{3.SING} and her sister_{3.SING} are_{3.PL} beautiful.
 ‘Marie and her sister are beautiful’.

Regardless of conjunct order, 1.SING/PL+2 and 1.SING/PL+3.SING/PL combinations appear to trigger first person verbal morphology, 2+3.SING/PL result in second person morphology and 3.SING/PL +3.SING/PL generate third person morphology. In this situation, then, it appears that the Person features of both DP₁ and DP₂ are somehow linked to the uPerson feature on T.

We see the same pattern when we examine how the Gender feature of the conjuncts agrees with verbs and adjectives in Italian: regardless of conjunct order, a masculine DP obligatorily triggers masculine morphological agreement.

87. Italian

- (a) Maria_{FEM} e suo fratello_{MASC} sono arrivati
 Maria_{FEM} and her brother_{MASC} are arrived_{MASC,PL}.
 ‘Maria and her brother have arrived’.
- (b) Marco_{MASC} e sua sorella_{FEM} sono arrivati_{MASC,PL}
 Marco_{MASC} and his sister_{FEM} are arrived_{MASC,PL}.
 ‘Marc and his sister have arrived’.
- (c) Maria_{FEM} e sua sorella_{FEM} sono arrivate_{FEM,PL}
 Maria_{FEM} and her sister_{FEM} are arrived_{FEM,PL}.
 ‘Maria and her sister have arrived’.

As the Person of both conjuncts can have an impact upon the morphology of T and the Gender of both conjuncts can affect the morphology of the larger phrase as well, we can conclude that T must somehow enter into an agreement relationship (direct or otherwise) with both. We have also seen indications that T appears to be more closely related to DP₁ than DP₂, thanks to the optional singular verbal morphology when &P is post-verbal and DP₁ is singular. However, there is no way of telling (from these data) whether T probes the conjuncts directly, or whether it agrees with & after the features of the conjuncts are somehow instantiated upon &.

6.3.2 What are the morphosyntactic features of &?

It must therefore be asked whether & has its own features (φ and/or uCase), obtains them through agreement with one or both conjuncts, or does not bear any features that are relevant to this analysis.

It could be suggested that & has some inherent morphosyntactic features. We saw in section 3.2.1 that a pre-verbal subject conjunction phrase triggers obligatory plural verbal agreement, even when both DP conjuncts are singular. This suggests that & might have an inherent [Number: Plural] feature. However, given the discussion in section 6.3.1, it appears that T forms some sort of relationship with both conjuncts, rather than just &, as the value of its u φ -features can be affected by those of both DPs. This suggests that & may not have its own features, but rather that either it somehow obtains features from the conjuncts, or that T probes the conjuncts directly.

If T (or v) probes &, rather than the DP conjuncts, to value its u φ -features (whether & is inherently specified for Number or it obtains features from its conjuncts) we may have to assume that & is (at least) minimally specified for a uCase feature, as otherwise & would presumably not be visible for probing.

An additional argument against & having its own features is that it can be used to conjoin several types of phrases other than DPs:

88. (a) [_{VP} Running] and [_{VP} jumping] are fun when you're a child.
 (b) Mark was [_{AP} kind] and [_{AP} gentle]
 (c) [_{IP} Matt laughed] and [_{IP} Claire cried] when they were told the news.

There is no reason to suggest that & in (at least some of) these situations would have a uCase feature or any φ -features, especially as it has been shown (see the relevant discussion in section 3.2.1) that &P in such contexts appears to take the categorial features of its conjuncts – i.e., VP, AP or IP. If we argue that & has morphosyntactic features when conjoining two DPs, we must extend this argument to claim that it also has the relevant features when conjoining other phrases. Looking at only English data, we would not expect & to be different depending on the category of phrases it is conjoining, even more so when we take into account that & can conjoin two different categories of phrase:

89. Mike was [_{DP} a kind man] and [_{AP} very friendly]

It would involve less lexical redundancy to suggest that & does not have features that are specific to any one syntactic position. However, this logic is called into question by Kitada (2007) and Zhang (2006), who provide data from languages where different conjunctions are used, depending on the nature of their conjuncts:

90. **Mandarin Chinese** (Zhang 2006: 4)

- (a) Dai Jiaoshou xihuan he pijiu **gen**/*you lü-cha.
 Dai Professor like drink beer **and**/and green-tea.
 “Prof. Dai likes to drink beer and green tea.”
 (b) Dai Jiaoshou shanliang **you**/*gen youmo.
 Dai Professor kind **and**/and humorous.
 “Prof. Dai is kind and humorous.”

91. **Japanese** (Zhang 2006: 10)

- (a) [_{DP}Taroo] –**to** [_{DP}Hanako]
 Taroo –**and** Hanako
 “Taroo and Hanako”
 (b) [_{AP}akaku] –**te** [_{AP}atsui] hon
 red –**TE** thick book
 “the red and thick book”
 (c) [_{CP}musuko-ga sotugyoo sita] –**si** [_{CP}musume-ga yome-ni itta]
 son-NOM graduation did –**and** daughter-NOM bride-DAT went
 “The son graduated and the daughter got married.”

Zhang (2006) presents data from a number of languages that distinguish between DPs and other categories (as well as some such as Chinese that distinguish between

types of DP) with regard to the conjunctions they can select. It may therefore be possible to argue that there are multiple conjunctions in all languages, which have different features depending on the nature of their conjuncts. In English, this would result in LIs with the same phonological representation (and therefore a degree of lexical redundancy).

From the discussion in this section and the previous one, it would seem that the Person and Gender features of both conjuncts can affect the morphology of T (and any other verbs/adjectives in the phrase). There must therefore be some level of agreement between T and both conjuncts, but there is insufficient data to determine whether this agreement is direct or indirect. It would seem likely that there is a closer relationship between T and DP₁ than between T and DP₂, due to the post-verbal subject Number data shown in (85), but this still does not allow us to determine whether T probes DP₁ directly, or whether it probes & (which has previously entered into an Agree relationship with DP₁ and DP₂). It is furthermore possible, although perhaps unlikely, that & has some inherent features of its own, including a uCase feature. Due to the continued uncertainty, I do not make any decisions regarding these issues solely on the basis of the data presented in this section, but rather develop several analyses in parallel, investigating which one allows us to account best for the data whilst relying on the fewest theoretical assumptions that cannot be independently supported.

6.4 How are the attested case forms generated?

As summarised in (82), I showed in chapters 4 and 5 that whilst only ACC+ACC combinations⁶ are accepted in object position, there is attested variation (both inter- and intra-speaker) in subject position, with some speakers accepting three variants: NOM+NOM, ACC+ACC and NOM+ACC. Any analysis therefore needs to be able to account for how all three variants are generated within the grammar of a single speaker (I return to the attested inter-speaker variation in section 6.6.3: for the time being, I consider only intra-speaker variation): something which none of the analyses discussed in section 3.3 can do. Furthermore, subsequent to the discussion in section 6.3.1, it is also necessary for any analysis to be able to explain how T's EPP-feature is satisfied (and why &P moves to satisfy the EPP rather than just DP₁), how the uNumber feature on T agrees with either DP₁ (when a subject &P is post-verbal) or is obligatorily plural, and how both conjuncts contribute to valuing T's uPerson feature.

In this section I develop a number of alternative analyses. Given the uncertainty regarding whether & has an inherent uCase feature, the first analysis explores how the derivation would be most likely to proceed if it does. It will be shown that this requires several important theoretical assumptions that cannot be properly justified. I then move on to consider the consequences of assuming that & does

⁶As long as combinations involving *and I* are treated separately: see section 5.8 for the rationale behind making this decision and a proposal for how these combinations may be generated.

not have any inherent uCase or φ -features. There are four logical ways⁷ that the derivation could look like at this point:

92. (a) T probes DP_1 directly, and has no relationship with DP_2 .
- (b) T probes directly for both DP_1 and DP_2 .
- (c) T probes DP_1 directly, and has an indirect relationship with DP_2 .
- (d) T probes $\&$, which has obtained features from both conjuncts⁸.

At this point, none of the five analyses developed in this chapter are assumed to be any better or worse than each other. They will be assessed solely on the adequacy of their empirical predictions and the number and validity of the theoretical assumptions required to make those empirical predictions. By the end of this section, we will see that the third of these four options can account for the generation of all attested variants, whilst relying on the fewest theoretical assumptions, and is therefore the most plausible of the five analyses developed in this chapter.

6.4.1 Analysis 1: If $\&$ has a uCase feature

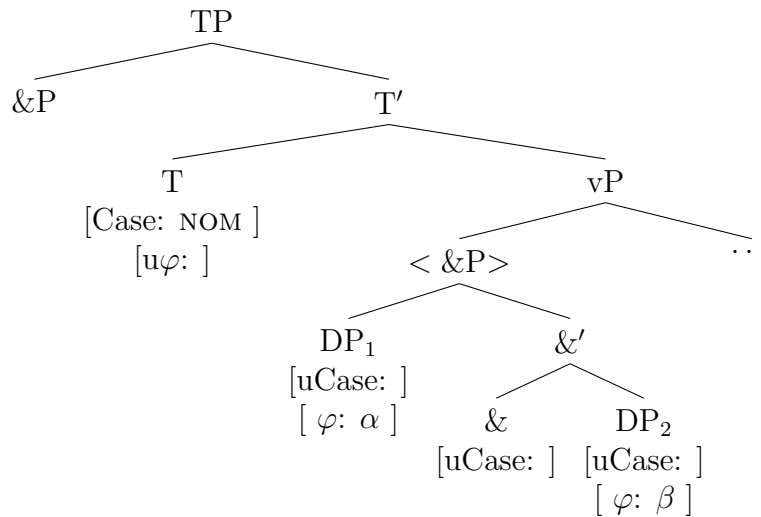
If we assume that $\&$ has a uCase feature of its own⁹ (rather than one obtained from one or both of its conjuncts), we have the following structure for conjoined subject position pronouns (showing only the features¹⁰ and sections of the phrase that are relevant for this part of the derivation process):

⁷There are of course other possible explanations, such as the idea that $\&$ might be an ACC case assigner (with thanks to Andrew Radford (pers. comm.) for drawing my attention to this option). Under this analysis, T would probe DP_1 and value its uCase as NOM. $\&$ would then render DP_2 as ACC, generating NOM+ACC combinations. ACC+ACC combinations would be generated when DP_1 is Caseless, and NOM+NOM combinations would be generated as a result of some sort of “Harmony Constraint” (see section 6.6.3) that forced both conjuncts to have the same case form. I have not considered this option in any detail, as it has the same drawback as that of Johannessen (1998) with regard to explaining intra-speaker variation, and also relies on $\&$ being a Case assigner: as we saw in section 6.3.2, there is no compelling argument that there is more than one LI that relates to $\&$ (in English at least) regardless of whether it is conjoining DPs, VPs, CPs or anything else, and there is little evidence that a VP or CP second conjunct would be assigned ACC Case. Furthermore, it is difficult to see how the other features of the two conjuncts would be linked under this analysis, and we have seen in section 6.3.1 that there appears to be such a link. I therefore investigate only the possibility that the variation is the result of how the morphosyntactic features of $\&$ and its conjuncts interact.

⁸The fifth possibility is that $\&$ has obtained features from only one conjunct, but we know from the evidence presented in section 6.3.1 that this is not a viable option.

⁹Here, I assume that $\&$ is minimally specified for uCase only: as T’s u φ -features are influenced by those of both conjuncts (see section 6.3.1), $\&$ cannot have inherent φ -features: I discuss possible ways in which the φ -features could be resolved below.

¹⁰In this tree, and all subsequent ones in this chapter, I have included an interpretable Case feature on T for the purposes of clarity. It should not be taken to indicate that I am arguing in favour of the existence of such a feature: see section 2.3.3 for the assumptions made about Case theory in this thesis.



93.

Under the version of Case theory described in section 2.3.3, the obvious way for the uCase features on & and the two DPs to be valued would seem to be for T to probe all three simultaneously (Multiple Agree: Hiraiwa 2000, Ura 1996 or similar), as the Defective Intervention Effect (Chomsky 2000: 123) would otherwise mean that the presence of the more local DP₁ would make probing either & or DP₂ impossible.

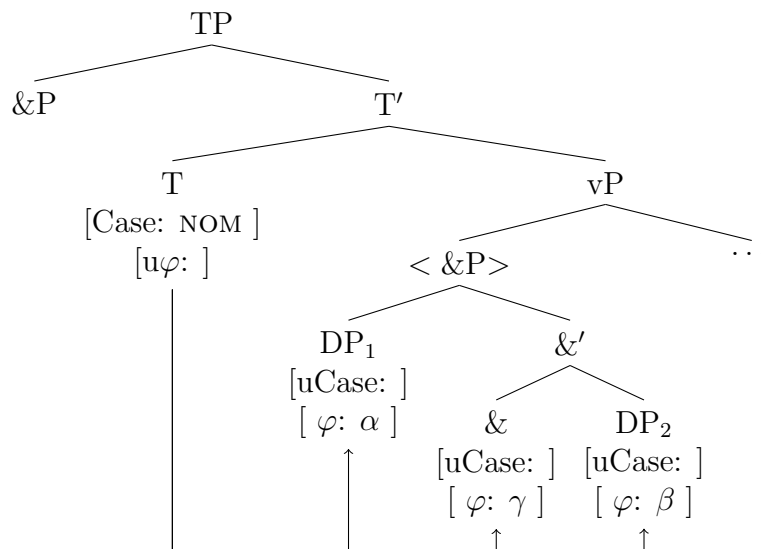
94. MULTIPLE AGREE (Hiraiwa 2000: 69)

“Multiple Agree (multiple feature checking) with a single probe is a single simultaneous syntactic operation: AGREE applies to all the matched goals at the same derivational point *derivationally simultaneously*.”

95. DEFECTIVE INTERVENTION CONSTRAINT (Chomsky 2000: 123)

$$\alpha > \beta > \gamma$$

*AGREE (α, γ), α is a probe and β is a matching goal, and β is inactive due to a prior Agree with some other probe.



96.

When the $u\varphi$ -features on T probe those on DP_1 , & and DP_2 , the uCase features on the three goals are valued by reflex. We would therefore expect all three to receive NOM syntactic Case in subject position (and ACC in object position).

In order to account for the attested intra-speaker variation, I turn to the concept of feature underspecification (Adger 2006). As discussed in section 2.4.3, Adger claims that it is possible to explain some forms of intra-speaker morphosyntactic variation if LIs can be underspecified in the lexicon for the uninterpretable features that they contain. Whilst the presence or absence of an interpretable feature will change the semantic content of an LI, the same is not true for an uninterpretable one. If an uninterpretable feature is needed to satisfy syntactic requirements (such as making a goal active for a probe) then the LI cannot underspecify for it. If it is present, it has to be checked before Spell-Out, otherwise the derivation will crash.

Only & or one the two DPs need to have an active uCase feature to satisfy T's probing requirements: if (for example) DP_1 does not have a uCase feature, it is not an active goal for T's $u\varphi$ -features, and so presumably does not trigger a Defective Intervention effect. Although it is generally assumed that all DPs in A-positions have a uCase feature, this is by no means a universal assumption: see, for example, Danon (2006) for one argument in favour of the possibilities offered by the concept of Caseless DPs.

Up to this point, I have been assuming a direct link between the value of the syntactic Case feature and the morphological case of a DP. If, however, it is possible for a DP to be underspecified for uCase, this link can no longer be maintained. Following Schütze (2001), I propose that English DPs that do not have a uCase feature receive default ACC morphological case.

The optional underspecification of & and the two DPs for uCase gives us eight possible derivations:

DP_1	&	DP_2
Case	Case	Case
No Case	Case	Case
Case	No Case	Case
Case	Case	No Case
No Case	No Case	Case
No Case	Case	No Case
Case	No Case	No Case
No Case	No Case	No Case

Table 6.1: Possible derivations if feature underspecification is possible and & has a uCase feature

As there is nothing preventing T from probing any of the derivations other than the last¹¹, we would expect all phrases with a uCase feature to receive NOM syntactic

¹¹As there is no uCase feature in the final possibility, we expect this derivation to crash as the $u\varphi$ -features on T would presumably be unable to find an active goal – although see section

Case, and all Caseless phrases to receive default morphological ACC case. As a result, the following case forms can be generated in subject position by this analysis:

DP ₁	&	DP ₂	Case forms
Case	Case	Case	NOM+NOM
No Case	Case	Case	ACC+NOM
Case	No Case	Case	NOM+NOM
Case	Case	No Case	NOM+ACC
No Case	No Case	Case	ACC+NOM
No Case	Case	No Case	ACC+ACC
Case	No Case	No Case	NOM+ACC
No Case	No Case	No Case	Derivation crash

Table 6.2: Subject position case forms generated by initial analysis

It could be argued that a Defective Intervention effect (Chomsky 2000) would block T from probing either & or DP₂ when DP₁ is Caseless. If this were the case, then any derivation in which DP₁ is Caseless and either & or DP₂ have a uCase feature would be expected to crash (see table 6.3). This would correctly block the generation of ACC+NOM combinations, but would also incorrectly block the generation of (grammatical) ACC+ACC combinations.

DP ₁	&	DP ₂	Case forms
Case	Case	Case	NOM+NOM
No Case	Case	Case	Derivation crash
Case	No Case	Case	Derivation crash
Case	Case	No Case	NOM+ACC
No Case	No Case	Case	Derivation crash
No Case	Case	No Case	Derivation crash
Case	No Case	No Case	NOM+ACC
No Case	No Case	No Case	Derivation crash

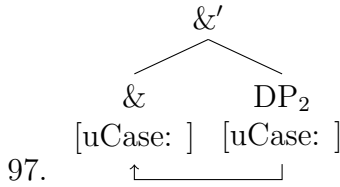
Table 6.3: Subject position case forms generated if the presence of a Caseless phrase blocks probing of a subsequent phrase

Leaving aside the theoretical issues inherent in adopting Multiple Agree (these are discussed further in section 6.4.3), this analysis makes incorrect empirical predictions, as it incorrectly suggests either that ACC+NOM combinations should be grammatical in subject position (table 6.2) or that only NOM+NOM and NOM+ACC combinations are grammatical in subject position (table 6.3). We therefore need to find a way to block T from valuing DP₂'s uCase feature if DP₁ is Caseless.

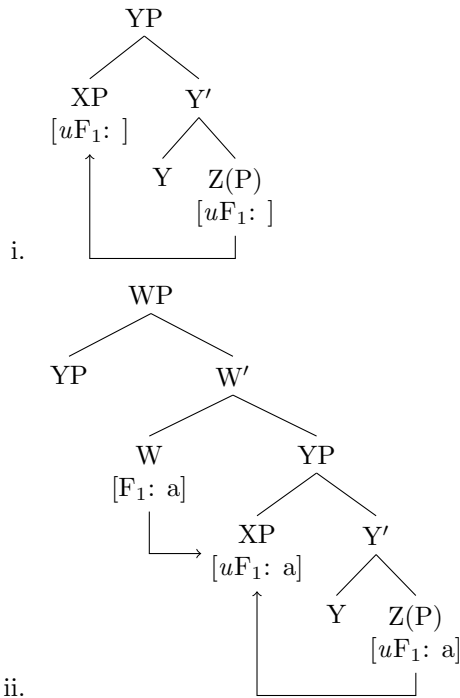
6.6.2 for a discussion of how derivations such as this one might be possible.

Version 2

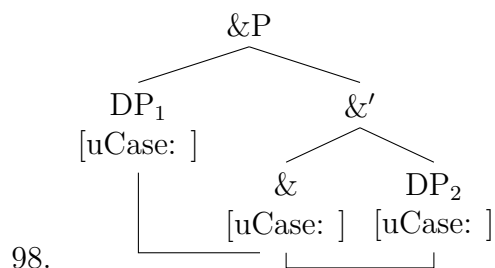
If we cannot assume that the $u\varphi$ -features on T probe those of $\&$ and both DPs independently of each other and values their $uCase$ features as a reflex of this probing, we must find an alternative explanation. One possibility is that $uCase$ features are not valued as a reflex of φ -probing, but rather can act as probes themselves in the same way as other uninterpretable features. This would mean that the derivation would proceed as follows. According to standard “bottom-up” Merge assumptions, the first LI to enter the derivation is DP_2 . As it does not have anything in its c -command domain, there is nothing to check its $uCase$ feature. This does not cause the derivation to crash immediately, as it can wait to probe upwards when there is no suitable goal within its c -command domain (Rezac 2003; Hicks 2009). $\&$ then merges with DP_2 to form $\&'$, and the $uCase$ feature on DP_2 probes that of $\&$, forming a chain with it¹².



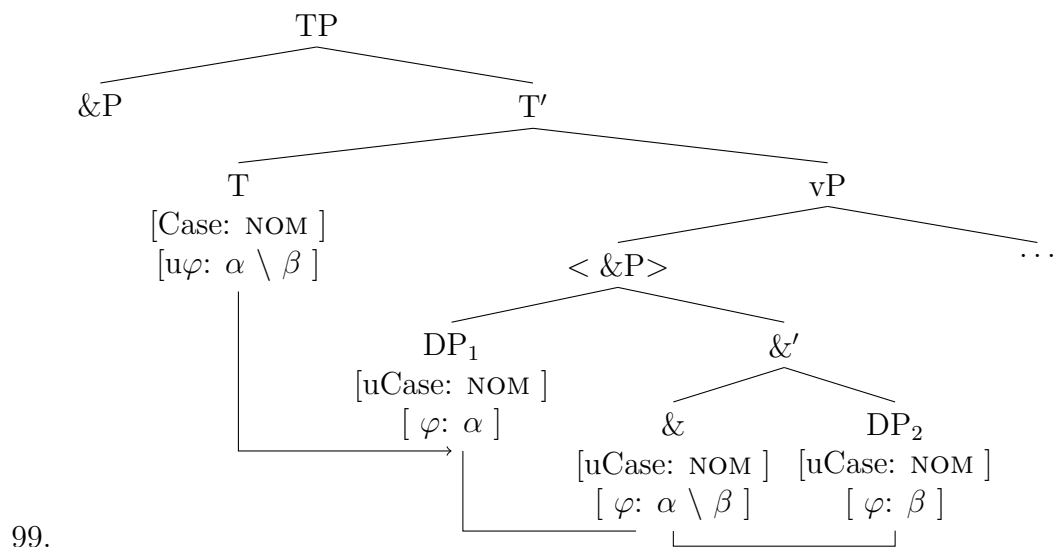
¹²According to Frampton and Gutmann (2000), Adger (2006) and Pesetsky and Torrego (2007), *inter alia*, two uninterpretable features can form a chain through an Agree relationship, when there is no LI bearing the appropriate interpretable feature that is closer to the probing uninterpretable feature. When one of these uninterpretable features enters into an Agree relationship with an interpretable feature (under the probe-goal relationship detailed in section 2.3.2), both uninterpretable features in the chain receive the same value. This is exemplified below, where the uninterpretable features of ZP and XP form a chain, as in (i). When W, which has an interpretable feature matching the uninterpretable features in the chain, is merged, both uninterpretable features in the chain are checked with the same feature value (ii).



When DP_1 merges with $\&'$ to form $\&P$, the $uCase$ feature on $\&$ probes upwards and finds its goal in the $uCase$ feature of DP_1 , forming another link in the chain.



When $\&P$ is merged into a larger phrase (with subject position $\&P$ being used in the example here), T probes DP_1 for a goal for its $u\varphi$ -features¹³ and values DP_1 's $uCase$ feature as NOM as a reflex of this probing. The $uCase$ features on both $\&$ and DP_2 also receive NOM as a result of the chain between them and DP_1 .



So far, then, this analysis results in $NOM+NOM$ combinations in subject position and $ACC+ACC$ combinations in object position. To account for the attested intra-speaker variation, I use the same mechanism of feature underspecification (Adger 2006) as adopted in the first version of this analysis. There are three $uCase$ features in this derivation, but T only requires one of them. This gives us the same eight possible derivations as discussed above.

¹³For the time being, I leave aside the value that T 's $u\varphi$ -features receive. As $\&$ has no inherent φ features (see section 6.3.1), it must somehow obtain them from one or both of its conjuncts, presumably through the chain between them, and has therefore been marked as having the value of both of its conjuncts in the example here. We also know (see the same section) that T can be influenced by the φ -features of both conjuncts, and it has therefore also been marked as having the value of both. I return to this issue shortly.

DP ₁	&	DP ₂
Case	Case	Case
No Case	Case	Case
Case	No Case	Case
Case	Case	No Case
No Case	No Case	Case
No Case	Case	No Case
Case	No Case	No Case
No Case	No Case	No Case

Table 6.4: Possible derivations if feature underspecification is possible and & has a uCase feature: Analysis 1 version 2

If we assume that a DP (or &) without a uCase feature is invisible for probing and therefore does not trigger a Defective Intervention effect, we would expect T to be able to probe DP₁, & or DP₂ in that order of preference. Remember, however, that the chain between conjuncts is triggered by the presence of a uCase feature on **both** conjuncts: therefore if either conjunct does not have a uCase feature, there is no chain. There is no obvious reason (assuming the lack of a Defective Intervention effect) why the uCase feature on DP₂ could not probe that of DP₁, as long as there is no intervening feature on &, forming a chain between DP₁ and DP₂.

We know from the discussion above that when all three have a uCase feature, NOM+NOM combinations are generated in subject position. When DP₁ does not have a uCase feature but both & and DP₂ do, T probes &, meaning that DP₁ receives default ACC case in the morphological component and both & and DP₂ receive NOM (generating ACC+NOM combinations). If DP₁ and DP₂ have a uCase feature but & does not, a chain is formed directly between the two DPs. NOM+NOM combinations are therefore generated. When DP₁ and & have a uCase feature but DP₂ is Caseless, the first two receive NOM from T and DP₂ receives default ACC in the morphological component, resulting in NOM+ACC combinations. If both DP₁ and & are Caseless but DP₂ has a uCase feature, T probes DP₂ directly and the two Caseless elements receive ACC morphological case, producing ACC+NOM combinations. When both DPs are Caseless, but & has a uCase feature, ACC+ACC combinations are generated, as both are assigned morphologically default ACC case. When only DP₁ has a uCase feature, we expect it to receive NOM whilst DP₂ becomes ACC, generating NOM+ACC combinations. The final possibility, where none have a uCase feature, is expected to crash, as T cannot find an active goal and therefore cannot value its u φ -features.

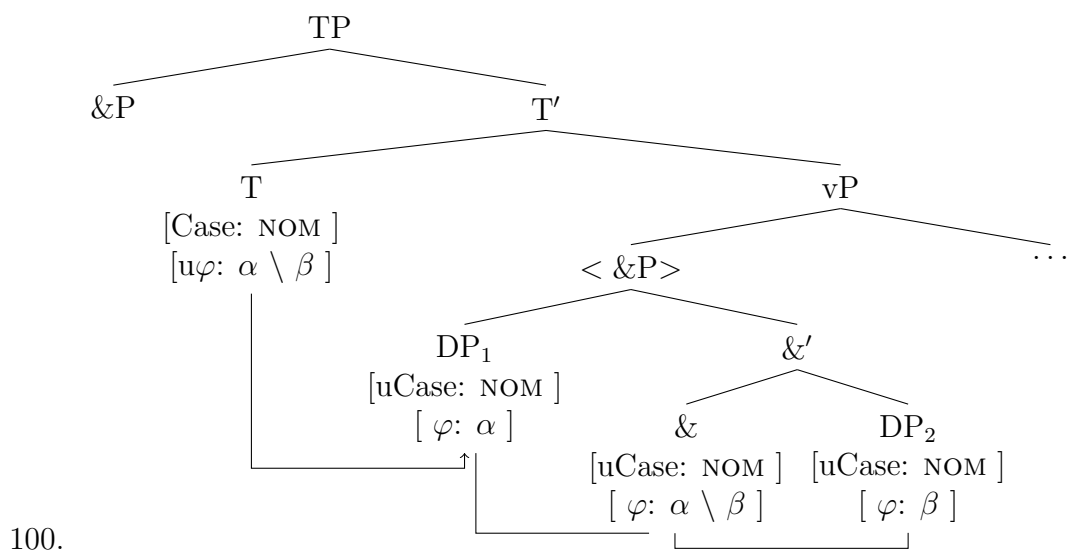
Once again, therefore, this analysis makes incorrect empirical predictions, as it suggests that ACC+NOM combinations can be generated in two different ways. It would appear that the only way to block the generation of these ungrammatical combinations is to assume that the uCase feature on DP₂ can only be valued if DP₁ also has a uCase feature: it cannot agree directly with T, and nor can &.

DP ₁	&	DP ₂	Case forms
Case	Case	Case	NOM+NOM
No Case	Case	Case	ACC+NOM
Case	No Case	Case	NOM+NOM
Case	Case	No Case	NOM+ACC
No Case	No Case	Case	ACC+NOM
No Case	Case	No Case	ACC+ACC
Case	No Case	No Case	NOM+ACC
No Case	No Case	No Case	Derivation crash

Table 6.5: Subject position case forms generated by Analysis 1 version 2

Version 3

The major stumbling block for the second version of this analysis seems to be caused when T probes either & or DP₂. Here, I assume that the same chain is formed between DP₁, & and DP₂ as a result of the upwards probing of the uCase features (see version 2 above). When T merges with &P, it probes DP₁ for interpretable φ -features and values its uCase feature with NOM as a reflex of this probing. As a result of the chain between & and DP₁, the uCase feature on & also receives NOM. The uCase feature on DP₂ then receives the same value, thanks to the chain between & and DP₂.

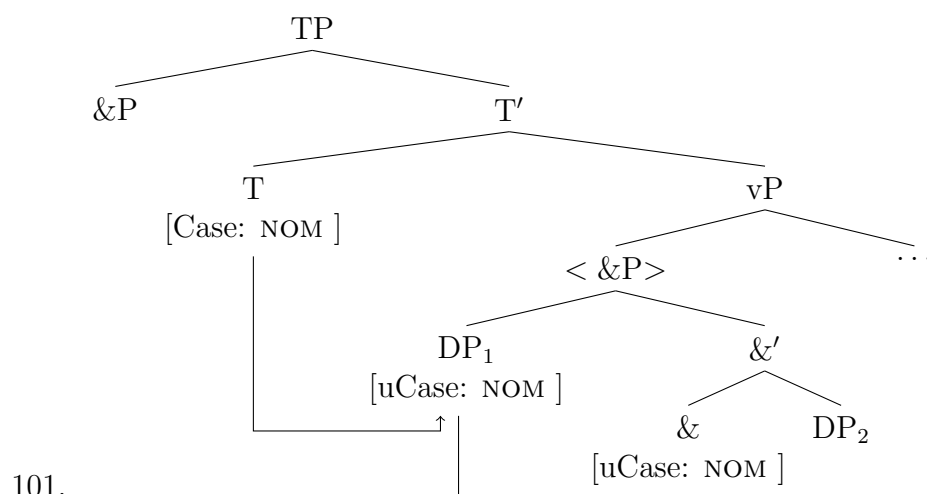


Under this analysis, all subject position conjunction phrases should be NOM+NOM and all object position ones should be ACC+ACC. In order to account for the attested intra-speaker variation, I once again turn to the concept of feature underspecification (Adger 2006). We have seen that it is possible for uCase features on &, DP₁ and DP₂ to receive a value. However, under the analysis currently being developed, only DP₁ enters into a direct Agree relationship with T and as such, the uCase feature on DP₁ is the only one that is required in order to stop the derivation crashing. It is therefore possible to optionally underspecify & and DP₂ for uCase. This gives us four possibilities:

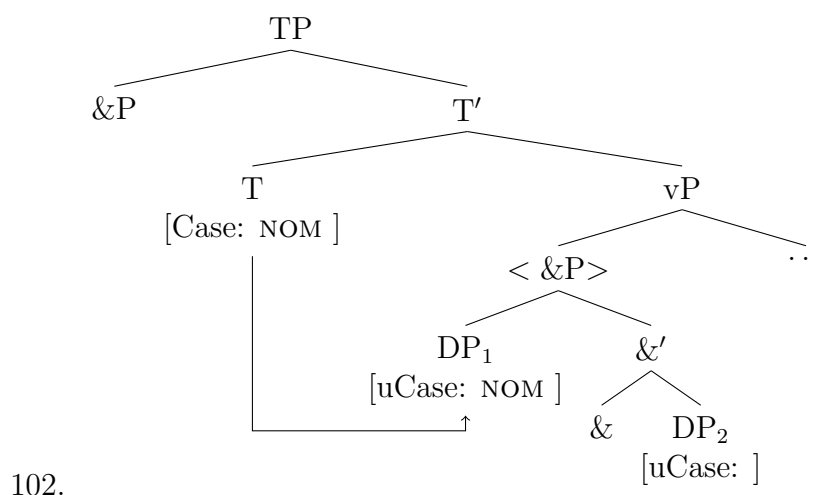
- Both & and DP₂ have a uCase feature.
- & has a uCase feature, DP₂ does not.
- & does not have a uCase feature, DP₂ does.
- Neither & nor DP₂ has a uCase feature.

The first possibility has been covered above – it produces NOM+NOM in subject position and ACC+ACC in object position.

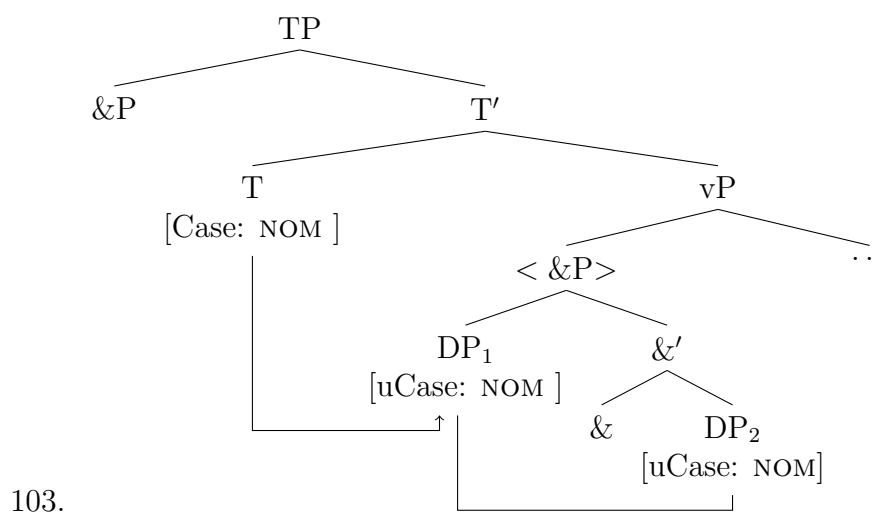
When & has a uCase feature and DP₂ does not, DP₁ and & form a chain. DP₂ does not form a chain with &, as it has no uCase feature. When T probes DP₁, DP₁ receives NOM case and therefore so does &, thanks to the chain between them. DP₂ does not receive any syntactic Case value and as such, receives default ACC case in the morphological component.



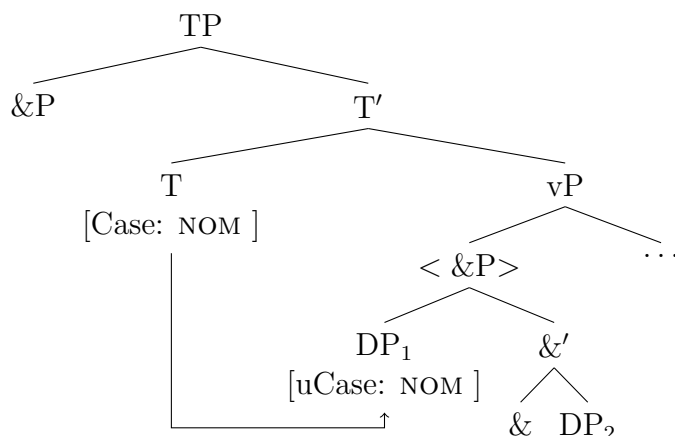
When & does not have a uCase feature but DP₂ does, there are two possible derivations. If Caseless & results in a Defective Intervention effect, neither & nor DP₂ can form a chain with DP₁. The uCase feature on DP₁ receives NOM from T. & does not need to receive any syntactic Case form, as it has no uCase feature. The uCase feature on DP₂ cannot receive any value, as there is no uCase feature on & and the Defective Intervention Constraint (Chomsky 2000: 123) prevents direct agreement between DP₁ and DP₂, and so the derivation crashes at Spell-Out. This is a desirable result, as we have seen that ACC+NOM combinations (which would be generated if it was possible for DP₂ to receive syntactic Case here) are ungrammatical in English.



If, however, the lack of a *uCase* feature on *&* makes *&* inactive in terms of probing, we would not expect it to trigger a Defective Intervention effect. We would therefore expect a chain to form between *DP*₁ and *DP*₂, meaning that *DP*₂ could also receive NOM Case, generating NOM+ACC combinations.



When neither *&* nor *DP*₂ have a *uCase* feature, neither form a chain with *DP*₁. *DP*₁ checks its *uCase* feature through an Agree relationship with *T*. This is the only uninterpretable feature that requires checking, and so the derivation does not crash. Both *&* and *DP*₂, having no syntactic Case value, will receive default ACC morphological case, generating NOM+ACC combinations.



104.

To summarise, by positing the possibility of optional uCase features on & and DP₂, we can explain how the following combinations are generated (where DP₁ receives the appropriate Case from either T or v):

105. (a) Both & and DP₂ have a uCase feature.

- i. In subject position, DP₁ receives NOM, & receives NOM from DP₁, DP₂ receives NOM from & – NOM+NOM.
- ii. In object position, DP₁ receives ACC, & receives ACC from DP₁, DP₂ receives ACC from & – ACC+ACC.

(b) & has a uCase feature, DP₂ does not.

- i. In subject position, DP₁ receives NOM, & receives NOM from DP₁, DP₂ receives default ACC – NOM+ACC.
- ii. In object position, DP₁ receives ACC, & receives ACC from DP₁, DP₂ receives default ACC – ACC+ACC.

(c) & does not have a uCase feature, DP₂ does.

- i. If a Defective Intervention effect is triggered by the presence of Caseless &:
 - A. In subject position, DP₁ receives NOM, & receives default ACC, DP₂ cannot value [uCase:] – derivation crashes.
 - B. In object position, & receives ACC, DP₁ receives default ACC, DP₂ cannot value [uCase:] – derivation crashes.
- ii. If a Defective Intervention effect is not triggered by Caseless &:
 - A. In subject position, DP₁ receives NOM, & receives default ACC, DP₂ receives NOM from DP₁ – NOM+NOM.
 - B. In object position, DP₁ receives ACC, & receives default ACC, DP₂ receives ACC from DP₁ – ACC+ACC.

(d) Neither & nor DP₂ have a uCase feature.

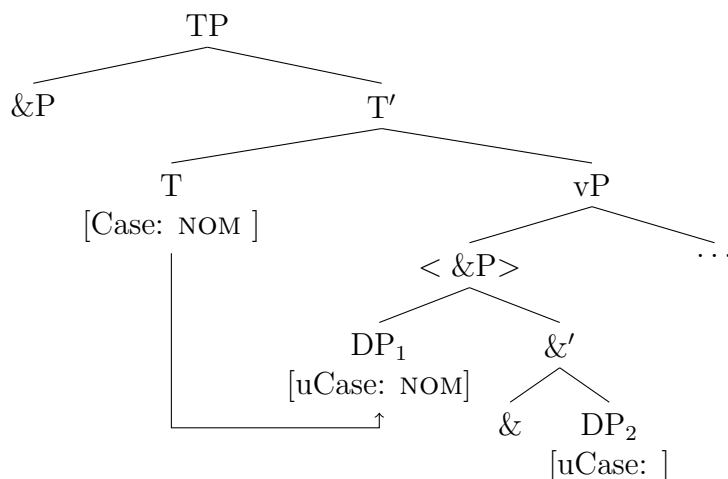
- i. In subject position, DP₁ receives NOM, & receives default ACC, DP₂ receives default ACC – ACC+ACC.
- ii. In object position, DP₁ receives ACC, & receives default ACC, DP₂ receives default ACC – ACC+ACC.

In subject position, therefore, NOM+NOM and NOM+ACC can be generated. Only ACC+ACC can be generated in object position, although there are multiple ways of generating it (given the morphophonological ambiguity between syntactic ACC and default morphological ACC in English, it is impossible to determine which combinations are the result of which type of case). However, as we saw in chapters 4 and 5, ACC+ACC combinations are also grammatical in subject position for many speakers, meaning that this version of this analysis is also empirically unsatisfactory.

It also rests on a theoretical assumption which may prove to be problematic: namely, that & has its own morphosyntactic features. We discussed in section 6.3.2 the evidence for and against & having inherent features, and saw that it is difficult to determine which is more likely with regard to Case (and possibly Number), but that & cannot have its own Person and Gender features. If we assume that & has its own features (under this analysis, it would be necessary to assume that it is at least minimally specified for uCase), we then have to explain how & can conjoin VPs and CPs in positions where there is no possibility of valuing uCase. The logical way of doing this would be to posit that there are multiple LIs which all map to the same VI, each of which has the appropriate features for its conjuncts. However, this introduces a large amount of lexical redundancy, which is something that we do not want to encourage unless it can be shown to be unavoidable. It should be remembered, though, that there are languages (e.g. Japanese and Chinese) that have multiple conjunctions, the use of which is determined by the syntactic nature of the conjuncts. Perhaps it is therefore not so unreasonable to assume multiple conjunctions. It would appear that assuming that & is minimally specified for uCase causes more problems than it can resolve, especially given that this assumption does not allow us to explain how all and only the grammatical case forms are generated. I therefore henceforth assume that & is not inherently specified for uCase. As I am only concerned here with pronominal conjunction in English, I leave aside the possibility of multiple conjunctions: even if DPs are conjoined with a specific conjunction that is different to that used by other phrases, there is no reason to assume that different pronominal combinations would use different LIs for &.

6.4.2 Analysis 2: Direct agreement between T and the first conjunct

In this proposal, I assume direct agreement between T and DP₁ with no agreement between DP₂ and T or DP₁. In this analysis and all subsequent ones, I make the same assumptions concerning φ -features as outlined in section 6.4.1.



106.

Working on the basis that both DPs can be underspecified for uCase¹⁴, this leaves us with four possibilities:

- DP₁ and DP₂ have a uCase feature;
- DP₁ has a uCase feature, DP₂ is Caseless;
- DP₁ is Caseless, DP₂ has a uCase feature;
- DP₁ and DP₂ are both Caseless.

When both conjuncts have a uCase feature, DP₁ receives NOM Case, thanks to its relationship with T. There is no way for DP₂'s uCase feature to be valued (as there is no relationship, direct or otherwise, between T and DP₂), causing the derivation to crash. When DP₁ has a uCase feature and DP₂ is Caseless, DP₁ is valued NOM by T, and DP₂ receives default ACC in the morphological component, generating NOM+ACC combinations. When DP₁ is Caseless and DP₂ has a uCase feature, the derivation crashes, as there is once again no way of valuing DP₂'s uCase feature. When both conjuncts are Caseless, the derivation should crash, as there is no active goal for T's probing u φ -features.

Empirically, therefore, this analysis makes empirically incorrect predictions, as it suggests that the only grammatical combination in subject position is NOM+ACC. However, we have seen that NOM+NOM and ACC+ACC combinations are grammatical in English. We are therefore forced to assume that either NOM+ACC combinations are generated in a different manner to NOM+NOM and ACC+ACC combinations, or that this is not the correct analysis.

It could be argued that this analysis could be adapted to allow for the production of ACC+ACC combinations, if we can find a way to explain for how T can satisfy its u φ -features and its EPP-feature if DP₁ does not have a uCase feature. It is worth noting that there are other contexts in which grammatical sentences are generated with apparently Caseless subjects: for example, clauses and PPs (Stowell 1981).

¹⁴I discuss the problems that this assumption raises with regard to probing below.

107. (a) [_{PP}On the beach] is a good place for a party.
 (b) [_{CP}To err] is human, to forgive, divine.

As there are some types of Caseless phrase that can fill a subject position, it could be argued that Caseless &P acts in the same way as subject-position CPs and PPs. We will see that the issue of generating ACC+ACC combinations is common to all of the analyses developed in this chapter – as a result, I return to it in section 6.6.2).

The only way for DP₂ to receive NOM under this analysis would be through agreement with DP₁, which then makes this analysis the same as the one developed in section 6.4.4. If there were no link between the two conjuncts, we would expect DP₂ to always be ACC, as it would have no way to value a uCase feature. As already explained, this would incorrectly block the generation of the (attested) NOM+NOM combinations.

An additional theoretical issue is that of φ -features. We saw in section 6.3.1 that the φ -features of **both** conjuncts are involved in valuing T's u φ -features. Under this analysis, there is no reason to expect that T would be influenced at all by DP₂, as there is no agreement (direct or otherwise) between the two. As a result, we would predict that T would always gain the φ -feature values of DP₁. As can be seen from (108), this is not what happens.

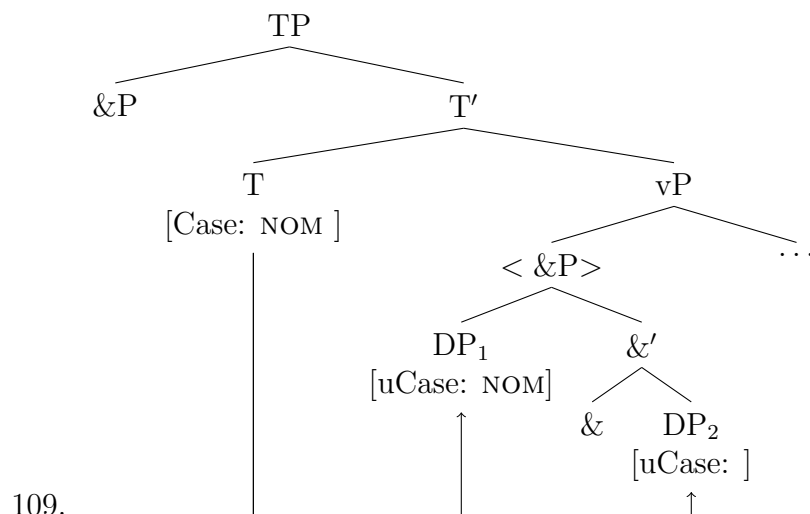
108. (a) *She_{SING} and her brothers iss_{SING} funny.
 (b) She_{SING} and her brothers are_{PL} funny.

Short of decoupling Case assignment from φ -feature agreement (which is not a completely novel concept – see McFadden 2004 for one argument in support of this possibility – but is nevertheless not a possibility examined here, for reasons of scope), the only way of rectifying this issue is to assume that there is some indirect agreement between T and DP₂ – a possibility which I discuss in section 6.4.4.

Due to its inability to account for NOM+NOM combinations in subject position, this analysis has to be ruled out as being the only way in which conjunction phrases can be merged with T, although it could arguably still be used by some speakers to generate NOM+ACC (and possibly ACC+ACC) combinations, if we wanted to explore the possibility that the attested variation is the result of multiple ways of satisfying T. It is also hard to see how both conjuncts can contribute to the valuation of T's u φ -features, when there is no agreement (either direct or indirect) between T and DP₂.

6.4.3 Analysis 3: Direct agreement between T and both conjuncts

This analysis assumes that T probes DP₁ and DP₂, possibly in some form of Multiple Agree. There is no agreement between DP₁ and DP₂ other than through T.



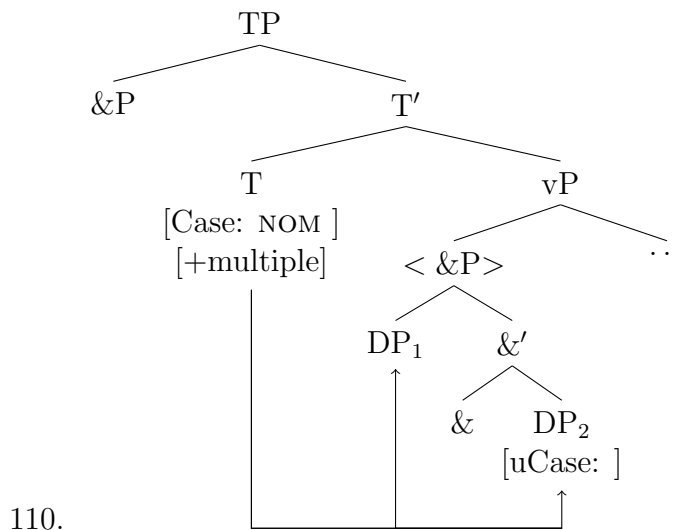
Multiple Agree (Ura 1996; Hiraiwa 2000) was proposed as a way of overcoming the discrepancy between the effects of the Defective Intervention Constraint and the evidence for covert multiple feature checking that can be seen in Japanese.

According to Hiraiwa (2000), a probe can have a [+multiple] feature, at which point it probes for all matching goals within “an accessible domain”¹⁵, rather than being satisfied by finding the nearest appropriate one. As Multiple Agree applies to all goals simultaneously, the Defective Intervention Constraint is irrelevant – at the point in the derivation at which it applies, β is still an active goal and as such, does not block agreement between α and γ .

Returning to my analysis of how Case is assigned in conjunction, I again propose that the two DP conjuncts can be optionally underspecified for a uCase feature. When both conjuncts have a uCase feature, both enter into direct agreement with T and receive NOM (NOM+NOM combinations); when DP₁ has uCase and DP₂ does not, DP₁ agrees with T and DP₂ receives default ACC case in the morphological component (NOM+ACC combinations). When DP₁ is Caseless, a defective intervention effect blocks agreement between T and DP₂ – Multiple Agree cannot occur here, as DP₁ has no uninterpretable features at the derivational point at which T probes for a goal and therefore blocks any type of Agree between T and DP₂.

¹⁵It is not made clear what is meant by “an accessible domain” – for example, whether it varies depending on the nature of the probe, can be linked to phase boundaries or has another definition entirely. Whilst this could be determined, it would be necessary to find more data on where Multiple Agree is and is not possible, to identify its boundaries. It could, however, potentially be argued that any content within &P is within an accessible domain for T or v.

It is however once again unclear how ACC+ACC combinations can be explained under this analysis, as if neither conjunct has a uCase feature, there is no obvious way for T to probe for either goal for its $u\phi$ -features. Whilst it might seem possible to rescue this analysis through recourse to other Caseless subjects as suggested briefly for Analysis 6.4.2 above (see section 6.6.2 for further discussion of this topic) and claim that T can somehow probe Caseless DPs, the issue then is how to block the generation of the following derivation:



We know that this has to be an illegitimate derivation, as it would derive ACC+NOM combinations, which are ungrammatical. We want the lack of a uCase feature on DP₁ to cause a Defective Intervention effect, and therefore block T from probing DP₂. It seems impossible, under this analysis, to allow the generation of ACC+ACC combinations but block ACC+NOM combinations.

On a theoretical level, it must be asked why T or v would have a [+multiple] feature – in many contexts, either of these probes can be satisfied by having only one goal, so we have to either assume that they permanently have a feature which is frequently unnecessary for the derivation, or explain why the merger of &P would affect the featural specification of T or v. Neither of these options is particularly desirable. Zeijlstra (2012) proposes that Multiple Agree (and, in fact, all other types of Agree) is motivated by the properties of the goal instead of those of the probe, which would resolve this issue in that it would be the conjuncts that necessitated Multiple Agree rather than T or v. However, this relies on Agree being driven by the goal – something which runs contrary to the assumptions made in this thesis.

This analysis does partially explain how ϕ -features from both conjuncts can affect the value of T's $u\phi$ -features: if T probes both DP₁ and DP₂, it is unsurprising that values from both can affect the agreement process. However, it must be asked what happens when DP₂ has no uCase feature. In this situation, we would not expect T to agree with it, and therefore would predict that only the ϕ -features from DP₁ could have an impact on those of T. Intuitively, this does not appear to be the case: if English distinguished between 1.PL and 2.PL verbal morphology,

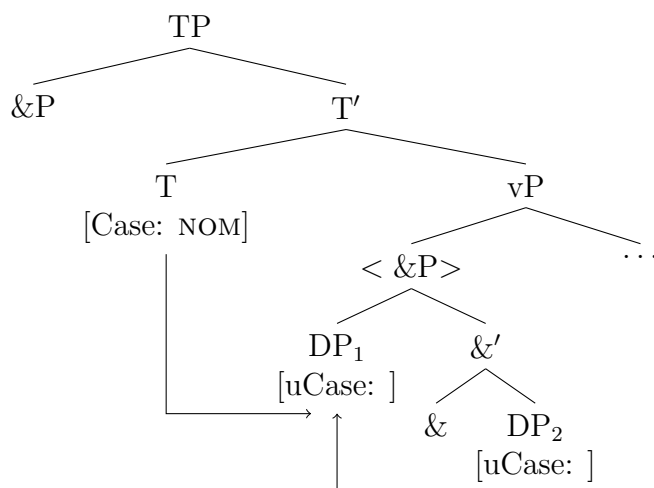
we would still expect the same verb form regardless of whether the subject was *you and me* or *me and you*. However, the languages that show such verbal morphology do not appear to permit the same degree of case variation as English, leaving this a hypothesis that I am unable to test more rigorously.

The same issue arises with regard to T's EPP-feature. We know that extraction from &P is impossible (thanks to the Coordinate Structure Constraint, Ross 1967) and that the entire &P moves to satisfy this feature, rather than only DP₁. When T agrees with both DP₁ and DP₂, it might be expected that both DPs (and therefore &P) would move, as they are both in the same relationship with T, so if one moves, the other may as well. However, when only DP₁ has a uCase feature (or when both conjuncts are Caseless), it is less clear why &P, rather than DP₁, would be targeted for movement to satisfy the EPP.

Adopting this analysis would necessitate altering our understanding of Agreement to include the concept of Multiple Agree, either driven by the goal rather than the probe or involving an optional [+multiple] feature on T. There are also unresolved issues surrounding how T's u ϕ - and EPP-features are satisfied when one or both conjuncts are Caseless.

6.4.4 Analysis 4: Direct agreement between T and the first conjunct, indirect agreement with the second conjunct

In much the same way as the analysis developed in section 6.4.1, I argue here that DP₂ forms a chain with DP₁, as a result of upwards probing by DP₂ for a goal for its uCase feature. In contrast to Analysis 1, however, when T probes with its u ϕ -features, it agrees directly with DP₁ (and therefore indirectly with DP₂, but there is crucially no direct relationship between T and DP₂).



Assuming the same four possibilities of DPs being underspecified for a uCase feature as used in each of the analyses developed so far in this chapter, this analysis makes the following predictions. When both DPs have a uCase feature, agreement with T values DP₁, which then values DP₂ through the chain between them, generating NOM+NOM combinations. When DP₁ has a uCase feature but DP₂ is Caseless, the derivation proceeds in the same way, but DP₂ receives default case in the morphological component, resulting in NOM+ACC combinations. When DP₁ is Caseless and DP₂ has a uCase feature, the derivation crashes (thereby explaining why ACC+NOM combinations are ungrammatical) as DP₂ agrees only indirectly with T through its chain with DP₁¹⁶, there is no way for a uCase feature on DP₂ to be valued other than through a chain with a uCase feature on DP₁. If both DPs are Caseless, we would expect the derivation to crash.

Empirically, then, this analysis appears relatively promising, as it predicts that NOM+NOM and NOM+ACC combinations are grammatical in subject position, whilst blocking the generation of ACC+NOM combinations.

In the same way as in the previous analyses, the inability to account for ACC+ACC combinations is problematic, forcing us once again to resort to the proposal that as there are some types of subject which appear to be Caseless and yet satisfy T's requirements (Stowell 1981), it may be possible for &P to satisfy T in the same way as other Caseless subjects when DP₁ is underspecified for uCase. I return to how this might work in section 6.6.2.

Explaining how φ -feature agreement works in this analysis initially appears to be complicated. However, by altering our understanding of the chain between DP₁ and DP₂, I propose a possible account of how the u φ -features on T are affected by both conjuncts. The theory of F-chains developed by Frampton and Gutmann (2000) states that feature chains are formed by the coalescence of two or more equivalent features (at least one of which has to be uninterpretable), and that this process is driven by Agree. I propose a slight alteration to this: namely, that the chain involved here represents the coalescence of **bundles** of features (or LIs). Interpretable feature values are not affected, and any uninterpretable features take the value of the interpretable features they agree with.

In example (112), DP₁ and DP₂ form a chain. The indices in (112b) show that the (interpretable) φ features have coalesced without changing their values, as have the uCase features. When T is Merged into the derivation (shown in 112c), its u φ features coalesce into the chain formed by those of DP₁ and DP₂, as does its Case feature.

112. (a) DP₁: [φ : α], [uCase:]
 DP₂: [φ : β], [uCase:]
 T: [u φ :], [Case: Nom]¹⁷

¹⁶Even when DP₁ is Caseless, a Defective Intervention effect (see definition in (95) presumably prevents T from probing DP₂ directly.

¹⁷The Case feature on T is included for the sake of clarity: I continue to assume that uCase features are valued as a reflex of φ -feature agreement, as outlined in section 2.3.3.

- (b) $DP_1 \dots DP_2: [\varphi_i: \alpha], [uCase_j:] \dots [\varphi_i: \beta], [uCase_j:]$
 (c) $T \dots DP_1 \dots DP_2: [u\varphi_i:], [Case_j: Nom] \dots [\varphi_i: \alpha], [uCase_j:] \dots [\varphi_i: \beta], [uCase_j:]$

The changes to the theory of chains do not affect how the $uCase$ features on DP_1 and DP_2 are valued: when T enters the derivation, it values both of the coalesced $uCase$ features at the same time with the same value (in this context, with NOM).

The valuation of T 's $u\varphi$ -features is more complex, as it has entered a chain of two interpretable (but potentially differently valued) φ -features. In this context, I propose that feature hierarchies become crucial. Consider one proposed Person hierarchy¹⁸ (Woolford 1999: example 7f):

113. First person > second person > third person

Nichols (2001: 517) states that conflicts between interpretable φ -features are resolved by “the highest ranking person/referential feature [being] associated or copied to the head of the Tense projection”. I therefore suggest that when two interpretable features form part of the same chain, the “higher” feature value prevails over the “lower” one, regardless of the order of the LIs in the chain. This results in the following possible chains:

114. (a) $T_1 \dots DP_1 \dots DP_2: [uPerson_i: 1] \dots [Person_i: 1] \dots [Person_i: 2]$
 (b) $T_2 \dots DP_3 \dots DP_4: [uPerson_j: 1] \dots [Person_j: 1] \dots [Person_j: 3]$
 (c) $T_3 \dots DP_5 \dots DP_6: [uPerson_k: 2] \dots [Person_k: 2] \dots [Person_k: 3]$

On the assumption that Masculine > Feminine is another feature hierarchy, this revised concept of chains can be used to explain the conclusions reached in section 6.3.1 about both Person and Gender features in conjunction: namely, that both conjuncts can affect T in that the presence of a masculine conjunct renders any morphological agreement (verbal or adjectival) masculine, the presence of a first person conjunct causes first person verbal morphology and a combination of second and third person conjuncts is obligatorily second person.

This feature hierarchy hypothesis leaves one unresolved issue. The generally accepted Number feature hierarchy is Singular > Plural (Woolford 1999). Extending the theory of chains developed above means that we would expect conjoined phrases to trigger singular agreement unless both conjuncts were plural, but this is clearly not the case. I suggest that, in the case of Number, the semantic structure of a

¹⁸There is an extensive body of work on feature hierarchies, including how they might be encoded in the syntax. See, *inter alia*, Béjar and Rezac 2009, Hale 2001 and Nichols 2001 for further discussion of the topic. I suggest that it is likely to be in the morphological component: if the syntax is “blind” to feature values and simply cares that every uninterpretable feature has been checked, then it could plausibly be argued that the conflict between multiple feature values in a chain can wait to be resolved by morphological feature hierarchies.

conjunction phrase has a large role to play. Logically, we would not necessarily expect the conjunction of the concepts of *a man* and *a woman* to result in the group being masculine. We would, however, expect *Person A* and *Person B* to equate to *two people* – the notion that this conjunction of *Person A* and *Person B* might still be singular is semantically illogical. If this intuition is correct, we would expect languages that have a [Number: Dual] feature (e.g. Slovenian and Sanskrit) to exhibit the same semantic logic (i.e., SING+SING=DUAL, SING+DUAL=PL). In Slovenian¹⁹, at least, this is indeed what happens:

115. Slovenian

- (a) On misli_{3.SING}, da je plavanje dolgočasno.
He thinks, that is swimming boring.
“He thinks that swimming is boring.”
- (b) On in njegov brat misli_{ta3.DUAL}, da je plavanje dolgočasno.
He and his brother think, that is swimming boring.
“He and his brother think that swimming is boring.”
- (c) On in njegov bratje misli_{jo3.PL}, da je plavanje dolgočasno.
He and his brothers think, that is swimming boring.
“He and his brothers think that swimming is boring.”

Whilst seemingly plausible, this leaves unanswered why post-verbal conjoined subjects can trigger optional singular agreement if one of the conjuncts is singular. My suggestion is that the presence of a pre-verbal “dummy” syntactic subject (usually *there* in English) somehow weakens, but does not completely remove, the semantic link. We would then expect the feature hierarchy to encourage the use of SING agreement, whilst semantic logic would still encourage PL – thereby accounting for the possibility of both SING and PL verbal morphology when &P is post-verbal.

One additional change needs to be made to the theory of chains adopted here. Feature chains (as used in Frampton and Gutmann 2000 and Adger 2006) are triggered by the probing of an uninterpretable feature. In the situation described here, the only possible probing feature is uCase on DP₂, but there are two major issues with this: firstly, it is generally assumed that uCase does not probe; and secondly, both conjuncts appear to have some form of relationship with T even when DP₂ does not have a uCase feature. Whilst the first issue could possibly be resolved by recourse to the type of chain suggested in Chomsky (1986) to account for Case transfer between expletives and their associates, the second cannot be. I therefore suggest replacing the Case-dependent feature chain between DP₂ and DP₁ with an &-chain – a feature-sharing relationship between the two conjuncts triggered by the presence of &. This mechanism explains why φ -features from both conjuncts can agree with those of T even when DP₂ is Caseless, and also goes some way to explaining why conjunction phrases seem to work differently to many other phrases (e.g. with regard to permitting Case variation, the Coordinate

¹⁹Examples provided by Jan Turk (p.c.).

Structure Constraint etc.). It also removes the need to explain why uCase features in conjoined phrases probe, when they are not expected to do so in any other context.

The &-chain also explains the apparent relationship between T and &P. If T agrees directly with DP_1 , it needs to be explained why the whole &P moves to satisfy T's EPP-feature, rather than just DP_1 . The Coordinate Structure Constraint (Ross 1967) suggests that extraction from &P is impossible, thereby providing a descriptive explanation for why &P might be pied-piped along with DP_1 to fill Spec,T, but without explaining why the CSC exists in the first place. If both DPs form part of a chain that is triggered by the presence of &, however, T is indirectly forming a relationship with the entirety of &P when it probes DP_1 . It is therefore perhaps not unreasonable to suggest that the &-chain is the reason for the impossibility of extraction from &P and the cause of &P being pied-piped along with DP_1 . I return to this issue in section 6.6.1, where I develop a more theoretically robust, based on Rizzi's (2006) suggestion that the EPP is, in fact, better expressed as a Subject Criterion.

With the exception of the difficulty in explaining how a Caseless &P allows T to probe for φ -features (an issue common to all of the analyses developed in this chapter other than the first one as developed in section 6.4.1, and something that is discussed in more detail in section 6.6.2), this analysis appears to be able to account for the generation of all attested case forms, show how T's u φ -features are satisfied and explain why &P moves to satisfy the EPP-feature rather than just DP_1 . It is perhaps less than desirable to introduce a concept that is unique to conjunction (namely &-chains), but equally, it does explain the intuition, prevalent since the first studies of conjunction (e.g. Chomsky 1981), that &P is somehow different to other types of phrase.

6.4.5 Analysis 5: Direct agreement between T and &

The principal distinction between this proposal and Analysis 1 (section 6.4.1) is that here, it is not claimed that & has any inherent features, but rather that it obtains all pertinent features from its conjuncts²⁰. This removes any possible

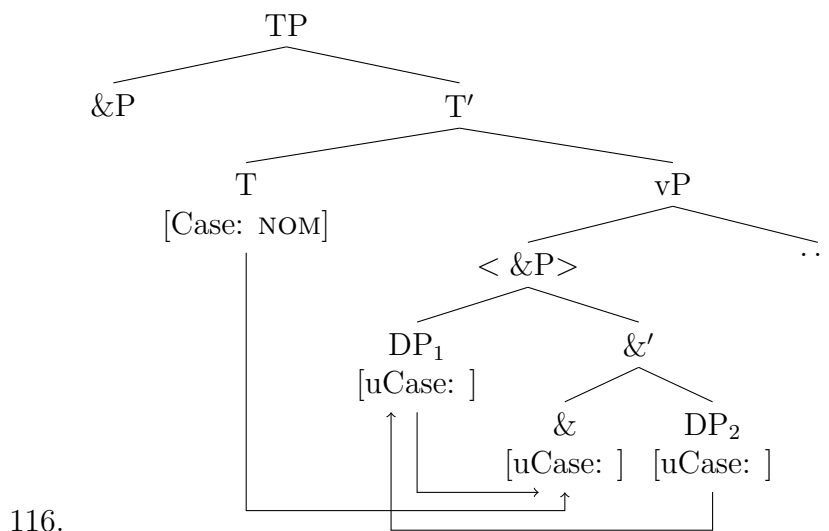
²⁰This could be done in one of three ways: inheritance, percolation or spreading. Feature inheritance (Chomsky 2005; Richards 2007) is widely used within syntactic analyses, but is usually believed to involve features moving from a phase head to its complement. As we want features to move from either (ideally both) the complement or specifier to the head (i.e., from both DP_1 and DP_2 to & – see section 6.3.1), this is not a workable analysis.

Feature percolation (as discussed in Kobele 2005 and Yoon 2001) seems a more viable possibility: features percolate from a specifier to its head, but cannot percolate from a complement to a head. Given that we know that DP_1 has a more direct relationship with T than DP_2 does, this may not be an unfeasible analysis. It is stated in Yuasa and Sadock (2002: 89) that “a coordinate constituent is one of two or more sister nodes whose categorial information percolates to the mother node”. It seems plausible to suggest that, if categorial information is percolating to &, then morphosyntactic features may also be doing so.

The final possibility, feature spreading (e.g. Halle, Vaux, and Wolfe 2000) is a phonological theory, although some (e.g. Pollard and Sag 1994; Frampton and Gutmann 2000) have adopted

lexical redundancy in the specification of $\&$, as it explains why an $\&P$ conjoining DPs might have a $uCase$ feature (and φ -features) whilst one that conjoins two VPs or clauses would not need one.

I suggest that DP_1 and DP_2 enter into an $\&$ -chain (as discussed in Analysis 4, section 6.4.4), and that features from the chain percolate from DP_1 to $\&$. This percolation is presumably the result of a property of $\&$: under this analysis, I assume that $\&$ is the only possible goal for T 's probing $u\varphi$ -features, and that it therefore needs some features. We saw in section 6.4.1 that an analysis assuming that $\&$ has inherent features is implausible, meaning that it must obtain them from its conjuncts and that $\&$ must therefore have a property triggering feature percolation. T then probes for a $uCase$ feature and agrees with $\&P$. There are therefore now two separate mechanisms required for the distribution of features across the constituents of $\&P$: feature percolation and the $\&$ -chain.



Continuing the assumption that both DPs can be underspecified for $uCase$, we have the same four possibilities as discussed in the majority of analyses developed in this chapter. These lead to the generation of different variants, as follows:

117. (a) DP_1 and DP_2 have $uCase - NOM + NOM$
 DP_1 receives syntactic Case through “reverse” feature percolation (i.e., DP_1 ’s $uCase$ feature percolates to \mathcal{E} . When \mathcal{E} ’s $uCase$ feature is valued through direct agreement with T , so does that of DP_1 as a result of the link between the two features) from \mathcal{E} , DP_2 receives syntactic Case through the \mathcal{E} -chain with DP_1 .

it within syntax. However, the few syntactic analyses of feature spreading that could be used within a Minimalist framework (such as Danon 2011 and Frampton and Gutmann 2000) do not elaborate upon the direction in which features spread, focussing rather on whether the theory could be used to replace Agree. My aim here is not to replace Agree, but to allow pertinent features to move to $\&$, in order for Agree between $\&$ and T to take place.

Of the three options, then, feature percolation appears to be the most plausible. For the remainder of this analysis, I therefore assume that the relevant features move through feature percolation. However, nothing crucial hinges on the adoption of this theory.

- (b) DP_1 has uCase, DP_2 does not – NOM+ACC
 DP_1 receives syntactic Case through indirect agreement with T as described above, DP_2 receives default morphological case.
- (c) DP_1 and DP_2 are Caseless – derivation crashes
 T cannot probe for an active goal for its $u\varphi$ -features.
- (d) DP_1 is Caseless, DP_2 has uCase – derivation crashes
 DP_2 cannot value its uCase feature, as it cannot form a Case \mathcal{E} -chain with DP_1 and therefore does not agree (even indirectly) with T .

We saw in section 6.3.1 that an analysis of the structure of &P needs to explain not only how all and only the attested case forms are generated (i.e., NOM+NOM, NOM+ACC and ACC+ACC in subject position and ACC+ACC in object position) but also how T 's EPP-feature is satisfied, how Person on T agrees either with DP_1 (when the subject &P is post-verbal) or is obligatorily plural, and how both conjuncts contribute to valuing the Number and Gender features on T .

Whilst in general the satisfaction of T 's EPP-feature is unproblematic, it relies on DP_1 having a uCase feature which percolates up to &P – otherwise, &P is not visible to T and as such, cannot move to Spec,TP to satisfy the EPP. As a result, we would expect any derivation involving Caseless DP_1 to crash, but the only way to account for the generation of ACC+ACC combinations in subject position is if DP_1 has no uCase feature. However, as we have already discussed, there are other contexts in which an apparently Caseless subject can be used to satisfy T 's EPP-feature, so even if there is no immediate solution to this issue, it may not be such an insurmountable problem as it first appears. As already stated, I return to this issue in section 6.6.2, as it is one that is common to every analysis developed in this chapter.

In the same way as the previous analysis, we can explain the φ -feature relationship between the two conjuncts and T through the concept of &-chains. This analysis requires an additional step (as shown in bold text below) to the explanation developed in Analysis 4:

- DP_2 forms an &-chain with DP_1 , as a result of the presence of &.
- **The features of DP_1 (and therefore those of DP_2 , as a result of the chain) percolate to &.**
- T probes & for φ -features, indirectly receiving the conflicting φ -features from DP_1 and DP_2 , and values &'s uCase feature as NOM.
- The uCase features of DP_1 and DP_2 are valued NOM as a result of the &-chain between them and their relationship with &.

The addition of feature percolation into this derivation adds a degree of complexity, as it also necessitates some form of “reverse percolation” – not only do the φ -features of both conjuncts have to percolate to &, but it is also necessary for the

value of $\&$'s inherited uCase feature to percolate back to those of DP_1 and DP_2 . If this allowed us to account for the data more satisfactorily than Analysis 4, it might be a worthwhile sacrifice, but this analysis does not appear to be any more empirically satisfactory than the alternative.

In summary, this analysis can account for the generation of all and only the attested case forms in subject position apart from ACC+ACC, as long as we accept the following assumptions:

118. (a) Both interpretable and uninterpretable features form $\&$ -chains (triggered by the presence of $\&$).
- (b) Features percolate from DP_1 to $\&$ (after the $\&$ -chain has been formed).
- (c) Any conflict between coalesced interpretable features is resolved by feature hierarchies.
- (d) The Number feature hierarchy can be overridden by semantic logic (when $\&P$ is in pre-verbal subject position).
- (e) Feature values acquired by a head that has obtained its features through percolation can be percolated back to the specifier of that head ("reverse percolation").

Some of these assumptions are common to some or all of the other analyses developed in this chapter, but (118b) and (118e) are unique to this analysis. Whilst feature movement from a specifier to a head (feature percolation – Kobele 2005; Yoon 2001) has previously been proposed, I am unaware of any arguments in favour of the reverse operation. However, this assumption is necessary to account for how the uCase features on DP_1 and DP_2 are valued. The strength of this analysis therefore rests on the desirability of adding such an operation to the grammar, potentially on the basis of this structure alone. Such matters are discussed in the following section.

6.5 Comparison of analyses

In this section, I compare the major strengths and weaknesses of each of the five analyses developed in this chapter. I show that it is possible to eliminate some of them, and make an argument in favour of adopting Analysis 4 over the other four.

Analysis 1 (the argument that $\&$ has an inherent uCase feature; section 6.4.1) appears to be the least attractive of the five possibilities, on both an empirical and a theoretical level. None of the three versions of this analysis make the correct empirical predictions, meaning that on this basis alone, it may have to be abandoned. Furthermore, this analysis can only be made to work by assuming that uCase features can probe, but it is generally believed (see section 2.3.3) that

uCase features are valued as a reflex of φ -feature probing. It is also necessary to assume that Agree is possible between uninterpretable features, requiring the introduction of a mechanism like Frampton and Gutmann's (2000) F-chains. In addition to these issues, given the argument that & should not have any inherent φ -features (but must instead somehow obtain them from both of its conjuncts – see section 6.3.1), it must be asked why it would have an inherent uCase feature: Case theory (as discussed in section 2.3.3) suggests that uCase can only be valued as a reflex of φ -feature agreement and so we would not expect to see a uCase feature on an LI that did not also have φ -features. Given that this analysis is both empirically and theoretically unsatisfactory, it has to be discarded.

Whilst the suggestion that T agrees directly with DP₁ but has no relationship with DP₂ (Analysis 2, section 6.4.2) could possibly be used to explain the generation of NOM+ACC combinations, there are too many issues to make it a feasible possibility. Firstly, as it cannot explain how NOM+NOM combinations are generated, it is empirically unsatisfactory. Secondly, it cannot be used when φ - and EPP-feature agreement is taken into consideration: if there is no agreement (whether direct or indirect) between T and DP₂, the features on DP₂ have no way of interacting with those of T; and it is also difficult to see why &P, rather than DP₁, would move to satisfy T's EPP-feature.

The third proposed analysis (section 6.4.3) is that T agrees directly with both DP₁ and DP₂ through Multiple Agree (Hiraiwa 2000 or similar). On theoretical grounds, it must be queried why there would be a [+multiple] feature on T or why an Agree relationship would be contingent on the nature of the goals – the two proposals that have been made to explain why Multiple Agree is possible. In addition to this, there are other problems with this analysis. Although it can explain how both NOM+NOM and NOM+ACC combinations are generated, it cannot explain how T probes either conjunct when they are Caseless. Although the issue of Caseless probing is common to most of the analyses developed in this chapter, it is especially problematic for this one, as we rely on the Defective Intervention Constraint (caused by the impossibility of probing Caseless DP₁) to block the derivation of ACC+NOM combinations, and there appears to be no way of blocking ACC+NOM combinations whilst permitting the generation of ACC+ACC ones. Furthermore, if the only relationship between T and the conjuncts is driven by Agree, the lack of a uCase feature on either DP should make them invalid goals for φ -feature probing, meaning that they should only be able to contribute towards valuing T's φ -features when they have Case: something that we know is untrue.

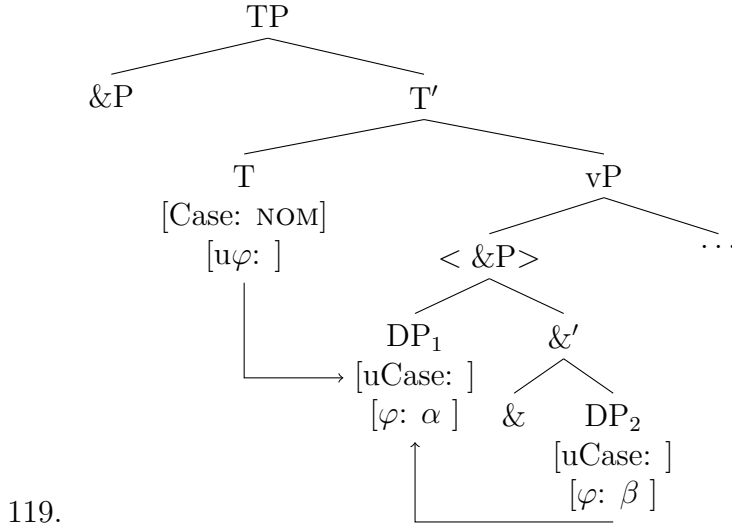
Analysis 4 (section 6.4.4) investigates what would happen if T probed DP₁, which has already formed a chain with DP₂. T therefore agrees directly with DP₁ and indirectly with DP₂. I show that this analysis can only work if we assume that the chain between the two conjuncts is formed by their relationship with & and not by the probing of a uCase feature – an '&-chain'. Whilst the mechanisms of &-chain formation have not yet been investigated in any detail²¹, it is a necessary assumption as the alternative possibility, that the relationship is driven by a

²¹I return to this topic in section 6.6.1.

feature chain, relies on the presence of a uCase feature on both conjuncts. The continued influence of DP₂'s φ -features even when it is Caseless shows that the link between the two conjuncts cannot be driven by Case, and therefore that this link cannot be an F-chain in the sense of Frampton and Gutmann (2000). The presence of an &-chain between conjuncts can also be used to explain why &P moves to satisfy T's EPP-feature rather than just DP₁: I develop this argument further in section 6.6.1. One question that still remains to be answered with regard to this analysis is how T probes DP₁ when it is Caseless. However, this is an issue which has an impact on a much larger scale than merely case in conjunction, as it appears to be linked with other Caseless subjects. I return to this issue in section 6.6.2. It would seem that the feasibility of this analysis rests on the desirability of adding the concept of &-chains into the grammar. Whilst we would ideally not add structure-specific concepts like this into the grammar, I argue that there are no existing possibilities that can satisfactorily be used instead.

For the final analysis (section 6.4.5), I explored the possibility that T agreed directly with &, which had obtained features from the chain formed between DP₁ and DP₂. Once again, the chain would have to be an &-chain rather than a feature chain (so that the φ -features of both conjuncts can affect the u φ -features of T even when they are Caseless), and I showed that the features were likely to percolate, rather than be shared or inherited, from DP₁ to &. However, whilst it has been argued that features can percolate from a specifier to a head, I am unaware of any convincing arguments that the reverse is possible. For this analysis to work, it would be necessary for uninterpretable features to percolate from DP₁ to &, and then for the value of these features to percolate **back** to DP₁ in order to value the uCase features of both conjuncts. In the same way as the previous analysis, there is no way of explaining how T can probe for a goal for its u φ -features when DP₁ is Caseless. It would seem that this analysis can explain no more than Analysis 4, but is considerably more complex due to the introduction of feature percolation.

All five analyses developed in this chapter have some issues that still need further investigation. However, Analysis 4, where DP₁ and DP₂ form an &-chain and T probes DP₁ directly (thus indirectly gaining access to the features of DP₂), can account for how all (and only) the grammatical combinations can be generated, whilst relying on the fewest theoretical assumptions or stipulations.



There is still work to do regarding the nature of &-chains and how T probes DP_1 when it is Caseless, but this analysis can otherwise explain the generation of NOM+NOM, NOM+ACC and ACC+ACC combinations in subject position, whilst accounting for the continued effect of the φ -features of Caseless conjuncts and the movement of &P (rather than DP_1) to satisfy the EPP. The only other analyses that are equally empirically satisfactory are Analysis 3 (Multiple Agree) and the final option (T probing &, which has features that have percolated from DP_1), but these rely on the concepts of either Multiple Agree (thereby raising questions about our understanding of Agree) or “reverse percolation” to value the conjuncts’ uCase features. Analysis 4 therefore relies on the fewest theoretical assumptions, whilst covering the widest range of data.

6.6 Developing Analysis 4

In this section, I discuss the major issues that still need to be resolved in order to strengthen the most plausible analysis developed above. I begin by discussing the concept of &-chains: their purpose and their possible nature. I then move on to consider Caseless subjects, and how T can probe for φ -features if there are no active DPs in its probing domain. To conclude this section, I examine how the attested inter-speaker variation can be accounted for within the framework provided by this analysis.

6.6.1 &-chains

In section 6.4.4, I developed an analysis that explains how all the attested variants can be generated within a single grammar. However, it relies on the concept of &-chains to account for the transfer of feature values between DP_2 and DP_1 , and by extension between DP_2 and T. In this section, I summarise my arguments for

why it is necessary to assume such a chain, and why there are no suitable analyses already in existence that can be used in its place.

We have seen that, in order to block the generation of (ungrammatical) ACC+NOM combinations, we have to assume that there is no direct relationship between T and DP₂, even when DP₁ is Caseless. There must, therefore, be a direct relationship between the morphosyntactic features of the two conjuncts: given that φ -features from either conjunct can value those on T (see section 6.3.1), this relationship appears to involve some form of Agree relationship being formed between the features of both DPs.

As discussed in section 6.4.4, it originally seemed plausible that this relationship involved a feature chain (Frampton and Gutmann 2000 or similar), whereby a series of matching uninterpretable features form a chain. When the highest member of that chain is valued by agreement with an appropriate interpretable feature, all members of the chain receive the same value. Note that only uninterpretable features can form a chain under this analysis, and that these uninterpretable features are the cause of the chain being formed.

This raises two problems, as far as the analysis developed in section 6.4.4 is concerned. Firstly, as discussed in section 6.3.1, the interpretable φ -features on **both** conjuncts agree (whether directly or indirectly) with the $u\varphi$ -features on T, meaning that the chain between the two DPs has to involve both uninterpretable and interpretable features. Secondly, the only uninterpretable features on the conjuncts are uCase features. However, the chain between DP₁ and DP₂ cannot be driven by Case, as Number agreement does not change when one or both conjuncts are Caseless:

120. (a) [Him and her] *is/are rarely able to agree on anything.
 (b) [He and she] *is/are rarely able to agree on anything.

Furthermore, uCase features are assumed to be unlike other uninterpretable features in that they do not probe: given that there is not believed to be an interpretable Case feature (see section 2.3.3), there is no suitable goal for them to probe for. It seems unlikely, therefore, that the formation of a chain would be dependent on an optional uCase feature probing for a relevant goal.

We therefore require a way of linking the features of the two conjuncts that is not reliant on either conjunct having a uCase feature. However, we need a way to restrict the use of this chain: it is not desirable, for example, to claim that there is a similar chain between the specifier and complement of every head. The claim that it is & that is triggering this link neatly captures the intuition that the conjuncts are inherently linked by the conjunction, whilst not requiring & to play any active part in the derivation process.

I propose that & has a property that allows it to trigger an “&-chain” between its specifier and its complement. I furthermore suggest that this property is a syntactic criterion: more specifically, an &-Criterion meaning that & has to have

an overt specifier and complement, the morphosyntactic features of which are linked by an $\&$ -chain. From the evidence provided in section 6.3.1, I suggest that an $\&$ -chain has to be able to link multiple interpretable features as well as uninterpretable ones: otherwise, there would be no way of explaining the φ -feature agreement patterns seen in Romance languages. Any conflict between the interpretable feature values and how they value any uninterpretable features probing a member of the chain are then resolved in the morphological component by resorting to language-specific feature hierarchies.

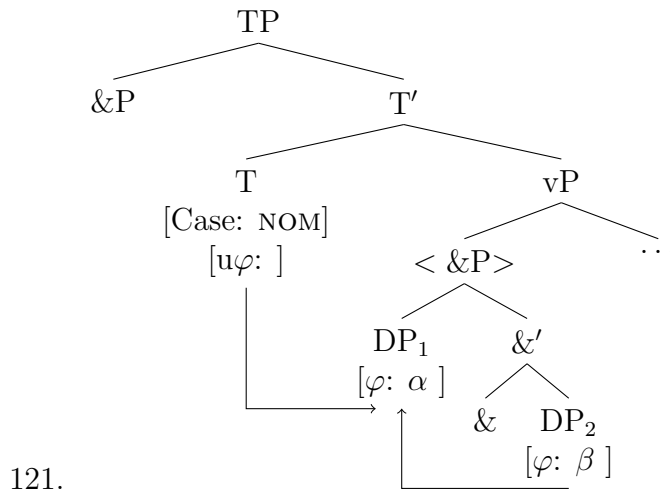
This $\&$ -Criterion also explains why the entire $\&P$ moves to satisfy the EPP, rather than just DP_1 . Rizzi (2006) argues that the EPP is, in fact, better described as a Subject Criterion that is the result of a Subj phrase that is distinct from T. A single element cannot satisfy two or more criteria in distinct positions (Rizzi and Shlonsky 2007), meaning that even if T probes DP_1 , this element is not available to satisfy the Subject Criterion, as it is already satisfying the $\&$ -Criterion. Rizzi and Shlonsky (2007) claim that this type of situation can be resolved by clausal pied-piping: if the rest of $\&P$ is pied-piped along with DP_1 , then the entirety of $\&P$ is used to satisfy the Subject Criterion, not DP_1 . Separate elements are therefore responsible for satisfying the two criteria, and we can now explain why it is always $\&P$, not DP_1 , that moves to satisfy the Subject Criterion (or EPP, in the terminology used in the previous parts of this thesis).

This concept appears relatively simple, as long as we assume that pronouns are a single unit (e.g. an “intransitive D” head – Abney 1987) and that Case and φ -features are present on this head, as the $\&$ -chain can then be presumed to be linking the D heads. However, whilst Person is widely assumed to be a feature on D (Danon 2011), arguments have been made for the other features to have their own projections – KP^{22} for Case (Löbel 1994), NumP for Number (Ritter 1991) and GenP for Gender (Piccolo 1991). As T is not generally believed to have a uGender feature, this can potentially be ignored, but it is certainly necessary for the $\&$ -chain to link Case, Number and Person, at the very least. If the “split-DP” analyses are correct, it would therefore be necessary for $\&$ to form multiple links between the relevant heads.

6.6.2 Caseless subjects

The other major problem that needs resolving in order to make the proposed analysis viable is to determine how T can probe DP_1 for φ -features when DP_1 is Caseless. As already discussed, this probing has to occur, otherwise we would expect the derivation shown in (121) to crash, rather than produce ACC+ACC combinations.

²²Although Hale (2001: 23) claims that NOM represents a “bare DP, not a KP”. For reasons of scope, I will not go into this issue any further: the relevant point for my purpose is that there *may* be an additional projection involved for Case.



Stowell (1981) discusses a number of situations where Caseless subjects are possible, such as PPs with copula verbs:

122. (a) [_{PP}Under the chair] is a nice place for the cat to sit (Stowell 1981: ex.27a)
 (b) [_{PP}Outside the bank] is where I'll wait for you if you're late.

One suggestion for the grammaticality of these structures is the proposed property of copula verbs that allows nominative Case to be “absorbed or deflected away” from the subject position (Stowell 1981: 268). However, this cannot be the correct explanation for Caseless subjects in conjunction, as they are not limited to sentences using copulas²³.

123. (a) That's how [me and him] became friends.
 (b) He always brings it up that [him and her] split cause he chose our daughter over his girlfriend.

An alternative possibility is that suggested for bare subjects in Korean, where it is possible to omit case markers on subjects under certain conditions:

124. Korean

Nwukwu- \emptyset Yenghi-lul manna-ss-ni?
 Who \emptyset Yenghi_{ACC} meet_{PAST.Q}

“Who is such that he/she met Yenghi?” (Ahn and Cho 2007: 58)

Ahn (1999) suggests that these bare subjects are best analysed as being Left-Dislocated NPs, with *pro* filling the canonical (Case-marked) subject position:

²³Examples taken from GloWbE.

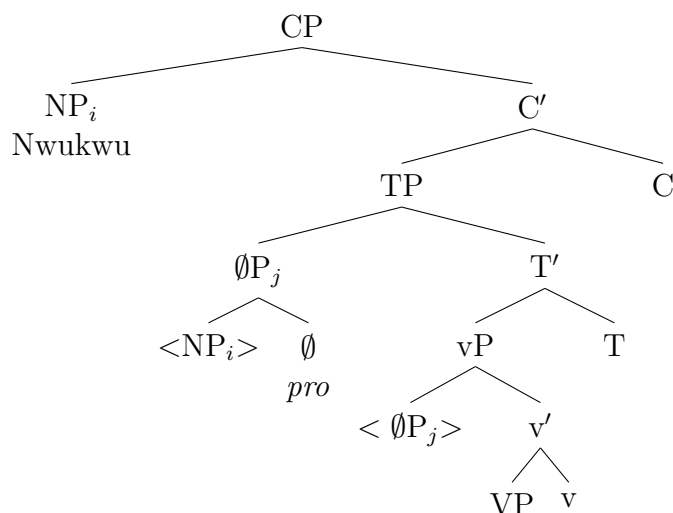
125. Korean

Mary- \emptyset *pro* ku chayk ilk-ess-ni?

Mary \emptyset *pro* the book read_{PAST.Q}

“Did Mary read that book?” (Ahn 1999: 6)

Following Boeckx (2003) and Boeckx and Grohmann (2004), Ahn and Cho (2007) suggest that sentences such as (124) are derived as in (126).



126.

The desirability of applying this analysis to English conjunction is partially dependent on one’s views on the use of *pro* in English. Whilst it is not generally believed that English permits null subjects (and therefore *pro*), there are certain contexts in which subject omission is possible, such as colloquial speech and diary English. Shepherd (2011) develops an analysis with regard to subject omission in the former context that does not rely on *pro*, whilst Haegeman (2013) and Haegeman and Ihsane (2001) (among others) do the same for the latter, meaning that it may be possible to adapt the Left Dislocation analysis outlined above for use in English without resorting to the use of *pro*.

Furthermore, if we wished to adopt a Left Dislocation analysis for the generation of ACC+ACC case forms in subject position, we would expect these combinations to be ungrammatical if they occurred with other elements in CP, such as complementisers and *wh*-phrases. However, as the examples below show, this is not the case in English:

127. (a) Why do you care what [_{&P}me and him] have been doing?
 (b) It doesn’t seem suspicious to you that [_{&P}him and her] are always out late?

It would therefore seem that we cannot adopt Left Dislocation of &P to account for how ACC+ACC combinations are generated in subject position.

Biberauer (2008) argues that, in German, T probes vP for V_D (a verbal agreement feature) and that its EPP-feature can be satisfied by vP-raising. She goes no further into how T's u φ -features are satisfied (this being irrelevant to her argument), meaning that it is difficult to know how, or indeed if, this type of analysis can be extended to the situation under investigation in this thesis. What her analysis does suggest is that T can probe other Caseless phrases and somehow check its u φ -features. It may therefore be plausible to suggest that one of the properties of the &-chain is that it somehow makes DP_1 visible for probing by T, whether or not it has a uCase feature.

6.6.3 Inter-speaker variation

Our investigation of the existing literature surrounding case variation in conjunction (section 3.3) indicated that linguists disagreed whether the variation they were attempting to explain was inter- or intra-speaker. I showed that some analyses could account for inter- but not intra-speaker variation, whilst others could account for the reverse. None considered the possibility that both forms of variation might be present in their data set. However, the data gathered for this thesis show evidence of both types of variation, as there are some speakers who use three variants, others who may accept two of the three²⁴ and a third group who accept only one. In section 6.4.4, I developed an analysis that can account for the speakers who accept all three variants if we postulate the possibility of having optional uCase features on the conjuncts.

As yet, however, I have not discussed inter-speaker variation, focussing solely on the attested intra-speaker variation. My rationale for this is simple, and is based on the belief that it is more logical to develop an analysis that can account for all possible variants and then discuss how some speakers may constrain this proposed grammar, than to develop an analysis of the most restrictive grammar and then attempt to expand upon it. Having developed an account of the most comprehensive grammar, it is now time to determine how it may be constrained to explain the attested inter-speaker variation.

As discussed in section 5.7.2, there appear to be five groups of speakers. Firstly, there are the group whose grammars are as described in section 6.4.4 above: those who can generate all three grammatical variants. There is a second group who reject all forms of pronominal conjunction: this group have little to tell us about the structure in question as it is impossible to determine their underlying grammars if they are rejecting all combinations for reasons of acceptability rather than grammaticality, and therefore are discussed no further. Another group of speakers permit only NOM+NOM combinations in subject position, rejecting all others. Finally, there are two more possible groups: one which accepts only NOM+NOM and NOM+ACC combinations, and another which accepts only NOM+NOM and ACC+ACC combinations. As discussed in section 5.7.2, it is unclear whether these

²⁴See section 5.7.2 for a discussion of why it is currently impossible to state with certainty whether these speakers accept two or three variants.

are genuine groups, or whether these speakers actually form part of the first group. Here, I explore what the grammars of all of these groups might look like.

Speakers who only accept NOM+NOM combinations in subject position and ACC+ACC in object position are easily explained by proposing that these speakers do not permit feature underspecification (at least on conjoined DPs: more investigation would be needed to determine whether this statement can be extended to account for all possible areas of feature underspecification), and therefore cannot generate any combinations that involve a Caseless DP conjunct²⁵.

The possible group of speakers who generate NOM+NOM and ACC+ACC combinations but not NOM+ACC ones are somewhat harder to account for within this analysis. If this is a true grammar, I suggest that it may be the result of some speakers having a “Harmony Constraint”²⁶, where speakers require both conjuncts to either have a uCase feature or be Caseless. It is possible that this might be the result of a different type of &-chain, which for these speakers would contain a Harmony requirement. It would be interesting to know if these speakers required three-way conjunction phrases (e.g. *he, she and I*) to be harmonious, and if they adhere more closely to the Coordination of Likes constraint (Chomsky 1957: see section 3.2.1 for a discussion of the CLC) than most, as either of these would provide some support for the possibility that these speakers form a different type of &-chain to others. Due to the uncertain nature of this grammar, I do not investigate the nature of the proposed Harmony Constraint any further, but leave it for further investigation if future data show that this is a valid grammar.

If there is a grammar that allows NOM+NOM and NOM+ACC but not ACC+ACC, it may be that they form an &-chain which does not have the property allowing T to probe Caseless DP₁ in the way suggested in section 6.6.2. This would mean that, for these speakers, DP₁ has to have a uCase feature (and therefore be NOM in subject position) or else the derivation will crash.

Contrary to the assumptions made by Emonds (1986) and Angermeyer and Singler (2003), my data suggest that there are no speakers who accept only ACC+ACC in subject position. Under my analysis, this is simple to explain, as the only way for this to be the case would be if there was a group of speakers who did not allow DP conjuncts to have a uCase feature. It is hard to envisage a situation where it would be necessary to have two different types of DPs in the lexicon – one with a uCase feature and another without²⁷. Unless we want to claim that there are some

²⁵This could also explain why there are some languages, including many of the Romance languages, that do not permit case variation in conjunction: these languages presumably also do not permit feature underspecification on conjoined DPs.

²⁶With thanks to Dr. Laura Dominguez for providing an appropriate name for this constraint.

²⁷This is different from the concept of an optional uCase feature, which suggests a single DP which can, but does not have to, bear a uCase feature. In principle, all DPs (whether part of an &P or not) could have an optional uCase feature, as suggested in the analysis developed in this thesis. Any DPs without a uCase feature that were merged into a syntactic position where they needed to enter into Agree with T or v would cause the derivation to crash (as they would be invisible for probing and result in unvalued uninterpretable φ -features at Spell-Out, not having the relationship with &P to “save” the derivation as discussed in section 6.6.2) – as a result, DPs in these positions would not trigger variation.

grammars where the presence of & somehow blocks the possibility of DPs having a uCase feature, it is to be expected that all speakers who permit conjunction will have the possibility of conjuncts with a uCase feature and therefore can generate NOM+NOM combinations in subject position.

6.6.4 Production frequencies

Adger (2006) claims that his theory of Combinatorial Variability can predict the frequency with which each variant will be used. As we have adopted the basic premise of this theory (feature underspecification) in the analysis developed above, it must be asked whether we can also predict the frequency with which each combination in a group will be used.

According to Adger's original proposal, we would expect to see combinations arise in proportions equivalent to the number of ways in which they can be generated. We might therefore expect to see approximately equal numbers of NOM+NOM, NOM+ACC and ACC+ACC combinations being produced in subject position, as each possible set of optional uCase features results in a different morphophonological representation:

- DP₁ and DP₂ both have a uCase feature – NOM+NOM
- DP₁ has a uCase feature, DP₂ does not – NOM+ACC
- DP₁ does not have a uCase feature, DP₂ does – derivation crashes
- Neither DP₁ nor DP₂ have a uCase feature – ACC+ACC

However, an examination of the corpus study data (chapter 4 – the relevant data is repeated below in table 6.6) shows that NOM+NOM combinations are produced far more frequently than either NOM+ACC or ACC+ACC combinations in subject position, with between 75% and 100% of tokens in each group being NOM+NOM. It is interesting to note that (with the exception of 1.SING+3.SING combinations) there are roughly equal numbers of tokens for both NOM+ACC and ACC+ACC in each group.

Given the attested inter-speaker variation, however, it is perhaps not surprising that this method does not work. The only way to reliably test the predictive power of the Combinatorial Variability theory would be to examine the production rates of individuals. We would expect speakers who accept all three variants to produce each variant roughly 33% of the time, whilst those who accept only two would be expected to produce each of their accepted variants in approximately even proportions. However, it is impossible to undertake such an examination in this thesis, due to the lack of appropriate data.

As a result of the inter-speaker variation, we would expect to see more NOM+NOM combinations than any other (as all speakers accept NOM+NOM combinations,

Group	Combinations	Case forms	BNC		GloWbE	
1.sing & 3.sing	I and he	NOM+NOM	173	90%	1012	96%
	He and I					
	I and him	NOM+ACC	0		1	0.3%
	He and me					
	Me and him	ACC+ACC	14	7%	45	4%
	Him and me					
1.sing & 3.pl	I and they	NOM+NOM	4	100%	17	90%
	They and I					
	I and them	NOM+ACC	0		0	
	They and me					
	Me and them	ACC+ACC	0		2	11%
	Them and me					
3.sing & 3.sing	He and she	NOM+NOM	22	96%	26	77%
	She and he					
	He and her	NOM+ACC	0		4	12%
	She and him					
	Him and her	ACC+ACC	1	4%	4	12%
	Her and him					
3.sing & 1.pl	He and we	NOM+NOM	4	100%	13	86%
	We and he					
	He and us	NOM+ACC	0		1	7%
	We and him					
	Him and us	ACC+ACC	0		1	7%
	Us and him					
1.pl & 3.pl	We and they	NOM+NOM	17	100%	41	96%
	They and we					
	We and them	NOM+ACC	0		1	2%
	They and us					
	Us and them	ACC+ACC	0		1	2%
	Them and us					

Table 6.6: Frequency of NOM+NOM, NOM+ACC and ACC+ACC combinations in subject position

whilst only some also accept the other two variants). Without a far greater sample of speakers, however, it is not possible to predict with any certainty the proportions with which we would expect them to arise. My data suggest that there are approximately even numbers of speakers who accept all three variants and those who only accept NOM+NOM ones (temporarily ignoring the speakers who may or may not accept only two of the three variants). If this is a representational sample, we would therefore expect to see approximately twice as many NOM+NOM as either ACC+ACC or NOM+ACC combinations.

However, there is a greater proportion of NOM+NOM combinations than this, meaning that we cannot rely solely on Adger's hypothesis. One possible additional explanation is that frequency effects are having an impact – given that these combinations are predicted to be used more frequently than the other variants,

they may sound more natural to some speakers and therefore be produced more often.

As this issue is tangential to my research aims, I will not discuss it any further here, but merely wish to highlight its possibilities for further research.

6.7 Analysis extensions

I conclude this chapter with a brief discussion of two issues: one which has been argued to need explaining under the same analysis as case variation in pronominal conjunction; and another that could plausibly be used to extend the analysis developed in this chapter.

Firstly, I discuss the conjunction of a pronoun with a full DP such as *my brother*, as many of the existing analyses (e.g. Angermeyer and Singler 2003) use examples of this type of conjunction to reach radically different conclusions about which case forms are possible in English. It is therefore necessary to determine whether there is any reason to believe that these conjunction phrases function any differently to those examined in the main body of this thesis.

Secondly, I consider whether my analysis can be used to explain the generation of non-standard case forms in other contexts, and show that at least some of these forms have the potential to be explained using feature underspecification as well.

6.7.1 Conjunction with a developed DP

Many of the arguments suggesting that NOM in object position is grammatical (such as Angermeyer and Singler 2003 and Johannessen 1996) are based on data involving the conjunction of a pronoun with a full DP, rather than the conjunction of two pronouns.

128. (a) “For both [Steve and I], our marriage in 1979 was a second chance”
(Johannessen 1996: 674)
- (b) “There is such a league between [my good man and he]” (Shakespeare, *The Merry Wives of Windsor*, quoted in Johannessen 1998)
- (c) “We’re very happy for [he and his family]” (Angermeyer and Singler 2003: 172)

Assuming that conjunction of this sort has the same underlying structure as pronominal conjunction, the claim that NOM pronouns are grammatical in object position when conjoined with a full DP is problematic for my analysis, as there is no way of generating NOM case forms in object position.

However, a systematic search of the GloWbE corpus suggests that object position NOM forms are limited to *he/she and DP*²⁸ and *DP and I* – no other pronouns appear as NOM (in object position) and the opposite ordering of the conjuncts appears to be illicit (i.e., *I and DP* and *DP and he/she* is unattested, as are any combinations involving any NOM forms other than *he/she/I*). In subject position, however, these constraints do not appear to exist, with both *I and DP* and *DP and he/she* appearing multiple times in the GloWbE corpus.

129. (a) “If Lucas can find some sustained health this season you can see [he and Allen] teaming up to absolutely maul opposing midfielders.”
 (b) “Switching [he and Gerrard] around might be the simple thing to do ...”
 (c) “And then I filmed [he and Jeanne] having a fight ...”
 (d) “Sean has spent the day repeatedly calling [he and Maria] perfect ...”

Furthermore, other than the Shakespearian example (128b), I can find no evidence from any of the existing literature that NOM forms are produced other than as *he/she* in first conjunct position and *I* as the second conjunct.

I therefore suggest that these case forms are not generated by the grammar as part of the analysis developed in section 6.4, but rather in the same way as a “pronoun *and I*” (as discussed in section 5.8): in other words, as the result of a lexically specific transformation in the morphological component. This use of apparently NOM pronouns in object position is therefore no more problematic for my analysis than is the existence of “pronoun *and I*” combinations.

As full DPs do not show overt case morphology in English, it is impossible to know for sure whether the same degree of case variation is occurring in these contexts as in pronominal conjunction. Until cross-linguistic evidence can be provided to show that it is not, I suggest that the underlying syntactic structure and case assignment mechanisms are the same in both situations.

6.7.2 Other areas in which non-standard case forms exist in English

Grano (2006) observes that there are several contexts in English in which case assignment is often disrupted, resulting in the possibility of case forms that could not otherwise be generated. Some other examples of this case assignment disruption are (Grano 2006: 10–12):

130. (a) Adjective + DP (*Silly little me forgot to bring an umbrella*)

²⁸Perhaps indicating that the Shakespearian example (128b) represents a combination that was grammatical at that time, but is no longer.

- (b) *We/us* + NP (*We/us linguists are fascinated by language*)
- (c) DP + relative clause (*I will give the award to he who most deserves it*)

Grano suggests that these case forms can be generated when a DP is not in a direct syntactic relationship with either T or v (i.e., when it is part of a larger phrase, such as &P). Hristov (2013) presents an alternative (LFG) analysis for these structures, in which he proposes that non-canonical case forms (i.e., ACC in subject position and NOM in object position) are possible when the pronominal DP is not the head of the construction receiving Case. This would seem to provide some support for the theory that DPs can be optionally underspecified for uCase when the feature is not required for syntactic reasons.

In an ideal world, it would be possible to show that these examples of non-standard case forms can be generated using the same mechanisms as those used in the analysis developed in section 6.4.4 for case variation in conjunction. In the contexts outlined above, it could be argued that the larger clause (i.e., *silly little me*, *he who most deserves it* and *us linguists*) is acting in the same way as &P and the &-chain with regard to making the DP visible for T's probing requirements (see section 6.6.2). The somewhat problematic issue is how to explain why underspecification of uCase is optional in conjunction and example (130b) – making case variation possible – but apparently obligatory in examples (130a) and (130c).

However, I argue that structures such as (130c) may be somewhat misleading, as to my ear, they are only acceptable with *he/she*:

131. (a) The award will be given to he who most deserves it.
 (b) *The prize will go to they who have worked hardest.
 (c) *The cars will be sent to we who were the competition winners.
 (d) *The highest mark went to I who did the best work in the class.

The same comment can be made about expanded DPs like *silly little me*: given that this structure appears to only be possible with *me* (and possibly *you*), it can be argued that it is a lexically-specific structure.

132. (a) Silly little me was running late, after having forgotten what time the bus left.
 (b) *Silly little him was sent home to his mother.
 (c) *Silly old her had made a huge mistake in trusting him.

It could therefore be argued that these are not comparable contexts to case assignment in conjunction, where the use of grammatical but non-standard case forms is not lexically restricted (with the exception of *and I*, which we saw in section 5.8

functions differently to other NOM case forms). Whether or not the same morphological readjustment argument should be adopted for these types of construction as for *and I* is debatable, but I leave this issue for further research, as it does not appear to be linked with the focus of my argument.

The variation between *we* and *us* in example (130b) could, as already mentioned, be ascribed to optional uCase feature underspecification if the larger phrase *us linguists* has a property that allows it to satisfy T in the same way as the &-chain (as discussed in section 6.6.2). In this situation, the pronoun is Caseless (and therefore receives default morphological ACC) and some property of the larger phrase makes the pronoun visible for probing by T. If the pronoun has a uCase feature, T probes it and values it as NOM. It could therefore plausibly be argued that this type of variation could be explained using the same mechanisms as case variation in conjunction, although further investigation is needed into the legitimacy of this claim.

This section has shown that it may be possible to account for some other contexts of non-standard case through using the same mechanisms as argued for in the analysis developed in section 6.4. Although further investigation would be needed to determine the extent to which the analyses suggested here can be applied, the fact that they are seemingly plausible gives strength to my original analysis.

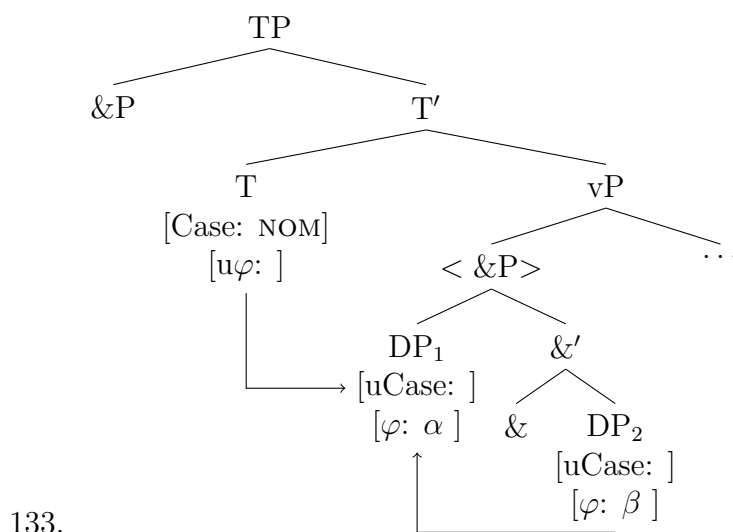
6.8 Chapter Summary

In this chapter, I have shown that none of the existing accounts discussed in chapter 3 can be used to explain how all (and only) the attested combinations are generated as well as the possibility of both inter- and intra-speaker variation. I then showed that it is insufficient to consider only Case features, as both φ - and EPP-features are also an intrinsic part of this issue, and that all three types of feature need to be considered when developing an analysis. From the data, it can be suggested that & does not have inherent Person and Gender features, that it is unlikely to have an inherent Number feature, but that there is no empirical way of showing whether it has an inherent uCase feature. I therefore devoted the remainder of this chapter to investigating five different possible analyses:

- & has an inherent uCase feature and T agrees directly with &.
- T agrees directly with DP_1 , but has no relationship with DP_2 .
- T agrees simultaneously with both DP_1 and DP_2 , in a Multiple Agree relationship.
- T agrees directly with DP_1 , which has previously formed an &-chain with DP_2 .
- T agrees directly with &, which has obtained features from both DP_1 and

DP₂ through an &-chain between the two conjuncts and feature percolation from DP₁ to &.

Each of these possibilities is explored in detail in section 6.4 and their relative strengths and weaknesses compared in section 6.5. I concluded that the most plausible analysis was that DP₁ and DP₂ form an &-chain and that T subsequently probes DP₁ for φ -features. As a result of the &-chain, T's u φ -features are affected by those of both conjuncts, whilst the uCase features (when present) are valued NOM as a reflex of this φ -feature agreement. Any conflict between the φ -feature values of DP₁ and DP₂ can be resolved by recourse to feature hierarchies (Woolford 1999 or similar).



When the conjuncts do not have a uCase feature, they receive default ACC case in the morphological component, allowing the generation of NOM+ACC and ACC+ACC combinations. ACC+NOM combinations cannot be generated, as there is no way for DP₂'s uCase feature to be valued other than through its chain with DP₁: when DP₁ does not have a uCase feature, there is no relationship between the Case features of T and DP₂ and the derivation must crash.

In section 6.6, I discussed some of the issues that still needed further elaboration if the analysis developed in section 6.4.4 is to be adopted. I began by giving further consideration to the concept of &-chains, showing why feature-chains (e.g. Frampton and Gutmann 2000 or similar) cannot be used, and demonstrating that both interpretable and uninterpretable features have to be linked by the chain, and that the chain cannot be triggered by an uninterpretable feature probing for a goal. Rather, it seems to be the case that the chain is triggered by the presence of &. I then moved on to discuss how T's probing requirements could be met when DP₁ is Caseless, and showed that there are other contexts in which Caseless subjects are grammatical in English. In this section, I also discussed the attested inter-speaker variation, showing that it can be easily accounted for within the confines of the analysis developed in this chapter. I then concluded the section with a brief investigation into production frequencies, as Adger (2006) claims that it should

be possible to use the type of analysis developed here to predict the frequency with which the different variants appear. I showed that it is not possible to do so for case variation in conjunction, as there are too many interacting factors to separate out the influence of any one in particular. Significantly more data would be needed to do so.

To conclude this chapter, I briefly considered two other structures that could arguably be linked to case variation in conjunction. I showed that the apparent grammaticality of a NOM pronoun in object position when conjoined with a lexical DP (which has been used as evidence to suggest that NOM pronouns are grammatical in object position) may be misleading, as only *he/she and X* and *X and I* have any tokens in GloWbE. This suggests that these combinations are lexically specific, and as such, are more likely to be generated in the same way as other *and I* combinations (see section 5.8) than through the derivation process argued for in this chapter. I also showed that some other contexts in which non-standard case forms can be used in English (e.g. *we/us linguists enjoy studying other languages*) may well also be generated using feature underspecification, giving support to my analysis.

Chapter 7

Conclusion

Whilst Minimalist theory is relatively clear in its proposal that variation should be the result either of changes in the morphosyntactic feature specifications of LIs in the numeration, or of PF-based operations (Adger and Smith 2005, 2010, Biberauer and Roberts 2005 among many others), it has yet to be verified whether all (or even most) types of variation can indeed be explained in this way. In this thesis, I therefore aimed to produce a detailed working example of how this theory could be applied, adopting case variation in English conjunction to do so.

I had two main reasons for using this form of variation to investigate my underlying research objective. Firstly, it is a more complex topic than many of those which have been investigated: Adger (2006) is based on the production of two variants, whilst Barbiers (2005) examines the generation of five variant word orders (to give but two examples). Even when considering only the conjunction of two pronouns in two syntactic positions, there are eight possible combinations of case forms for each pairing of pronouns, giving a total of 128 different combinations to be analysed. The complexity of the phenomenon (especially when its interaction with the impact of prescriptive judgements is taken into consideration), whilst making it harder to gain a reliable data set, means that any proposed analysis is tested more rigorously than it would be with a less complex form of variation. The other principal reason for my interest in this form of variation is empirical. Whilst there have been many studies of case assignment in conjunction (see the references cited in section 3.2.2), there is no consensus regarding which case forms are grammatical and whether any variation is inter- or intra-speaker. Furthermore, they are primarily focussed on how the case forms are generated, without taking the variation itself into account. A detailed analysis of case variation in conjunction would therefore allow me to contribute to two theoretical fields: Minimalist studies of variation; and case in conjunction theory.

The research objectives of this thesis (as outlined in section 1.3) were three-fold, with two aims being primarily empirical and the other theory-based. Given the uncertainty surrounding the possible variants, my first aim was to determine

which variants are grammatical¹ and my second, to discover whether any attested variation is inter- or intra-speaker. Having developed this overview, my third objective was to determine the extent to which this variation can be accounted for using only the morphosyntactic feature specifications of the LIs involved in the derivation, as this is how the Minimalist framework adopted in this thesis (see section 2.3) suggests that variation of this type should be analysed.

The first two issues were addressed in chapters 4 and 5. Due to the complex nature of, and the many influencing factors inherent to, this phenomenon, it was impossible to collect enough sufficiently reliable data from only one source. However, through a combination of two corpus studies and a detailed acceptability judgement task, I was able to determine that there are three grammatical combinations in subject position, but only one in object position (as well as ACC *and* I combinations in both subject and object positions, which are shown in section 5.8 to be generated in a different way to the others).

134. Potentially grammatical combinations in subject position:

NOM+NOM

NOM+ACC

ACC+ACC

ACC *and* I

135. Potentially grammatical combinations in object position:

ACC+ACC

ACC *and* I

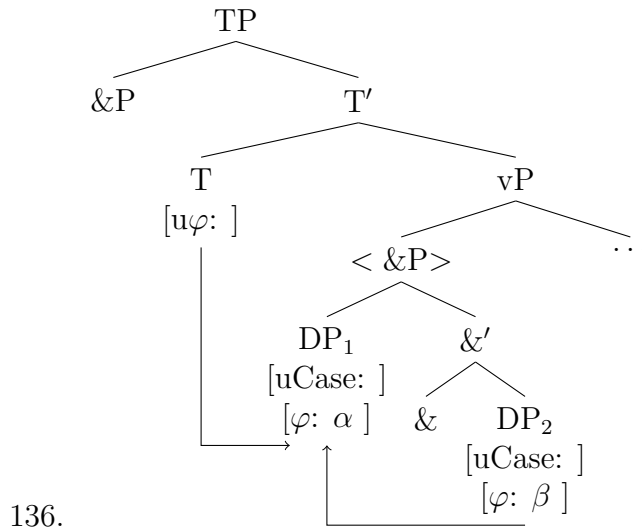
Furthermore, my data show (see section 5.7.2) that there are some speakers for whom all three subject position variants are grammatical, meaning that some of the attested variation is intra-speaker. However, there is also evidence of inter-speaker variation, as there are some speakers for whom only NOM+NOM combinations are grammatical in subject position and others who appear to accept two of the three variants.

This then left me with the question of how the attested intra-speaker variation could be best accounted for within a Minimalist framework – the topic of chapter 6. In contrast to the original systematic studies of variation (e.g. Labov 1969 and Kroch 1989), the broadly Minimalist aim pursued here is to show that no variation-specific operations or structures are needed to explain the generation of multiple variants, but rather that this type of variation is the result of changes in the morphosyntactic features of the lexical items in the derivation.

I have shown that it is possible to account for the generation of all grammatical combinations, with the exception of ACC *and* I, by resorting to the concept of morphosyntactic feature underspecification, thereby providing support to the Minimalist claim (Chomsky 2001, *inter alia*), that at least some forms of morphosyntactic variation should be analysed as being the result of properties of morpho-

¹At least in British English: I make no claims that other varieties of English behave in the same way.

syntactic features. After investigating a number of different possibilities, I showed that it seems most plausible to account for the generation of all variants within the grammar of a single speaker by adopting the concept of feature underspecification (Adger 2006) and the newly proposed &-chain: a chain linking both the interpretable and uninterpretable features of the conjuncts that is triggered by the presence of &. This chain forms an agreement relationship between the two DPs, meaning that when DP₁ is probed by T, any uCase features on the conjuncts are valued NOM as a reflex of T's u φ -features being checked.



When either DP is underspecified for uCase, it receives default ACC case in the morphological component as a “last resort” way of producing morphological case. DP₁ can continue to satisfy T’s probing requirements when Caseless, thanks to the presence of &P allowing it to act in the same way as other Caseless subjects (see section 6.6.2 for a more in-depth discussion of this).

It is indisputable that my analysis relies to a certain extent upon operations situated in the morphological component (e.g. the morphological readjustment-type analysis of ACC *and I* combinations), rather than a single syntactic derivation. However, given the awareness that (some) speakers have regarding the prescriptive norms affecting this structure, it is perhaps unsurprising that there is no single syntactic analysis that can account for how all combinations are generated. I suggested in section 5.8 that ACC *and I* combinations are generated as a result of a specific operation in the morphological component. Parrott (2007) argues that morphological transformations can be altered by prolonged exposure to prescriptive norms, resulting in the production of multiple VIs corresponding to the same LI. As a result, it is perhaps to be expected that any structure that is subject to prescriptive norms may be influenced by certain (lexically-specific) morphological transformations as a direct result of this prescriptive pressure on the grammar.

I have also made reference to “extra-grammatical” preferences (such as the ordering preferences discussed in section 5.7.2). It should be noted, however, that whilst these preferences appear to have an impact upon the perceived acceptability of certain combinations and the frequency with which those combinations are

produced, they do not seem to influence the underlying grammaticality of the affected combinations. This means that they need to be considered when analysing any data to determine underlying patterns and grammaticality, but should not necessarily be included within a syntactic analysis.

I have furthermore demonstrated the importance of considering which type of variation (inter- or intra-speaker) is attested, as both can be seen here and therefore need to be accounted for separately. It would be incorrect to claim that all speakers generate every possible combination, but it would be equally incorrect to assume that the different variants are generated by different speakers and therefore do not need to be accounted for within the same grammar. Whilst there are presumably other forms of variation which are either inter- or intra-speaker, no assumptions should be made unnecessarily, as the two types of variation may require very different sorts of analysis.

The fact that the analysis appears to have potential to be extended to other contexts in which non-standard case forms are generated (such as in expanded DPs such as *we/us linguists* and *silly little me*) gives it some additional strength: some work is needed to determine whether this potential is genuine, but from the limited amount of work done here, it seems like it may be.

This analysis has therefore allowed me to achieve my aim of showing that this form of intra-speaker variation can be accounted for within the confines placed upon variation theory by the adoption of a Minimalist framework (as outlined in section 2.3), as the only syntactic mechanism needed to account for the presence of the variation is that of morphosyntactic feature underspecification. This is not the only contribution towards studies of variation that can be taken from this thesis, however. The empirical evidence that both inter- and intra-speaker variation can be present in the same data set shows that it is possible for these two forms of variation to co-exist. I therefore argue that it is important for all future studies to carefully consider the nature of any attested variation, as the presence of one type does not preclude the presence of the other.

This thesis also makes a contribution toward our understanding of how agreement works in conjunction. I have shown that it is not possible to claim that Case and φ -feature agreement always work in tandem with each other, as there are situations in which a Caseless DP can still project its φ -features to value the uninterpretable ones of T or v. I argue that the φ -features of both conjuncts are always involved in the derivation process (this is presumably also the case when one or both conjuncts are full DPs, rather than pronouns, but I have little concrete evidence to support this claim), but that because of the $\&$ -chain between them, and the ability of $\&P$ to allow DP_1 to act as a Caseless subject, both DPs can be underspecified for uCase.

I also suggest that this analysis provides some support towards the syntactic structure of $\&P$: although it could be adapted for use with either the recursive specifier or adjunction analyses, it could not be used with a multidimensional analysis, for example. This suggests that we are best analysing conjunction phrases as having the same binary structure as all other phrases.

To conclude, this thesis has allowed me to resolve much of the empirical confusion surrounding which case forms are grammatical in English conjunction and the nature of the attested variation. I have shown that it is possible to account for the generation of all grammatical case combinations other than ACC *and I* with a single syntactic analysis relying on morphosyntactic feature underspecification and a newly proposed &-Criterion (stating that & has to have an overt specifier and complement, the morphosyntactic features – both interpretable and uninterpretable – of which are linked to form an &-chain). The adoption of feature underspecification (Adger 2006) is relatively unproblematic within a Minimalist framework: it coincides with the argument (Chomsky 2001 *inter alia*, see section 2.4) that morphosyntactic variation can be the result of alterations in the properties of morphosyntactic features. The &-Criterion and the &-chain that is argued to be a part of this criterion are more problematic. However, as I showed in section 6.3.1, both the interpretable and the uninterpretable features of the two conjuncts need to be linked in some way with the interpretable features remaining linked even when neither conjunct has any uninterpretable features. A feature chain of the type proposed by Frampton and Gutmann (2000) or Adger (2006) therefore cannot be adopted, as the formation of these chains is driven by probing of uninterpretable features. The introduction of an &-chain, however undesirable it may be to introduce a structure-specific concept, is therefore necessary. Proposing that it is part of a larger &-criterion also allows us to explain why &P, rather than DP₁, moves to satisfy the EPP (see section 6.6.1) and explains why an &-chain is limited for use in conjunction phrases, rather than linking the features of specifiers and complements of all syntactic heads.

Appendix A

Judgement Test Instructions and Stimuli

A.1 Participant Instructions

Please read this information carefully before deciding to take part in this research. If you are happy to participate, please tick the boxes below.

This study is part of my Ph.D. and is designed to gather information about whether specific phrases sound like natural English. The only criteria for taking part in this study are that you are over 18 and a native speaker of British English. It will take approximately 30 minutes and is completely anonymous: no information that could be used to identify you will be requested.

You have the right to withdraw from this study at any point, without needing to provide a reason. This does not affect your legal rights in any way. In the unlikely case of concern or complaint, you can contact the Chair of the Faculty Ethics Committee, Prof Chris Janaway (023 8079 3424, cjanaway@soton.ac.uk).

Please tick all boxes to give your consent to participate in this study:

- I agree to take part in this research project and for my responses to be used for the purpose of this study.
- I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected.
- I understand that no information will be requested that can be used to identify me.
- I confirm that I am over 18 and a native speaker of British English.

During this study, you will see a number of groups of sentences. Some sentences may sound completely natural, others completely unnatural, with the majority being neither completely natural nor unnatural. I would like you to rate the final sentence in each group with a number between 1 and 6, where 1 is completely unnatural and 6 is completely natural. In the following two examples, the first is (at least to me) completely natural, and the second completely unnatural.

There are no right or wrong answers, so please answer instinctively rather than thinking about each sentence in any detail. I am interested in informal, spoken English and not formal, written English, so it is irrelevant if your English teacher would have said something was wrong or if it would look odd written down: my interest lies in what you actually say, rather than what you feel you should say.

1. Tom wants to go on holiday to India next year because he's always dreamed of seeing the Taj Mahal. He's got lots of tourist brochures already.
2. Maria learnt to play the clarinet when she was little. Now she was older, she would play it all the time.

A.2 Stimuli

A.2.1 List 1:

- He and me (s)
 - Tom wants to split up because he says he's not happy any more. He and me only started going out six months ago.
 - I think I get on so well with Greg because we watch a lot of the same films. He and me always have something to talk about.
 - James is annoyed because the leaders gave us all fruit for dessert. He and me had both hoped for chocolate, but I knew it wasn't likely.
- I and they (s)
 - Please don't cook Italian when Andy and Laura come over for dinner with us. I and they hate cheese, and you know I don't eat tomatoes.
 - I can't wait to see my cousins again. I and they used to fight all the time when we were little but I get on better with them now.
 - Tim and Jane are really rude and never invite me to their parties. I and they lived together for three years, but they seem to have forgotten that.
- They and I (s)

- Tom and Joanne are really sorry, but they’ve made other plans for the 15th. They and I won’t be able to come to your party, because apparently their plans involve me too.
- I’ve been talking to my parents about getting some extra help for their dinner party, but it should be fine. They and I should be able to cope if they do the food and I provide drinks.
- I should know better than to try and spend time with your friends. They and I always end up arguing about stupid little things.
- Me and them (s)
 - There’s no point trying to explain anything to my boyfriend’s parents. Me and them can never agree on anything, so I’ve given up trying.
 - At your party, your flatmates let me play my music all night. Me and them like very different music, so they must have hated it.
 - I spend a lot of time with my housemates. Me and them go out together at least twice a week, whenever I don’t have to work.
- Them and me (s)
 - You should come and meet Tracy and Martin. Them and me met at the fair last night, and I really like them.
 - I try to avoid irritating my sisters whenever I can, but it’s quite hard sometimes. Them and me have never got on, although they get on fine with each other.
 - I argue with my parents most days, normally about the same thing. Them and me can’t agree whether I should apply to study medicine or physics at university.
- I and them (s)
 - I hate listening to my grandparents’ stories but they love to reminisce. I and them can’t spend more than an hour together before I get annoyed with them.
 - I can’t wait to move out of the house I share with two of my coursemates. I and them originally got on well, but now I can’t stand them.
 - Steve and Andy are my colleagues and work in the same office as me. I and them have been working together for about 5 years now, ever since I joined the company.
- Them and I (s)
 - I’ve known Bill and Susan for years, ever since they moved in next door. Them and I have dinner together once a week, either at their house or mine.
 - There’s just one small problem with your plan to get your friends to help me prepare for the show. Them and I can’t stand each other!

- Stacey’s parents think she’s wonderful but I think she’s horrible. For some reason, them and I see completely different sides of her.
- Me and they (s)
 - My friends think netball is the best sport, but I prefer squash. Me and they frequently have arguments about which sport is best.
 - Why did you think that I wouldn’t get on with your flatmates? Me and they really liked each other, even though I don’t have much in common with them.
 - When I was little, I used to complain about my sisters all the time. Me and they used to fight a lot, because they always left me out of things.
- They and me (s)
 - I got really negative feedback from the people who interviewed me yesterday. They and me completely disagreed about whether I’d be suitable for the job.
 - Now my brothers are teenagers, they pretend I’m really embarrassing. They and me used to be really close as kids, so hopefully they’ll get over it.
 - I work well with children because I love being silly but can keep them under control. They and me can have fun together but they know when they’re pushing their luck.
- He and she (s)
 - Trevor and Mandy have decided to get a kitten. Both he and she love cats, although she secretly prefers dogs.
 - I like spending time with Joe but not Sarah. Both he and she have always been cheeky, but now she’s just rude.
 - Tanya called her husband at work to tell him that she was leaving him. He and she had been fighting for weeks and she was too scared to face him any more.
- She and he (s)
 - Katie avoids Kevin as much as she can. She and he can’t see eye-to-eye about anything since he cheated on her.
 - Freya knows she should spend less time with Reg, but he’s very controlling. She and he are together all day, every day, and he won’t let her out of his sight.
 - Harry thinks that his girlfriend might leave him soon. She and he want very different things from their relationship, and she doesn’t seem happy any more.
- Him and her (s)

- Tom hasn't visited Hannah for a few weeks now. Him and her both thought they needed some time apart.
- Maria won't go to anything if she knows that Peter's going to be there, but he doesn't care either way. Him and her have reacted very differently to their divorce.
- Owen shouldn't have talked to his wife in such a patronising way. Him and her may be arguing a lot at the moment, but that's no excuse.
- Her and him (s)
 - My brother lied to my mum about where he was because he knew she wouldn't like the truth. Her and him can't agree whether his new girlfriend is good for him or not.
 - My brother constantly plays pranks on my sister, winds her up and calls her names. Her and him are very different from each other and he doesn't understand her.
 - I don't know why Kate likes Peter. Her and him are so different, I expected them to hate each other on sight.
- He and her (s)
 - Leanne should ask Kevin to help her decorate her new flat. He and her should be able to do it between them over the weekend.
 - I need to talk to Martin about how Vicky walks all over him. He and her are meant to be equal partners, but she calls all the shots.
 - Do you think Bob would introduce me to Olivia? He and her seem to be good friends, and I've wanted to meet her for ages.
- Her and he (s)
 - It's hard to know if Yvonne likes her youngest brother Terry. Her and he seem to avoid each other, but I know he'd like to spend more time with her.
 - What about putting Helen and Toby together to run the session? Her and he have very different approaches, but she could learn a lot from working with him.
 - It's been a while since Ellen and Tony went running. Her and he have both been very busy recently: she's been travelling and he's been working shifts.
- Him and she (s)
 - Don't believe everything Nick says about his relationship with Polly. Him and she claim not to get on, but I know he fancies her.
 - Look at Jake and Holly laughing and joking over there. Him and she only met yesterday, although he thinks he's seen her at other parties.
 - I wish Bill and Emma would just get engaged. Him and she both want to, but neither will admit it to the other.

- She and him (s)
 - Olivia and James go to a museum every Saturday. She and him always go together, even though Olivia hates history and would rather go to an art gallery.
 - Natasha and William used to go shopping every week. She and him both loved clothes shopping, but only Natasha ever bought anything.
 - Christina and Paul visited the fair yesterday. She and him travelled separately, because she had to go straight from work.
- Them and I (o)
 - I have a difficult relationship with both my brothers. My parents treated them and I very differently as children, and I find it hard to forget that.
 - It's so nice of you to have bought me back a present from your holiday. Will your grandparents be offended that you gave them and I the same thing?
 - As soon as I saw Tom and Kevin, I knew there was a problem. I'd been told to sort out uniforms for them and I, but had forgotten how tall they both were.
- We and they (o)
 - We had so much in common with our neighbours that most people thought they were our cousins. Our parents couldn't see any similarities between we and they though.
 - We met our neighbours for the first time at a street party five years ago. I can't remember who introduced we and they in the first place, though.
 - Have your housemates done something to annoy you as well? You'll have to talk to both we and they eventually, or you'll have no friends left.
- They and we (o)
 - Do Jon and Mike really think we can forgive them for stealing from us? They obviously don't get how serious the problem between they and we is.
 - We were trying out some tandems with two of our friends. A goose flew between they and we, and knocked them off their bike.
 - We haven't spoken to our neighbours for several weeks now. The loud music at their last party caused a huge fight between they and we, and we're waiting for them to apologise.

A.2.2 List 2:

- You and he (s)
 - I was really surprised that you know Mike’s new girlfriend Louise. Did you and he meet her at the same time?
 - It’s always worrying when Nicholas is down to work on the same day as you. You and he really shouldn’t be trusted together, because you always end up doing something silly.
 - Why have you and Brad stopped talking to each other? You and he used to be such good friends.
- He and you (s)
 - Just so you know, Johnny’s on his way over. He and you will just have to tolerate each other for a bit.
 - I really liked your new boyfriend. He and you should come over for dinner one night.
 - I want Michael to do this project with you. He and you work well together, so it should be an easy one for you both.
- You and him (s)
 - You’d probably get on well with Leon. You and him are both Scout leaders, and love being outside.
 - Why’s Miles in a bad mood? Have you and him had another fight?
 - Ian keeps avoiding me, so can you see if he’ll talk to you? You and him are close enough that he might do.
- Him and you (s)
 - I think Greg might be able to help with your problem. Him and you should have a chat about it, just in case there’s something he can do.
 - Please leave my brother alone at his birthday party tonight. Him and you always fight over stupid things, and I don’t want you to ruin his day.
 - You need to spend some time with someone other than Jon. Even though him and you are going out, you shouldn’t ignore your other friends.
- He and they (s)
 - It’s so nice watching Tommy play with his new friends. He and they are talking so much, it’s impossible to get a word in!
 - Nigel has known Fred and his wife for years, and goes on holiday with them every year. He and they always argue over where to go, though.
 - Mike needs to spend some time with his sons now that he’s separated from their mother. He and they can’t live together any more, and the boys are really angry about it.

- They and he (s)
 - Clarence is really unhappy with the way his bosses are treating him. They and he need to talk, so they can understand his concerns better.
 - Martin is going to fleece the people playing poker with him. They and he have all agreed not to cheat, but he's already stacked the deck.
 - Luke had fallen out with his teammates just before kickoff and was hardly talking to them when they walked on the pitch. They and he didn't let it affect their game though, and he scored four goals.
- Him and them (s)
 - I'm so glad that my boyfriend has something in common with my brothers. Him and them all love fishing, even if he doesn't have time to go very often.
 - I wish Tim and his mates would sort out whatever it is that they keep arguing over. Him and them need to move on and start being friends again.
 - Can you get Roger to apologise to the triplets for making fun of them? Him and them had a huge fight last week at school, so he needs to say sorry.
- Them and him (s)
 - Will needs to be kept in the same group as his cousins whenever possible. Them and him may bicker a lot, but they can help with his anxiety issues.
 - Mike feels very isolated from the rest of his class, because he moved school in the middle of the year. Maybe them and him should do some team building activities.
 - If he's feeling lonely, Joe should get to know Olga and Polly better. Them and him have a lot of lectures together, so they could spend a lot of time with him.
- He and them (s)
 - Peter's been practising a lot with his new football team, but he's the only one with any match experience. He and them might be good enough to win the trophy if they work together, but I'd be surprised.
 - If Luke wants the rest of the group to pull their weight, he needs to involve them in his plans. He and them need to agree how to finish the job.
 - At the seminar, Kevin provided the conference delegates with a handout of his data. He and them could then concentrate on his analysis.
- Them and he (s)
 - Steve's mum and dad are struggling now that he's gone to uni. Both them and he have to learn that he needs to be more independent.

- Jonathan would be a good choice to look after the new students when they arrive. Them and he know each other from their athletics club.
- The other Scout leaders want to talk to Callum in private. Them and he have some issues that need to be sorted out before the next meeting.
- Him and they (s)
 - Your dad and my parents have a lot in common. Him and they enjoy walking, climbing and bird watching, but unlike them, he doesn't like running.
 - Listen to Neil arguing with Rhys and Stuart about the new rules. Him and they are actually making the same point, but he won't listen for long enough to work that out.
 - I'm so tempted to shut Dan in a room with his parents and refuse to let anyone out. Him and they have got to sort out their problems.
- They and him (s)
 - Simon needs to learn to listen to his teachers rather than assuming they hate him. They and him want the same things, but he won't take their advice.
 - How do you think the twins would cope working with Matt? I need a group of three for the next task, and they and him seem to be the obvious choice.
 - Peter keeps shutting his parents out, even when they're doing their best to help him. They and him have a difficult relationship and always have done.
- We and you (s)
 - We don't think it's a good idea to try and run the event just the two of us. We and you might be able to do it together though, if you've got time to help?
 - What do you mean, you're not interested in the investment opportunity? We and you had a deal, you can't back out on us now.
 - If you're struggling to make ends meet, maybe you need to find ways to save money. We and you get on well enough, why don't you move into our spare room for a bit?
- You and we (s)
 - We think you're being very ungrateful, but perhaps we should have expected it. You and we come from very different backgrounds: it's no surprise you don't want the same things as us.
 - You're always criticising us, and it means that we don't want to come home in the evenings. Maybe you and we shouldn't be sharing a house any more.

- I’m coming to Somerset with my whole family in a couple of weeks, and would love to see you. You and we could meet up for dinner or you could show us your new home.
- Us and you (s)
 - We don’t understand why you’ve been sent to run this activity as well. Us and you would be more productive on different bases.
 - It seems unfair that we can’t join the Scout group at the same time as you. Us and you signed up together, so why can you join now when we have to wait?
 - I bet we can beat you to the shops, because our car’s faster than your bike. Maybe us and you should have a race?
- You and us (s)
 - You archaeologists think you’re so much smarter than us historians. You and us should be able to work together, but you don’t bother to tell us anything.
 - It’s pretty obvious that there are three of us and three of you going to watch the match. You and us won’t all fit in the same car, so I’ll take mine if you take yours.
 - This project will never get done by the deadline if you keep doing things in your own way. You and us have got to work together on this.
- They and I (o)
 - My friends are going to Madrid this summer and I’m thinking about going next year. Would you come over and show they and I your photos?
 - Can you call Wendy or Rich about your plans for next week? You’re welcome to come for dinner with they and I if you want, just let one of them know.
 - Adam and Liz were talking about the year when the four of us were housemates. Do you remember trying to get they and I to make up whenever they made fun of me?
- I and they (o)
 - My parents have asked me not to tell anyone about their secret, but I really want to tell you. It should stay between I and they though, so I can’t.
 - Why haven’t I got your work yet, when you sent it to our bosses last Friday? You were told to send it to both I and they, so I should have it by now.
 - Ever since you moved to Australia, my brothers have really missed you. Why don’t you come and see I and they when you’re next in this country?

- He and she (o)
 - Pam’s over there in the corner, trying to hide. Liam told her that their mum’s mad with he and she, but it’s really only him that’s in trouble.
 - Tommy and Maria are annoyed with me, because I made their life harder than it should have been. I should have sent my work to both he and she, but I only sent it to Maria.
 - Lucy’s husband paid someone to come in and redecorate the master bedroom. The decorator produced the perfect space for he and she to share.
- She and he (o)
 - Whatever Joy thinks about Morgan, they’re going to have to sort something out. The work needs to be split between she and he, because there’s too much for her to do alone.
 - Karen and James have agreed to work on the project together. They split the work evenly between she and he because Fred was worried about doing it alone.
 - Jenny and her brother are useless at keeping secrets. If they had to keep something just between she and he, they wouldn’t be able to.

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