# Abstract

This thesis investigates Auxiliary Contraction and the behaviour of auxiliaries in non-standard dialects of English in order to provide an insight into the structure of the English clause and the parameters along which dialects may differ

I argue for a syntactic account of Auxiliary Contraction which treats clitic auxiliaries as allomorphs distinct from the weak and full forms. In order to account for the two different positions in which English auxiliaries may appear (above and below adverbs like *probably*), I propose that NegP must be replaced by ΣP in the English clause and that Σ hosts [NEG] and/or [EMPH] features. Weak and full forms are then derived in clauses in which Σ is absent, and emphatic and negative auxiliaries from clauses in which Σ is projected. This clause structure is also maintained in the analysis of non-standard phenomena such as Double Modals and Double *Have* Constructions.

This thesis is also concerned with dialect variation, and presents a number of ways in which dialects may differ from one another. I show that the structure of the lexicon plays a crucial role in small scale variation; dialects which permit Double *Have* Constructions have, in their lexicon, a modal *coulduf* which is not found in other varieties (even those Northern dialects which also permit the multiple realisation of *have*), and Double Modal dialects differ from each other and from Standard English in the forms of modals available in the lexicon, i.e. some dialects permit *might* to be an adverb, and others an untensed modal. The order of functional heads also plays a role in dialect variation; Double *Have* dialects allow Σ to appear lower in the clause structure, leading to the raising and eventual Multiple Spell Out of *have*. Thus, this thesis contributes to the growing knowledge of dialect variation and to the understanding of the syntactic structure of the English auxiliary system.

# English Auxiliaries: A Syntactic Study of Contraction and Variation

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This thesis is submitted in partial fulfilment of the
requirements for the degree of
Doctor of Philosophy.

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September 2004

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# Acknowledgments

There are a number of people without whom this thesis would not have been possible. I have received continued support from David Adger, Bernadette Plunkett and Anthony Warner - each my supervisor at some stage - for which I am very grateful; thanks for your time, your knowledge and your patience. Special thanks to Anthony for the encouragement and inspiration in the final stages. Thanks also to the members of the Department of Language and Linguistic Science for their insights and comments particularly Steve Harlow, Richard Ogden, and Jennifer Smith. I am forever grateful to Ros Temple for always offering an open door and a (kind of) empty chair, and to Beck Sinar for her friendship and technical support. Many thanks to Siobhan Cottell for introducing me to English Dialect Syntax, and for the enlightening tutorials on searching the web for Double Modals (!).

This work was funded by ERSC grant R42200034085, for which I am very grateful. Thanks to my informants for their time and their judgements.

Above all thanks to my family and friends: to Wendie for making me coffee, and Laura and Hannah for making me laugh; to Ros for good advice; to Joan, Tom and Gran for always being supportive; and to Gemma for proof-reading, and for everything.

# Declaration

This thesis has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree other than Doctor of Philosophy of the University of York. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by explicit references.

I hereby give consent for my thesis, if accepted, to be made available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed T. L. Close (candidate)

Date 29th September 2004

# Chapter 1

# Introduction

## 1.1 Introduction

This thesis investigates the contraction of modal and auxiliary verbs in Standard English, and the double appearance of modal and auxiliary verbs in non-standard varieties of English. The theoretical aim of this work is to use the behaviour of auxiliaries in contraction and non-standard contexts in order to re-think the way in which the English auxiliary system is structured and, in turn, to provide an insight into the nature of dialect variation.

The English auxiliary system has been chosen for investigation for a number of reasons. Firstly, there exists in the linguistics literature a large amount of data that has either been (i) collected and not analysed, or (ii) collected and analysed in an older syntactic framework. For instance, although there are many accounts of Double Modals such as *might could* and *will can* (see Di Paolo 1989, Brown 1991, Mufwene 1994), there is no Minimalist account of the differences between Double Modal dialects and non-Double Modal dialects. Secondly, there are non-standard uses of auxiliaries such as Double *Have* Constructions (e.g. *he could* ***have*** *not* ***have*** *gone*), for example, that have not been reported or explored in the syntactic literature, yet may be crucial to the analysis of English auxiliaries.

In the syntactic literature there are many proposed analyses that concentrate on the following facts about English auxiliaries:

- Auxiliaries occur in a fixed order (see Chomsky 1957, Pullum and Wilson 1977, Akmajian et al. 1979, Boertien 1979, Warner 1993).

- Auxiliaries have a number of properties which distinguish them from main verbs (see Palmer 1979b, Lobeck 1986, Johnson 1988, Lasnik 1999).

- All auxiliaries do not have the same properties - *have* and *be*, for instance, do not share the same behavioural traits (see Johnson 1988, Kayne 1993).

Accounting for these facts is not a direct concern of this chapter. Rather, I will assume that (i) auxiliaries are merged into the derivation as heads of their own projections and (ii) finite auxiliaries undergo raising to T, and will determine how well such an analysis can cope with the phenomena of auxiliary contraction and auxiliary and modal "doubling."

I will take the analysis of auxiliaries proposed by Lasnik (1999) as 'a standard analysis,'[1] and, throughout the thesis, will propose changes to this analysis based on the data presented. As Lasnik's analysis was formulated using Standard English (StE) data, it is expected to have difficulties in accounting for non-standard data. Precisely, it seems that the clause structure is too sparse to allow for the occurrence of Double Modal and Double *Have* constructions shown in (1a) and (1b), respectively, if these are to be analysed as instances of two modals or auxiliaries:

(1) a. He might could do it.
b. He could have not have done it.

In Chapter 2, as well as suggesting a more extensive clause structure, I will re-assess the idea that finite auxiliaries raise to T. I will suggest that there is an extra functional projection ($\Sigma$) required in the clause, and that finite auxiliaries are not always forced to raise as high as T.

## 1.2 The Syntax of English Auxiliary Verbs

Many differences exist between English main and auxiliary verbs (see Huddleston 1970, Palmer 1988). For instance, as shown in (2), finite auxiliary verbs may appear to the left of negation and adverbs, and may invert in interrogatives. However, as shown in (3), main verbs cannot.

(2) a. She hasn't/has not arrived.
b. She has always arrived late.
c. Has she arrived yet?

(3) a. *She arrived not.

[1] I intentionally avoid the use of the definite article here as there does not exist, in the current theory, an account of English auxiliary verbs that can explain all of the data. Lasnik's analysis has been chosen as it is a Minimalist account, and is able to account for much of the data.

b. *She arrived always late.

c. *Arrived she yet?

It has long been noted that there is a structural difference between English and French main verbs, and an apparent similarity between French main verbs and English auxiliaries (see Emonds 1978, Pollock 1989). Unlike English main verbs, French main verbs appear to the left of negation and adverbs as shown in the following examples from Pollock (1989, 367):

(4) a. *John not likes Mary.

b. Jean (n') aime pas Marie.

(5) a. *John kisses often Mary.

b. Jean embrasse souvent Marie.

As shown in (2), English auxiliaries exhibit behaviour like that associated with French main verbs.

### 1.2.1 Previous Analyses of Auxiliaries

Many analyses that have been proposed for English main and auxiliary verbs have been extended to include the cross-linguistic difference between main verbs in French and English outlined above. For example, Emonds (1978) proposes that English and French differ according to whether they allow main verbs to raise; he suggests that in English, only auxiliary verbs may raise, but in French verb raising applies to both main and auxiliary verbs.

A similar approach is taken by Lasnik (1981) who proposes the following filter to ensure that whenever verbal inflection is present, it must be in some way supported:

(6) *The Stranded Affix Filter*:
A morphologically realized affix must be a syntactic dependent of a morphologically realized category, at surface structure.

Verbal inflection is supported by raising the verb and adjoining it to the inflection. Thus, verb raising is obligatory when inflection requires support, but in all other cases, is unnecessary. Lasnik states that for the Stranded Affix Filter to achieve the correct results, verbal inflection must be assumed to be a morphological affix. As pointed out in Lasnik (1999), this idea, coupled with a theory of transformations, derives the following analysis of the English verbal system:

(7) a. S is a maximal projection of the inflectional morpheme Infl (=C of Chomsky (1957)).
b. Infl takes VP as its complement.
c. When the head of VP is *have* or *be* it raises to Infl, the next head up.
d. Otherwise, Infl lowers to V: Affix Hopping.
e. Otherwise, *do* adjoins to Infl.

Like the analysis of Emonds (1978), French main verbs behave like English *have* and *be*, and therefore raise to Infl. This gives an account of their position above negation and adverbs. English main verbs, on the other hand, do not raise to Infl; in positive declaratives Infl lowers to V, but in negatives and interrogatives *do* is inserted to support the verbal inflection on Infl. Therefore, English main verbs do not raise out of VP (or vP), and are thus unable to occur to the left of negation.

A more complex approach to French verbs is that proposed by Pollock (1989). Pollock argues that Infl is split into Agr(eement) and T(ense) projections and the difference between English and French lies in the opacity of Agr. He argues that English Agr is not morphologically rich and is opaque to theta-role transmission. Thus, if an English main verb raises to Agr, it will not be able to assign theta-roles and so the derivation will crash as a violation of the Theta-Criterion. In French, however, Agr is morphologically rich and transparent to theta-role transmission so main verbs can raise and are still able to assign theta-roles.

Pollock's analysis is adapted by Chomsky (1995) who adds that raising must take place whenever it can because it is more economical than lowering; lowering leaves an unbound trace that must be bound by re-raising in LF. The problem with this analysis is that raising is not always an option. For instance, (8) would be derived by overt lowering of the inflection and LF re-raising. However, it is ungrammatical because negation blocks the LF re-raising that is required:

(8) *John not likes Mary.

Lasnik (1999) states that if this is the case for English main verbs, it should not be possible to raise English auxiliaries or French main verbs across Neg either. As shown in (9), negation does not always block raising:

(9) John has not been here today.

*Have* and *be* in English (and French verbs) are not prevented from raising across negation.

Chomsky (1993) proposes that verbs are fully inflected in the lexicon. In the syntactic

component, therefore, verbs are not required to raise in order to pick up inflections. However, the inflected verbs that have been chosen from the lexicon are required to be syntactically associated with functional heads in the clause so that their inflectional properties can be checked against the features marked on functional heads. A result of this analysis is that Affix Hopping is no longer necessary.

Chomsky (1993) reduces the difference between English and French to the point in the derivation at which verb raising occurs; he suggests that in English, verb raising takes place at LF, while in French it occurs in overt syntax. According to Chomsky (1993), verb raising can take place at different levels in the derivation depending upon the strength of the V-features. Chomsky proposes that the V-features of Agr are strong in French, and weak in English. Unless checked, strong V-features are visible at PF and cause the derivation to crash. French verbs must raise to check the strong V-features of Agr, while in English, V-raising may be delayed until LF because Agr has weak features that do not cause the derivation to crash at PF.

While this can account for the difference between French and English main verbs, Lasnik (1999) sees a remaining problem in the behaviour of English auxiliaries *have* and *be*. Chomsky (1993) suggests that *have* and *be* are semantically vacuous and thus invisible to LF operations. They must, therefore, raise for checking in overt syntax. Lasnik (1999) questions whether *be* is actually semantically vacuous and, if it is, whether syntactic operations should be sensitive to semantic properties.

As Lasnik (1999) sees a number of problems with the suggested analyses of English auxiliaries, he attempts to provide an account which will overcome the problems; he describes his analysis of English auxiliaries as '[a return to] the classic analysis of English verbal morphology of Chomsky (1957) but from a Miniamlist point of view' (Lasnik 1999, 97). The 'hybrid theory' proposed by Lasnik (1999) incorporates a lexical analysis of English auxiliaries (and French verbs) and an Affix Hopping approach to English main verbs.

In order to account for the differences between English main verbs, French verbs and English auxiliaries *have* and *be*, Lasnik (1999) proposes the following approach to the English verbal system:

- French verbs are fully inflected in the lexicon.
- *Have* and *be* are fully inflected in the lexicon.
- All other English verbs are bare in the lexicon.

The structural assumptions that accompany this analysis are as follows:

- Infl is freely an affix or a set of abstract features.

- Finite featural Infl is strong in both French and English.

The crucial component in Lasnik's analysis is Affix Hopping.

Rather than deriving differences in French and English from the strength of Agr (see Chomsky 1993), Lasnik assumes that the difference arises from whether Infl is affixal or has abstract features. If Infl is affixal it must merge with a V, a PF process (not head movement) that demands adjacency. If Infl is not affixal but verbs are fully inflected in the lexicon (as is argued to be the case for French verbs and *have* and *be*) then Infl has abstract features as does V:[2]

(10) ... Infl ... V ....

+F +F

In this derivation, which Lasnik assumes applies to French verbs and *have* and *be*, V raises overtly to Infl to check the abstract features. Thus, the verbs raise in overt syntax, and appear to the left of negation.

The contrast with English main verbs is derived from the fact that English main verbs are bare in the lexicon and so occur with affixal Infl rather than featural Infl.

(11) ... Infl ... V ...

Af bare

The merger of affixal Infl and V takes place at PF (provided that the verb and inflection are adjacent), accounting for the fact that English verbs do not raise overtly like French verbs and *have* and *be*.

Merge of Infl and V is only possible when Infl and V are adjacent and no element intervenes. When negation intervenes, for example, PF merge is not possible:

(12) a. *John ed not walk.
b. *John not walked.

These examples are ruled out because (12a) is a violation of the stray affix filter, and in (12b) negation blocks V raising. In English, when the verb is prevented from raising to affixal Infl by an intervening negative, *do* support occurs as a last resort to rescue the derivation.

[2]These features are marked as +F.

(13) John did not walk.

By combining Verb Raising and Affix Hopping into an analysis, Lasnik is able to account for the differences between English and French verbs, and English main verbs and auxiliaries. As Lasnik's analysis provides a satisfactory analysis of the behaviour of English auxiliaries, it will be used as a touchstone in dealing with non-standard data in the following chapters. In his analysis of auxiliaries, Lasnik states that auxiliaries raise to Infl. I will interpret Infl as T, and will assume that auxiliaries raise to T from the position in the clause into which they were originally merged. This leads to the next issue in the analysis of auxiliaries: the positions into which they are merged.

### 1.2.2 Auxiliaries in the English clause

In this section I will outline some of the most important aspects of the behaviour of English auxiliaries, investigate some of the proposals made about English auxiliaries and the clause structure into which they fit, and attempt to arrive to some conclusions about the structure of the English clause.

Ideally, any analysis of the English auxiliary system will account for the following facts:

- English auxiliaries must occur in a fixed order.
- When present, sentential negation always follows the finite auxiliary.[3]
- *Do*-support is found in negative and inverted interrogative clauses when there is no finite auxiliary present.[4]

The ordering restrictions on auxiliaries, and on auxiliaries with respect to negation, is apparent in the following data:

(14) a. The T-Rex could not/couldn't eat Lara.
b. The T-Rex could not/couldn't have eaten Lara.
c. The T-Rex could not/couldn't have been eating Lara.

(15) a. She might have been being eaten.
b. * She might been have being eaten.
c. * She might being have been eaten.

[3]Negation is also able to occur to the immediate left of the non-finite main verb, but this is typically viewed as constituent rather than sentential negation,which is the focus here.

[4]Emphatic *do*, of course, often appears in declaratives.

This strict ordering of English auxiliaries can be accounted for by assuming a theory of a UG hierarchy of functional projections; Cinque (1999) argues, on the basis of the various adverbial positions that languages permit within the clause, that there is a fixed order of functional categories across all languages. It has been suggested by Brown and Miller (1991), Denison (2000) and Adger (2003), among others, that tensed finite clauses in English have the following structure:[5]

(16) Tense - Negation - Modal - Perfect - Progressive - Passive

Brown and Miller use an abstract representation to refer to English auxiliaries and to make it clear that the auxiliary chosen consequently affects the form of the following verb: {HAVE + pp}, {BE + *-ing*}, {BE + pp}.

Within the structure in (16), I make the following assumptions:

- Modals are merged into the derivation as a head Mod and undergo raising to T.
- Auxiliaries are merged as heads of their own projections (i.e. perfective auxiliaries are merged into PerfP, passive ones in PassP, and progressive ones in ProgP).
- Finite auxiliaries raise to T.
- Verbs raise from V to v, but no further.

I will maintain these assumptions, and take on the main characteristics of the analysis of English auxiliaries proposed by Lasnik (1999). I will then use this analysis throughout the thesis in attempting to account for contracted auxiliaries and the double occurrence of modal verbs and perfective *have* in non-standard varieties of English.

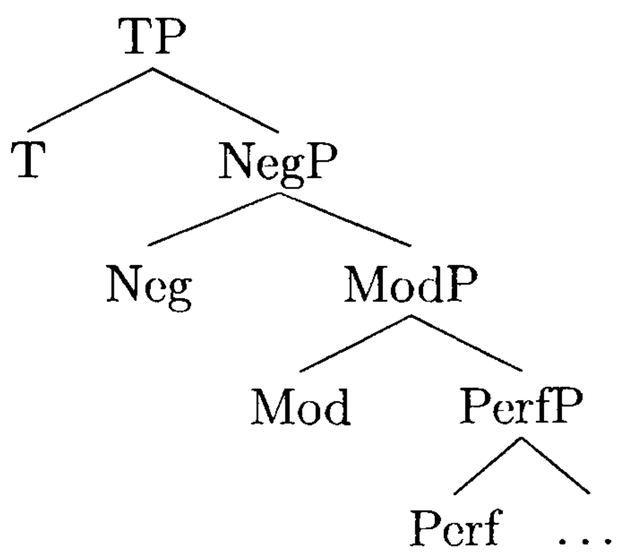
### 1.2.3 Auxiliaries and the Scope of Negation

Some of the most interesting behaviour exhibited by auxiliaries is in their co-occurrence with negation. As I will discuss the interaction of auxiliaries and negation in some detail in Chapters 2-5, I will now outline some of the assumptions I will make and terminology I will use.

In many syntactic treatments, sentential negation is the head of a projection (see Pollock 1989, Chomsky 1993, Laka 1990, Adger 2003). Following Pollock (1989), and Adger (2003) for a more recent account, I will assume that NegP is situated below TP.

[5]The question of whether this is true for all varieties of English will be addressed throughout the thesis. It is possible that the varieties of English which allow multiple *have* and multiple modals may have more functional structure that StE.

(17)




Thus, auxiliaries that raise to T occur to the left of negation, and main verbs that do not leave vP occur to the right of negation:

(18) a. He hasn't caught the rabbit yet.
b. He doesn't think he can catch the rabbit.

Negation can be expressed by the full form *not* or the clitic *n't*.[6] The distinction between full and clitic negation is a difficult one, and will be addressed in more detail in Chapter 2.

Negation can be interpreted in a number of different ways, and can appear in different clausal positions depending on the particular negation that is being expressed. Negation positioned immediately below TP is generally referred to as *sentential negation*, as it takes scope over the sentence, or part of the sentence. Drawing a distinction between sentential and constituent negation is not always straightforward. Klima (1964) suggests tests for sentential negation; these include the use of a following positive tag question, and an *either/neither* clause:

(19) a. He couldn't go, could he?
b. *He couldn't go, couldn't he?

As shown, sentential negation triggers the use of a positive tag, and cannot occur with a negative tag. Sentential negation also triggers the use of an agreeing clause such as those including the words *either* or *neither*:

(20) a. He couldn't go, and neither could I.
b. He couldn't go, and I couldn't either.
c. *He couldn't go, and so could I.

[6]The phonological form of these two kinds of negation differs across dialects. For instance, in Scottish varieties of English, the full form is *no* and the clitic *-nae*.

It is not possible, however, for sentential negation to occur with a following positive clause such as *so could I.*

The second form of negation which I will refer to is *constituent negation.* Constituent negation takes low scope over a constituent such as vP:

(21) He could probably not go.

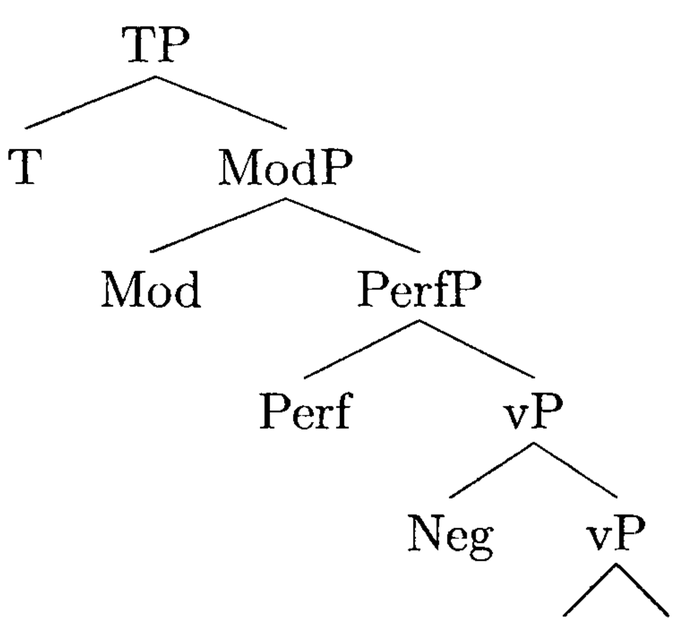
Constituent negation can be identified by attaching a negative tag:

(22) a. He could probably not go, couldn't he?
b. *He could probably not go, could he?

(23) a. He could probably not go, and so could I.
b. *He could probably not go, and neither could I.
c. *He could probably not go, and I couldn't either.

I will also refer to constituent negation as low scope negation, as opposed to sentential negation which takes high scope. This scope difference is reflected in the syntactic position and structure of the two types of negation. Whereas sentential negation is a functional head located below TP in the clause, constituent negation has adverb-like properties and is left-adjoined to the constituent which it negates. In the tree below, negation negates vP, and is thus left-adjoined to it:

(24)




Throughout the thesis, I will refer to sentential and constituent negation, where sentential negation negates the whole, or part of, the sentence and constituent negation negates a single constituent such as vP. I will use Klima's tests as evidence for the kind of negation being used.

## 1.3 Dialect Variation

Above, I outlined previous accounts of the English auxiliary system and some of the problems faced in the analysis of auxiliaries. On the face of this, it may seem unusual to propose studying variation in a system that is barely able to cope with the task of accommodating the standard data. It is hoped that studying non-standard phenomena found in the auxiliary system will strengthen the system's ability to account for the standard data, and extend its capabilities to account for non-standard data.

As well as being of theoretical significance, this work has empirical importance in the use of data from non-standard dialects of English. The majority of work in the field of syntactic theory is based on cross-linguistic comparisons. This focus on macro-variation somewhat overshadows the importance of micro-variation. However, 'microparametric syntax is a powerful tool, whose growth is perhaps to be compared with the development of the earliest microscopes, that allows us to probe questions concerning the most primitive units of syntactic variation. And since the invariant principles of UG can hardly be understood in isolation from syntactic variation, this tool promises to provide invaluable evidence that will shape our understanding of those principles themselves' (Kayne 1996, xvii).

One of the aims of modern linguistics is to uncover the answers to the following questions: what properties of language are universal, and how far can languages diverge from one another? It is believed that the answers to these questions are most likely to be found during an investigation into the differences between languages. For this reason, much work in syntactic theory, and in linguistics in general, focuses on cross-linguistic variation.

Not all languages have the same syntactic structure, this is an uncontroversial claim. What it is that makes languages differ, however, is not so clear. The fact that languages are different is one of the main concerns of the Principles and Parameters (P&P) theory of language (Chomsky 1986; 1993), a theory concerned with the language faculty (a component of the mind/brain used in language processing) in human beings. It is assumed that this 'language faculty has an initial state, genetically determined; in the normal course of development it passes through a series of states in early childhood, reaching a relatively stable steady state that undergoes little subsequent change, apart from the lexicon. To a good first approximation, the initial state appears to be uniform for the species' (Chomsky 1995, 14). If all human beings start out with the same in-built grammar, why is it that languages are so different, not only in terms of the lexicon but the syntax, phonology and morphology? The P&P theory supposes that individuals set a series of parameters within the language faculty. These parameters begin at a default setting but are adjusted appropriately according to the input received.

Changes to the framework in which syntax is studied results in changes to the way in which parameters are seen to operate. For instance, 'Chomsky 1995 suggests that the only possible differences between grammars relate to whether or not elements move (overtly) out of their original merge position. This depends on the strength of functional elements [...] which determine whether lexical elements will raise overtly to them' (Wilson and Henry 1998, 12). Thus, in a Minimalist framework, we might expect to find that the parameters along which languages differ related to the strength of functional heads. As functional categories are projections of lexically encoded features, it may also be possible to discover a link between language differences and the particular features encoded in the lexicon (see Adger and Smith 2003).

If Language is Universal, with cross-linguistic differences derived by parameter setting, then in what way should we account for dialectal variation? Henry (1995, 4) states that dialect variation is a challenge for the P&P theory of language, because dialects 'do not seem to vary from one another in precisely the way this view would predict...[In fact] Belfast English differs from standard English in a number of ways, but these are not all derivable from a single difference in parameter setting.' The study of dialect variation, therefore, may lead to the discovery of further ways in which varieties of language (whether individual languages or dialects of the same language) may differ from one another. In this work I will show that a recurring area of dialect variation is the lexicon including features marked on lexical items, the function of lexical items, and the actual presence or absence of lexical items. For instance, Scottish English in Fife has a modal *coulduf* marked with [PERF] features and Arkansas English has an adverb *might* in Double Modal constructions.

In her comprehensive study of the syntax of Belfast English, Henry (1995) outlines a number of contexts in which Belfast English (BelE) utilises different constructions from those used in Standard English (StE) including imperative constructions, subject-verb agreement properties and *for to* infinitives. Although Henry was unable to relate these to a single difference in parameter setting between the two varieties, she was able to show that 'all of the differences were of the same type as differences found between languages; they related for example to the strength or weakness of functional elements, or the status of elements as clitics or independent items [...leading to the conclusion that...] dialects differ from one another, as one might expect, in the same way that languages do: the difference between "language" and "dialect" is after all a more political than a linguistic construct' (Henry 1995, 136).

Henry (1995) chose to study the variation found in a particular dialect (Belfast English) in order to uncover the ways in which it differs from Standard English. In this thesis, I will tackle dialect variation from a different angle; rather than choosing one dialect for study, I have chosen an area of the grammar of English in which to look for variation across dialects. As mentioned above, the area chosen is the English auxiliary system.

## 1.4 Summary

In this chapter, I have outlined the importance of studying dialect variation in the auxiliary system. I have chosen the analysis of auxiliaries of Lasnik (1999) as a touchstone in the investigation of non-standard auxiliaries, and have discussed the ways in which auxiliaries and negation interact with respect to scope.

The rest of the thesis is organised as follows: in Chapter 2 I investigate Auxiliary Contraction in English and suggest that it should be dealt with syntactically; and in Chapter 3 I present the multiple realisation of *have* in two varieties of English, and come to the conclusion that *have* may be multiply spelled out due to the morphological reanalysis of the higher form of *have* and *not* as a compound word. In Chapter 4, I investigate Double Modals in two dialects of American English and propose that *might* is an adverb in one of the varieties, and a modal in the other; and in Chapter 5, I present a syntactic analysis of Double Modals in a variety of Scottish English. Finally, I return to the structure of the English auxiliary system and the nature of dialect variation in Chapter 6.

# Chapter 2

# A Syntactic Account of Auxiliary Contraction in English

## 2.1 Introduction

The main aim of this chapter is to provide a syntactic analysis to account for the phenomenon of English Auxiliary Contraction. This will involve an investigation into the distribution of the different phonetic forms of finite auxiliaries, and the way in which these finite auxiliaries interact with negation, including the apparent variation between *I've not* and *I haven't* in particular varieties of English. The data used in this chapter, unlike that in Chapters 3-5, is taken mostly from Standard English.

Auxiliary Contraction (henceforth AC) occurs frequently in English; phonetically reduced or contracted forms of auxiliaries like those in (1)-(3) occur in most spoken varieties (in fact, there is no dialect of which I know that does not permit auxiliary contraction).

(1) a. HAVE: I've managed to catch the hamster.
b. HAD: He'd turned up late again.
c. HAS: She's just phoned to say she'll be late.

(2) a. WILL: She'll be late as usual.
b. WOULD: I'd be able to catch it if it wasn't so fast.

(3) a. ARE: They're turning up around nine.
b. IS: She's going to be late.

The underlying theoretical question behind this research is: is Auxiliary Contraction

a syntactic or a phonological phenomenon? Both have been suggested in the literature, yet a suitable analysis remains to be formulated; as we shall see in section 2.3.3, phonological analyses fail to account for all of the data, and syntactic treatments are pre-Minimalist Program. Since the proposed analysis by Kaisse (1985), syntactic theory has undergone many important changes, including P&P theory and the introduction of the Minimalist Program by Chomsky (1993). AC has not been re-examined in the Minimalist framework, and the most recent literature by Roberts (2000) fails to offer a fully fledged description or analysis of AC. The aim of this chapter, therefore, is to develop a syntactic analysis of AC in a Minimalist framework.

AC appears to have a close connection with Negation Contraction (Tagliamonte and Smith 2002, Yaeger-Dror et al. 2002) in that it is only possible to have either a contracted auxiliary (4a) or contracted negation (4b):

(4) a. I've not seen her in ages.
b. I haven't seen her in ages.

Examples such as (4a) are often cited in studies of the grammar of Northern English (see McDonald 1981, Beal 1993) and, according to Trudgill (1984), (4a) is more typical of Northern dialects and (4b) of Southern ones, although this was not found in the study carried out by Tagliamonte and Smith (2002).

There is no known variety of English which permits both AC and Negation Contraction (NC):

(5) *I've'n't seen her in ages.

In section 2.4.4, I will extend the syntactic analysis formulated in this chapter to account for the difference between Auxiliary and Negation Contraction in (4), and to explain the ungrammaticality of the co-occurrence of Auxiliary and Negation Contraction in (5).

Re-investigating contraction from a syntactic point of view will provide evidence for the syntactic status and position of auxiliaries in the English clause, and extending the analysis to account for the variation between AC and NC will impact on variationist studies of the forms in (4).

In this chapter I will argue that there are two structural positions to which auxiliaries may raise, as suggested by Roberts (2000) (see section 2.4). That AC is a syntactic phenomenon is not uncontroversial, so I will first explain the AC debate, showing that it is not possible to account for all of the data using a phonological approach, and that it is necessary to refer to syntax (see section 2.3). Before doing this, a distinction must

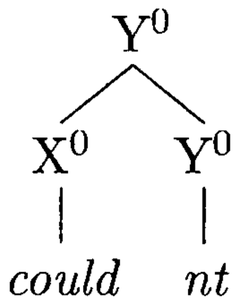
be drawn between the distinct phonological forms of English auxiliaries as shown in section 2.1.1.

### 2.1.1 Phonetic Forms of Contracted Auxiliaries

In the description of AC by Bresnan (1978) and Selkirk (1984) there is a blurred distinction between the terms *phonological clitic* and *syntactic clitic*, and between the terms used to refer to the phonetic forms of auxiliaries (*clitic*, *weak* and *strong*). I will use this part of the chapter to clarify the terminology that I will be using in the discussion of contraction.

Throughout this work, I will assume that phonological cliticisation does not necessarily entail syntactic cliticisation. According to Selkirk (1995), phonological cliticisation involves reanalysing an element so that it forms a phonological word with another unit. Syntactic cliticisation, however, involves the movement and adjunction of a head $X^0$ to another head $Y^0$, forming a complex syntactic head (Baker 1988, Travis 1984). For instance, the formation of *couldn't* is typically assumed to involve the left-adjunction of the modal to negation, shown as $X^0$ and $Y^0$ in the tree below.

(6)




Phonological cliticisation does not entail syntactic cliticisation, so although the auxiliaries in (1) are phonological clitics as they have formed a phonological word with each of the pronoun subjects, they are not necessarily syntactic clitics. The distinction between syntactic and phonological cliticisation is an important one as, although I will not deny that contracted auxiliaries are phonological clitics, I will suggest in section 2.4 that contracted auxiliaries do not syntactically adjoin to another head.

Before going on to discuss AC in depth, an important distinction must be made between the phonological forms in which auxiliaries may appear. As is pointed out many times in the literature, English auxiliaries may surface in a number of phonetic forms (Selkirk 1984, Palmer 1988) other than the full form. These include the clitic and weak forms which do not have the same distribution as the full forms (see section 2.2). Using auxiliary *have*, I will outline some of the distinguishing features of the clitic, weak and full forms.[1] These features are not only true of auxiliary *have*, they can be generalized

[1] I use the term clitic to reflect the phonological structure of the auxiliary, and not the syntactic structure.

to the other English modal and auxiliary verbs.

The clitic form of auxiliary *have* is a reduced non-syllabic form, and is phonetically realised as /v/.[2] As shown in section 2.2, it appears in a sub-set of positions in which the strong form is found; the only time the clitic form can be used is when it occurs to the immediate right of a subject pronoun, as illustrated in the following examples.[3]

(7) a. I've heard that Mulder has proved that alien life forms exist.
b. They've found a UFO at Roswell.

The non-syllabic form is referred to as the clitic form because it is pronounced as part of a phonological word with the preceding element; *clitic* thus refers to a phonological property and not a syntactic one.[4]

The weak form differs from the clitic form as, although it is phonologically reduced, it is a syllabic form and can be phonetically realised in a number of ways. For instance, it can be realised with a reduced vowel with or without the initial consonant.[5] The weak form can appear in a number of positions, again a subset of the positions in which the full form can surface, including to the immediate right of a modal verb:

(8) a. Scully could've been abducted.
b. Mulder may've been wrong.

As well as being realised in clitic and weak forms, auxiliaries can, of course, surface in their full forms. The full form might be expected to occur in all positions in which an auxiliary is permitted to appear. As shown in section 2.2, however, there is a context in which the strong form is not permitted. The full form of have is realised with an initial consonant and an unreduced vowel: [hav].

(9) a. The aliens have taken Mulder.
b. The UFOs have been quarantined.

The full form of the auxiliary can appear in a wide range of contexts, and it is this

[2]This is not to say that the clitic form is necessarily derived from the weak or strong form by phonological reduction rules. This will be discussed in more detail in sections 2.3 and 2.4.

[3]As discussed in section 2.2, the exceptions to this rule are auxiliaries *has* and *is* which can be realised as clitics following DP subjects:

(i) Mulder's found evidence of alien life.

(ii) Mulder's exposing the conspiracy.

[4]This form is not analysed as a syntactic clitic (see section 2.4).

[5]There are many other ways in which *have* can be phonetically realised but these do not concern us here. The important point is that the weak form differs from the clitic in terms of syllabicity (see Inkelas and Zec 1993, Palmer 1988).

form that appears when contrastive stress is marked on the auxiliary. This is often the case when an auxiliary occurs to the right of an adverb.

(10) The UFOs probably HAVE been quarantined.

For ease of exposition, I will use the following orthographic forms to represent each form of an auxiliary.

| Auxiliary form | Phonetic form | Orthographic form |
|---|---|---|
| clitic | [v], [l] | v, l |
| weak | [əv], [əl] | ev, el |
| full | [hav], [wɪl] | have, will |
| contrastively stressed | ['hav], ['wɪl] | HAVE, WILL |

Table 2.1: Some forms of *have* and *will*

Thus, the examples given above, and all following examples, will be represented using the orthographic forms in the table:

(11) a. They'v found a UFO at Roswell.
b. Scully could'ev been abducted.
c. The UFOs have been quarantined.
d. The UFOs probably HAVE been quarantined.

Following Inkelas and Zec (1993), I will assume that the alternation between the full and weak forms (the syllabic forms) is a phonological alternation, i.e. derived by phonological reduction. The alternation between the syllabic and clitic (non-syllabic) forms, however, will be argued to be non-phonological, following arguments by Kaisse (1985) that there are no phonological rules from which to derive the clitic forms from the full forms. Inkelas and Zec (1993, 208) argue that with respect to AC 'a three-way distinction obtains in the language, that between full and weak forms on the one hand, and clitics on the other'; they state that it is not possible to relate the full and clitic forms using phonological rules, but the full and weak forms *can* be related by the rule of vowel reduction which occurs in unstressed syllables. I will argue that there is a structural difference between the full/weak and clitic forms of auxiliaries; the clitic form is forced to raise to T while full and weak forms are not. That a distinction does exist between clitic and weak forms of contracted auxiliaries has been noted by Selkirk (1984) and Kaisse (1985) among others, as discussed in section 2.3.

## 2.2 Auxiliary Contraction Data

A successful analysis of AC should be able to provide an account of each of the following facts:[6]

1. Clitic and weak forms of auxiliaries do not share the same syntactic distribution (sections 2.2.1-2.2.3, Selkirk (1984), Kaisse (1985)).

2. AC is sensitive to contexts occurring on the immediate right of the auxiliary such as an ellipsis site or a (sentence final) weak pronoun (section 2.2.4, Bresnan (1978)).

3. Auxiliaries (excluding *has* and *is*) can only appear as clitics when co-occurring with a subject pronoun (section 2.2.1, Kaisse (1985)).

4. The clitic form of the auxiliary is found only in a subset of the environments in which the full form occurs (sections 2.2.1-2.2.3, Kaisse (1985)).

5. *Has* and *is* are allowed to occur in their clitic forms in a much larger set of contexts (section 2.2.3, Wilder (1997)).

Listed below are a number of contexts that play an important role in determining whether contraction can occur. Accounting for the behaviour of auxiliaries in some of these contexts will be the focus of the remainder of the chapter. I will pay particular attention to properties A-C: the grammatical category of the subject, the difference between finite and non-finite auxiliaries, and the contrast between *has* and *is*, on the one hand, and other modals and auxiliaries on the other. I will show in section 2.4 that properties A-C can be accounted for by assuming, as suggested by Kaisse (1985) and Inkelas and Zec (1993), that the clitic forms of auxiliaries are distinct from the full and weak forms and, following Roberts (2000), that there are two syntactic positions to which auxiliaries may raise.

### 2.2.1 Property A: Grammatical Category of the Subject

With the exception of *has* and *is*, auxiliaries appear as clitics when occurring to the immediate right of a pronoun subject, but not a DP or proper name. As an initial hypothesis, we might predict that the clitic form of the auxiliary occurs with pronouns because most English subject pronouns end with a vowel.[7]

---

[6]The task of accounting for the data is made more difficult because, as in most other cases, speakers do not always agree on judgements. I will attempt to note cases where speakers' judgements may vary, but may not always be able to provide an account for this in the analysis I propose.

[7]The only pronoun which does not end in a vowel, *it*, does not occur with the clitic form of a modal auxiliary but with the weak form:

Kaisse (1985) falsifies this observation by formulating a number of examples in which the subject is a DP or proper noun, whose final segment is almost phonologically identical to a pronoun. Although the pronoun subject can occur with a clitic auxiliary, the almost identical DP subject cannot, as shown in the following examples adapted from Kaisse (1985):

(12) a. The ewe'el go.
b. You'l go.
c. *The ewe'l go.

(13) a. The Sioux'ev gone.
b. You'v gone.
c. *The Sioux'v gone.

(14) a. Sue'el go.
b. You'l go.
c. *Sue'l go.

These examples illustrate that it is the grammatical category and not the phonological form of the subject that affects the phonological realisation of the auxiliary (see section 2.4.3.1 for a syntactic account of these facts). If the form of the auxiliary was dependant on the phonological form of the subject, the subjects *ewe, Sioux, Sue* would be expected to trigger the same form of the auxiliary triggered by the pronoun *you*, whose final segment is almost phonetically identical to the other subjects. This is not the case, as shown by the ungrammaticality of the (c) examples.

The idea that the form of the auxiliary is dependant on the syntactic structure or grammatical category of the subject is supported by co-ordinated subjects and relative clauses which end with a pronoun. Again, the clitic form is ruled out, and only the weak or full forms are able to surface here:

(15) a. Me and you will have to go.
b. Me and you'el have to go.
c. *Me and you'l have to go.

(16) a. The woman that spoke to you will have to be shot.
b. The woman that spoke to you'el have to be shot.

---

(i) The door'el be left open for you.

(ii) It'el be left open for you.

This can be reduced to the properties of the cluster [tl], which is also pronounced with a schwa in English words like *little*.

c. *The woman that spoke to you'l have to be shot.

If the spell out of the auxiliary was a purely phonological effect then a co-ordinated subject or a relative clause ending in a pronoun would be expected to trigger the clitic form, but again, as shown by the (c) examples, this is not the case.

### 2.2.2 Property B: Finiteness

A non-finite auxiliary may not occur as a clitic; when *have* co-occurs with a finite modal, it is typically realised in its weak form (even when this modal is vowel-final):

(17) a. Harry may'ev escaped from Snape.
b. *Harry may'v escaped from Snape.

Bresnan (1978, 25,footnote 9) points that non-finite *have* does not reduce to a clitic form when following a pronoun, but occurs as a weak or full form:

(18) a. Should you have gone?
b. Should you'ev gone?
c. *Should you'v gone?

This contrasts with finite *have* which occurs as a clitic following a pronoun, as shown in section 2.2.1 and the following example:

(19) You'v gone.

Thus, there appears to be a contrast in the behaviour of finite and non-finite auxiliary *have*, which will be accounted for syntactically in section 2.4.3.2.[8]

### 2.2.3 Property C: Behaviour of *Has* and *Is*

*Has* and *is* behave in a different way from other modals and auxiliaries in that the contexts in which they may occur as clitic forms are far less restricted than other modals and auxiliaries. For instance, it seems that the type of subject does not restrict the occurrence of the clitic *'s*:

[8]This is only true of *have* as modals are always finite, and *have* is the only auxiliary which may contract following a modal (see Johnson (1988) for discussion of the differences between *have* and *be*, including the fact that *be* cannot contract following a modal).

(20) a. He's only seen her once in three weeks.
b. The cat's been fed today.
c. It's been a long time.
d. There's been a lot to do.

(21) a. She's coming to see you later.
b. The hamster's very sleepy today.
c. It's hard to escape from that cage.
d. There's nothing more to say.

The clitic form of *has* and *is* can occur with a range of subjects including a full DP. It thus appears to have a much freer distribution than the other clitic forms which are not able to appear following a DP subject.

In other ways, the clitic form of *has* and *is* does share some similarities with the clitic forms of the other modals and auxiliaries; it does not appear when immediately preceding a gap:

(22) a. He hasn't been as nice to me as he has to you.
b. *He hasn't been as nice to me as he's to you.

(23) a. He isn't going to work today but she is.
b. *He isn't going to work today but she's.

In previous accounts of AC, the behaviour of the clitic *'s* has not been fully explored. Kaisse (1985) suggests that perhaps the distribution of the clitic *is* is linked to morphological factors which appear to affect AC. That morphological factors can affect contraction is pointed out by Zwicky (1970) to account for the fact that not all auxiliaries can be reduced easily. For instance, *is* and *has* are more freely reduced than modals or other persons and tenses of the same verbs.

It may be noted that the clitic form which has the least restricted distribution is the same phonetically as the morphological inflection which is a marker of plurality and of the genitive in English, i.e. *-s*. This will be further investigated in section 2.4.3.3.

### 2.2.4 Property D: Sensitivity to Following Context

AC, like *wanna* contraction,[9] appears to be sensitive to the following syntactic context. For instance, a modal or auxiliary cannot contract when preceding a gap; in this context the modal or auxiliary cannot appear as a clitic or a weak form, only as a full form:[10]

(24) a. This won't have the effect on us that it will have on you.
b. This won't have the effect on us that it will on you.

(25) a. This won't have the effect on us that it'el have on you.
b. *This won't have the effect on us that it'el on you.

Bresnan (1978) argues, based on the fact that contracted forms are sensitive to material occurring to the immediate right, that contracted auxiliaries are proclitics. This will be discussed in further detail in section 2.3.2 where I present Bresnan (1978)'s account of these facts.

### 2.2.5 Property E: Related Lexical Entries

The clitic form, *'s*, may occur with plurals while *is* may not (see Dixon 1977, Nathan 1981, Sparks 1984, Kaisse 1985).

(26) a. Where are the lions?
b. Where's the lions?
c. *Where is the lions?
(examples from Kaisse (1985, her (5)))

(27) a. What are the lions doing?
b. %What's the lions doing?

---

[9]As pointed out by Chomsky (1977) and Radford (1981), *wanna* contraction is only possible when the *wh*-word is the object, not the subject, of the embedded sentence:

(i) Who do you wanna see?

(ii) *Who do you wanna see Bill?

(examples from Chomsky (1977, 187))

[10]Remember that the clitic form is independently ruled out from occurring with the pronoun *it*, so would not be expected to occur in this particular example. That the clitic form is, in fact, ruled out in this position when following other pronouns is shown by the contrast in the following examples:

(i) You don't have as much money as I have.

(ii) *You don't have as much money as I'v.

However, this is only possible with a DP subject, and not a pronoun.

(28) *Where's they?

It seems that the appearance of *'s* with plurals is restricted to a very small subset of examples. Consider the following examples in which the use of the clitic *'s* results in ungrammaticality:

(29) a. Why are the lions roaring?
b. *Why's the lions roaring?

(30) a. When are the lions going to be fed?
b. *When's the lions going to be fed?

Similar restrictions hold in existential constructions, which differ from *wh*-questions in one major respect - they do not involve inversion. In existentials, the clitic *'s* can also occur with plurals.

(31) a. There's the lions.
b. *There is the lions.

These examples will not be discussed further in this work. The lack of number agreement between the auxiliary and the existential subject suggest that these cases are not identical to cases of AC; in fact, Chomsky (1995, 384) states that '*there's* simply seems to be a frozen option.'

### 2.2.6 Summary

I have outlined a number of contexts in which the distribution of the clitic, weak, and full forms of auxiliaries is not the same. For instance, clitic auxiliaries can only appear when they immediately follow a subject pronoun (section 2.2.1), and are not permitted when immediately preceding a gap or weak pronoun (section 2.2.4). In the following section, I will present some of the main arguments in the debate as to whether AC is best analysed syntactically or phonologically.

## 2.3 Previous Analyses of Auxiliary Contraction

The overall aim of this chapter is to formulate a syntactic analysis of AC. Before doing this. however, it is important to outline some of the previous analyses, and to give some justification for their rejection.

There have been many different proposed accounts of AC, although few recent analyses and none in a Minimalist framework. It must be pointed out that not all analyses focus on the same phonological contracted forms. For instance, Kaisse (1985) is concerned with the use of the clitic form of auxiliaries while Selkirk (1984) seems to use WEAK as an umbrella term for both weak and clitic forms. This means that it is not always possible to directly compare different analyses of AC straightforwardly. In this section, therefore, I will not aim to compare previous analyses, as such, but rather to evaluate them in terms of the data for which they are able to account.

### 2.3.1 Sadler (1997): Auxiliaries as Tense Inflections on Pronouns

In the contraction literature, there are not only proposals for transformational and phonological accounts of auxiliary contraction, there are also analyses in lexicalist theories and frameworks. I will outline one of the main lexicalist proposals, that of Sadler (1997), and will show that although this analysis does have its advantages, it is unable to account for the same amount of data that can be accounted for in a syntactic analysis.

Spencer (1991) suggests that non-syllabic reduced auxiliaries are affixes rather than clitics. These affixes, he claims, are tense inflections and differ from syllabic reduced auxiliaries which are post-lexical clitics. Spencer's analysis is supported by the fact that the non-syllabic forms of the reduced auxiliaries have a highly restricted distribution, only occurring after single subject pronouns, as we saw in section 2.2.1 above. Sadler (1997) claims that these forms are positioned morphologically, unlike the syllabic forms which are positioned syntactically. She goes on to show the arguments for treating non-syllabic auxiliaries as affixes and to analyse them in an LFG framework. I will outline Sadler's arguments for this approach and will suggest a set of arguments against her approach, reaching the conclusion that non-syllabic auxiliaries cannot be analysed lexically as inflections but must be analysed syntactically.

Sadler gives the following reasons for analysing non-syllabic auxiliaries as tense inflections on subject pronouns:

- Firstly, as claimed by Zwicky and Pullum (1983) affixes are very selective about the host to which they will attach. This is the case with clitic (non-syllabic) auxiliaries; they only appear with simple pronoun subjects. The clitic forms

cannot scope over co-ordinate subjects, which, according to Sadler, is expected if the auxiliary is an affix which is attached, word internally, to a stem.

- Secondly, vowel laxing, which happens word internally, is found with non-syllabic auxiliaries and the pronoun with which they occur, e.g. /hi:l/ becomes /hil/.

- Thirdly, the stem forms (i.e. the pronoun) vary in ways that are not predictable on phonological grounds, e.g. we'll - /wi:l/ - /wIl/, I'm - /aIm/ - /am/.

While maintaining that the pronoun and affixal auxiliary construction is a morphological one, Sadler claims that both the stem and the affix make 'independent and identifiably different contributions to the functional syntax of the sentence, providing both predicate-related and argument-related information. That is, that there are entries in the lexicon which contain information like the following: *you*:D = 'PRO', 2, FUT.

There are a number of reasons for rejecting Sadler (1997)'s analysis. Firstly, if tensed pronouns do exist and if they are a combination of a pronoun and an affix in the shape of a reduced auxiliary, we would expect that these tensed pronouns would always display unit-like behaviour, i.e. that it is not possible to separate the affix from the stem. Consider this in the light of *wh*-questions. Sadler's analysis predicts that (32b) would be the result of forming an interrogative from (32a). (32c) would presumably be ruled out as in this example, the affix has been detached from the stem. Sadler's analysis predicts incorrect results for *wh*-questions.

(32) a. He's gone home.
b. *Where he's gone?
c. Where's he gone?

The fact that (32c) is widespread suggests that Sadler's analysis cannot be correct as it should not be possible to remove the affix from the stem in these contexts.[11]

Sadler's analysis seems to make unusual theoretical assumptions. It is assumed that in English, the subject is separate from the predicate yet Sadler's analysis suggests that a tensed pronoun can encode features of the subject and the predicate of a sentence. This raises the important question of why it is that only pronouns and not nouns can have this particular property. It also raises a number of interesting questions about tense and how it may be marked. The marking of tense on pronouns suggests that tense may be encoded in different ways in different sentences; at times tense is marked

[11] It may be possible, however, to modify Sadler's analysis to incorporate data like (32c); perhaps stating that either (i) the tense inflection can appear on elements in the specifier of TP (pronouns) and in C (*wh*-words) or (ii) that tense is marked in T and that *wh*-words are in T and not C as traditionally assumed.

on pronouns and others on verbs. This would complicate the grammar of English and make it more difficult to acquire.

Also, if forms like *you'll, he's, I'm* etc are tensed pronouns then an independent explanation is needed for the fact that these forms are not acceptable in ellipsis contexts or preceding gaps, as shown in example (33).

(33) I won't be late for work but you will/*you'l/*you'el.

While these facts may be easily explained in a syntactic framework like that of Bresnan (1978), which is the topic of section 2.3.2, there seems to be no ready explanation in an analysis like that proposed by Sadler (1997).

### 2.3.2 Bresnan (1978): Auxiliary Contraction as Procliticisation

In this paper, Bresnan (1978) investigates a range of contraction phenomena: *To*-contraction, NOT contraction, and auxiliary contraction.[12] According to Bresnan, *To*-contraction and *not* contraction are both derived by rules of encliticisation. According to Bresnan, *To*-Contraction is derived by the following rule:

(34) $[_S$ NP V to V ...] - [NP [V + to] V ...]

*To*-contraction only occurs when no element (overt or non-overt) intervenes between the verb and *to*, thus leading to the conclusion that *to*-contraction is derived by encliticisation.

As AC seems to behave in a way opposite to *to*-contraction, i.e. being sensitive to material occurring on its immediate right, Bresnan proposes that AC is derived by a rule of procliticisation which involves 'rightward adjunction as well as reduction' (Bresnan 1978, 13). Bresnan's main argument for analysing AC as procliticisation is that, according to her, contraction is possible when the auxiliary occurs in sentence-initial position:

(35) Will one do? - 'el one do? (example from Bresnan (1978, 12, her (39)))

Bresnan's argument is as follows. If AC involves left adjunction then examples like (35) would not be possible as there is nothing to the left to which the auxiliary could adjoin. Therefore, she concludes that AC must involve adjunction to the right. However, it must be noted that in examples like that in (35), the auxiliary appears in its weak

[12]Which Bresnan refers to as Tense Contraction.

form and not its clitic form. There is no reason for Bresnan to suppose that weak auxiliaries must be syntactic clitics; it is plausible that the weak auxiliary in (35) may be in the same syntactic position as the full form.

There is a stronger argument for auxiliaries which are phonological clitics to appear in a different syntactic positions than the full and weak forms. Therefore, stronger evidence for Bresnan's analysis would be the appearance of the clitic form in this sentence initial position. However, this is rejected by many speakers of English. In the following examples, the form form in (a) is acceptable in initial position, the weak (syllabic) form in (b) is acceptable to some speakers, but the clitic (non-syllabic) form in (c) is rejected.

(36) a. Will you be coming?
b. ?el you be coming?
c. *'lyou be coming?

(37) a. Is he here yet?
b. ?'es he here yet?
c. ?/* 'zhe here yet?

(38) a. Boy, am I hungry!
b. ?Boy, 'em I hungry!
c. *Boy, mI hungry! (Anthony Warner p.c.)

This suggests that it is not possible for an auxiliary to form a phonological word with an element on its right, and is evidence that auxiliaries are not proclitics.

The virtue of Bresnan's analysis is that it is able to account for the fact that AC is sensitive to contexts on its immediate right, and by stipulating that the proclicisation rule occurs after rules which position adverbs, it can also account for the fact that the strong form of the auxiliary appears after adverbs as shown in the following contrasting examples from Bresnan (1978, 60).

(39) a. He's often liked them.
b. He never HAS liked them.

Bresnan's final hypothesis is that auxiliary contraction is a function of stress and that auxiliaries with heavy stress cannot procliticise.

Bresnan's analysis focusses on the context following the auxiliary, ignoring the effect of the preceding subject:

(40) a. The ewe'el not go.
b. You'l not go.

The form of the preceding subject is a crucial factor in understanding AC, particularly in providing an account for the clitic form which is restricted to occurring after a pronoun subject. Bresnan's account of AC ignores these facts and as her analysis treats contracted auxiliaries as proclitics it does not seem that the distinction between DPs and pronouns can be analysed in Bresnan's framework. For this reason, and those outlined above, Bresnan's analysis of procliticisation will be rejected.

### 2.3.3 Selkirk (1984): A Phonological Approach to Auxiliary Contraction

The very phrase 'Auxiliary Contraction' seems to imply that the phenomenon is best accounted for by phonetics/phonology. Before investigating a syntactic stance on AC, I will examine a phonological account in order to evaluate its strengths.

Selkirk (1984; 1995) argues that there is a phonological difference between lexical and functional words in languages. Function words, including auxiliary verbs and modals, contrast with lexical words in that the former may occur in both strong and weak forms.[13]

Selkirk (1984) proposes a framework in which all auxiliaries start out as strong forms. Within the phonological derivation, however, they may lose their basic beat alignment and will then be produced in their WEAK form. Before discussing Selkirk's analysis in more detail, I will outline some of the most important aspects of the phonological approach that she adopts.

#### 2.3.3.1 Metrical Grids, Beat Assignment and Auxiliary Contraction

Selkirk's analysis of AC is formulated within a theory of phonology which utilises the metrical grid first proposed by Liberman (1975) and the concept of beat assignment.

A metrical grid is composed of two levels:

- A horizontal level which is the metrical (grid) level and;
- A vertical level which consists of demibeats and beats that are built up on the metrical grid (the horizontal level).

[13]Selkirk's use of the term *weak* appears to be an umbrella term to encompass both weak and clitic forms. To differentiate this from what I refer to as weak, I will use WEAK to refer to Selkirk's 'weak form'.

(41) An example of a metrical grid:

x

x x BEATS

x x x x x x x x DEMIBEATS

A beat (or demibeat) that does not coincide with a beat on the next higher metrical level is a weak beat (or demibeat). A beat (or demibeat) that does coincide with a beat on a higher metrical level will be referred to as a strong beat (or demibeat).

A rule known as Silent Demibeat Addition (SDA) operates within metrical grids. Selkirk formulates the SDA as follows:

(42) *Silent Demibeat Addition*
Add a Silent Demibeat (SD) at the end (right extreme) of the metrical grid aligned with

a. a word,
b. a word that is the head of a nonadjunct constituent,
c. a phrase,
d. a daughter phrase of S.

Selkirk defines the SDA as a cyclic rule which applies after all rules that generate prominence patterns on a cyclic domain. The application of the SDA is governed by the Principle of Categorial Invisibility of Function Words (PCI). This operates to make function words 'invisible' to rules of grammar that appeal to the categorial status of constituents. Thus, the SDA will not apply to function words, only to words belonging to major categories. In short, the PCI confines (a) and (b) of the SDA to applying only to the categories N, V, A, and Adv.

#### 2.3.3.2 Function Words

Selkirk argues that function words are treated differently in syntax-phonology mapping than non-function words; that, with respect to the metrical grid outlined above, they are not treated like 'real' words by grid construction principles of mapping. For instance, a Silent Demibeat is not inserted after them and they do not receive third-level 'main word stress.'

As mentioned above, Selkirk suggests that the behaviour of function words is tied to the PCI. As a consequence of the PCI, function words lack some features of grid alignment that 'real' words have. All other facts are argued to follow from the metrical grid alignments which function words are assigned.

The stress that function words receive is also affected by the Monosyllabic Destressing Rule (MDR) which eliminates the basic beat (2nd level stress) alignment of single syllables in certain contexts. The alternation between strong and WEAK forms is directly related to the operation of this rule; in short, a WEAK form is a stressed syllable which has had its basic beat alignment eliminated by the MDR. The rule destressing function words must apply on a phrasal domain and must precede the application of Beat Movement on that domain.

For instance, when an auxiliary occurs sentence finally, it must occur in its strong form:

(43) a. Scully's more skeptical than Mulder is.
b. *Scully's more skeptical than Mulder's.

In this case, *is* will start off in the derivation in its strong form. A Silent Demibeat will be inserted at the end of the phrase in which it is final under condition (c) of the SDA rule. The addition of this Silent Demibeat will then block the application of Monosyllabic Destressing and only the full form of the auxiliary is permitted. If the auxiliary is not phrase final, it does not get a Silent Demibeat inserted after it and it is able to reduce (as in *Scully is/Scully's* above).

Selkirk's analysis is provided to account for the fact that prepositional phrases with 'stranded' prepositions, VPs containing only a modal or auxiliary (where the rest of the VP has been deleted), NPs with a determiner and an empty head, and NPs with a possessive pronoun and an empty head must occur in their full form when they precede a gap as shown in the following examples from ?):

(44) a. What were you thinking [$_{PP}$ of] last night? (*destressed form)
b. I'd like [$_{VP}$ to], but I'm not sure I [$_{VP}$ should]. (*destressed forms)
c. [$_{NP}$ Some] complained.
d. [$_{NP}$ His] disappeared.

Other analyses (e.g. Barron 1998) have argued that it is trace effects which prevent the occurrence of the weak forms in these positions. Selkirk disagrees on the grounds that in comparative constructions, a trace-based theory does not work because some speakers find no contrast in the following:[14]

[14]Contrary to the judgements by Bresnan who gives the following examples:

(45) It's more trouble than it's fun.

(46) It's more trouble than it's worth.

The assumption here is that (45) and (46) are derived from (47) and (48) respectively.

(47) It is more trouble than it is X fun.

(48) It is more trouble than it is worth X.

Selkirk argues that the trace of *more* in (45) that has been deleted under identity does not block the appearance of the weak form of *is* for speakers who find both (45) and (46) grammatical, thus driving her towards a non-trace based approach. However, Selkirk's argument is only viable if the X in (47) is actually a deleted element; if the X is a null operator which shares the same interpretation as *more* in the *trouble* clause, Selkirk's argument no longer holds as there is no *more* to delete under identity and therefore, no trace to block contraction.

Chomsky (1977, 188) suggests that there is a difference between a deleted element and a zero morpheme such as a null operator: a zero morpheme is identical to other elements in syntax and morphology, the only difference being that it is assigned a null phonetic representation by later rules; but a deleted element is null on both morphological and phonological levels. This explains why a deleted element will block *wanna*-contraction and a zero morpheme will not:

(49) a. Who [you want [X to see]]
b. Who [you want [t to see Bill]]
(examples from Chomsky (1977, 187))

(50) a. Who do you wanna see?
b. *Who do you wanna see Bill?

Therefore, although AC is not permitted preceding deletion sites (see Bresnan (1978) and sections 2.2.4), as a deletion site is not the same as a zero morpheme, contraction need not be blocked in (45).

Selkirk seems to state that there is no contrast between the two derived forms in (45) and (46). However, this is not correct as for many speakers there is a difference between

(i) It's more trouble than it is/*it's fun.

(ii) It's more trouble than it's worth.

(51) and (52) when the full form of the auxiliary is used.

(51) It's more trouble than it is fun.

(52) ?/*It's more trouble than it is worth.

The full form is acceptable in (51) but is degraded or even ungrammatical in (52). The unacceptability of (52) raises problems for Selkirk's analysis as she derives the weak forms of auxiliaries from the strong forms. The existence of positions in which the strong form is not possible, as in (52), suggests that perhaps the weak forms are not simply derived from the strong forms in the way that Selkirk proposes.

Selkirk's account for the sensitivity of contraction to the following context has one major flaw: there are no phonological rules which can derive the weak and clitic forms from the strong form (see Kaisse 1985). For this reason, Selkirk's analysis of contraction in this context cannot be maintained. Her account of subject effects on contraction shares the same problem.

As mentioned in section 2.2.1, auxiliaries may lose syllabicity when they occur with pronouns. Selkirk (1984, 401) proposes that these non-syllabic (or clitic) forms are contractions and that their phonological shape is derived by a rule of Auxiliary Deletion. She assumes that Auxiliary Deletion can occur only if the following conditions apply:

1. The auxiliary is stressless.
2. The auxiliary is juncturally adjacent (in grid terms) to the preceding syllable.

Auxiliary Deletion reduces stressless syllables, resulting in 'a "coalescence" with an immediately preceding syllable' (Selkirk 1984, 401). In order for this to take place, the auxiliary must be juncturally close to the preceding element and a syntactic rule must move the auxiliary (or at least some of the auxiliaries) closer to the preceding element (Lakoff 1970, Zwicky 1970, Kaisse 1981). Again, Selkirk provides no justification for this claim.

According to Selkirk, this predicts that AC occurs in contexts where: (i) the auxiliary is stressless, (ii) a phrase-final function word is not followed by a silent demibeat(s), and (iii) this function word is juncturally adjacent to the following auxiliary. For instance, AC is possible in the following examples given by Selkirk (1984):

(53) a. She's a gas.
b. You've done it again.

c. I'm up to my ears in it.
d. We'll give it a try.
e. They're about to go.

(54) a. Who've you been seeing?
b. Who'll be there?
c. Where've you been?
d. How'm I supposed to do that?
e. The one that's over there?

Selkirk states that junctural adjacency would not be present if the subject was a DP, rather than an pronoun, and that this is the reason that clitic auxiliaries do not appear with DPs.

There are two main problems with an analysis like the one proposed by Selkirk (1984). The first problem, and the least serious, is that the weak and clitic forms have a restricted distribution; they do not simply appear in all positions in which the strong form may appear. Selkirk accounts for this using metrical grids and the rules that operate on them; she proposes that monosyllabic function words fail to destress in a phrase-final position, because a Silent Demibeat has been added at the end of that phrase. This Silent Demibeat blocks the application of Monosyllabic Destressing, so the function word must be pronounced in its strong form. However, the fact that the clitic forms are permitted in positions in which the full forms are not (see sections 2.2.5), is more problematic.

Secondly, as pointed out by Kaisse (1985) there are no phonological rules in English which can be used to derive the weak and clitic forms of the English auxiliaries from the strong forms in non-fast speech. For instance, there is no phonological rule (or set of rules) in English that deletes /h/ before an unstressed vowel in all contexts in slow speech; this only happens in fast speech. This is a major problem for an analysis of phonological reduction.

#### 2.3.3.3 Summary

The main advantage of Selkirk's analysis is that it is able to account for some of the data using the concept of the metrical grid. However, the fundamental flaw in her analysis is that she claims that the clitic and weak forms are derived from the strong using phonological reduction rules. However, this must be rejected as their are no rules of English phonology which could derive the clitic and weak forms from the full (see Kaisse 1985). It seems, therefore, that it would be sensible to regard AC as allomorphy rather than as the result of phonological 'reduction' or 'contraction'. In the following section I will investigate the suggestion by Kaisse (1985) that AC is

contextual allomorphy rather than phonological reduction.

### 2.3.4 Kaisse (1985): Reduced Auxiliaries as Enclitics

This section reviews Kaisse (1985)'s analysis of AC which sees contraction in terms of "simple cliticisation" (Zwicky 1977) defined as 'syntactic or morphological adjunction of some grammatical word to a "host" (some adjacent word or phrase).' The clitic is then relabelled as part of the category of the host and the host-clitic group and realised as a single phonological unit. In Kaisse's analysis of AC, an auxiliary moves leftwards, cliticizing onto a constituent which it governs. The definition of government will be addressed shortly and the question of what it is that drives auxiliary movement will also be addressed.

As "simple cliticisation" refers to the production of a single phonological unit, Kaisse's analysis is dealing with the clitic form of the auxiliaries, rather than the weak form.

Kaisse's main reason for not regarding AC as phonological is that the reduced forms cannot be derived by any productive phonological rule of English. For this reason, Kaisse proposes an alternative analysis to phonological reduction whereby reduced forms are not derived from full forms by phonological rules but are suppletive allomorphs to be listed in the lexicon alongside full forms. Under this approach, AC is not a single reduction rule but a series of rules stating the circumstances under which the reduced allomorph may be inserted.

According to Kaisse, AC takes place in two stages:

1. a restructuring (cliticisation) rule that (Chomsky-)adjoins Aux to a preceding word.
2. a rule of allomorphy that inserts the reduced variant.

Kaisse's rule of allomorphy correctly predicts that the three forms of the auxiliary do not share the same distribution.

#### 2.3.4.1 The Government Condition

A major component of Kaisse's analysis is what she refers to as the Government Condition, as outlined in (55):

(55) *The Government Condition*:
Auxiliaries may cliticise only onto a constituent that they govern, where government is defined as follows:

(56) 'The head of any phrase will be said to govern all the phrases (=Xmax) within its projections, and to c-command every element within those phrases. Government is thus a more stringent relation than c-command; if a node $\alpha$ governs a node $\beta$, it also c-commands $\beta$, but the converse is not true. Formerly c-command was defined in terms of branching nodes, but more recent versions allow $\alpha$ to c-command $\beta$ as long as no maximal projections intervene between $\alpha$ and $\beta$. Government can then be defined as mutual c-command.' (Kaisse 1985, 47).

Basically, within Kaisse's analysis the clitic form of the auxiliary may surface when there is mutual c-command between the subject (pronoun) and the auxiliary. It is not enough for the auxiliary to be preceded by a pronoun, as shown by the fact that the clitic form is not possible when the auxiliary follows a relative clause or a co-ordinated subject which ends with a pronoun:

(57) a. Me and you will have to go.
b. *Me and you'l have to go.

(58) a. The woman that spoke to you will have to be shot.
b. *The woman that spoke to you'l have to be shot.

A problem for Kaisse's analysis is that Selkirk (1972) and Pullum (1979) argue that movement of any phrase into COMP is compatible with AR.

(59) What's that? (cf. % What book's that?)

This should be ungrammatical as single words in COMP are not governed by the auxiliary any more than phrases are. In order to account for this, Kaisse suggests that the Government Condition be modified to the following:

(60) *Proform Condition*: Auxiliaries may cliticise onto a c-commanding proform.

If the host is a proform, the Government Condition is relaxed so mutual c-command is not required - only c-command by the host.

Kaisse's account is preferable to Selkirk's as it does not assume that rules of reduction are used to derive the weak and clitic forms from the strong forms. Kaisse's Proform Condition, however, is an ad hoc explanation of the data; she offers no reason as to why the Proform Condition should be important in the analysis of AC. Also, as it stands Kaisse's analysis cannot account for the sensitivity of material occurring on the immediate right of the auxiliary (see section 2.2.4 for the data), as she refers only to

contexts on the right of the auxiliary. Therefore, if an auxiliary can contract whenever it follows a simple subject pronoun, we would expect the following example, and others like it, to be acceptable:

(61) *I won't go but he'l.

However, as discussed in 2.2.4, even when following a pronoun, the clitic form is not permitted to occur preceding an ellipsis site. Thus, Kaisse's analysis is in need of expansion in order to account for the ungrammaticality of weak and clitic pronouns preceding ellipsis sites.

The most significant aspect of Kaisse's analysis - that the different phonological forms of the auxiliaries are allomorphs that are listed separately in the lexicon - will be pursued in the analysis proposed in the following section, but the rest of Kaisse's analysis will be abandoned in favour of a syntactic account that focusses on the structural position of auxiliaries. I will show in the following section that there is a close link between the phonetic form of the auxiliary and the structural position in which it occurs.

## 2.4 Toward an Analysis of Auxiliary Contraction

In section 2.3, I rejected a number of previous analyses of AC for a number of reasons. For instance, the analysis proposed by Bresnan (1978) concentrates on contexts to the right of the auxiliary such as ellipsis sites, while that of Kaisse (1985) focuses on contexts to the left, namely the type of subject. In section 2.2, I presented a variety of properties associated with AC showing that AC is affected by a number of factors, not only the type of subject or following context. In the remainder of this chapter I will, therefore, attempt to provide a syntactic analysis of AC that can account for a number of AC properties. Specifically, I will account for properties A-C (subject type, finiteness, and the behaviour of *has* and *is*) in a syntactic framework, and will show that there is a strong link between the phonological form of the auxiliary and the syntactic position and structure in which it occurs.

### 2.4.1 Phonetic Forms of Auxiliaries as Allomorphs

Following suggestions by Kaisse (1985) and Inkelas and Zec (1993), I will draw a two-way distinction between clitic auxiliaries, on the one hand, and full and weak forms on the other; both Kaisse and Inkelas and Zec suggest, contra Selkirk (1984) that the clitic forms cannot be derived from the full by phonological rules. According to the latter, however, it is possible to derive the weak from the full. The syntactic position of the weak and full forms suggest that there is a strong link between the full and weak

forms. I suggest that this link is a phonological one, i.e. that the weak form is derived from the strong by phonological reduction rules (see Inkelas and Zec (1993) for a more thorough discussion of these kinds of rules). This leaves the clitic forms unaccounted for.

As the clitic forms do not appear in all positions in which the weak and full forms are found (for example, they do not occur to the immediate right of adverbs), I suggest that these forms are not directly related to the full and weak forms, i.e. they are not full/weak forms that have been phonologically reduced in the phonological component. Rather, I propose that the clitic forms are allomorphs (this was originally suggested by Kaisse (1985)), that are inserted when particular conditions are met. Precisely, I propose that the clitic forms are (optionally) inserted when immediately preceded by a subject pronoun. I will outline this in more detail below when I address the particular properties of pronoun subjects which make them available for co-occurrence with clitic auxiliaries.

That auxiliaries can occur in different structural positions, as shown in section 2.2, is a significant discovery but it cannot provide an explanation for the restricted distribution of the clitic auxiliary. The clitic auxiliary can only surface when two conditions are met: (i) the auxiliary has raised to T and (ii) the auxiliary is preceded by a pronoun subject. I will discuss the second of these conditions in more detail in section 2.4.3.1. In this section, I will focus on the first condition: the structural position of the clitic auxiliary. As clitic auxiliaries are not permitted to the right of adverbs, this suggests that the clitic auxiliary is forced to raise above adverbs such as *probably*.

(62) a. He'l probably turn up later.
b. *He probably'l turn up later.

Pronouns differ from DPs, relative clauses, and co-ordinate subjects in that they have a non-branching syntactic structure.[15] Branchingness is an important concept in the mapping from syntax to phonology; the syntactic structure of a phrase can determine the phonological structure of that phrase and other phrases within the clause. For this reason, I wish to propose that it is not only the syntactic structure of the subject that is important, but also the phonological structure. I will argue that non-branching subjects do not introduce a phonological phrase at their right edge, and can thus occur with the clitic auxiliary.

Inkelas and Zec (1993) propose a Phonological Phrase Algorithm which maps syntactically branching nodes into phonological phrases:

(63) Phonological Phrase Algorithm

[15]This will be discussed in further detail in section 2.4.3.

a. Branching Clause: From the bottom up, map a branching node into a phonological phrase.
b. Default Clause: Map any terminal element left unphrased by the Branching Clause into a phrase of its own.

This algorithm is sensitive to the difference between branching and non-branching nodes. Applying the algorithm to the two VPs *transforms sentences* and *transforms long sentences* produces different results. The latter has a branching complement, *long sentences*, that will be mapped into one phonological phrase leaving the verb to be phrased separately. In the former VP, the complement will be mapped into a phonological phrase with the verb as both verb and complement are nonbranching.

(64) a. ['transforms 'sentences]
b. [trans'forms] ['long sentences]

Following this idea, I will propose that the subject effect on AC can be reduced to the difference between branching and non-branching subjects. A subject which has branching structure, like a DP, will be mapped into a phonological phrase and will, therefore, have a phonological phrase boundary at its right edge. A non-branching subject will not necessarily be mapped into its own phonological phrase and will not have a phonological phrase boundary at its right edge. This is discussed in further detail in section 2.4.3.1.

### 2.4.2 The Structural Position of Clitic, Weak, and Full Auxiliaries

When discussing contracted auxiliaries, it is important to draw a clear distinction between clitic, weak and full forms. In section 2.1.1 I described the phonological differences between the three forms: the full form is phonologically unreduced, the weak (syllabic) form is phonologically reduced, and the clitic (non-syllabic) forms a phonological word with the (pronoun) subject. Selkirk (1984) and Kaisse (1985) assume that the main difference between the clitic form, on the one hand, and the weak and full forms, on the other, is that the former phonologically cliticises to the pronoun, but the latter do not. In the analysis presented in section 2.4.2.1, I argue that *syntactic* differences, not just phonological differences, exist between the clitic and the weak and full forms; I suggest that there are two structural positions to which auxiliaries may raise, and that the phonological form of the auxiliary is related to the position to which it has raised. The idea that auxiliaries may occur in different structural positions within the clause is not unprecedented, but it has not been fully explored. Using data from Baker (1971), Kayne (2000) and Roberts (2000), I will investigate the distributional properties of clitic, weak and full form auxiliaries. I will then show that it is necessary

to draw a structural distinction between the three forms of auxiliaries.

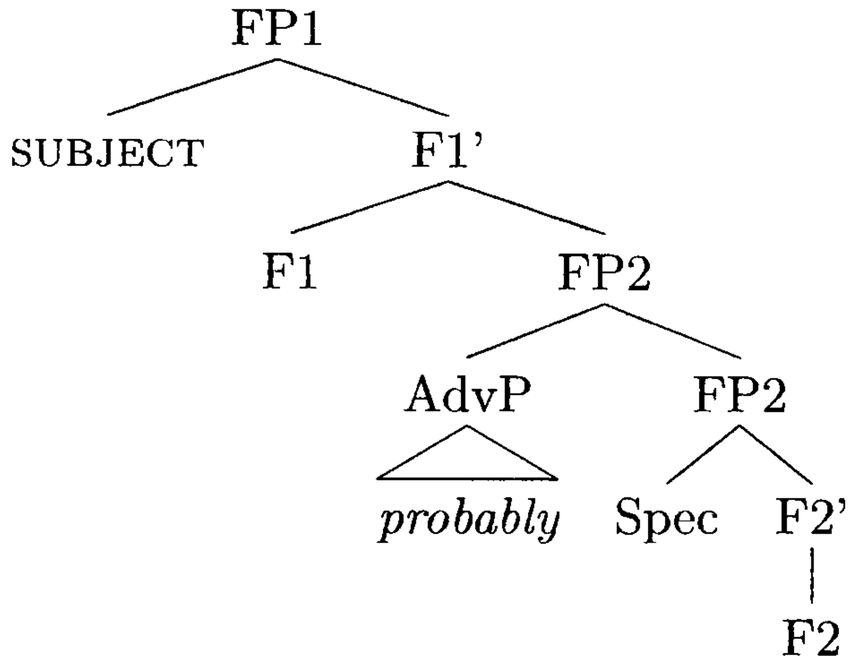
Using the following examples as evidence, Kayne (2000) suggests that full form auxiliaries appear in a lower position as they occur to the right, and not to the left, of adverbs.

(65) a. John wasn't there.
b. John probably wasn't there.

(66) *John wasn't probably there.

Based on this data, Kayne proposes that auxiliaries may only move to the lower of two functional heads (F1-probably-F2-V), i.e. auxiliaries do not raise to T (where F1 is the equivalent of T). Adverbs like *probably*, he assumes, are adjoined to the maximal projection labelled F2, as shown in the tree below.

(67)




Kayne's proposal cannot be correct; auxiliaries can, in fact, appear in F1 and F2. Although it is true that in examples like (66) the auxiliary cannot appear above the adverb, this order is permitted in cases where the clause is positive rather than negative as shown in (68):

(68) a. He probably was there.
b. He was probably there.

That auxiliaries can appear above adverbs like *probably* in non-negative clauses, suggests that instances like (66) may be ruled out by independent factors such as the scopal properties or clausal position of negation with respect to adverbs like *probably*, rather than the position of the auxiliary in the clause. Data such as (68) leads to the conclusion that auxiliaries can, contra Kayne, raise higher than adverbs, i.e. higher

than Kayne's F2.

More evidence to suggest that auxiliaries can raise to T (Kayne's F1) comes from the following examples which are common in Northern varieties of English:

(69) a. NE: He'll not come.
b. NE: He'll probably not come.

(70) a. NE: I've not seen her for three weeks.
b. NE: I've probably not seen her for about three weeks.

In these examples, the contracted modal *will* and auxiliary *have* can appear above both negation and the adverb *probably*, indicating that auxiliaries and modals can actually raise to T (F1).

Notice that there must be a particular order of negation and adverb in Northern English (NE):

(71) a. NE: *He'll not probably come.
b. NE: *I've not probably seen her for about three weeks.

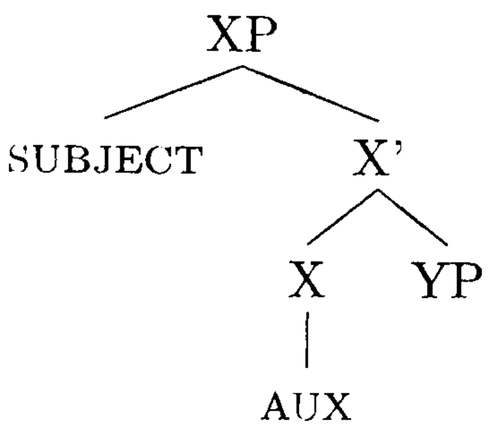
Placing negation above the adverb results in ungrammaticality, providing more evidence that it is properties of negation or adverbs which rule out examples like (66).

That auxiliaries can in fact appear in a higher position is also suggested by Roberts (2000). Roberts points out that nothing can intervene between a pronoun subject and a clitic auxiliary. Adverbs like *probably*, for example, cannot intervene between a pronoun and a clitic auxiliary:

(72) a. He'l probably turn up later.
b. *He probably'l turn up later.

Roberts suggests that this can be accounted for this by assuming that the subject and clitic auxiliary are in the specifier and head positions, respectively, of the same projection.

(73)




Thus, there is no intervening maximal projection to which an adverb can adjoin.

Considering the position of auxiliaries with respect to adverbs in more detail leads to a number of interesting conclusions, as shown by the following data:

(74) a. He'l probably turn up later.
b. John'el probably turn up later.[16]
c. He will probably turn up later.
d. He WILL probably turn up later.
e. * He won't probably turn up later.

(75) a. * He probably'l turn up later.
b. ?He probably'el turn up later.[17]
c. ?He probably will turn up later.[18]
d. He probably WILL turn up later.
e. He probably won't turn up later.

From the data we can make the following assertions:

1. There are two positions in which auxiliaries may appear: one below adverbs, one above.
2. Clitic auxiliaries are restricted to appearing **above** adverbs.
3. Negative and emphatic auxiliaries must appear **below** adverbs.
4. Auxiliaries in the weak form occur above adverbs.

The idea that the different phonetic forms of auxiliaries appear in different syntactic positions is an intriguing one and will be pursued further throughout this chapter.

[16]I have avoided the use of a pronoun subject here, as the weak form is dispreferred with pronoun subjects.

[17]I have marked this as marginal rather than ungrammatical, as there is a contrast between (a) and (b) here with the former much worse than the latter.

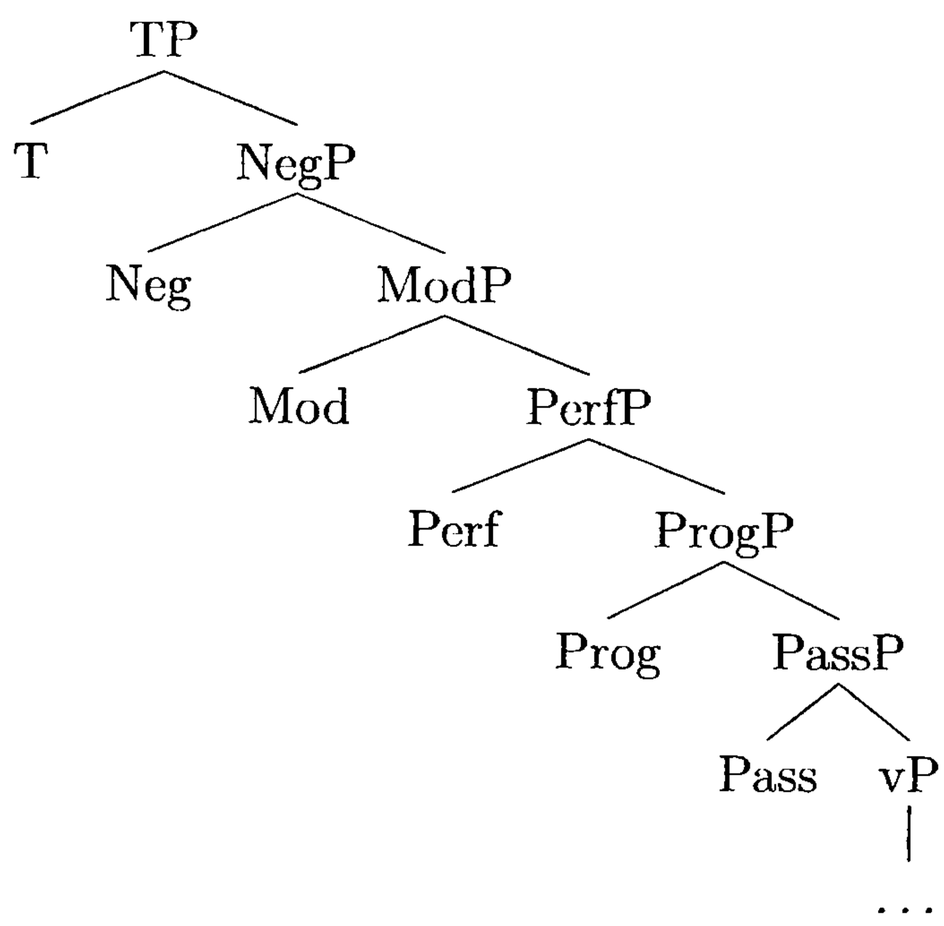
[18]I have marked this as marginal following suggestions in the literature that auxiliaries are typically more emphatic following adverbs (see Baker 1971, Bresnan 1978, Wilder 1997).

Before investigating this idea further, however, it is necessary to consider the structure of the English clause in more detail. The proposals by Roberts (2000) and Kayne (2000) and the data outlined above, suggest that an extra functional projection available to finite auxiliaries is required in the clause. This will be the topic of the following section.

#### 2.4.2.1 ΣP and the structure of the clause

As discussed in Chapter 1, until the data suggests otherwise, I have been assuming the following clausal structure:[19]

(76)



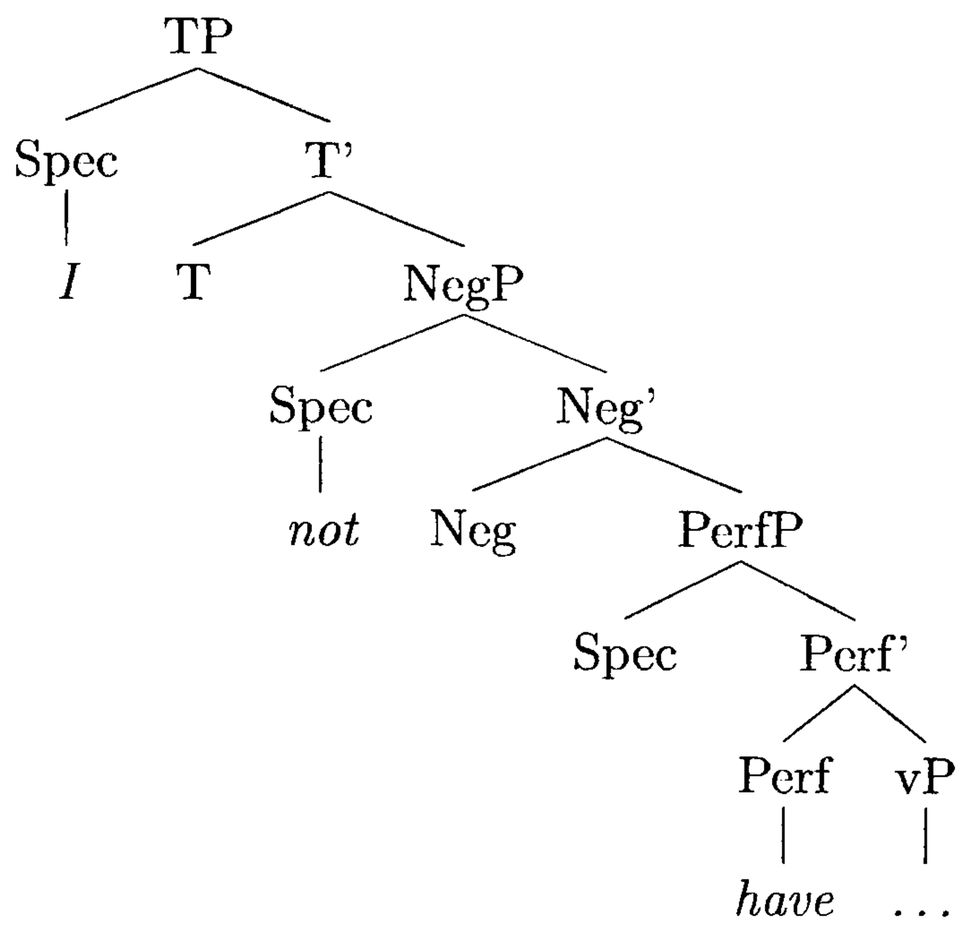

As shown in section 2.4.2, auxiliaries may occur to either the left or right of adverbs like *probably*, suggesting that there are two syntactic positions to which auxiliaries may raise: a position above adverbs, and a position below adverbs but above negation. Following Kayne (2000), I will assume that the higher of these two positions, i.e. the one above the adverb, is T.[20] There are a variety of possibilities regarding the lower position. An obvious assumption to make would be that the lower position is the auxiliary's merged position, but this is not possible; assuming that auxiliaries are merged below negation (Chomsky 1957, Lasnik 1999), for them to remain in their merged position would result in the following which is ungrammatical:

(77) *I not have ...

[19] I have omitted bar-levels for reasons of space.

[20] Kayne (2000)'s F1 which he stated was the head T, to which auxiliaries could not raise. That auxiliaries can in fact raise to this position was clarified in section 2.4.2.

(78)



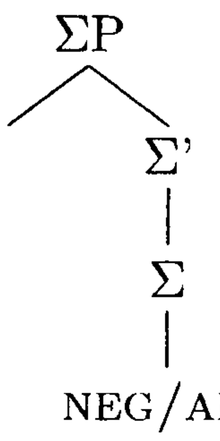

This leads to the conclusion that there must be an extra functional projection, between T and the auxiliary's merged position, to which auxiliaries can raise.

Auxiliaries that occur in the lower position below adverbs are negated or emphatic, as shown in the following examples:

(79) a. He probably won't come.
b. He probably WILL come.

The fact that the lower position is occupied by negative and emphatic auxiliaries as shown in (79a) and (79b) above is consistent with the analysis of the English clause proposed by Laka (1990). She proposes that negation is the value of an abstract category, ΣP, along with other sentential operators such as emphasis and affirmation.

(80)




Laka (1990) uses the following data to illustrate that in English and in Basque there are certain syntactic strategies available to rescue a negative sentence; *do*-support in

English and auxiliary fronting in Basque.[21]

Using the following data, Laka illustrates that *do* must be inserted in negative clauses and can be inserted in emphatic clauses, but is not permitted in clauses which are neither negative or emphatic:

(81) a. Mary didn't leave.
b. Mary DID leave.
c. *Mary did leave.

Laka uses the fact that these same strategies are available in emphatic affirmative and negative sentences as evidence that negation and affirmation are part of the same projection. Following Chomsky (1957), Laka proposes the presence of an Aff morpheme within the clause which triggers *do*-support in English in the same way that negation does. She proposes that this morpheme heads a projection AffP and, based on the above data, she assumes that the head Aff and the head Neg are different ways of instantiating the head of a more abstract projection which she labels ΣP. This is compatible with Chomsky's idea that *not* and the morpheme Aff are parallel in that while the former negates the clause, the latter affirms it; i.e. they perform the same function but have opposite semantic values.

One of Laka's main claims behind the instantiation of ΣP is that Neg and Aff would not be expected to co-occur within the clause, if they really are separate instantiations of Σ. Laka attempts to illustrate that this prediction is borne out in English with the following data:

(82) a. I didn't, as Bill had thought, go to the store.
b. I DID, as Bill had thought, go to the store.
c. *I DID not, as Bill had thought, go to the store.

In (82a) *did* is negated whilst in (82b) *did* is emphatic. In (82c), it is not possible to have emphatic *did* co-occurring with negation. However, Laka fails to consider that it is possible to have a sentence in which emphatic *did* may occur with emphatic negation:

(83) I DID NOT, as Bill had thought, go to the store.

Initially, this may appear to raise problems for the instantiation of Laka's ΣP. If Σ is host to *either* negation or emphasis (but not both) then examples like (83) would be

[21] For reasons of space, I will concentrate on Laka's analysis of English. For a detailed discussion of the syntax of Basque, the reader is referred to Laka (1990).

incorrectly ruled out. The fact that they are not ruled out is problematic for Laka's analysis. It is possible, however, to incorporate these examples into Laka's analysis by thinking of ΣP as the realisation of features, i.e. [+/-NEG] and [+/-EMPH]. This predicts the following results:

| | -NEG | +NEG |
|---|---|---|
| -EMPH | - | didn't |
| +EMPH | DID | DID NOT |

Table 2.2: The realisation of Σ

Notice that the outcome of [+EMPH, +NEG] is not the ungrammatical DID *not* where *did* but not the negative marker is emphatic, but DID NOT where both the auxiliary *do* and negation are emphatic.

(84) a. I didn't, as Bill had thought, go to the store. [-EMPH, +NEG]
b. I DID, as Bill had thought, go to the store. [+EMPH, -NEG]
c. I DID NOT, as Bill had thought, go to the store. [+EMPH, +NEG][22]

Laka states, on the grounds that (82c) is ungrammatical, that Σ cannot be filled by both an element that is emphatic, i.e. emphatic *do* and a negative marker. If we think of Σ as being a realisation of a feature [EMPH] or a feature [NEG] then there seems to be no reason for ruling out the appearance of Σ which is marked [+EMPH, +NEG], as I have argued above. The grammaticality of DID NOT shows that this instantiation of ΣP appears to be viable and that Σ can be filled by both emphatic and negative features on the grounds that the negative feature is also marked with contrastive stress.

As auxiliaries which may occur in the lower position below adverbs are emphatic or negative, I have suggested that the head Σ is the other available landing site for auxiliaries in the English clause. Laka's ΣP has been utilised in an analysis of AC by Wilder (1997).

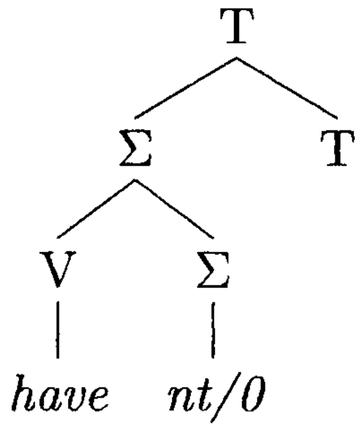
In his analysis of AC, Wilder (1997) proposes that the full form of an auxiliary appears in clauses in which Σ is projected, and that the clitic form occurs in clauses in which Σ is not projected.[23] He suggests that 'negation is realised as an overt morpheme, [...and...] the affirmative morpheme is abstract' (Wilder 1997, 342), as shown in (85):

(85) a. $\Sigma$[+NEG] = *n't*
b. $\Sigma$ [-NEG] = *0*

[22]The equivalent of [-EMPH, -NEG] would presumably be *I went to the store.*
[23]Wilder refers to this as the weak form.

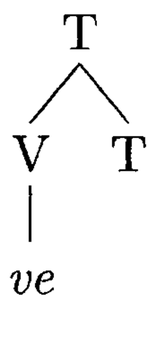
Following on from this, Wilder proposes that the auxiliary will pick up either the abstract Σ-morpheme or the clitic *-n't* when it raises through Σ on its way to T.[24] According to Wilder (1997, 343), the full form of an auxiliary is 'a V-T complex [head] incorporating Σ':

(86)




The weak form, however, is 'a V-T complex [head] lacking Σ':

(87)




Following Wilder, I will argue that Σ is not always projected in the clause, and will derive the phonetic forms of the auxiliaries from their internal syntactic structure. Wilder suggests that the full form is realised when Σ is present, and the weak form when Σ is absent. However, the data implies that this is not the case; rather, the emphatic and negative forms are derived when Σ is present, and the full and weak forms when Σ is absent. Linking the presence of the emphatic and negative auxiliaries to the presence of Σ follows naturally from the argument that Σ is the instantiation of the features [EMPH] and [NEG].

I propose that the derivation of emphatic and negative auxiliaries is as follows:

- In clauses with [EMPH] and/or [NEG] features Σ is projected.
- Auxiliaries are merged into the derivation as heads of their own projection and undergo raising to Σ.
- In the case of [EMPH] features, Morphology analyses the auxiliary and [EMPH] as a Morphological word which is spelled out at PF as an auxiliary with contrastive stress (or heavier stress).

[24] Wilder proposes that the full form of negation, *not*, does not occur in Σ, but is an adverb.

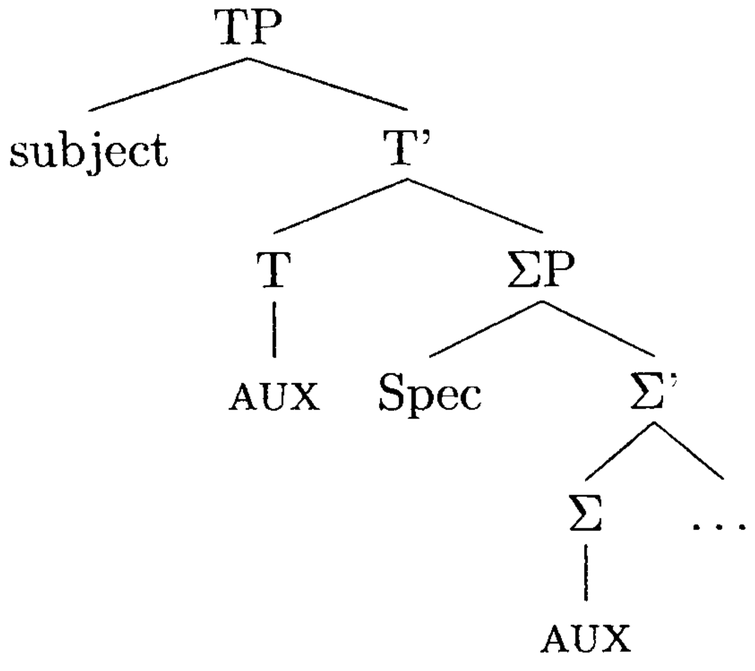
- Where [NEG] features are concerned, the Morphological reanalysis is optional. When it takes place negative contraction occurs (i.e. *haven't*), and when it does not negation is realised as the full form *not*.

Thus, the difference between negative and emphatic auxiliaries, on the one hand, and weak and full ones, on the other, is a syntactic one. Negative and emphatic auxiliaries surface when Σ is present in the clause, while the weak and full forms appear when Σ is absent.

In the following section, I will describe the derivation of the different phonetic forms of auxiliaries referring to their internal syntactic structure and their clausal position. Regarding the clitic auxiliaries, it is necessary to refer to the syntactic structure of the preceding subject and the ways in which this structure is mapped into phonological structure.

In section 2.4 I made two important proposals; I argued following Kayne (2000) and Roberts (2000) that auxiliaries may appear in two distinct structural positions, and that an extra functional projection ΣP is required as a landing site for auxiliaries.

(88)



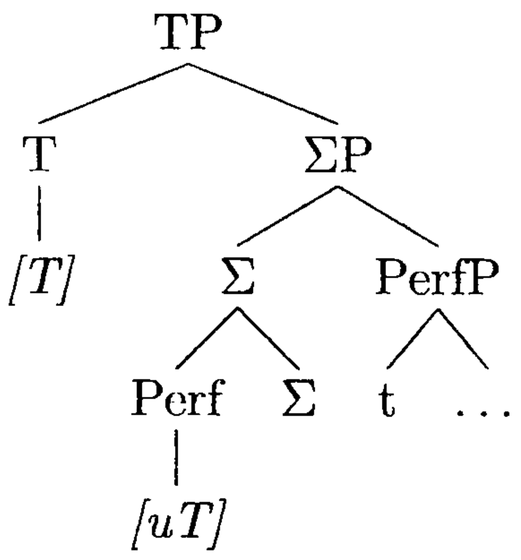

That there are two possible landing sites for auxiliaries is suggested by Roberts (2000), and is supported by the fact that auxiliaries can occur to both the right and left of adverbs like *probably*. That it is correct to assume that the lower projection is Laka's ΣP is supported by the fact that an auxiliary in a lower position below adverbs is negative/emphatic as shown by examples (75d) and (75e), repeated below as (89a) and (89b).

(89) a. He probably WILL turn up later.
b. He probably won't turn up later.

The fact that auxiliaries can appear in two positions leads to the conclusion that, contrary to what has been suggested in the literature (e.g. Lasnik 1999), finite auxiliaries need not necessarily raise to T; in fact, the data suggests that raising to T is optional. As auxiliaries raising to T is believed to be a result of the requirement that T features are checked, the fact that auxiliaries need not raise to T is problematic.

To overcome this problem I will appeal to Agree and to feature strength. Raising is not the only way to check features; features can also be checked by the operation Agree. I propose that Σ is in a position from which to check Tense features.[25] This takes place via an Agree operation in which the [uT] features on the auxiliary are checked and valued (see Chomsky 2001, Adger 2003).

(90)




In addition, I propose that English T has optionally strong features; when T is strong, finite auxiliaries are forced to raise to T to check features. When T is weak, however, auxiliaries raise to Σ where they can check T-features via the Agree operation.[26] This provides an account for the fact that auxiliaries can occur in either T or Σ.[27] However, when Σ is absent from the clause structure, auxiliaries are forced to undergo raising to T in order to check features. I suggest that this is related to the selectional properties of T; specifically, weak T selects for Σ and strong T does not.

In section 2.4, I argued that ΣP is filled by [EMPH] and/or [NEG] features. It seems intuitive to suppose that ΣP is only projected when [EMPH] or [NEG] features are present in the clause. I will assume that this is the case, following traditional assumptions that NegP is only projected in negative clauses.

I have suggested that: (i) raising to T is optional, and (ii) Σ is only projected when it hosts emphatic or negative features. Thus, there will be four different clause types in

[25]That there could be such a close link between T and Σ is plausible; they are both projections in the English inflectional system and there is, after all, a strong link between the placement of negation and finite auxiliaries.

[26]The idea of differing feature strength is not a new one; see Pollock (1989), Chomsky (1995).

[27]An auxiliary in T is to the left of adverbs like *probably* and an auxiliary in Σ is to the right of these adverbs.

which the following auxiliaries are possible:[28]

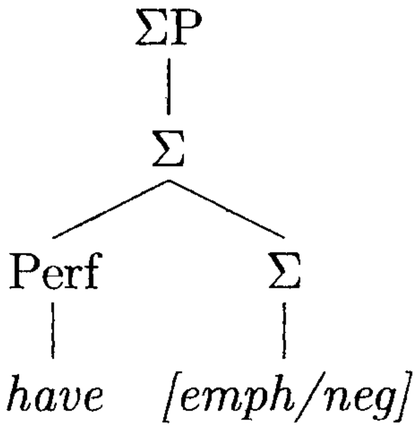
| | Σ projected | Σ absent |
|---|---|---|
| Raising to T | HAVE/haven't | have/ev |
| No raising to T | HAVE/haven't | * |

Table 2.3: Clause types with and without Σ and raising to T

In the table above, I have made some suggestions about the impact that the clause structure has on the phonetic form of the auxiliaries. Precisely, I have suggested that only emphatic and negative auxiliaries are possible in clauses in which Σ is projected, and that weak and full forms surface in clauses in which Σ is absent. I will now discuss reasons behind these suggestions, and the derivation of the emphatic, negative, full and weak forms of auxiliaries.

#### 2.4.2.2 Emphatic and Negative Auxiliaries

I suggested above that the emphatic and negative forms appear only in clauses in which Σ is present. This is a direct consequence of having [EMPH] and [NEG] features marked on Σ - these features can only be present when Σ is projected. Thus, in order to be realised as emphatic and/or negative, auxiliaries must raise to Σ where they may (or may not) go on to raise to T.




If emphatic and negative auxiliaries are able to occur in either T or Σ, this suggests that these auxiliaries should be able to occur above and below adverbs. As shown below, this is not the case for negative auxiliaries:

(91) a. He WILL probably come.
b. He probably WILL come.

(92) a. *He WON'T probably come.
b. He probably WON'T come.

[28]I have marked the bottom right cell with an asterisk to indicate that there is no possible outcome from not projecting Σ and not raising to T. Weak T must project Σ, and must also force auxiliary raising.

However, as suggested in section 2.4.2, it is possible that examples such as (92a) are ruled out by independent factors such as the scopal position of negation with respect to adverbs like *probably*. Negative auxiliaries can appear to the left of adverbs such as *really* and *often*:

(93) a. He won't really/often turn up dressed as a clown.
b. He really/often won't turn up dressed as a clown.

In (93a) negation scopes over the adverb, and in (93b) the opposite is true.

I therefore propose that where negative adverbs are ruled out in T, this is as a result of independent factors. Were it not for these other factors, we would expect negative adverbs, like emphatic adverbs, to occur in T.

#### 2.4.2.3 Full and Weak Auxiliaries

The full form is possible to the left of adverbs, but is dispreferred to the right of adverbs:

(94) a. He will probably turn up late.
b. ?He probably will turn up late.

Weak auxiliaries are also possible to the left of adverbs, but are ruled out to the right:

(95) a. John'el probably turn up late.
b. *John probably el turn up late.

This can be accounted for if we assume that full and weak forms occur in clauses in which Σ is absent. In these clauses, T is strong and forces auxiliary raising. Thus, these auxiliaries will only appear to the left of adverbs, as the position to the right (Σ) is absent and raising to T is forced.

#### 2.4.2.4 Summary

This discussion has led to two conclusions, both of which are supported by the data: (i) emphatic and negative auxiliaries are associated with the head Σ and are thus only able to appear in clauses in which Σ is projected, and (ii) the other forms of auxiliaries (full, weak, clitic) appear in clauses in which Σ is absent. In section 2.4.3, I will discuss the ways in which this framework can account for the AC properties A-C. Firstly, however, I will examine the distribution of the clitic auxiliary to determine

how it can be incorporated into the analysis.

### 2.4.3 Accounting for the Main Properties of Auxiliary Contraction

The syntactic position of auxiliaries (see section 2.4.2) and the concept of allomorphy and its sensitivity to syntactic branchingness (see section 2.4.1) are crucial in the analysis of the following properties of AC: the grammatical category of the subject (see 2.2.1), the finiteness of the auxiliary (see section 2.2.2), and the distinct behaviour of the auxiliaries *has* and *is*.

#### 2.4.3.1 Property A: Grammatical Category of the Subject

It has been noted already that for most English speakers, the clitic form of an auxiliary can surface when it occurs to the immediate right of a subject pronoun, provided that pronoun is not part of a larger phrase (i.e. in a co-ordinate structure or a relative clause), but not when it occurs after DP subjects, as shown by the data below (repeated from section 2.2.4).

(96) a. The ewe'el not go.
b. You'l not go.
c. Sue'el go.
(examples from Kaisse (1985)).

(97) a. Me and you will/el have to go.
b. Sue will/el have to go.
c. The woman that spoke to you will/el have to be shot.

As pointed out by Roberts (2000) an adverb is unable to occur between a pronoun subject and a clitic auxiliary:

(98) *He probably'l go.

This follows if the clitic auxiliary appears in T and not $\Sigma$, as the subject and auxiliary will be in the specifier and head, respectively, of T, leaving no opportunity for an adverb to intervene. It does not, however, account for the fact that the auxiliary surfaces as a clitic. The solution to this problem is best solved by appealing to syntax-phonology mapping rules.

Appealing to the rules and principles of the syntax-phonology interface offers a number of possible accounts of the effect of subject type on AC. I will now address two of

the main possibilities: (i) that auxiliaries can occur in clitic form when following a word which does not receive word stress and (ii) that the clitic form cannot occur with elements that introduce an XP boundary at their right edge in the phonological interface. I will demonstrate that the latter analysis is the correct one.

When considering word stress, it is important to consider the difference between function words and content words (see Selkirk 1984; 1995). According to Inkelas and Zec (1993, 206) the difference between the two is that they 'enter the postlexical component with very different phonological properties. Content words will possess all of the phonological structure assigned in the lexicon, including phonological word status, whereas function words will have none of these properties. Specifically, they will lack both word stress and phonological word status.' As a result of this, function words behave very differently from content words in terms of phonology. For instance, the former can appear in reduced forms while the latter cannot. Auxiliaries are obviously classed as function words (see section 2.3.3.2, Selkirk (1984), Selkirk (1995)). In phonological terms, pronouns can also reduce and can therefore be classed as function words (see Inkelas and Zec 1993).

Following Selkirk (1984) and Inkelas and Zec (1993), function words do not possess word stress. As function words, pronouns, therefore, do not carry word stress. As auxiliaries may only appear in their clitic form when they follow pronouns it is possible to state the generalization that auxiliaries may only reduce when they follow a word which does not receive word stress. This will account for the fact that an auxiliary may appear in its clitic form when it follows a pronoun but not when it follows a full DP.

(99) a. *The ewe'l not go.
b. You'l not go.

A full DP ends, of course, in a noun which is a content word and therefore does receive word stress. The same is true of proper nouns, which cannot occur with clitic auxiliaries:

(100) *Sue'l go.

Initially, it seems that the fact that clitic auxiliaries can follow stressed pronouns raises problems for this analysis. Stressed pronouns appear to receive stress just like content words do.

(101) YOU'l have to go because I'm too busy.

These examples are less problematic if a distinction is made between different types of stress. Inkelas and Zec (1993) argue that while content words are assigned word stress in the lexicon, function words may receive stress in the post-lexical component which is interpreted as secondary prominence. Although function words may receive stress they never receive word stress which is only assigned to content words and never post-lexically.

Appealing to word stress can account for a proportion of the data. When considering relative clauses and co-ordinate subjects which end in a pronoun, however, this account runs into difficulties. If auxiliaries can appear as clitics following pronouns which do not receive word stress, we would expect the clitic form of the auxiliary to appear following relative clauses and co-ordinate subjects which are pronoun-final. However, this is not the case.

(102) a. Me and you will/el have to go.
b. The woman that spoke to you will/el have to be shot.

These examples raise a real problem as the pronoun should trigger the clitic form of the auxiliary. Word stress, then, cannot be used to account for subject effects. By appealing to phonological phrasing, however, all of the data including these more problematic cases can be dealt with. I will turn to this now.

An immediate observation, and one which will turn out to be very important, is that simple pronouns have a very different syntactic structure from DPs, relative clauses and co-ordinate subjects as illustrated below. Taking the syntactic structure of subjects into account leads to two avenues along which to pursue AC: (i) appealing to the syntactic boundary on the right of the subject, and (ii) appealing to the syntactic branchingness of the subject. I will discuss each of these in turn.

If we consider the syntactic boundary to the right of the subject, we might expect the XP boundary at the right edge of the subject to block the appearance of the clitic auxiliary. The subjects which cannot occur with clitic auxiliaries (DPs modified by relative clauses, co-ordinated subjects, DPs, and proper nouns) are all XPs, and introduce an XP boundary at their right edge in phonology. Pronouns, however, are $X^0$s so do not have an XP boundary at their right edge, allowing a pronoun to co-occur with a clitic auxiliary. This approach is not as straightforward as it initially seems; it raises questions about the syntactic structure of pronouns, i.e. do pronouns, as Ds, project a DP? If so, as has been traditionally assumed (Abney 1987, Longobardi 1994), a pronoun will have an XP boundary at its right edge in phonology in the same way that the other subject types do. Consider the following sentences in which the subject is placed in brackets:

(103) a. [The hamster that escaped in the kitchen] has never been found.
b. [Gemma] can't find her keys.
c. [Me and you] will have to go.

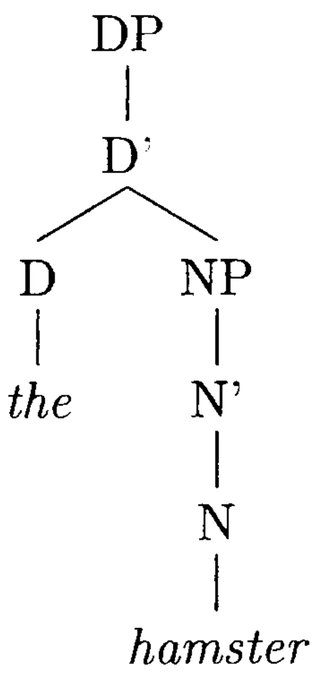
In (103a), (103b) and (103c), the bracketed constituents all have one thing in common. They are all DPs and can all be replaced by a pronoun:

(104) a. [It] has never been found.
b. [She] can't find her keys.
c. [We] will have to go.

If pronouns can be used to replace phrases then pronouns themselves must be phrases, not heads. This suggests that it is correct to assume that a simple pronoun subject does occur within a DP. This DP will introduce an XP boundary at its right edge in the phonological component and, if the analysis above is correct, should not appear with a clitic auxiliary. This is an incorrect prediction, and leads to the conclusion that it is necessary to reject the analysis involving XP boundaries in favour of another approach. I will now demonstrate that what is important in terms of subject type is syntactic branchingness; subjects without branching structure (pronouns) can occur with the clitic auxiliary, and subjects with branching structure are blocked from appearing with the clitic auxiliary.

As shown in the tree below, DPs have branching structure:

(105)



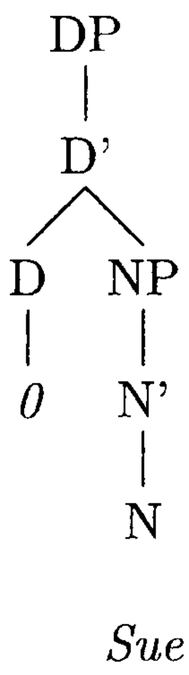

According to Longobardi (1994), bare nouns with an existential interpretation involve an empty D to which the noun raises to at LF. Thus, a bare noun such as *dogs* in (106) has branching structure and, as shown in (107), cannot occur with a clitic auxiliary:

(106) a. Dogs were sitting on my lawn
b. Dogs were everywhere.
(examples from Longobardi (1994, 645, his (73)))

(107) *Dogs'l always chase cats.

Proper nouns also have branching structure:[29]

(108)




As mentioned in section 2.2.1, these subject types are blocked from appearing with the clitic auxiliary:

(109) a. *The hamster'l escape if you're not careful.
b. *Sue'l want to come.

A simple pronoun subject, on the other hand, allows a following auxiliary to appear as a clitic form:

(110) a. She'l escape if you're not careful.
b. She'l want to come.

Pronouns, unlike the subject types that cannot occur with the clitic auxiliary, are base-generated in D (see Longobardi 1994, Chomsky 1995) and do not have a branching structure as shown in the tree below:

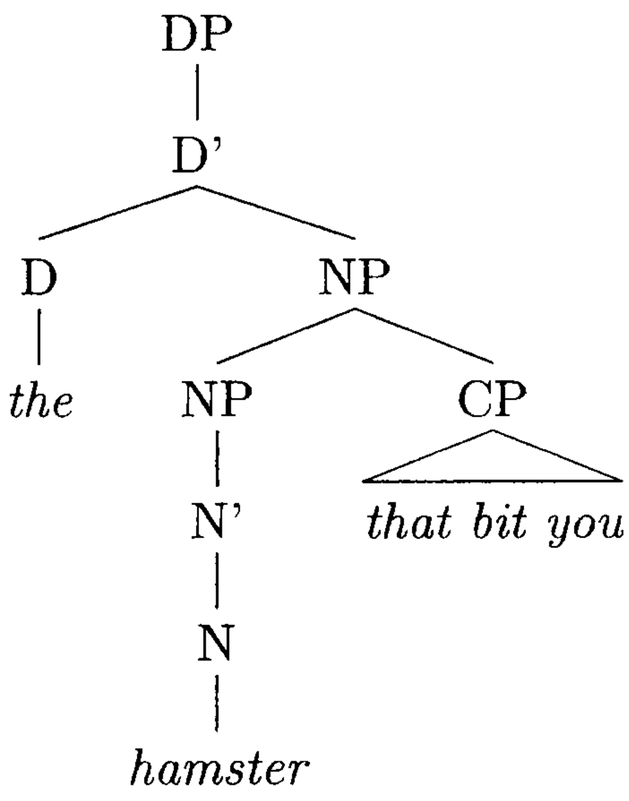
[29]Longobardi (1994, 635) claims that proper nouns 'directly designate the entity referred to' and, like bare nouns, may also undergo movement to D.

(111)


Appealing to the difference in syntactic structure between pronouns, on the one hand, and DPs and proper names, on the other, provides an account of the contraction facts with these subject types. For this analysis to prove successful, however, it must also account for the fact that clitic auxiliaries do not appear following pronouns that are part of a relative clause or a co-ordinate subject.

Relative clauses are adjunct clauses which act to modify nouns (see Stockwell et al. 1973, Weisler 1980, Borsley 2000, Doherty 1999, Haegeman and Gueron 1999). Prior to the introduction of DP, relative clauses were assumed to be right-adjoined within NP. I will follow this traditional approach, although I do acknowledge the possibility that this analysis is incorrect and that relative clauses may be adjoined to DP.[30]

(112)

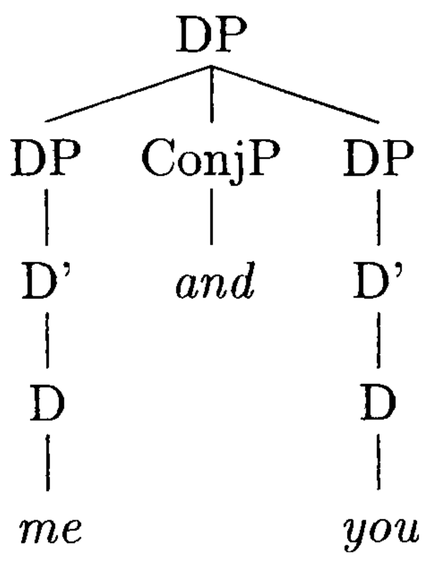



In linear terms, the pronoun is adjacent to the auxiliary, although in structural terms this is not the case as shown in the tree; the pronoun at the end of the relative clause is deeply embedded inside the relative clause, which has branching structure.

As in a relative clause, the pronoun at the end of a co-ordinate subject cannot occur with a clitic auxiliary.

[30]See Kayne (1994), Bianchi (1999), Bianchi (2000) for an alternative analysis of relative clauses in which relative clauses are selected as complements of a DP.

(113)




Again, the pronoun is embedded within a subject which has branching structure and is blocked from appearing with a clitic auxiliary.

A division can be made between pronouns and the other subject types: pronouns have non-branching structure, and the other subjects have branching structure.

As mentioned above, mapping from syntax to phonology is dependent on the branchingness of syntactic structure. For instance, the subjects which have branching structure will be mapped into a phonological phrase:

(114) a. [The hamster] will escape if you're not careful.
b. [Sue] will want to come.
c. [The hamster that bit you] will escape if you're not careful.
d. [Me and you] will have to go.

These subjects will thus have at their right edge a phonological boundary, which prevents the subject and following auxiliary from being phrased as a phonological word. If the auxiliary is not part of the same phonological phrase as the subject, it cannot reduce.

When the subject is a pronoun, however, the non-branching structure of that pronoun means that it is not mapped into a phonological phrase, thus allowing a following auxiliary to be phrased with the pronoun:

(115) [She'll] want to come.

The phrasing of the pronoun and auxiliary together means that the auxiliary can be realised in its clitic form, although this is not obligatory. When the auxiliary is not phrased with the pronoun it is realised as either a full or weak form.

#### 2.4.3.2 Property B: Finiteness

One of the advantages of the analysis I am proposing is that it offers a neat account of the fact that non-finite *have* may never be a clitic. It could be argued that this is as a result of phonological reasons, as most of the modals are vowel final and would therefore not permit the clitic form. However, even when following a vowel-final modal like *may*, *have* cannot appear as a clitic.

(116) *He may'v been arrested.

As argued above, the clitic form of the auxiliary may only surface when the auxiliary occurs in T. In examples like (116), the modal occurs above the auxiliary and must therefore raise to a higher position than non-finite *have*. As discussed in Chapter 1, it is possible to analyse modals as being merged into the head of ModP and undergo raising to T. Alternatively, it is possible to conceive that modals are merged directly into T. It is unimportant for the purpose of this chapter, which of these analyses is chosen, as the outcome is the same in both: the modal verb appears in T at the final stage of the derivation. This means that T is not an available landing site for the non-finite auxiliary. The clitic form of the auxiliary can only surface when the auxiliary has raised to T, not when it remains in its merged position or has raised to $\Sigma$. Therefore, non-finite auxiliaries will never undergo raising to T and will thus never appear in clitic form.

A question raised by this analysis is, of course, in what position is the non-finite auxiliary? The word order suggests that when non-finite, auxiliaries remain in their merged position, below sentential negation.

(117) He probably couldn't have gone.

If the non-finite auxiliary remains in its merged position as suggested, then this analysis is compatible with Minimalist assumptions in which raising to T is triggered by the need to check tense features (Chomsky 1995, 232-5).

#### 2.4.3.3 Property C: The Behaviour of *Has* and *Is*

The behaviour of *has* and *is* does not immediately fall out of the structure or the theory about branchingness. I have suggested that clitic auxiliaries may be phonologically phrased with a pronoun subject. However, *has* and *is*, unlike other auxiliaries, can appear as clitics following branching subjects such as DPs, relative clauses, and co-ordinate subjects as pointed out in section 2.2.3.

(118) a. The hamster's escaped.
b. The book you wrote's been out of print for years.
c. Bus and train's always been the cheapest way to travel.

(119) a. The hamster's escaping.
b. The book you wrote's out of print.
c. Bus and train's the cheapest way to travel.

A significant similarity between *has/is* and *have*, however, is that all are affected by the syntactic position in which they occur.

(120) a. She's probably had to leave early.
b. ?/* She probably's had to leave early.

(121) a. She's probably going to leave early.
b. *She probably's going to leave early.

Again, the clitic form of an auxiliary cannot appear when the auxiliary occurs below adverbs like *probably* because the auxiliary is in $\Sigma$. In this respect, *has* and *is* are no different from the other auxiliaries; the structural position does affect the phonological form of the auxiliary, allowing the theory about structural position outlined so far to be maintained.

This leaves the problem of why *has* and *is* can occur as clitics with non-pronominal subjects. Wilder (1997) suggests that the solution to this problem may be related to the fact that the clitic form of *has* and *is* is phonologically identical to the English plural marker which can appear as a clitic when preceded by a DP.[31] This suggestion by Wilder (1997) does not provide a satisfactory explanation for the occurrence of *has/is* as clitics following a range of subject types; his analysis merely reduces the behaviour of *has* and *is* to a different problem.

As pointed out in section 2.4.3.1, auxiliaries appear as clitics only when preceded by a subject which does not have a syntactically branching structure. This explains why the clitic form only appears with pronouns. With respect to *has* and *is* it seems that it must be stated that these auxiliaries do not care about the branchingness of the subject

[31]However, it is interesting to note that the non-syllabic clitic *-s* is permitted for plurals and for contracted *has*, except when it is ruled out by phonology as in the following cases.

(i) The boxes (es/*s) are heavy.

(ii) The box's (es/*s) been lost.

In these examples, the clitic form is ruled out on phonological grounds; when following an alveolar fricative /s/, the plural inflection *-s* must appear in a syllabic form, and cannot be clitic. The same is true of *has/is*.

which they follow, and in order to appear as a clitic only one syntactic condition must be met: that the auxiliary appears in T.

#### 2.4.3.4 Summary

In sections 2.4.3 to 2.4.3.3, I have shown that it is possible to account for the properties A-C by assuming that there are two syntactic positions to which auxiliaries may raise: T and Σ. I argued that for the clitic form of an auxiliary to appear, two syntactic conditions must hold: (i) the auxiliary must raise to T, and (ii) the subject preceding the auxiliary must be syntactically non-branching.

Subject effects can be accounted for with reference to syntax-phonology mapping rules, whereby the branchingness of the subject can affect the form of the following auxiliary (see section 2.4.3.1). In particular, I suggested that if the subject is branching (in terms of syntax), the auxiliary cannot appear as a clitic (unless the auxiliary is *has* or *is* (see section 2.4.3.3). Also, a further condition on the appearance of the clitic forms is that the auxiliary must have raised to T.

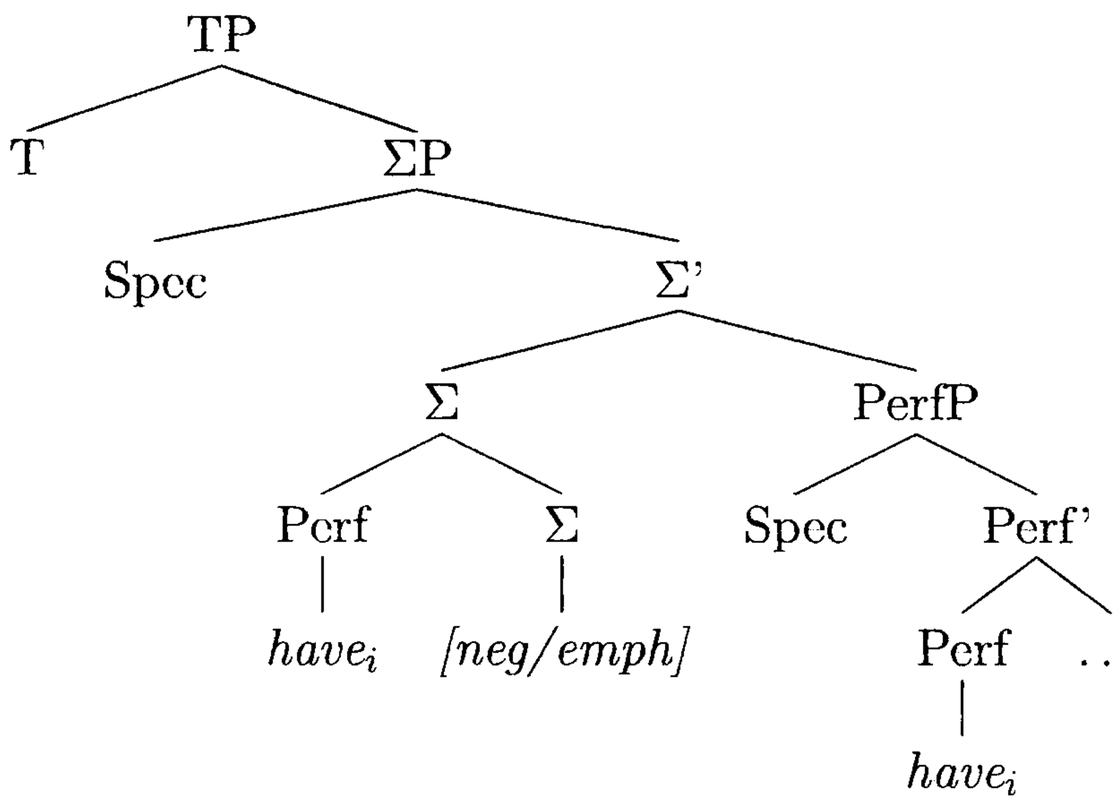
Now that a syntactic analysis for AC has been formulated, I will consider the further ramifications of this analysis with respect to the difference between *I haven't* and *I've not*. I will also consider the implications that this analysis has for Minimalism.

### 2.4.4 Further Implications

Up to this point in the chapter I have presented a range of AC data (section 2.2), and have reviewed a number of analyses that have attempted to account for some or all of that data (section 2.3). As the analyses that have been proposed either ignore or fail to account for parts of the data, I have arrived at the conclusion that AC needs to be re-examined from a syntactic point of view. I have suggested that a syntactic analysis of AC should focus on the structural positions occupied by auxiliaries in the English clause (Kayne 2000, Roberts 2000), leading to the proposal of T and Σ as possible landing sites for auxiliaries (section 2.4). I also suggested that there is a rule of allomorphy which inserts the clitic form of an auxiliary when it is immediately preceded by a non-branching (in syntactic terms) subject, i.e. a pronoun. The rule of allomorphy and the different structural positions available to auxiliaries were used in the account of properties A-C in section 2.4.3.

An unresolved issue in the proposed analysis involves auxiliary raising to Σ. If auxiliaries may raise to Σ independently of their raising to T, a trigger for this movement is required. I propose that, when Σ is projected, auxiliaries must raise to this position in order to check [EMPH] and [NEG] features.

(122)




As suggested in section 2.4.2.1 above, auxiliaries may check T features via Agree from this position. Thus, raising to T depends upon the feature strength of T (i.e. whether T is weak or strong).

One of the secondary aims of this chapter was to account for the distinction between (4a) and (4b), repeated below as (123a) and (123b), and the ungrammaticality of (5), repeated below as (124):

(123) a. I've not seen her in ages.
b. I haven't seen her in ages.

(124) *I've'n't seen her in ages.

There seems to be no syntactic reason to rule out (124), so I suggest that these examples should be dealt with in the phonological component.

I proposed that in the English clause, NegP must be replaced by ΣP, and that auxiliaries raise to Σ (or through Σ on their way to T). In section 2.4.2.1 I went on to suggest that an auxiliary and negation may be (optionally) reanalysed as a morphological word. This will account for the different inversion patterns found in negative interrogatives.

(125) a. Will he not have come?
b. Won't he?

If *will* and *not* (in Σ) are analysed as a morphological word, this would explain their inversion as a syntactic unit in (125b). This has to be optional, however, to allow (125a) in which negation does not undergo raising with the modal. I am, therefore,

suggesting that there is a structural difference (in terms of morphology) between AC and Negative Contraction (NC). However, this is only visible in interrogatives in which it is possible to separate the auxiliary and negation in cases where they have not been reanalysed as a morphological word. In declaratives, I propose that the realisation of the auxiliary and negation is a reflex of the phonological component and not the morphological one,[32] i.e. the spell out of *won't* and *will not* are not an indication of the morphological structure of the auxiliaries, but an arbitrary reflex of the phonological component. Thus, both *will not* and *won't* are possible regardless of the morphological structure assigned.[33]

## 2.5 Conclusion

In this chapter, I argued that the different phonetic forms of auxiliaries can be linked to their syntactic structure and position in the clause. The different forms of auxiliaries are derived as follows:

- **Clitic**: Inserted by a rule of allomorphy when immediately preceded by a non-branching subject (i.e. a pronoun).
- **Weak**: Derived from the full form by phonological reduction rules.
- **Full**: Appears in derivations in which $\Sigma$ is not projected.
- **Strong**: The emphatic form surfaces when $\Sigma$ is present and hosts [EMPH] features.
- **Negative**: Appears when $\Sigma$ is present and hosts [NEG] features.

This can account for the following properties of Auxiliary Contraction:

A : The clitic form of an auxiliary may only occur when it immediately follows a simple pronoun subject.

B : Non-finite auxiliaries can never be clitic.

C : Auxiliaries *has* and *is* can be clitic following any subject type.

A result of this analysis is the slight re-structuring of the English clause in the instantiation of $\Sigma$P as a replacement for NegP. I will maintain this clause structure in the analysis of non-standard phenomena in Chapters 3-5.

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[32]The reasons for this will become clearer in Chapter 3.

[33]This approach to the difference between AC and NC is compatible with data presented by Tagliamonte and Smith (2002) who propose that there seems to be a lexical preference, i.e. speakers tend to use either one form or the other rather than alternating both. For these speakers, perhaps morphological reanalysis results in NC, and no reanalysis gives AC.

# Chapter 3

# The Multiple Realisation of *Have* in English Dialects

## 3.1 Introduction

This chapter has two main aims: (i) to investigate and formulate an analysis of a particular locus of variation in the auxiliary system of English, and (ii) to show how the analysis of this variation impacts upon analyses of Standard English auxiliaries. The locus of variation which I am concerned with in this chapter is the "doubling" of auxiliary *have* as shown in (1), which is a feature of Northern and Scottish varieties of English.

(1) He could've not have broken the window.

This construction has been highlighted for investigation, because it immediately calls into question the validity of previous analyses of English auxiliaries, which have been formulated using Standard English data. It is clear that the double appearance of *have* within a single clausal structure is problematic for analyses in which *have* is merged as a head into the clause structure (Ouhalla 1990, Lasnik 1999). The fact that *have* may appear twice within a structure which has only one available slot for perfective *have* means that double *have* data cannot be accounted for without modifying the analysis and framework into which auxiliaries fit.

By investigating the use of double *have* in non-standard dialects of English, we can learn not only about the syntax of these dialects but also about the structure of StE. The analysis of double *have* is also significant for the analysis of the verbs *have* and *be*, as doubling is another way in which these two verbs differ: the dialects which allow *have* doubling do not appear to allow *be* doubling. Further differences between finite

and non-finite verbs may also be uncovered during the investigation into double *have* as only non-finite *have* can appear twice in a clause.

As discussed in more detail in section 3.1.1, there are a number of restrictions on the use of double *have*, including the fact that only non-finite *have* may be doubled; *have* cannot be doubled when it is a finite auxiliary or when it is a main verb:

(2) a. *I've not have finished.
b. *I've not have a car.
c. *I might've not have a car.

Further conditions are that the two forms of *have* must not be directly adjacent; *have* may appear either side of an adverb or *not* (see section 3.1.1).

(3) a. *He could've have gone.
b. He could've not have gone.
c. He could've probably have gone.

The data used in this chapter is taken from two dialects, Scottish English in Fife (SEF) and Durham English (DE),[1] and was collected by eliciting grammaticality judgements from speakers. Throughout the chapter I will compare SEF and DE with Southern British Standard English (SBSE) as this has different patterns of usage.[2]

SEF and DE both allow double *have* in the same environments, although there are differences in usage including the interpretation given to a double *have* sentence - this is not the same in both dialects. A sentence like (1) above, for instance, has the interpretation shown in (4a) in SEF and that in (4b) in DE:

(4) a. SEF: It is not possible that he broke the window.
b. DE: It is possible that he didn't break the window.

This cross-dialectal variation will be accounted for in section 3.5 by referring to the form (*not* vs *n't*) and function (sentential vs constituent) of negation.

This chapter is organised as follows: section 3.2 focuses on the use and restrictions on the use of double *have*, including the interpretation of double *have* and its interaction with negation; section 3.3 presents a number of ways in which double *have* can be analsyed, including the possibility that the higher *have* is the complementiser *of* (Kayne 2000), and the suggestion that *have* forms a lexical item with the preceding

[1]Double *Have* Constructions are also found in varieties of American Southern English, but this is beyond the scope of this work and is a topic for future research.
[2]Specifically, it does not allow Double *Have* Constructions.

modal; section 3.4 pursues a Multiple Spell Out analysis of double *have* (Nunes 2001); and section 3.5 discusses the further implications of this analysis.

Before going on to discuss the use of double *have*, I will examine the use of single auxiliary *have* with a modal verb and negation across a range of dialects: Southern British Standard English (SBSE), Scottish English in Fife (SEF) and Durham English (DE). Data indicates that auxiliary *have* can be found in a variety of positions in Standard English and across regional dialects, but that there are few differences across the dialects with respect to the permitted structures and interpretations.

### 3.1.1 *Have* Across Dialects

#### 3.1.1.1 *Have* in Southern British Standard English

The following patterns of use are found in SBSE when *have* occurs with a modal verb such as *could* and the negative marker *not*:[3]

(5) a. SBSE: He could not have gone.
(='It is possible that he has not gone/He was able to have not gone'
or 'It is not possible that he has gone/He was not able to have gone.')
b. SBSE: He could have not gone.
(='It is possible that he has not gone/He was able to have not gone.')

In (5b) vP is negated, rather than the sentence, as evidenced by the use of a negative rather than a positive tag:[4]

(6) a. SBSE: He could have not gone, couldn't he?
b. SBSE: *He could have not gone, could he?

In (5a), on the other hand, there are two possible interpretations depending on the prosodic phrasing: one involves constituent negation and the other sentential negation. This is indicated by the availability of both a negative and a positive tag with (5a):

(7) a. SBSE: He could not have gone, couldn't he?
b. SBSE: He could not have gone, could he?

When negation is marked with the clitic *-n't*, only sentential negation is possible:

[3]The same patterns are not found with all modals, and the patterns outlined here must be restricted to *could*; the interpretation is different with *should*, for instance.

[4]See Chapter 1 and Klima (1964) for a discussion of the syntactic and scopal properties of negation.

(8) a. SBSE: He couldn't have gone. [5]
(='It is not possible that he has gone.')
b. SBSE: *He could haven't gone.

Again, the use of a positive tag indicates that negation is sentential in (8a):

(9) a. SBSE: He couldn't have gone, could he?
b. SBSE: *He couldn't have gone, couldn't he?

Example (8b) is assumed to be ungrammatical on the grounds that constituent negation cannot be a clitic but must occur as full form *not*, and because the clitic form of negation is only permitted to follow a finite auxiliary. This is also the case in SEF and DE and will not be discussed further.

The difference between constituent negation and sentential negation is attributed to the structural position of negation in the two structures; in sentential negation like (8a) *could* is negated, while in constituent negation like (5b) negation scopes over vP.

As mentioned, (5a) is allowed two interpretations which are distinguishable by intonational patterns. Negation in (5a) is assumed to be in the same structural position in both interpretations, with the differences in meaning distinguished by intonation alone.

When negation is present in interrogatives in SBSE, the negative modal is inverted:

(10) SBSE: Couldn't he have gone?
(Meaning: **(Q...not...poss)**: 'Was it not the case that he was able to have gone?')

This is different from the preferred use in Northern and Scottish varieties, in which the modal inverts without negation (see section 3.1.1.3):

(11) a. DE: Could he not have gone?
b. SEF: Could he no have gone?

In terms of negation, SEF and DE show little difference to SBSE initially; all varieties appear to show the same patterns of interpretation.

[5] (8a) has an epistemic sense and implies *He hasn't gone.*

#### 3.1.1.2 *Have* in Scottish English in Fife

In SBSE negation is marked with either the enclitic *-n't* or with the non-clitic negation *not*. Similarly, there are two ways to mark negation in SEF; there is an enclitic negative and a non-clitic negative, both of which have a different phonological form from the markers of SE negation. They are written as *nae* and *no* respectively. In a structure with negation and only one auxiliary *have*, SEF uses the following forms:

(12) a. SEF: He couldnae uf done that.[6]
(='It is not possible that he has done that/ He was not able to have done that.')
b. SEF: He coulduf no done that.
(='It is possible that he didn't do it/ He was able to have not done that.')

In SEF, sentential negation is marked with the clitic *nae*:

(13) a. He couldnae uf done that, could he?
b. *He couldnae uf done that, could he no?[7]

Constituent negation is marked with *no*:

(14) a. He coulduf no done that, could he no?
b. *He coulduf no done that, could he?

Notice that SEF does not have a construction equivalent to that of (5a) in SE. In this dialect, sentential negation with the interpretation of NOT...POSS is marked with clitic negation *nae* on the modal verb, and cannot be marked by non-clitic negation. Non-sentential negation is expressed by (12b) with negation occurring to the immediate left of the verb, and not in any other position.

When negation is present in interrogatives in SEF, only full form negation is acceptable:

(15) a. SEF: Could he no have gone?
b. SEF: *Couldnae he have gone?

This is the opposite pattern to that found in SBSE, as shown in section 3.1.1.1.

[6]Reduced have is orthographically represented as 'uf' in SEF as this mirrors the phonological form.
[7]In tag questions, SEF uses 'could he no?' rather than the SBSE form 'couldn't he?'.

#### 3.1.1.3 *Have* in Durham English

In DE, the use of *have* with negation patterns similarly to SBSE and SEF in that DE also has two negative markers: the clitic *-n't* and the non-clitic *not*.

(16) a. DE: He couldn't have done that.
(='It is not possible that he has done that/He was not able to have done that')
b. He could have not done that.
(='It is possible that he didn't do that/He was able to have not done that')

As in SEF, the clitic form is used for sentential negation, and the non-clitic for constituent negation as shown by the use of tag questions:

(17) a. DE: He couldn't have done that, could he?
b. DE: *He couldn't have done that, couldn't he?
c. DE: *He couldn't have done that, could he not?

(18) a. DE: He could have not done that, couldn't he?
b. DE: He could have not done that, could he not?
c. DE: *He could have not done that, could he?

Again, (5a) is dispreferred in this dialect, although the interpretation POSS NOT available in SBSE can be achieved if *not* is contrastively stressed. The sentential negation reading of (5a) that is found in SE is expressed by (16a).

In negative interrogatives DE shares similarities with both SEF and SBSE.

(19) a. DE: Could he not have gone? (preferred)
b. DE: ?Couldn't he have gone? (possible but dispreferred)

Like SEF, full form negation is preferred in interrogatives but, like SBSE, clitic negation is also possible.

#### 3.1.1.4 *Have* Across Dialects: Conclusions

The above data is interesting, particularly the differences in the position and form of negation in questions across the dialects, but it does not challenge accounts of the English auxiliary system. More interesting data come from constructions found in

DE and SEF in which perfective *have* appears to occur twice in one clause; these constructions will be referred to as Double *Have* Constructions and will be the focus of the remainder of this chapter.

## 3.2 Double *Have*: A Challenge for Syntactic Analyses of the English Auxiliary System?

In this part of the chapter, I will begin by outlining the data and facts of Double *Have* Constructions (DHCs) in two dialects: SEF and DE. I will focus on the doubling of *have* in three contexts: positive declaratives, negative declaratives, and interrogatives. Using the data from these contexts, I will go on to formulate an analysis of double *have* in sections 3.3-3.5.

### 3.2.1 The Data

Double *have* appears to be a regional phenomenon; it is typical of Scottish and Northern varieties of British English, and varieties of Southern American English. In this thesis I will focus mainly on the use of *have* doubling in British English dialects. In order to get as complete a picture as possible of the auxiliary system, this chapter will compare and contrast the use of *have* in two varieties: SEF and DE. The initial investigation into the use of double *have* promised some interesting results; SEF and DE were both found to allow double *have*, although with significant variations in usage as shown in the following sections.

#### 3.2.1.1 Phonetics of Double *Have*

The phonetic form of DHCs must be mentioned. Throughout the chapter, I will orthographically represent DHCs as:

(20) a. DE: He could've not have gone.
b. SEF: He coulduf no have gone.

This is intended to indicate that the higher *have* is phonetically reduced. This is the typical phonological form of non-finite *have*,[8] and is not crucial to the analysis of DHCs.

[8]See Chapter 2 for a discussion of the different phonetic forms of auxiliaries.

#### 3.2.1.2 Non-Adjacency Restrictions

The first notable characteristic of DHCs is that two forms of *have* can appear only when they are non-adjacent to one another.[9] As shown in (21) and (22), in both SEF and DE it is ungrammatical for one *have* to immediately follow or precede another, although this non-adjacency requirement appears to be stronger in DE ((21c) is ungrammatical in DE, but (22c) is degraded in SEF):

(21) a. *DE: He could've have gone.
b. *DE: He could not 've have gone.
c. *DE: He could 've have not gone.

(22) a. *SEF: He coulduf have gone.
b. *SEF: He could no uf have gone.
c. ?SEF: He coulduf have no gone.

(23) and (24) indicate that two forms of *have* are permitted to co-occur when a negative marker intervenes between the two:

(23) DE: He could've not have gone.

(24) SEF: He coulduf no have gone.

In fact, in SEF three forms of *have* are permitted where an adverb and negation are present to separate the forms:

(25) SEF: He woulduf probably have not have come anyway.

Thus, it appears that there is a non-adjacency restriction on *have* doubling. This may be stated as a condition on the production of *have* doubling as in (26).

(26) Non-adjacent *Have* Condition:
Two forms of *have* are permitted provided that they are not adjacent to one another.

To state this restriction as a condition like (26) is obviously not ideal; a further aim of this chapter is thus to capture the non-adjacency restriction in an analysis of double *have*, so that it need not be stated separately.

[9]This is the case regardless of the phonetic forms of *have*.

The existence of this non-adjacency requirement identifies DHCs as a separate phenomenon from *had have* constructions which are typically found in conditionals in Scottish and Northern varieties of English. As shown in (27a), in *had have* constructions *had* and *have* can be adjacent or they can be separated by negation as in (27b).

(27) a. If I *'d have/had've* known the bus was going to be late, I would have brought the car.
b. If I *hadn't have* seen you today, I would have called you tonight.

DHCs are also different from *had have* constructions in a number of other ways, including the fact that double *have* can occur following a modal verb, but *had have* cannot occur with modals:

(28) a. He could've not 've come.
b. *I've not 've seen her.

(29) a. If I had've known...
b. *If I could had've known...

The ungrammaticality of (29b), in which a modal verb co-occurs with *had have*, is probably due to the fact that *had* is a modal and thus cannot occur in the same clause structure as another modal. The possibility of a modal with a DHC as in (28a), on the other hand, suggests that the higher *have* in a DHC is not a modal verb.

### 3.2.1.3 Verb Doubling Restrictions

There are a number of restrictions on the verb that can be doubled: the verb must be the perfective non-finite auxiliary *have*. As mentioned briefly in section 3.2.1.2, DHCs may co-occur with a modal verb:[10]

(30) a. DE: He could've not have come.
b. SEF: He coulduf not have come.

This is an obligatory, not an optional, condition as shown by the contrasting example in (31):

[10]It seems that this is a result of the condition that only finite *have* can be doubled as *have* can also be multiply realised in constructions in which it follows *to*:

1. For him to've not have finished is a big problem.

(31) DE/SEF: *I've not have seen her.

This example, and others like it, show that *have* can only be doubled when it is non-finite; when *have* is a finite auxiliary verb it can not be doubled:

(32) a. * He's not has gone.
b. * He'd not had gone.
c. *I 've not have gone.

This restriction holds whether *have* is an auxiliary (33) or a main verb (34):

(33) a. DE/SEF: *I've have finished.
b. DE/SEF: *I've not have finished.

(34) a. DE/SEF: *He could've have a car.
b. DE/SEF: *He could've probably have a car.

(35) a. *He is having having cake.
b. *He is having probably having cake.

As shown in (34) *have* cannot be doubled when it is a main verb, and thus can never be doubled when it is possessive (34) or progressive (35), only when it is perfective.

Throughout the chapter I have been referring to doubling auxiliary *have*. This is intentional as doubling is only possible with this verb form. This appears to be contradicted by Double Modal constructions which occur frequently in varieties of American Southern English, and are attested in Scottish and Northern varieties of British English.[11] Double Modals, however, appear to be a separate phenomenon as they involve the occurrence of two different modals in the same clausal structure. The "simple" repetition of the same verb form is only found with *have*; as far as I am aware no dialect permits *be*-doubling (37),[12] and Double Modal speakers who permit (36a), do not allow (36b) or (36c):

(36) a. He might (not) could go.
b. *He could (not) could go.
c. *He might (not) might go.

[11]See Chapters 4 and 5 for a discussion of the syntax of Double Modals.
[12]It is possible to double *be* in one particular construction:

(i) The thing is is that ...

This construction probably arises from the complement selection of *be*. It shows no similarity to DHCs, and should be considered separately.

(37) a. *I am (not) am late.
b. *He was (not) was late.
c. *They were (not) were late.

Therefore, it must be concluded that doubling is only possible with *have* when it is a non-finite perfective auxiliary.

#### 3.2.1.4 Double Have and Negation

There are two aspects of negation which must be considered in an analysis of double *have*: position and scope. The data shows that the position of negation is highly restricted in both dialects: negation can occur between the two forms of *have*, but in any other position it is either ungrammatical or degraded as shown in the following data:

(38) a. DE: He could've not have gone.
b. DE: *He could've have not gone.
c. DE: *He could not 've have gone.

(39) a. SEF: He coulduf no have gone.
b. SEF: ?He coulduf have no gone.
c. SEF: *He could no uf have gone.

A parallel restriction is that negation must appear in its full form, it can not be clitic:[13]

(40) a. DE: *He couldn't 've have broken the window.
b. DE: *He could've haven't broken the window.
c. DE: *He could haven't have broken the window.

(41) a. SEF: *He couldnae uf have gone.
b. SEF: *He coulduf havenae gone.
c. SEF: *He could havenae have gone.

The position of full form negation and the fact that constructions with double *have* and no negation are only marginally grammatical is puzzling. It is unlikely that negation would be required in order to license the appearance of double *have* as it is generally possible for all modals, auxiliaries, and main verbs to occur with or without negation. It is not implausible, however, that there is some other explanation for the requirement

[13]This is the case whether sentential negation in SEF, or constituent negation in DE is under consideration.

that, when it occurs, *not* must appear in a position between the two forms of *have*. This will be discussed in section 3.5.

One of the most interesting findings about DHCs is that they are interpreted differently in the two dialects that are under investigation. Consider sentence (1), repeated below as (42):

(42) He could've not 've broken the window.

This construction is found in SEF and DE, but not SBSE:

(43) a. SBSE: * He could've not've broken the window.
b. SEF: He coulduf no have broken the window.
c. DE: He could've not have broken the window.

Although DHCs in DE and SEF have the same word order, at least at PF, they do not appear to have the same function; SEF and DE show variation in the interpretation of double *have* like (42). Negated constructions with a single auxiliary can have two different meanings depending on the position of negation within the clause, as discussed in section 3.1.1. For instance, high clitic negation is generally interpreted sententially while low non-clitic negation tends to be interpreted as constituent negation:[14]

(44) a. He couldn't go, could he?
(NOT POSS)
b. He could not go, couldn't he?
(POSS NOT)

However, the scope of negation is not the same with all modal verbs. Take *should*, for instance:

(45) a. He shouldn't go, should he?
(POSS NOT)
b. He should not go, shouldn't he?
(POSS NOT)

Sentential negation with *should*, unlike with *could*, does not scope over the modal verb. It is for this reason that I have chosen to focus on DHCs with *could*.

It is with respect to the two meanings in (44) that variation is found between SEF and DE. Consider a DHC in DE:

[14]See section 3.1.1.1 for a discussion of a sentential negation reading of (44b) in SBSE.

(46) DE: He could've not 've broken the window.

As mentioned above, in SBSE it is possible that the full form negation in (44b) can be interpreted as sentential or constituent depending upon prosodic structure. This leads us to expect that the DHC in (46) could have two possible interpretations. However, as shown in (47), this is not the case:

(47) a. MEANING A (HIGH SCOPE NEGATION):
It is not possible that he broke the window. (i.e. He couldn't have broken the window)
b. MEANING B (LOW SCOPE NEGATION):
It is possible that he did not break the window (i.e. He could have not broken the window).

That the DHC in (46) can only have a reading of low scope is supported by (48).

(48) a. He could've not have broken the window, couldn't he?
b. *He could've not have broken the window, could he?

The possibility of having only a negative tag in (48) shows that DHCs in DE are not interpreted as having sentential negation.

Consider the data from SEF:

(49) SEF: He coulduf no have broken the window.

(50) a. MEANING A (HIGH SCOPE NEGATION):
It is not possible that he broke the window. (i.e. He couldn't have broken the window)
b. MEANING B (LOW SCOPE NEGATION):
??It is possible that he did not break the window (i.e. He could have not broken the window).

That DHCs in SEF have a different interpretation from those in DE is shown by the following data in which a DHC is followed by a positive tag question.

(51) a. SEF: *He coulduf no have broken the window, couldn't he?
b. SEF: He coulduf no have broken the window, could he?

This indicates that a negated DHC in SEF involves sentential negation - a contrast with DE, where negation is constituent and the following tag is therefore negative.

That there is a difference in interpretation in Double *Have* Constructions across dialects can be more clearly demonstrated if an epistemic reading of the modal is forced: this will force apart the two interpretations, revealing the dialectal differences. To do this, the meanings of A and B will be forced in order to discover with which interpretation Double *have* pattern.

A He couldn't have done that.(=It is not possible that he did that)

B He could've not done that.(=It is possible that he didn't do that)

One way to force a particular meaning is to make the alternative impossible in a particular context.

Brown (1991, 83) suggests that clitic negation is obligatorily interpreted as wide scope while non-clitic negation usually shows narrow scope, as shown by the following contrast:

(52) a. *She couldnae have told him, but she did.[15]
b. She could no have told him, but she did.

Example (52a) is ungrammatical because of the contradictory interpretation. It is possible to distinguish the interpretation of Double *have* by using similar tests. For instance, it is possible to force reading A, above, by putting it into a context in which it is incompatible with what follows as in (54):

(53) a. *He couldn't have broken the window, but he did.
b. He could've not broken the window, but he did.

(54) He could've not 've broken the window, but he did.

Example (53a) is ungrammatical because the main clause is interpreted as meaning NOT...POSS which is not compatible with the meaning of *but he did.* In (53b) on the other hand, the overall interpretation is that 'He had the choice of whether or not to do it and he did it.' This is valid semantically, unlike (53a).

If the main clause in (54) has the same interpretation as that in (53a), it will also be ungrammatical for the same reasons. However, if the main clauses in (53b) and (54)

[15]Brown judges this sentence as marginal and marked it as such, I have marked it with * because it appears to be ungrammatical rather than marginal.

share the same meaning then (54) should, like (53b) be grammatical. The data are as follows:

(55) a. DE: *He couldn't have broken the window, but he did.
b. DE: He could've not broken the window, but he did.
c. DE: He could've not 've broken the window, but he did.

In DE the (b) and (c) examples pattern together which means that in this case, (c) must share the same interpretation as (b); therefore, in DE a DHC is interpreted as having constituent, not sentential, negation. When the same tests are carried out in SEF, the results indicate that DHCs in SEF are different from those in DE: they are interpreted with sentential negation.

(56) a. SEF: *He couldnae uf broken the window, but he did.
b. SEF: He coulduf no broken the window, but he did.
c. SEF: *He coulduf no uf broken the window, but he did.

The above data show that although DHCs are grammatical in both DE and SEF, there are important differences in usage. For instance, a negated DHC in DE is interpreted as having constituent negation of the VP (i.e. low scope), but a negated DHC in SEF has sentential negation (i.e. high scope). This difference is significant, and as well as being vital in the analysis of DHCs, it may also disclose valuable information about the interaction of auxiliaries and negation in the two varieties.

#### 3.2.1.5 Double *Have* in Negative Interrogatives

Investigating the behaviour of auxiliaries in interrogatives is crucial, and the behaviour of double *have* in interrogatives is no exception. By investigating DHCs in interrogatives I aim to discover more differences between DE and SEF which I will use to formulate an analysis of DHCs in both varieties. Specifically, based on data in which *coulduf* inverts in SEF, I will propose that SEF has a lexical item *coulduf*.

The interrogatives data from DE show similarities with constructions involving any other English auxiliary verbs in that only the first auxiliary may invert; in both *yes-no* and *wh-* questions in DE, inversion of *could've* is not permitted:

(57) a. DE: Could he 've not have gone?
b. DE: *Could've he not have gone?
c. DE: *Could've he have not gone? (but better than (b))

(58) a. DE: What could he 've not have done?
b. DE: *What could've he have not done?
c. DE: *What could've he not have done? (but better than (b))

In interrogatives in DE, *could* may only invert alone, suggesting that *could've* is not a single lexical item. A different pattern is found in SEF:

(59) a. SEF: Could he uf no have gone?
b. SEF: ?Coulduf he no have gone?
c. SEF: Coulduf he have no gone? (constituent negation of vP)

(60) a. SEF: What could he uf no have done?
b. SEF: What coulduf he no have done?
c. SEF: What coulduf he have no done? (constituent negation of vP)

In SEF, it is possible to invert *coulduf* in a DHC, suggesting that it may be a single lexical item. This difference between SEF and DE will be returned to in section 3.3.2.

### 3.2.2 Double *Have* Across Dialects: Conclusions

From the above data it is possible to conclude that the following restrictions will prove important in a syntactic analysis of DHCs:

1. The verb that is doubled must be non-finite perfective auxiliary *have*; no other form of *have* (ie.*had* or *has*) or any other auxiliary is possible.[16]
2. There is a non-adjacency restriction on DHCs; two forms of *have* cannot be adjacent.
3. Negation must occur in its full form, not as a clitic (even when it is sentential negation in SEF).

The next step is to determine what the above restrictions mean for an analysis of Double *have*. This will be the focus of the rest of the chapter.

[16] As only non-finite *have* can be doubled, there must be a modal or *to* occurring above *have*.

## 3.3 Accounting for Double *Have* Constructions in the Existing Framework

As outlined in Chapter 1, I am assuming that auxiliaries are merged into the clause as heads of their own projections. In this kind of framework, there is clearly no place for a second occurrence of perfective *have*: the first *have* selected from the numeration will be merged into the clause as the head of PerfP, and the merging of the second *have* must take place elsewhere. This suggests that a number of changes must be made to the auxiliary system in order to account for DHCs. For instance, it may be necessary to propose that each form of *have* is merged into the clause as the head of the projection PerfP. This raises questions as to why PerfP may iterate while ProgP and PassP cannot. Rather than pursuing this line of inquiry, I will consider an alternative, which initially seems to be more likely.

It may appear that the most obvious analysis of a DHC is to assume that either (i) the structure is bi-clausal and that, as in StE, there may only be one form of *have* per clause, or (ii) that one of the forms of *have* is not an auxiliary verb but is another part of speech. An analysis which incorporates both of these ideas is that of Kayne (2000) in which non-finite *have* is analysed as the complementiser *of* which introduces a second clause.

### 3.3.1 Kayne (2000): Auxiliary *Have* vs Complementiser *Of*

A Kaynian analysis of the double *have* data in which one *have* is not an auxiliary but a complementiser may offer a solution to the problem that there appear to be two forms of perfective auxiliary *have* in one clause. Kayne (2000) argues that in some cases what has been thought of as a reduced form of the auxiliary *have* (orthographically represented as *'ve*) is actually a complementiser *of*, *have* being able to reduce to *of* in some varieties of English.

Kayne (2000) argues that in certain constructions in some varieties of English the element traditionally viewed as the auxiliary *have* is actually a complementiser *of* being used in a way similar way to the *to* of infinitives:[17]

(61) a. John wants to leave.
b. John should have left.

Kayne notes that *of* and *to* have very different uses but points out that the orthography

[17] Kayne (2000, 219) states in a footnote that he uses the term *complementiser* to refer to *to* following Rosenbaum (1967, 24ff), and because he believes that infinitival *to* has more in common with *for* than is commonly thought.

in (61b) is misleading; in colloquial English it is unlikely that *have* will be pronounced with a /h/ and an unreduced vowel, the usual pronunciation of (61b) would be (62a), and in some varieties (62b) which has the same form as the preposition in (62c):

(62) a. John should've left.
b. John should of left.
c. Who are you thinking of?

The orthography in (62a) implies that *'ve* is a form of *have*. Kayne suggests that this is not the case and that, in fact, the form is *of* as in (62b), and not *'ve* or *have*.

The following discussion will centre on Kayne's arguments for the status of what, for the moment, I will refer to as K(ayne)-*of*.

#### 3.3.1.1 The Reduction of *Of* and *Have*

In colloquial English it is possible to drop the /v/ from the preposition *of* so that (63a) becomes (63b):

(63) a. a bunch of grapes.
b. a buncha grapes.

According to Kayne, the fact that (62b) also allows this reduction suggests that the same form may be present in (62b):

(64) John shoulda left.

Obviously, the fact that similar reduction occurs in (62b) and (63a) is not sufficient evidence to assume that the same element is being reduced in both instances. Kayne gives further evidence in the different behaviour of finite *have*.

In English, *to* occurs in infinitives and not in finite clauses. By analogy with this, Kayne argues that if K-*of* is a complementiser parallel to *to* used in infinitives then it should not be able to replace finite *have*:

(65) a. *The kids of told a lie.
b. *The kids to tell a lie.

According to Kayne, (65) shows that the element found in finite contexts is not the same as that found in non-finite contexts; while in (64) *of* occurs, in (66) *have* occurs.

(66) a. The kids have told a lie.
b. They never have told us the truth.

That *have* and not K-*of* is the form in (66) is apparently supported by the following data in which Kayne suggests that *have* in (66) can be reduced as in (67) where the /h/ is dropped and the vowel reduced but not as in (68). Therefore, Kayne argues, while K-*of* can be reduced to *a*, *have* cannot, explaining the contrast between (64) and (65) above.

(67) They never've told us the truth.

(68) a. *?The kidsa told a lie.
b. * They nevera told us the truth.

The contrast between (67) and (68) is not as strong as Kayne proposes. For many speakers (67) is actually ungrammatical, because the auxiliary *have* has been reduced in a position where it should be stressed (see Baker (1971) who suggests that auxiliaries are always stressed when they follow adverbs). It is not unexpected, therefore, that the further reduction of *have* in (68) is also ungrammatical.

Kayne also uses non-standard data like the following to suggest that the reduced form is not an auxiliary but the complementiser K-*of*. The main argument behind this is that data like the colloquial construction in (69a) cannot have a reduced form of *have* on the grounds that the equivalent with the full unreduced form of *have* as in (69b) is disallowed:

(69) a. If you hadn'ta said that...
b. * If you hadn't have said that...

Thus, according to Kayne, (69a) must be an instance of the complementiser *of* as in (70):

(70) If you hadn't of said that...

This argument has one major flaw: the full form of an auxiliary is not always permitted in environments in which the reduced form can occur. For instance, as pointed out in Chapter 2, there is a contrast between (71a) and (71b):

(71) a. Where's the lions?
b. *Where is the lions?

(examples from Kaisse (1985))

Therefore, the fact that (69b) is ungrammatical is not a sufficient basis to propose that the reduced form in (69a) is not an auxiliary.

#### 3.3.1.2 Similarities Between *Of* and *To*

Kayne suggests that K-*of* is not an auxiliary *have* because it patterns with the *to* in non-finite clauses. For instance, Kayne states that it is possible for both *to* and K-*of* to be followed by the quantifier *all*:[18]

(72) a. If they hadn't of/hadn'ta all left at the same time...
b. If they want to/wanna all leave at the same time...

The data in (72) is not straightforward; the position of *all* within a clause is not a good indicator that elements share the same status, because there are many positions in which the quantifier *all* may occur:

(73) a. If they all hadn't've left at the same time.
b. If they hadn't all 've left at the same time.
c. *If they hadn't 've left all at the same time.
d. If they hadn't 've left, all at the same time.

As well as the position in (72), the quantifier can occur in the two positions illustrated in (73a) and (73b). (73c) is not a possibility because the quantifier cannot be stranded in the base position but only in intermediate positions that the subject passes through on its way to TP. It is interesting to note, however, that (73d), where there is a pause before the quantifier and it is phrased with the PP, is grammatical.

The quantifier can also occur after the auxiliary *have* in the past tense:

(74) a. The kids had all left.
b. The kids should've all left.

---

[18]Kayne's judgements do not reflect the true usage of *hadn't have*. For instance, in my dialect there is a contrast between the following:

(i) If they hadn't've all left at the same time...

(ii) ??If they hadn'ta all left at the same time...

This is probably a phonological effect but, preceding *all*, *hadn't've* is preferred over *hadn'ta*.

It is also possible in positions following what Kayne argues is auxiliary *have* rather than *of* (see example (66) above):

(75) a. The kids've all told a lie.

The fact that the quantifier can follow K-*of* like it can follow *to* does not appear to be relevant in showing the status of *of* because *all* can also follow *have*.

The third argument in Kayne's line of reasoning is that in some varieties of English both *of* and *to* can occur in non-standard inversion and that neither can occur with emphatic SO/TOO:

(76) a. % Should of/shoulda the kids left?
b. % Ought to he leave?

(77) a. *He should of/shoulda SO/TOO left.
b. *He ought to/oughtta SO/TOO leave.
c. *He claims to SO/TOO be happy.

Kayne states that the examples in (77a) are not ungrammatical for the reason that *so/too* cannot occur with infinitives; (78) shows that *so/too* can occur with infinitives:

(78) *?He claims to have SO told the truth.

This case is marginal but, according to Kayne, better than (77a), and he uses it to argue that it is possible for *so/too* to follow nonfinite *have*. However, (78) does not seem much better than the examples in (77a), and perhaps the reason it is deemed slightly more acceptable is a semantic or pragmatic one; it is possible that *so* is measuring *the truth*, whereas in (77a) it is not possible to measure *leaving*. If we modify (78), it too becomes ungrammatical:

(79) *He claims to have So left.

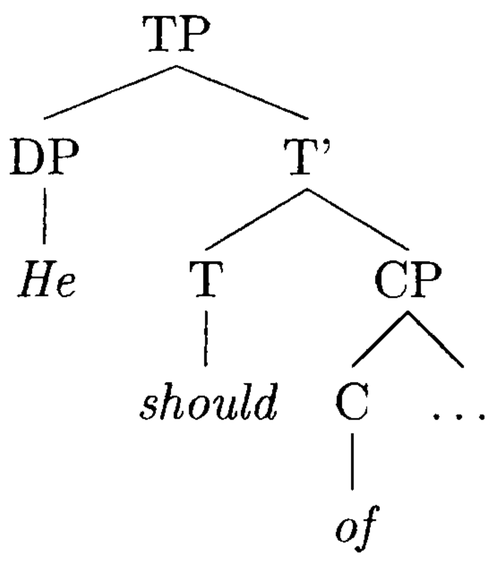
The use of SO/TOO does not add much support to Kayne's argument that reduced auxiliary *have* is actually a complementiser *of*.

#### 3.3.1.3 The Syntactic Structure of *Of*

Kayne's argument is based on data description and although he proposes that K-*of* is syntactically a complementiser he does not expand this idea, and does not propose a

clause structure into which *of* can be incorporated. The most obvious assumption to make from Kayne's suggestion is that sentences which have K-*of* are biclausal with K-*of* heading the CP of the lower clause:

(80)




If K-*of* is a complementiser then the fact that it affects the tense/aspect of the following clause is unexpected.[19]

(81) a. He should [CP of been there].
b. * He should [CP of be there].

This would have to be explained in Kayne's analysis.

There are two main problems with Kayne's proposal which leads to its rejection as a possible analysis for DHCs. Firstly, Kayne's arguments for the status of *'ve* is not well supported by the data he provides, leading to the conclusion that *'ve* is not best analysed as the complementiser *of*. Secondly, assuming that *to* is a complementiser is not standard, and it alone raises major theoretical questions about the analysis of the clause, i.e what would rule out the co-occurrence of *to* and modals if *to* occurs in C and not in T?

As Kayne's analysis will not be adapted in order to account for DHCs, I will investigate the idea that both of the forms of *have* in DHCs are occurrences of the auxiliary *have*. As mentioned, this raises a problem for any standard analysis of the auxiliary system in which there is only one possible merge position for a perfective auxiliary. For this reason, I will first consider the higher form of *have* as a clitic on the modal verb.

[19] An interesting contrast is that *to* yields the opposite results:

(i) I tried to be on time.

(ii) *I tried to been on time.

### 3.3.2 A Lexical Analysis of Could+uf/'ve

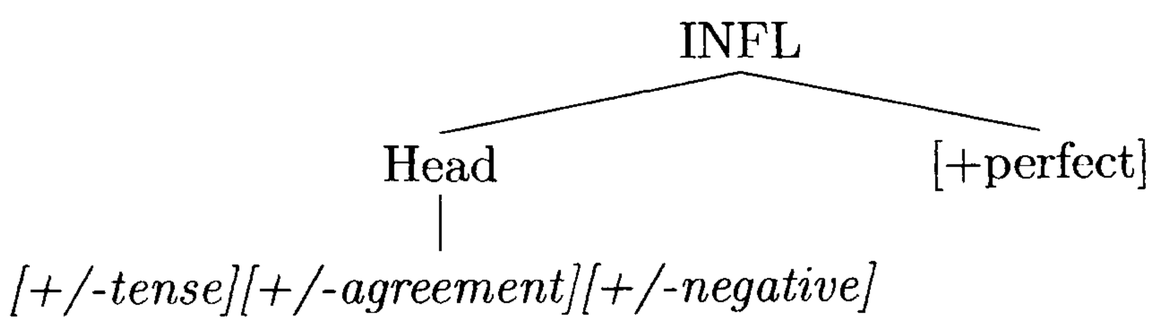
The idea that a modal verb may be composed of more than one item from the auxiliary system is not unprecedented; Di Paolo (1989) argues that Double Modal constructions such as *might could* found in dialects of American Southern English are not composed of two co-occurring modals but of a single lexical item, and Johnson (1988) maintains the standard analysis that *have* is base-generated as the head of a VP, but postulates that it has an extra condition of being a bound morpheme which means it must affix onto a head. According to Johnson, this is supported by the fact that in some non-standard dialects of English it is possible to invert a modal and auxiliary complex with the subject (a phenomenon known as Complex Inversion). In Complex Inversion contexts, a contrast is found between *have* and *be*, as shown in the following examples taken from Johnson (1988):

(82) a. Shouldn't have Pam remembered her name?
b. What could have Mary bought?

(83) a. *Shouldn't be Pam remembering her name?
b. *What could be Mary buying?

Johnson argues that the contrast between *have* and *be* arises from the ability of auxiliary *have* to raise and contract onto T.

An analysis similar to that proposed by Johnson is that of Lobeck (1986); although Lobeck argues that *have* does not head its own projection, she suggests that it is base-generated in INFL,[20] which has a complex structure:




Lobeck states that the position marked [+/-agreement] may be filled with a modal or *to*, and the [+perfect] feature indicates the position in which auxiliary *have* is inserted. This provides a straightforward account for the fact the perfective auxiliary always follows modal verbs, and for Complex Inversion in which the modal and auxiliary raise as a unit in interrogatives.

The suggestions by Johnson and Lobeck have one thing in common: they both propose that, at some point during the derivation, the modal and perfective auxiliary form a complex head. The SEF data in which *coulduf* inverts, supports an analysis in which

[20] T in the framework assumed in this thesis.

*could* and *uf* form a single lexical item. In an example like (84) from SEF. for instance, *coulduf* is a single lexical item which has been selected from the numeration:

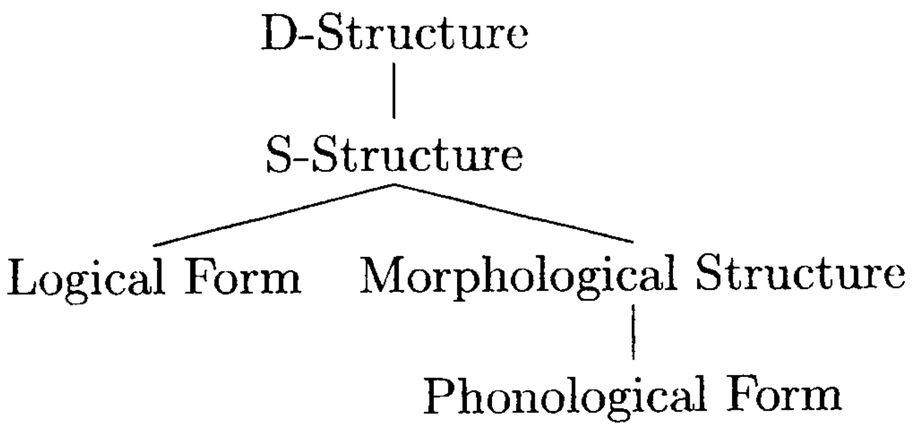
(84) SEF: He coulduf no have gone.

As *coulduf* occurs in the surface position of the modal and as there is an auxiliary *have* lower down in the structure it would seem obvious to propose that *coulduf* is a modal rather than an auxiliary or any other element. However, if *coulduf* is a modal, we would expect the following verb to have the same form following *coulduf* as it would following a standard modal. As shown in the following example, this is not the case:

(85) a. He could be planning to turn up late.
b. *He coulduf be planning to turn up late.

If *coulduf* is marked with [PERF] features, however, it might be expected to trigger the same form of *be* triggered by perfective *have*. Following an approach to Morphology by Halle and Marantz (1993), in which Morphology is not concentrated in a single component of the grammar but is distributed throughout several components (Distributed Morphology (DM)), I propose that the [PERF] feature that is marked on the modal, is fissioned off at Morphological Structure (MS).

According to Halle and Marantz, the terminal elements in syntax are separated from their phonological realisations which, in turn, are governed by lexical entries relating morphosyntactic feature bundles to phonological feature bundles. Morphological Structure is a level with its own principles which is assumed to be the interface between syntax and phonology:




There is a hierarchy of elements at LF, SS, and DS but morphemes have no linear order. This is established by rules relating SS to MS (and PF). Other processes which disturb the one-to-one relation between terminal elements SS and those at MS, may also occur. These include merger, fusion, and fission (see Anderson 1992, Nash-Haran 1992, Halle and Marantz 1993, Zwart 1997). Fission is the focus here as it will be shown that *uf* in SEF is derived by morphological fission.

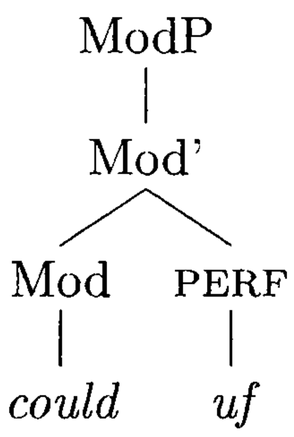
Examples like (84) in SEF would thus be derived from the numeration in (87) and not that in (86):

(86) N = he, could, uf, no, have, gone

(87) N = he, could[PERF], no, have, gone

At MS the [PERF] feature is fissioned off the modal, giving the phonological realisation *coulduf* at PF:

(88)




This analysis will work for the most basic data in SEF and DE, as the modal element *coulduf* (*could've* in DE) behaves exactly like other English modals; it gets merged into the tree as the head of ModP and raises to T. The [PERF] feature is fissioned off at MS, and is spelled out as *uf* in SEF and *'ve* in DE at PF. This derives the correct word order found in SEF and DE. On examination of the more complex data, however, it appears that this analysis of DHCs can be applied in part to SEF but not at all to DE. For instance, *coulduf* can invert in interrogatives in SEF, but *could've* in DE cannot:

(89) a. SEF: Coulduf he have no gone?[21]
b. DE: *Could've he not have gone?

In SEF, it is also possible to spell out what appears to be three perfective auxiliaries (in fact, one is the *-uf* affix on the modal), yet in DE this is not possible:

(90) a. SEF: He woulduf probably have not have come anyway.
b. DE: *He would've probably have not have come anyway.

In DE, the following is preferred:

[21]The order *have no* is preferred over *no have* when *coulduf* is inverted.

(91) DE: He would probably have not have come anyway.

This suggests that DE does not have a single lexical item *could've*, analogous to *coulduf* in SEF. Thus it seems that there is a lexical difference between SEF and DE. The use of *coulduf* as a modal will be confirmed in the next section, when the distribution of *coulduf* is compared to that of regular modal verbs like *could*.

#### 3.3.2.1 Applying Modal Criteria to Could+[perf]

In order to justify the analysis of *coulduf* as a modal, it must be found to have the same (or similar) distribution to the other English modals. Modals have a number of distinctive properties (Palmer 1979a, Coates 1983, Perkins 1983), as shown in the following table:[22]

| Criteria | Could-uf (SEF) |
|---|---|
| (a) Takes negation directly. | **couldufn't* |
| (b) inverts without *do*. | *Coulduf I?* |
| (c) 'Code.' | *John coulduf swam and so coulduf Bill.* |
| (d) Emphasis. | Ann COULDUF solved the problem. |
| (e) No *-s* form for third person singular. | **He couldufs* |
| (f) No non-finite forms. | **to coulduf* |
| (g) No co-occurrence. | **mightuf could* |

Table 3.1: Modal properties of *coulduf*

The table shows that *coulduf* in SEF fulfills six out of the seven modal criteria, while in DE *could've* fulfills only five out of the seven criteria. Criteria B (inversion without *do*) is perhaps the strongest indicator of both modal status and single item status; assuming that inversion involves raising from T to C,[23] only one item may invert, and that item must be finite. As shown in the table, *coulduf* can invert in interrogatives:

(92) a. SEF: He coulduf no have gone.
b. SEF: Coulduf he have no gone?

The inversion of *coulduf* in SEF, suggests that it is a single lexical item and a modal verb. However, the results of inversion are not clear-cut, and it appears that inversion in DHCs is more complex than it initially seems. As stated, negation in a DHC in SEF is interpreted as having sentential scope. However, the inversion of *coulduf* (92b)

[22]The lack of co-occurrence (property (g)) is not a clear indicator of modal status; two modals (and sometimes three) are permitted to co-occur in some non-standard varieties of English (see Chapters 4 and 5).

[23]That raising is from T is not crucial, most important is the fact that only one head is targeted for raising in each interrogative.

is only permitted with constituent negation. Sentential negation is not permitted with inverted *coulduf*:

(93) *Coulduf he no have gone?

The fact that inverting *coulduf* is only permitted with constituent negation is an unusual result as a constituent reading of a negated declarative DHC is dispreferred in SEF. Another peculiarity is that, if (92b) simply involves inversion of *coulduf* round the subject, it has been derived from an ungrammatical sentence:

(94) SEF: *He coulduf have no gone.

This is a problem for the proposed analysis; it seems that the account formulated for SEF is too simplistic to account for all of the data. Comparing (92a) and (92b), *have* seems to appear in two different positions: below negation in (92a) and above negation in (92b). With this in mind, and maintaining the idea that *-uf* is an affix on the modal, it seems plausible to propose that (92a) and (92b) are derived from the following, in which there are two forms of *have* as well as the affix *-uf* on the modal verb:

(95) ...coulduf have no have...

This order is only found to be acceptable when an adverb intervenes between *coulduf* and *have*:

(96) He coulduf probably have not have come.

It is possible that (92a) is derived from the underlying structure by deleting the higher copy of *have*, and (92b) is derived by inverting *coulduf* and deleting the lower copy of *have*:[24]

(97) a. He coulduf <have> no have gone.
b. Coulduf he have no <have> gone?

I will be more specific about the derivation of the two forms of *have* in sections 3.4 and 3.5 in which I will investigate the possibility of the Multiple Spell Out of *have*, and will show that the spell out of only one form of *have* occurs where *have* does not raise from its merge position. Until then, I will assume that, in at least some cases, there are two forms of *have* that form a chain (i.e. are copies of one lexical item). The conditions on the deletion of one of the forms of *have* will be discussed in more

[24] Where angled brackets are used to indicate an element that has been deleted.

detail in 3.4.3, and the rest of this section will focus on the implications of *coulduf* in SEF, including the use of MODAL+PERF in SEF as a single modal verb, and the way in which it interacts with the two forms of *have* and negation.

The proposal that COULDUF in SEF is a single lexical item which behaves like a modal verb raises a number of questions, including the following: is *coulduf* only a single lexical item in DHCs? The answer to this question is not immediately obvious. From looking at the data it is possible to state that MODAL+PERF is **not** a single lexical item when it appears in a clause with sentential clitic negation, as the modal and *uf* are separated by negation:

(98) SEF: He couldnae uf/have gone.

When full form negation is present, however, the answer is not so clear:

(99) SEF: The car mustuf no been ready.

As the modal and *uf* are not separated here, it is possible that they are a single item. If an adverb is inserted into the clause, *could* and *uf* may be separated, suggesting that *uf* is not attached to the modal:

(100) a. SEF: He coulduf no gone.
b. SEF: He could probably have no gone.

However, in other instances, it is possible for *uf* to occur on the modal:

(101) SEF: He coulduf probably have no have gone.

This suggests that there is a modal *coulduf* as well as a modal *could*.

Interrogatives show similar results; it is possible to invert *coulduf*, suggesting that it is a single item, and it is also possible to invert only *could*:

(102) a. SEF: Coulduf he gone?
b. SEF: Could he have gone?

The data shows conflicting views: the separation of the modal and *uf* and the modal by adverbs and negation implies that the modal and *-uf* are separate items, but the inversion of *coulduf* implies that the modal and *uf* are one item. It appears, therefore, that *coulduf* is a lexical item alongside the modal *could*, and can be chosen from the

lexicon like any other modal. It is therefore available in regular constructions as well as DHCs.

#### 3.3.2.2 Summary

I have shown that DHCs cannot receive the same analysis in SEF and DE; based on the fact that *coulduf* in SEF inverts in interrogative contexts but *could've* in DE does not, I proposed that *coulduf* in SEF is a single lexical item but that *could've* in DE is not. As *coulduf* in SEF shares the same distributional properties as a modal verb, I argued that it belongs to the class of modal verbs; specifically, I argued that it is a modal verb with a [perf] feature. Essentially, this translates to listing both *coulduf* and *could* in the lexicon.

In this part of the chapter, I suggested that, as well as the [perf] feature on the modal (in SEF at least), there are also two possible positions in which it is possible to spell out the perfective auxiliary *have*. The nature of these positions, and the conditions on the spell out of *have* will be the focus of the section 3.4.2. It seems that multiple spell out of *have* takes place in some contexts, the next section will focus on analyses of cases of multiple spell out, such as those by Grohmann (2000) and Nunes (2001), and the application of Nunes's analysis to DHCs.

## 3.4 A Multiple Spell Out Analysis of Double *Have* Constructions

In section 3.3, I considered a theory by Kayne (2000) in which reduced auxiliary *have* was analysed as a complementiser *of* as a possible analysis of DHCs in SEF and DE. However, Kayne's analysis was shown to have problems which meant it could not be applied to DHCs in either variety. In section 3.3.2, I went on to analyze DHCs in SEF lexically; the modal and *uf* were shown to be a single lexical item behaving as a modal verb. I also suggested that two forms of *have* are required in the clause, and that double *have* constructions in SEF are derived from an underlying structure:

(103) SEF: He coulduf have no have gone.

The inability for the modal and *'ve* to invert as a single unit in DE, however, indicated that a lexical analysis cannot be applied to DE and the modal and *'ve* cannot be analysed as a single item. The higher auxiliary does not appear to be a complementiser, nor does it appear to be attached to the modal verb, leaving little scope for an analysis of DHCs in DE. In this part of the chapter, I will examine the possibility that DHCs in DE involve two forms of auxiliary *have*, and are derived from a structure such as:

(104) DE: He could have not have gone.

If both forms of *have* in SEF and DE are auxiliaries, then there are two main avenues from which to approach this from a syntactic point of view:

1. Both copies of *have* occur in distinct head positions within the clause.
2. *Have* raises to a position higher than that in which is originally merged, and both the lower and higher copies of *have* are then phonologically realised.

The latter of these proposals has been suggested as an account for the multiple occurrence of DPs in German by Grohmann (2000) who argues that when movement takes place within a particular clausal domain, the result is the spell out of two copies which are distinct at PF. In his analysis, Grohmann (2000, 55) outlines three clausal domains:[25]

- $\Theta$-domain: the part of the derivation where theta relations are created.
- $\phi$-domain: the part of the derivation where agreement properties are licensed.
- $\omega$-domain: the part of the derivation where discourse information is established.

Grohmann suggests that there is a condition[26] on the three domains that prevents multiple copies of a DP from occurring in a single domain unless they have a distinct PF matrix. As mentioned in section 3.1.1, the two copies of *have* in a DHC, are not phonologically identical -the higher copy of *have* is reduced, and the lower copy can be a full form - suggesting that Grohmann's analysis may be extended to account for DHCs.

Grohmann's work will not be discussed in detail in this work, as it cannot be applied to DHCs for one vital reason: his analysis refers specifically to DP movement. It is not possible to extend his analysis to head movement as head movement creates a structurally distinct complex head. For instance, in the case of DHCs, the original copy [$_{\text{PERF}}$ *have*] and the higher copy [$_{\text{T}}$ [$_{\text{PERF}}$ *have*] [$_{\text{T}}$]] are structurally distinct, thus no 'drastic effect on the output' is required. According to Grohmann, where two syntactically distinct elements which form a chain occur in the same domain, the lower copy is deleted and the higher copy is spelled out.

[25] Grohmann (2000, 56) proposes that these domains are organised as follows: the $\Theta$-domain consists of V and v, and their complement and specifier positions as well as adjoined material; the $\phi$-domain consists of the functional projections assumed to license verbal morphology and agreement such as aspectual, negative, modal, and tense projections; and the $\omega$-domain corresponds to a C-layer with internal structure as proposed by Rizzi (1997). For the justification of these particular domains see Grohmann (2000).

[26] What he refers to as the Condition on Domain Exclusivity.

An analysis which has similar consequences to that of Grohmann (2000), i.e. the spell out of multiple copies of a chain, is that of Nunes (2001). Unlike Grohmann's analysis, Nunes's analysis does refer to head movement and can be applied to DHCs, as shown in the following section.

### 3.4.1 Nunes (2001): Multiple Spell-Out Theory

I suggested in section 3.4 that SEF and DE involve two copies of perfective auxiliary *have*, and above I proposed that this can be accounted for in a theory of Multiple Spell Out. I will now present a theory of Multiple Spell-Out (MSO) proposed by Nunes (2001)[27], and will go on to apply this theory to DHCs.

#### 3.4.1.1 Multiple Spell-Out and the 'Copy and Merge' Theory of Movement

Minimalism utilises the 'copy theory of movement' (Chomsky 1995, 251-3) in which a 'trace' is a copy of the moved element. While this 'trace' is deleted at PF, it remains available at LF for interpretation. In Minimalism, MOVE, which result in this type of chain formation, is composed of the following operations:

(105) MOVE

1.copying of a constituent $\alpha$ from K;

2.merger of the copy $\alpha$ with K;

3.chain formation relating the two copies; and

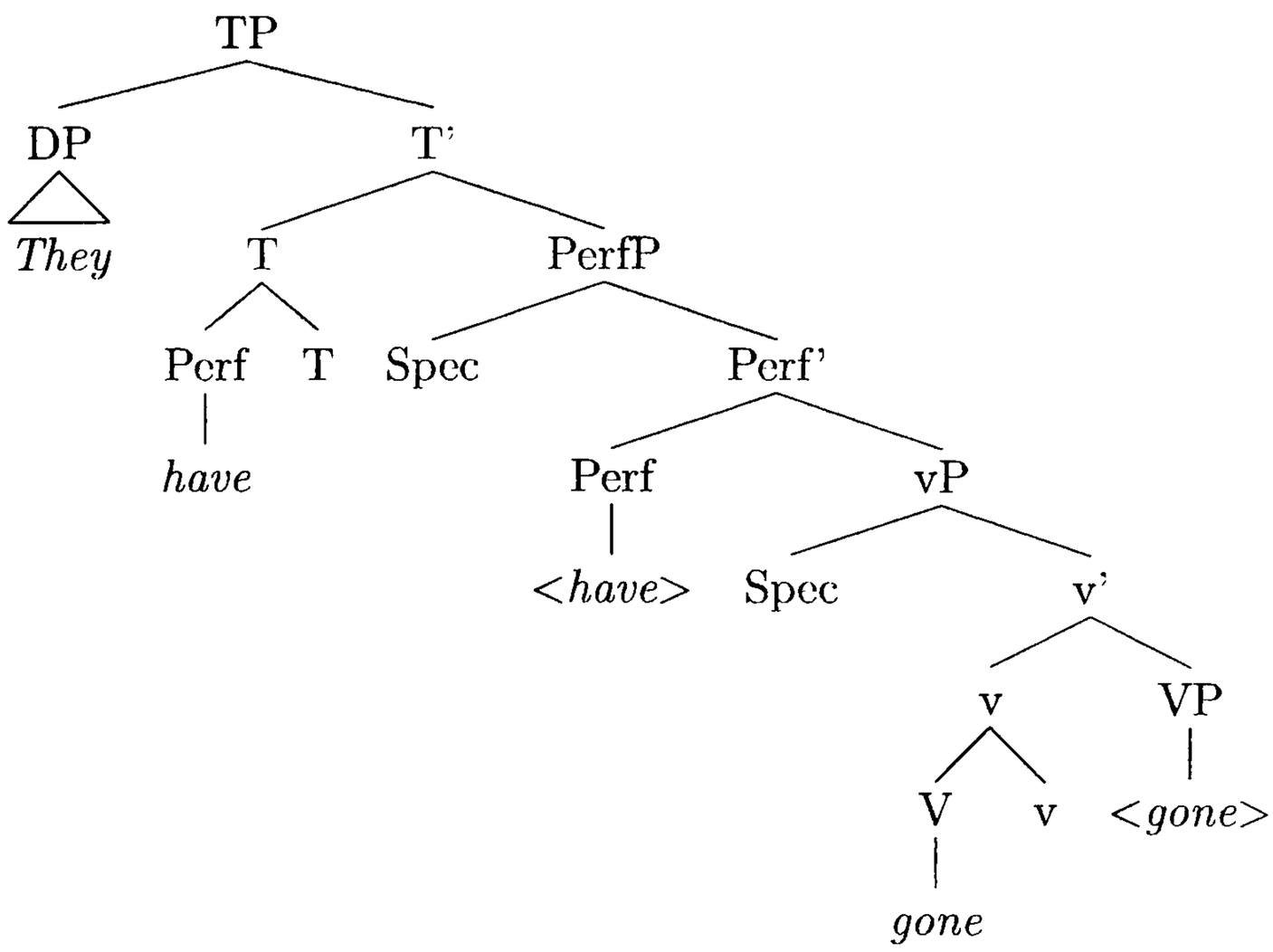
4.deletion of the lower copy $\alpha$ in the phonological component (overt movement).

If this is applied to the movement of finite auxiliaries to T in English, the following tree is derived:[28]

[27]The examples used in this section are taken from Nunes (2001).

[28]The lower copy of the auxiliary (the copy that is typically deleted) is enclosed in brackets <>.

(106)




In the final stage of MOVE in (105) above, spell out of the higher copy and deletion of the lower copy occurs.

(107) a. They have not gone.
b. *They not have gone.

This stage in the operation of MOVE raises problems for Nunes's theory of Multiple Spell Out, as it does not allow for more than one copy to be spelled out in the derivation; if the phonological component does merely delete the lower copy (as suggested by the final stage of MOVE) then cases cited by Nunes in which this copy is spelled out, cannot be explained.

As MOVE is a crucial operation available in a syntactic derivation, it is not something which Nunes can simply discard. For this reason, he develops an alternative approach to MOVE, the *Copy and Merge Theory of Movement* which is comprised of four operations:

(108) MOVE Revised

1.Copy

2.Merge

3.Form Chain

4.Chain Reduction

The version of MOVE in (108) may not seem drastically different from that outlined above. In fact, the only real difference is in the final stage of the operation; where Copy Theory deletes the lower copy (or copies) in the final stage, in Copy and Merge Theory it is not always the lower copy (or copies) that is deleted. This will be discussed in more detail in section 3.4.1.4.

In Copy and Merge theory, unlike in Copy Theory, MOVE can account for instances in which more than one copy is realised, as well as instances in which the tail (lower copy) rather than the head (higher copy) of the chain is realised.[29] Thus Nunes utilises Copy and Merge theory rather than Copy Theory in his MSO analysis.

#### 3.4.1.2 Multiple Spell-Out and the Linear Correspondance Axiom

The Linear Correspondance Axiom (LCA) is proposed as part of Kayne (1994)'s Antisymmetry Theory.[30] Antisymmetry uses the notion of asymmetric c-command coupled with the LCA to map hierarchical structure to linear order. Kayne (1994)'s LCA is defined in (109), with a further condition stated in (110):

(109) *Linear Correspondence Axiom (LCA)*:
d(A) is a linear ordering of T.[31]

(110) Let X, Y be nonterminals and x, y terminals such that X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y.

Where asymmetric c-command is defined by Kayne (1994) as follows:

(111) *Asymmetric C-command*:
$\alpha$ asymmetrically c-commands $\beta$ iff $\alpha$ c-commands $\beta$ and $\beta$ does not c-command $\alpha$.

The aspect of Kayne's Antisymmetry Theory which is of utmost importance to Nunes, is the LCA; the LCA forms the foundations of Nunes' theory of Multiple Spell-Out, along with the fact that 'traces' (lower copies) and heads (higher copies) must be subject to the same operations. Nunes aims to show that lower copies can be phonetically

[29] Nunes states that there are many advantages to the Copy and Merge theory of movement, including that there is no longer a stipulation that the copied element must be merged with a syntactic object containing the original (thus allowing sideward movement), and that Copy and Merge are not redundant with Form Chain. See Nunes (2001) for further discussion of Copy and Merge theory.

[30] The reader is referred to Kayne (1994) for a full account of Antisymmetry Theory, as it will not be discussed in great detail here.

[31] Where *A* is a set of ordered pairs <X, Y>.

realised and, in some languages, are. It is thus important to him that the Copy and Merge Theory of movement takes traces and heads of chains as subject to the same principles and accessible to the same operations. If this is true then Nunes must provide an explanation for the fact that generally 'traces' (lower copies), not heads of chains, are deleted in the phonological component. To account for this, he suggests that:

1. Only one link in a chain is phonetically realised because of the nature of the Linear Correspondence Axiom (LCA) proposed by Kayne (1994); the realisation of more than one link means that no linear order can be imposed. Chain Reduction ensures that linear requirements are met by deleting links of the chain.

2. Economy, the principle at the heart of Minimalism, is the key factor in deciding which link is deleted.

Initially, Multiple Spell-Out may appear to violate either of the above conditions, how would multiple copies be realised otherwise? According to Nunes, it is not the case that MSO violates the LCA or that economy considerations are such that both copies are realised. Rather, Morphology renders the multiple links invisible to the LCA.

MSO is sometimes an available result because, as Chomsky (1995, 339) points out, the LCA does not apply word-internally; therefore, once Morphology has converted an element K (formed from $\alpha$ and $\beta$) into a word, $\alpha$ and $\beta$ are no longer visible to the LCA. In some environments, therefore, a moved copy becomes invisible to the LCA and so multiple copies are produced. For example, in clitic duplication, both copies may only be pronounced when the higher copy is enclitic (section 3.4.1.6).

### 3.4.1.3 Copies and Nondistinctiveness

An important distinction needs to be made between copies, and elements with the same sets of features that were inserted into the derivation separately. If deletion is only sensitive to phonological features, (112) could spell-out any instances of *John* in (113):

(112) $[_{TP}$ John$_i$ T $[_{vP}$ John$_i$ $[_{v'}$ said $[_{CP}$ that $[_{TP}$ John$_k$ was $[_{vP}$ kissed John$_k$]]]]]]

(113) a. John said that John was kissed.
b. *John John said that was kissed.
c. *John said that was kissed John.
d. *Said that John was kissed John.

This is obviously not the case: (113a), in which the higher copies of $John_i$ and $John_k$ have been spelled out, is the only possible output, suggesting that deletion has applied to members of a chain, i.e. copies, and not to elements that happen to have the same sets of phonological features. It is not possible to spell out both copies of $John_i$ and delete both copies of $John_k$, or vice versa, as shown in (113b) and (113c) respectively. This indicates that at least one member of a chain must survive deletion. The fact that it is not possible to delete the higher copies and spell out the lower copies of $John_i$ and $John_k$, as shown in (113d), suggests that it must be the higher copy and not a lower copy in a chain which survives deletion.

According to Nunes, the phonological component requires the notion of nondistinctiveness to be available when *Linearize* operates. Consider (114):

(114) [John$_i$ [was [kissed John$_i$]]]

As the two instances of *John* in (114) are nondistinct, *was* both precedes and is preceded by the same element. As a result, no linear order is imposed, and the derivation is cancelled. The concept of distinctiveness offers an explanation for the fact that chains typically only have one link realised at PF; *Linearize* cannot apply when more than one link is spelled out.

For the LCA to apply to structures containing nontrivial chains, links must be deleted by the operation known as *Chain Reduction*. It is crucial for Nunes's argument that Chain Reduction does not merely delete traces; the head of the chain and the traces should be equally subject to deletion by the operation. This does not appear to be true, however, as in standard cases the trace is deleted. Nunes must provide independent motivation for this and explain the possibility for multiple copies to be realised without violating the LCA. This will be the focus of section 3.4.1.4.

#### 3.4.1.4 Deletion of Links by Chain Reduction

Nunes demonstrates the importance of economy in chain reduction through the unacceptability of scattered deletion (the deletion of parts of chain links rather than a single link). For instance, Nunes points out that from (115) it should be possible to derive the ungrammatical (117) by applying scattered deletion to the chain links as shown in (116):

(115) $[_{TP}[_{CP}$ the $[_{NP}$ tall man$]]_i$ appears $[_{TP}[_{CP}$ the $[_{NP}$ tall man$]]_i$ to have been kissed $[_{CP}$ the $[_{NP}$ tall man$]]_i$ ]]

(116) $[_{TP}[_{CP}$ the $[_{NP}$ <tall man>$]]_i$ appears $[_{TP}[_{CP}$ <the> $[_{NP}$ tall <man>$]]_i$ to

have been kissed $[_{CP}$ <the> $[_{NP}$ <tall> man]]$_i$ ]]$^{32}$

(117) *The appears tall to have been kissed man.

(117) must be ruled out on independent grounds; according to Nunes it is ruled out by Economy, as (116) is not the most economical derivation. If deletion for linearization targets constituents, deletion must be applied five times (once to each partial constituent (word or phrase) in <>) to derive (116). There are far more economical derivations in which deletion only applies twice; the optimal derivation is the one in which deletion of two of the three copies of the DP *the tall man* occurs, producing (118).

(118) The tall man appears to have been kissed.

Thus, Nunes states Chain Reduction as:

(119) *Chain Reduction*
Delete the minimal number of constituents of a nontrivial chain CH that suffices for CH to be mapped into a linear order in accordance with the LCA.

If the application of Chain Reduction is determined by economy considerations, Nunes can account for the fact that:

1. Scattered deletion within chains is in general not an option (deletion applies more times than required)
2. Convergent requirements may override the preference for deletion of entire chain links (only convergent derivations count for economy considerations)
3. Unrecoverable deletion does not occur (this employs more applications of deletion than necessary)

#### 3.4.1.5 Trace Deletion and Economy

A problem for Nunes is that in English, there is a preference to spell out heads of chains rather than traces, as shown in (120):

(120) a. The tall man appears to have been kissed.
b. * Appears the tall man to have been kissed.

[32]Where elements in brackets <> are deleted.

c. * Appears to have been kissed the tall man.

Nunes does not derive this fact from the differences between heads and traces, as he wishes to maintain that heads and traces are not different and are available to the same operations. Nunes states that heads of chains and traces are different as they undergo a different number of checking relations, and that economy considerations and formal features are responsible for the spell out of heads of chains rather than traces, i.e. that the minimal number of features in each set of formal features is deleted in order to satisfy Full Interpretation at PF. Consider (121):

(121) $[_{TP}[_{CP}$ the $[_{NP}$ tall man$]]_i$ appears $[_{TP}[_{CP}$ the $[_{NP}$ tall man$]]_i$-**CASE** to have been kissed $[_{CP}$ the $[_{NP}$ tall man$]]_i$-**CASE**$]]$.

After merging with *kissed*, the DP raises to the Spec of each T head to check the D feature of T. The Case-feature of the highest copy of the DP enters into a checking relation with the Case-feature of the matrix T. Since Case is [-interpretable], this checking relation renders the Case-feature of the highest copy of DP invisible at LF and at PF. However, as lower copies do not enter into Case-checking relations their Case features remain unchecked.

According to Nunes, there are two reasons why traces are not spelled out. Firstly, since nontrivial chains induce violations of the LCA they must undergo Chain Reduction. Secondly, spelling out the highest copy is the most economical derivation in terms of Case-checking; spelling out the higher copy satisfies Full Interpretation because the Case-feature is already deleted by checking. To spell out either of the lower copies, however, the unchecked Case-feature of this surviving copy must be deleted in order for the derivation to survive. This is less economical than spelling out the higher copy, and so is dispreferred.

That heads are spelled out more often than traces can be accounted for in Nunes's theory by appealing to economy, and is therefore no longer a problem. However, there is one question which remains unanswered: if heads are spelled out for reasons of economy, then how can the spell out of multiple copies be explained? The answer to this is explored in section 3.4.1.6.

#### 3.4.1.6 Phonetic Realisation of Multiple Copies

The discussion so far would lead us to believe that languages which allow traces to be phonetically realised should violate the LCA. Nunes illustrates that this is not the case and that when multiple copies are spelled out, the LCA is not violated because not all copies are visible to the LCA. For example, clitic duplication in a dialect of

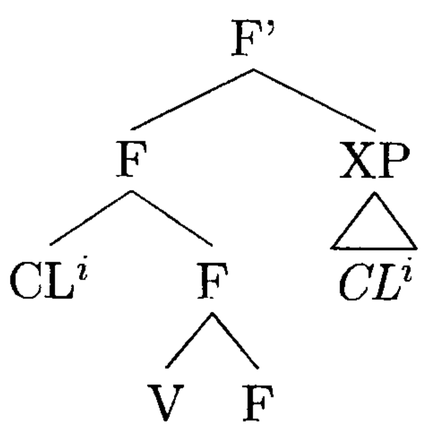
Argentinean Spanish is possible only when the higher copy is enclitic:[33]

(122) Vomo*nos* acostumbrando*nos* a este pais paco a paco
go-1PLUS$_{CL}$ getting-accustomed/US$_{CL}$ to this country little by little

(123) **Nos* vamos acostumbrando*nos* a este pais paco a paco
US$_{CL}$ go-1PL getting-accustomed/US$_{CL}$ to this country little by little
(examples from Nunes (2001))

Nunes assumes, in line with Kayne (1991) and Uriagereka (1995) that in this dialect of Argentinean Spanish, 'when the clitic climbs, it adjoins to the left of a functional category F with the verb adjoined to it'(Nunes 2001, 99).

(124)




The next step in the derivation is the application of Chain Reduction, deleting one of the copies. This is not the case in this particular dialect, however, because Morphology reanalyses [$_{F0}$ CL [$_{F0}$ V [$_{F0}$ F]]] in (124) as a word, rendering the clitic invisible to the LCA.

Nunes's approach to MSO relies on the application of the LCA in all cases. The difference between the realisation of one copy and the realisation of multiple copies hinges on Morphology rendering a copy invisible to the LCA in certain environments, namely when the copy is a clitic. It is important for Nunes that the LCA does not apply within words, a suggestion made by Chomsky (1995, 339) who states that Morphology is able to convert an element K (formed from $\alpha$ and $\beta$) into a word with the result that $\alpha$ and $\beta$ are no longer visible to the LCA.

#### 3.4.1.7 Summary of Multiple Spell Out

Nunes's theory of MSO can account for the multiple spell out of the clitic *nos* in an Argentinean Spanish dialect (122). Both copies of *nos* are clitics in (122), yet Nunes states that, in order for multiple spell out to apply, it is enough for only one of the

[33]In these examples, the lower copy of *nos* is also a clitic but Nunes (2001) does not state this as a necessary condition.

copies to be a clitic.

In light of Nunes's MSO analysis of clitic doubling, I will re-consider the structures that I have suggested underlie DHCs in SEF and DE:

(125) a. SEF: He coulduf probably have no have gone.
b. DE: He could have not have gone.

I will now consider the possibility that the forms of *have* are non-distinct, i.e. form a chain, and that one form is deleted during the derivation. This will be the focus of section 3.4.2.

### 3.4.2 The Position of the Higher *Have*

That two forms of *have* are needed in SEF as well as the modal affix *-uf*, is shown by the fact that *-uf* is able to co-occur alongside both forms of *have* in a construction involving negation and an adverb, such as:

(126) SEF: He coulduf probably have no have gone.

In DE, there is no affix on the modal, but there are two forms of *have*; it is the spell out of these two auxiliaries that derives a DHC. Therefore, the underlying order in DE is:

(127) He could have not have gone.

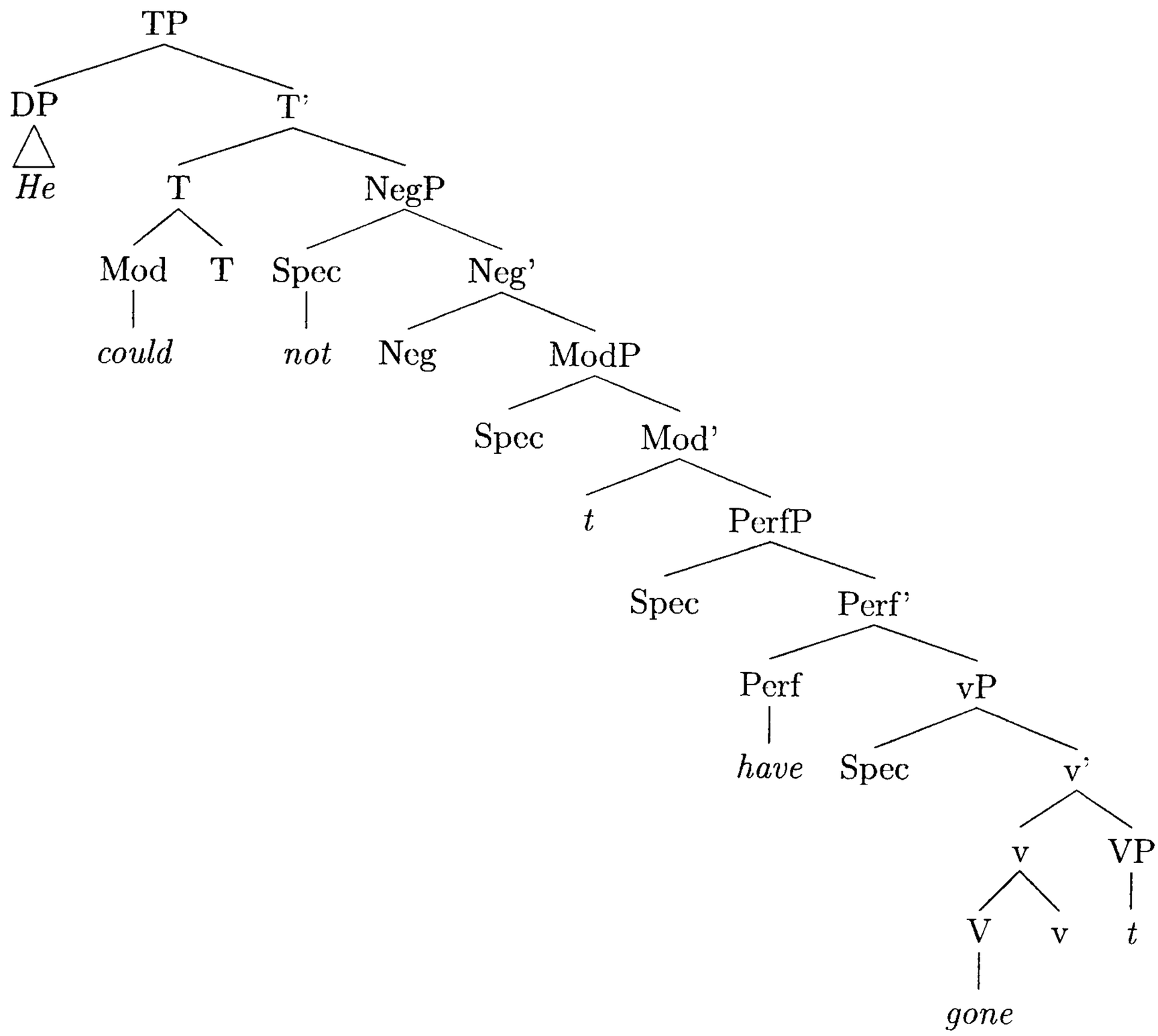
In this part of the chapter I will investigate the structural position of the higher form of *have* and the conditions on spell out. As Nunes (2001) suggests that the higher copy must be a clitic in order to be phonetically realised, I will begin by investigating the idea that *have* adjoins to the modal *could* at some stage in the derivation. However, I will show that this cannot be the case and that *have* must raise to a functional position rather than adjoining to *could*.

#### 3.4.2.1 The Higher *Have* as a Clitic

If the higher auxiliary is a clitic, it should be possible to fit DHCs into a standard structure such as that shown in the tree below. [34]

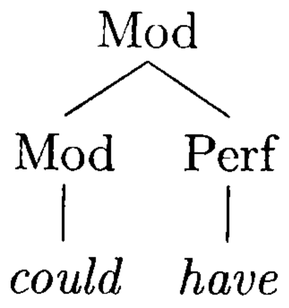
[34] Considering the DHCs data, and the fact that modals are assumed to pick up clitic negation whilst raising to T, it seems sensible to propose that negation is situated above ModP.

(128)




In order to maintain the structure presented in the above tree, there is only one possible way in which to derive Double *Have* Constructions using MSO; the auxiliary *have* that is merged into the head of PerfP must raise and cliticise to a functional head already present in the structure above. The word order in (126) indicates that the higher form of *have* occurs above negation but below the position to which the modal has raised (i.e. T). The obvious assumption to make is that *have*, which is later spelled out as *'ve* in DE, has cliticised to the modal, as shown in the following tree:

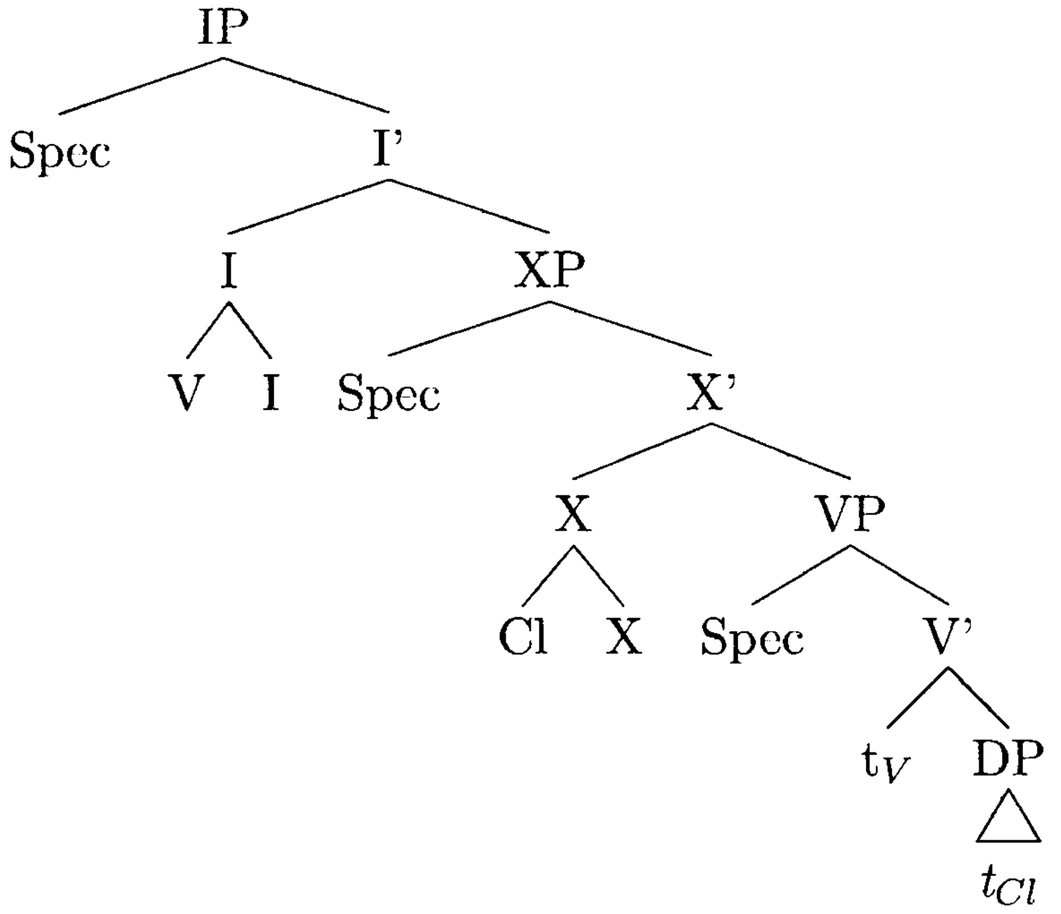
(129)




However, as shown in the tree, if *have* cliticises to the modal, it must do so by the process of right-adjunction - not an uncontroversial assumption. Kayne (1991) argues against right-adjunction for Romance clitics and proposes instead that object clitics in Romance can only adjoin to the left, not to the right. Pronominal clitics in Romance

can precede or follow the verb, and Kayne (1991) proposes that Romance clitics left-adjoin to a functional head. Where the functional head dominates the verb this yields clitic-verb order; the order verb-clitic results from moving the verb leftwards past the functional head to which the clitic has adjoined, rather than having the clitic right-adjoined to the verb.

(130)




Verb-clitic order is also found in embedded infinitives in Italian. For these cases, Kayne suggests movement of the infinitive verb left past the clitic resulting in adjunction to the single-bar projection whose head the clitic has adjoined to.

French clitics precede embedded infinitives whereas Italian clitics follow them.

(131) Lui parler serait une erreur
him$_{CAT}$ to-speak would-be an error

(132) *Parler-lui serait une erreur.

(133) Parlargli sarebbe un errore
to-speak-him$_{CAT}$ would-be an error.

(134) *Gli parlere sarebbe un errore

One possible analysis is that French left-adjoins clitics while Italian right-adjoins clitics. Kayne (1991) points out that if this were true then there would be no explanation for the fact that Italian does not allow clitics to follow the finite verb.

(135) Sarebbe assurdo che tu gli parlassi
it-would-be absurd that you himDAT spoke

(136) *Sarebbe assurdo che tu parlassigli

Kayne uses this to argue that the contrast between (131) and (133) cannot be in terms of left-vs right-adjunction which leaves the question of why right-adjunction is not an available option for object clitics. Kayne suggests generalizing the proposal by Williams (1981) about right-headedness in morphology to instances of X constituents created by adjunction. If such constituents must be right-headed then adjunction to X must be to the left given the standard assumption that adjunction creates a category of the same type as the element that is adjoined to.

Romance clitics must adjoin to a functional head (X). In (135), *gli* is adjoined to a functional head and the position of the verb is after V-to-I movement. The same is true of *lui* in (131).

If right-adjunction is not permitted for object clitics, in (133) *gli* must be left adjoined to an empty head, rather than right-adjoined to the infinitive verb. This head is not the trace of the V in VP, but an empty I-type position:

(137) ...V...Cl+I...[$_{VP}$[$_{V}$ e]...]...

The clitic has adjoined to I and V has moved leftwards skipping over I.[35] V adjoins to I' which is compatible with Chomsky's (1986) discussion of head movement restrictions: I' will not count as a Minimality barrier for V by virtue of V adjoining to it.

Verb-clitic order requires an abstract I for the clitic to adjoin to. There is no verb-clitic order in Italian finite clauses because there is not an I head for the clitic to move to. The finite verb must merge with T and Agr and the clitic cannot adjoin to a trace (verb will leave trace in both T and Agr). Infinitive verbs do not merge with T and Agr so the clitic can adjoin (to T).

(138) Italian
...V+Infin...Cl+T...[$_{Infin}$ e]...[$_{VP}$[$_{V}$ e]...

(139) French
...T...Cl+[$_{Infin}$ V+Infin]...[$_{VP}$[$_{V}$ e]...

[35]This movement violates the Head Movement Constraint.

Kayne's analysis of object clitics, avoids right-adjunction at the cost of violating the Head Movement Constraint.[36]

Aside from Kayne's rejection of right-adjunction, there is another problem with analysing DHCs as right-adjunction of *have* to the modal: it does not fit the data. The intervention of an adverb between *coulduf* and *have* in SEF and between *could* and *have* in DE, shows that *have* can not be cliticised to the modal:

(140) a. SEF: He coulduf probably have not have gone.
b. DE: He could probably've not have gone.

If *have* did adjoin to the modal it would incorrectly predict the following ungrammatical examples to be grammatical:

(141) a. SEF: *He coulduf have probably not have gone.
b. DE: *He could have probably not have gone.

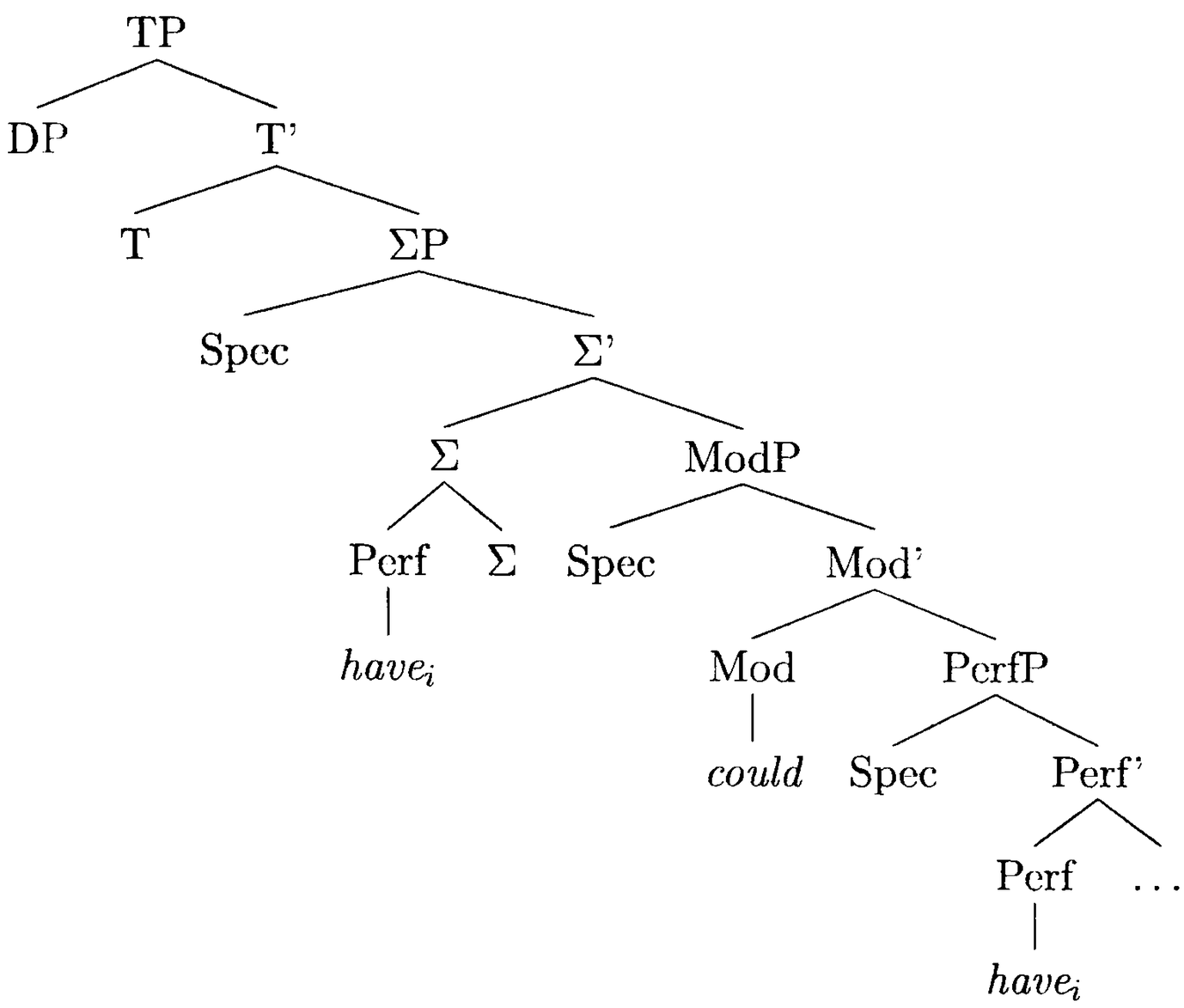
This forces us away from a clitic analysis of DHCs, and towards proposing that there is a extra functional head to which auxiliary *have* may raise - the topic of the next section.

#### 3.4.2.2 *Have*-Raising to a Functional Projection

In chapter 2, I argued that there is an extra functional projection to which auxiliaries may raise. I proposed that this projection is ΣP, and that it is situated between TP and ModP. The word order in DHCs tells us that if the auxiliary does raise, its final position must be to the left of negation. This is consistent with the position posited in chapter 2, so I will therefore consider that *have* in a DHC raises to ΣP.

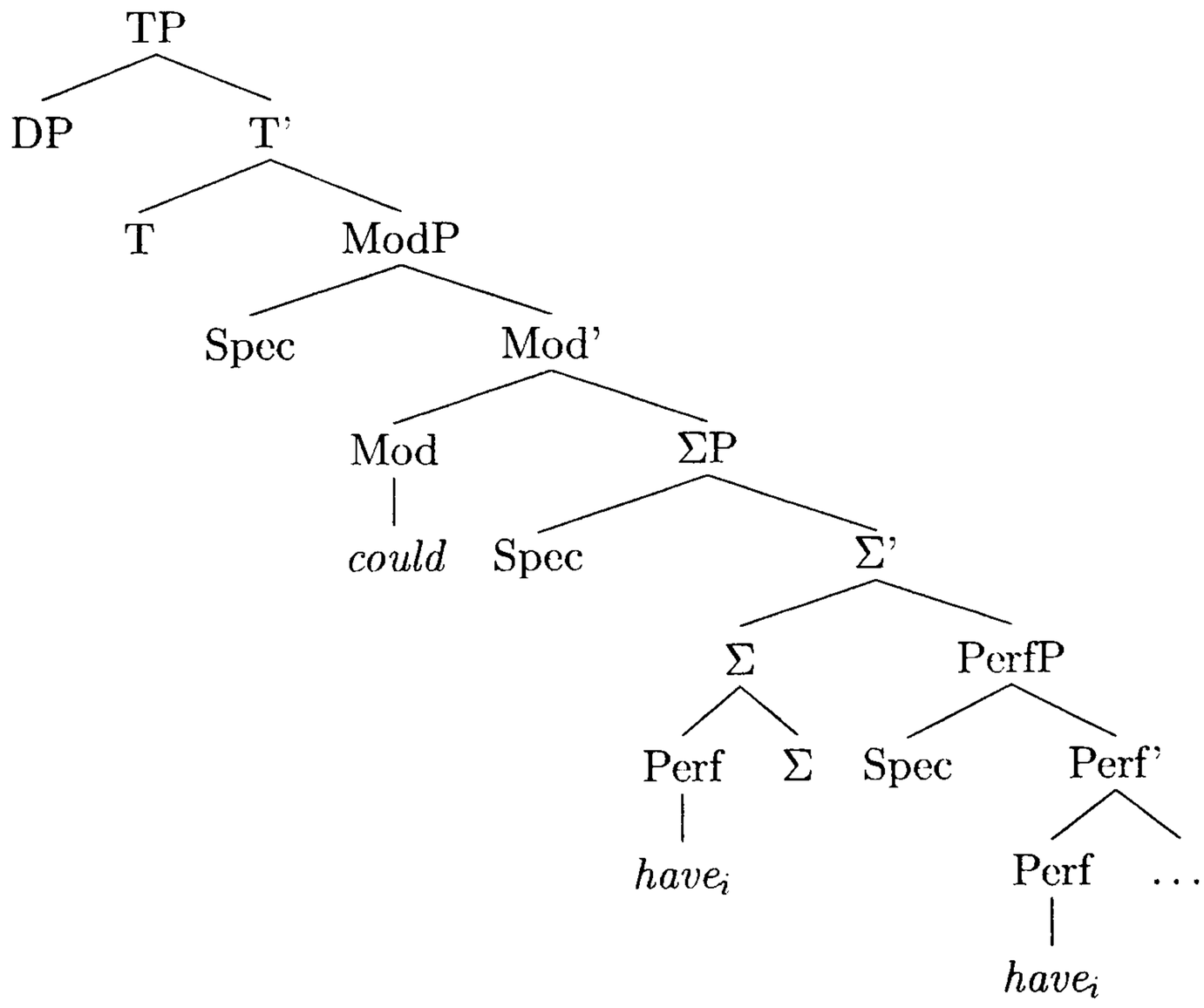
[36]Kayne points out that Chung and McCloskey (1987) show that pronoun postposing is possible in Irish, which suggests that right-adjunction is possible for some constituents.

(142)




However, if the auxiliary raises above the modal, as shown in the tree above, the HMC is violated (see Travis 1984). This is a problem only if we assume that the position of ΣP is fixed; if ΣP occurs below ModP (at least some of the time) in SEF and DE, then *have* raising to Σ no longer violates the HMC.

(143)



Assuming that functional heads are ordered differently in different languages and dialects is not uncontroversial. Cinque (1999) suggests, using the position of adverbs as evidence, that functional heads appear in a universal fixed order. Variation between languages depends on the functional projections chosen to appear, rather than the order in which they appear. Contrary to Cinque's proposal, however, is a suggestion by Laka (1990) that languages can differ in the actual ordering of functional projections; she argues that the position of Negation in the clause is a parametric choice, and that languages like English generate negation below TP whilst languages such as Basque generate negation above TP. According to Laka (1990, 11), 'grammars rely solely on UG operations to arrive at the unique solution (144), imposed on them by UG, [which means that] variation between languages lies in the inherent properties of functional items, which will differ in their selectional properties in such a way as to generate different functional structures.'

(144) Tense C-command Condition (TCC)
Tense must c-command at S-structure all propositional operators of the clause.

Laka makes two main claims about Basque:

1. Neg is generated above IP.
2. Infl is forced to move to Neg by S-structure.

She provides a range of evidence for these claims, some of which are outlined briefly below.

- **Deletion**
  If NegP is generated above IP in Basque, it should be possible to delete IP and leave NegP intact. This is, in fact, possible in Basque as shown by the following example in which IP is deleted but negation *ez* remains:

(145) Marik liburua erosi du eta Peruk ez
Mari book-the bought has and Peter not
"Mary has bought the book and Peter hasn't"

Under Laka's analysis, this is correctly predicted to be impossible in English. In English, NegP occurs within IP making it impossible to delete IP and leave NegP intact.

(146) *Mary bought a book and Peter not.

(147) a. Mary bought a book and Peter didn't.
b. Mary has bought a book and Peter hasn't.

- **NPI Licensing**
  In English, there is an asymmetry between the licensing of subject and object NPIs; sentential negation can license object but not subject NPIs.

  (148) a. *Anybody didn't come.
  b. Mary didn't see anything.

  It is assumed that in order to license NPIs, Neg must c-command them at S-structure. Subject NPIs are not c-commanded by Neg in English and are therefore not licensed, resulting in ungrammaticality.
  In Basque, however, Neg occurs outside of IP therefore c-commanding all arguments within IP. This predicts that both subject and object NPIs should be licensed in Basque. This is the case.

  (149) Ez dio **inork** Iboni etxea eman
  no has anybody Ibon-to house-the given
  "Nobody has given the house to Ibon"
  (Lit: "anybody hasn't given the house to Ibon")

  (150) Ez da **inor** etorri
  no has anybody came
  "Nobody came"
  (Lit: "anybody didn't come")

  This lends support to Laka's proposal that NegP is situated in a different clausal position in English than it is in Basque.

Laka has strong evidence for suggesting that the position of a functional head such as Negation, is not the same across languages. I will, therefore, follow Laka in proposing that *Sigma*P may appear in different positions in different dialects. This proposal has important implications as it highlights a similarity between language variation and dialect variation: the choice of position for functional heads appears to be a parameter of variation between languages and between dialects. If we take ΣP to be positioned immediately below ModP, then raising *have* to Σ does not violate the HMC, as shown in (143) above.[37]

The appearance of *have* in two positions does not explain DHCs in full. I will now turn to the conditions on the spell out of the two forms of *have*, including the fact that, in both SEF and DE, multiple forms of auxiliary *have* must be non-adjacent if they are to be spelled out.

[37]Non-finite auxiliaries are not generally assumed to raise from their original merge position. This will be discussed further in section 3.5.

### 3.4.3 The Conditions on Spell Out and Deletion of *Have*

I will now consider the options for spelling out the two forms of *have* in a derivation in which two forms of *have* appear, as in (143) above. If deletion of copies is randomly applied to the forms of *have* we would expect four possibilities: (i) spell out of the higher copy and deletion of the lower copy, (ii) spell out of the lower copy and deletion of the higher copy, (iii) spelling out both copies, and (iv) deleting both copies. However, according to Nunes (2001), there are restrictions on the spelling out and deletion of copies. For instance, for the sake of recoverability it is not possible to delete every copy of a chain; thus, in SEF and DE at least one form of *have* should be spelled out. This is supported by the data.[38]

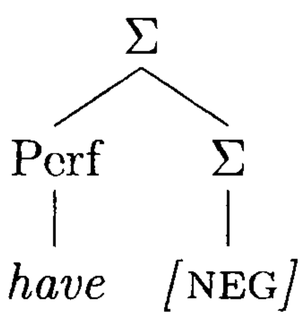
(151) DE: *He could not gone.

(152) SEF: *He could no gone.

Therefore, Nunes's claims about recoverability of deletion can be maintained in an analysis of DHCs, and the fourth possibility outlined above cannot.

According to Nunes, there are also restrictions on spelling out multiple copies of a head: it is only possible when the higher form is a syntactic clitic and is reanalysed as a morphological word with its host, thus escaping deletion on account of being invisible to the LCA. In DHCs, I did not propose that the higher form of *have* is a syntactic clitic; I did, however, suggest that it right-adjoins to Σ which hosts negation:

(153)




To be consistent with Nunes's analysis of MSO, morphology must reanalyse *have* and *not* in the above tree as a word. As clitic negation is ruled out in this position in DHCs, it seems counter-intuitive to proposed that *have* and NOT become a single word. It is not unreasonable, however, to suggest that morphology reanalyses *have* and *not* as a

[38]SEF does, however, allow the following:

(i) SEF: He coulduf no gone.

I suggest however, that in examples such as this one, *coulduf* is actually a modal occurring with the higher form of *have* (*could have*). *Have* is often reduced in this position, and so is phonetically realised in a form indistinguishable from the *-uf* that may be marked on the modal *could* in SEF.

compound word. Examples of English compounds cited by Spencer (1991, 14) include *blackbird* (Adjective-Noun), *cobalt blue* (Noun-Adjective) and *swearword* (Verb-Noun). none of which require one of the elements in the compound to be phonologically reduced or clitic. Thus there seems no reason to suppose that *have not* cannot be analysed as a compound word.[39] Nunes's approach to MSO can thus be maintained.

In SEF and DE, therefore, the following steps take place in the derivation of DHCs:

1. Lexical items are chosen from the numeration, including one form of auxiliary *have*.
2. *Have* is merged into the derivation as the head of PerfP, and undergoes raising to $\Sigma$.
3. When Syntax is mapped to Morphology, *have* and *not* are reanalysed as a compound word, making *have* invisible to the LCA and thus escaping deletion.
4. At PF, both forms of *have* are realised as neither have been deleted.

Spelling out both copies of *have* is possible in both dialects only when they are separated by negation or an adverb:

(154) SEF: He could have no have gone.

(155) DE: He could have not have gone.

In SEF, it is also possible to insert the modal *coulduf*, giving three forms of *have* when they are separated:

(156) a. SEF: *He coulduf have no have gone.
b. SEF: He coulduf probably have no have gone.

The MSO of *have* must, therefore, be restricted to rule out the occurrence of adjacent forms of *have*. To account for this, I suggest that if, at MS, two forms of *have* or bundles of [perf] features (if MS converts features into words) are adjacent, they are fused together and spelled out as one. Morphological fission can be thought of as the opposite of fusion; where fission splits off features which are later assigned a phonological realisation at PF, fusion merges features which receive a single phonological realisation at PF. [40]Consider the following example to be the output of Syntax in a DHC in DE and SEF:

[39]An alternative is to suggest that morphology reanalyses *have* and *not* as a word, but the spell out of this word takes place in the phonological component, i.e. the phonology decides upon the spell out of the auxiliary and negation complex.

[40]See Halle and Marantz (1993) for a detailed discussion of morphological fusion.

(157) SEF/DE: *He could have have gone.

When this output is mapped to MS, the two adjacent forms of *have* are fused together, giving the following output:

(158) He could have gone.

The same is true of SEF when *coulduf* is inserted; (159) becomes (160):

(159) He coulduf have have gone.

(160) He could have gone.

Thus, multiple copies are only spelled out when they are non-adjacent and thus not fused together at MS.

### 3.4.4 Summary

In this part of the chapter I have shown that DHCs can be accounted for in a theory of Multiple Spell Out proposed by Nunes (2001). I suggested in section 3.4 that *have* raises to $\Sigma$ where it is reanalysed by Morphology as a compound word with *not*, the head of $\Sigma$. This makes the raised copy of *have* invisible to the LCA (Kayne 1994), hence it escapes deletion when Chain Reduction (Nunes 2001) applies. The non-adjacency restriction on MSO of *have* was accounted for by an application of morphological fusion which fuses together adjacent forms of *have*/[perf] features at MS, leaving one feature bundle to be spelled out at PF.

Although the multiple realisation of *have* has been analysed in detail, a number of issues remain to be explored. In the following section I will focus on the derivation of examples in which only one form of *have* is spelled out. I will also examine the scopal properties of negation, accounting for the dialect differences by referring to the form of negation as well as the position, and the suggestion that non-finite auxiliary *have* can raise in DHC varieties.

## 3.5 Further Implications

In the investigation and analysis of DHCs carried out in this chapter, there remain a number of issues yet to be addressed. These include the ability for only one form of *have* to appear in each clause, the scopal properties of negation in SEF and DE,

the movement of non-finite auxiliary *have*, and the behaviour of DHCs in interrogative contexts. These issues will be the focus of this part of the chapter. I will show that the different scopal properties of negation found in the two Double *Have* dialects can be accounted for by referring to both the structural position negation holds within the clause and, in DE, the realisation of negation. The raising of non-finite *have* is not an uncontroversial issue and I will attempt to relate it to the position and features of Σ.

### 3.5.1 Constructions with Only One *Have*

In both varieties, it is also possible to have only one form of *have* in each clause. Rather than proposing that MSO is optional in SEF and DE, I will show that the spell out of only one *have* arises from *have* appearing in only one position, hence MSO is not an option.

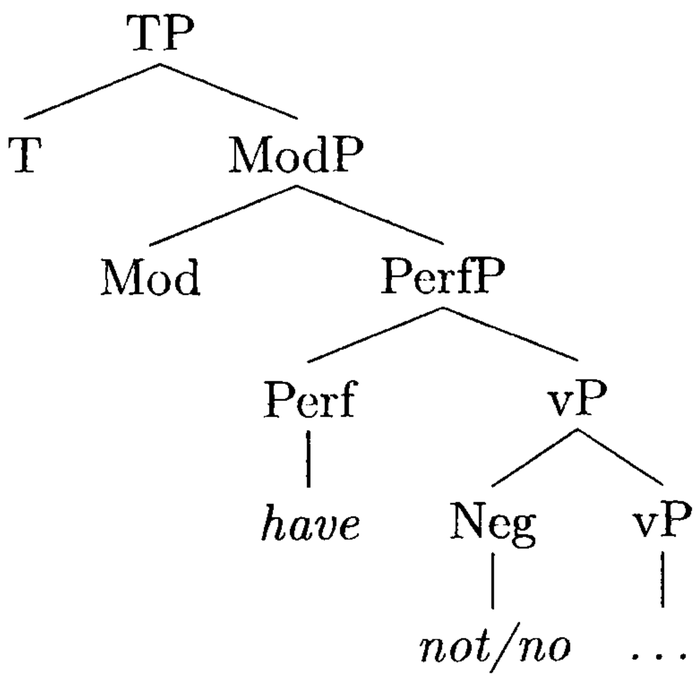
Both SEF and DE allow negation to occur below non-finite *have*. Negation in these instances is constituent and not sentential, as shown by the negative polarity of the following tag question:

(161) DE: He could have not gone, couldn't he?

(162) SEF: He could have no gone, could he no?

As negation in Σ is interpreted sententially in SEF,[41] I propose that negation in these examples, which is interpreted as constituent negation, is adjoined to vP.

(163)




Σ is not required to host negation and is absent from the clause, meaning that non-finite *have* raising to Σ is not possible. Therefore, it seems that MSO is only possible when Σ is present.

[41] See the following section for a discussion of the interpretation in DHCs in the two varieties.

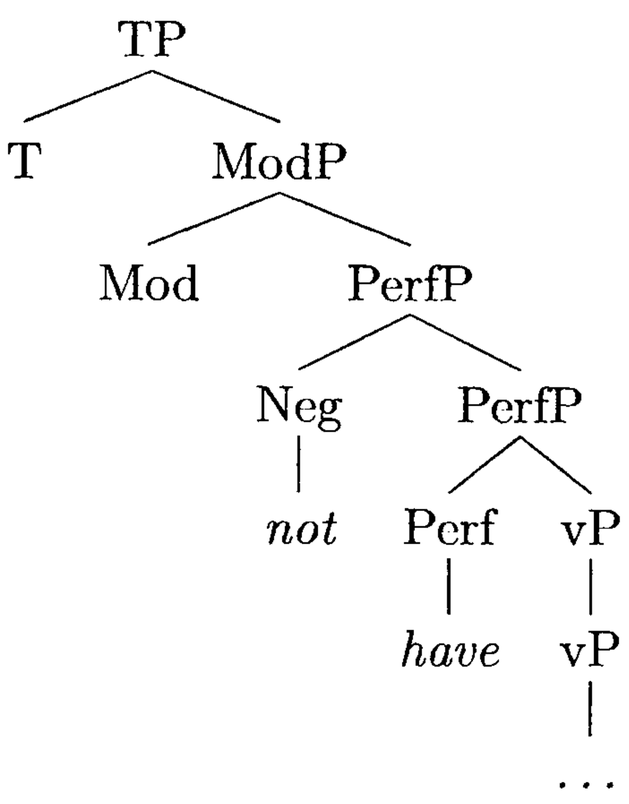
The occurrence of negation above *have* can also be accounted for in a similar framework. In these cases, negation is also interpreted as non-sentential, as shown by the negative tag:

(164) SEF: He could(uf) no have gone, could he no?

(165) DE: He could not have gone, couldn't he?

As negation occurs to the left of *have*, it must be adjoined to a higher projection than vP - PerfP.

(166)




Again, constituent negation, unlike sentential negation, is not instantiated in Σ, thus Σ is absent and *have*-raising does not occur. MSO is, therefore, not possible as there is only one form of *have* present in the derivation.

### 3.5.2 Negation in DHCs

Up to this point in the chapter I have not offered an analysis of negation in DHCs. There are a number of facts about negation in DHCs which must be considered. Firstly, double *have* is not permitted to occur with clitic negation. Secondly, although negation appears to be in the same position in SEF and DE, negation takes wide scope in SEF and low scope in DE.

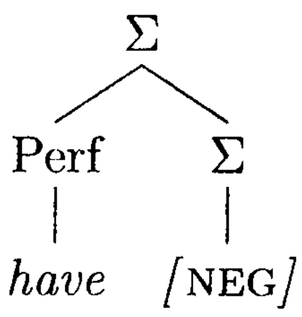
(167) SEF: *He coulduf no 've done it, but he did.

(168) DE: He could've not 've done it, but he did.

This section will focus on the structural position of negation in the clause, and the differences between the clitic and full forms of negation.

Following arguments presented in Chapter 2, I have assumed that sentential negation is instantiated in Σ. Thus, when *have* raises to Σ in DHC dialects (see section 3.4.2), it occurs in the same head position in which negation is marked. The structure of *Sigma* is as follows:

(169)




In this framework, the scope of negation in SEF can be easily accounted for; negation occurs in Σ (the position associated with sentential negation) and thus takes sentential scope.

In DE, the scope of negation is not so straightforward; negation appears to be in the position associated with sentential negation, yet it takes low scope. As shown in section 3.1.1.3, this is also the case in declaratives with only one form of *have*; where SBSE can interpret full form negation as sentential, this is dispreferred in DE:

(170) a. SBSE: He could not go, could he?
b. DE: He could not go, couldn't he?

Perhaps the answer to the DE puzzle is that it is not the structural position of negation but the expression of negation that determines the interpretation which a sentence receives. For instance, if negation appears as *n't* it takes wide scope, while negation realised as *not* takes narrow scope. Double *Have* Constructions which are not permitted with clitic negation thus receive narrow scope only.[42]

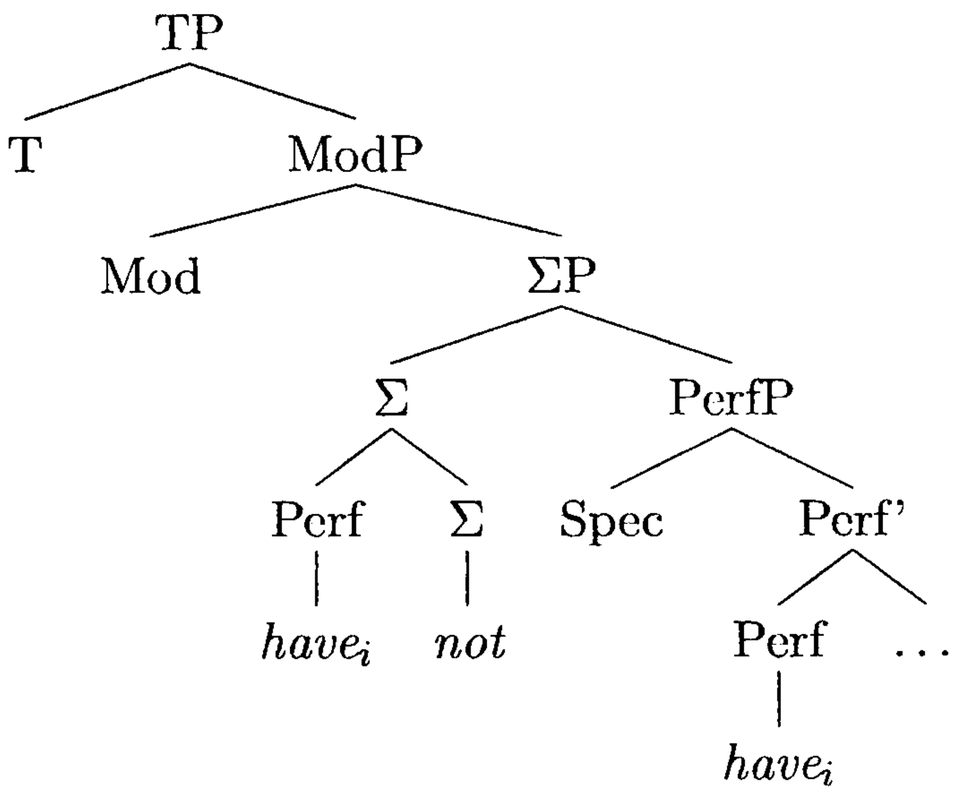
If DHCs are carefully considered, the fact that clitic negation cannot occur is expected as clitic negation only occurs following a finite auxiliary. Although *have* has raised above Σ, thus occurring to the left of [neg], it is not a finite verb and thus should not be followed by clitic negation. This leads to a further problem which, as yet, has not yet been resolved - the fact that non-finite auxiliaries are permitted to raise.

[42]This is consistent with arguments presented in Chapter 2, in which I proposed that the spell out of negation as a clitic or a full form took place in the phonological component, i.e. that there is no syntactic difference between the full and clitic forms of sentential negation.

### 3.5.3 Raising to Σ

A feature of the Multiple Spell Out Analysis of Double Have Constructions that, unfortunately, will not be fully resolved in this thesis is the issue of non-finite auxiliaries raising to Σ. As mentioned in section 3.4.2, it is unusual to propose that non-finite auxiliaries raise, therefore in this section I will present a way in which to proceed with the account of the raising of non-finite *have*; I will suggest that this is related to the position of Σ and the operations required for the derivation to survive. Specifically, I suggested in Chapter 2 that auxiliaries raise to Σ in order to check [EMPH] and/or [NEG] features. This would usually be done by a raising the finite verb (in this case, the modal verb), but as the modal is inserted above ΣP this is not possible. Therefore, this licensing must be done by another auxiliary: non-finite *have*.

(171)




In the tree above, *have* is forced to raise to Σ to check the [NEG] feature. The result is a higher copy and a lower copy of *have*, both of which are phonetically realised. The conditions on spell out and deletion of one or both forms of *have* were discussed in section 3.4.2.

### 3.5.4 Summary

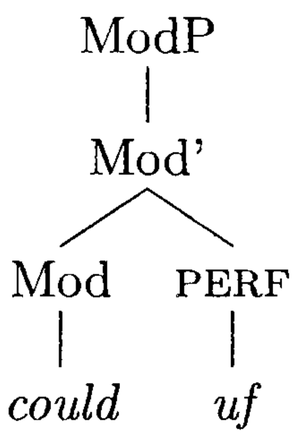
In this part of the chapter I have addressed some issues raised by the investigation and analysis of DHCs in SEF and DE. I have shown that the position of negation to the right of a non-finite auxiliary accounts for the fact that negation occurs in its full form; in English, clitic negation is only found to the right of a finite auxiliary. Additionally, I proposed that DE speakers prefer to use the full form of negation to signal low scope or constituent negation, and to reserve the clitic form for sentential negation.

## 3.6 Conclusion

This chapter presented new empirical evidence in the area of English auxiliaries; it focussed on the use of Double *Have* Constructions in two dialects, Scottish English in Fife and Durham English, and came to the conclusion that these constructions could be accounted for syntactically using an analysis of Multiple Spell Out proposed by Nunes (2001). Prior to this, I showed that it was not possible to analyse the higher form of *have* as the complementiser *of*, as suggested by Kayne (2000). I also rejected an approach to the multiple realisation of copies proposed by Grohmann (2000) on the grounds that it referred only to XP movement and could not be extended to head movement. While the Multiple Spell Out approach was sufficient to account for the data from Durham English, Scottish English in Fife was accounted for in two stages: (i) the option of merging the modal *coulduf* into the derivation, and (ii) the Multiple Spell Out of *have*.

The presence of *coulduf* in the SEF lexicon was justified in section 3.3 where I presented data from SEF in which inversion of *coulduf* takes place. I suggested that SEF differs from other varieties of English in that it has, alongside regular modals in the lexicon, a modal verb *coulduf* which is marked with a [PERF] feature. At Morphological Structure the [PERF] feature is fissioned off the modal, giving the phonological realisation *coulduf* at PF (see section 3.3 and Halle and Marantz (1993)):

(172)




Thus, a parameter of variation between SEF and other varieties such as DE and StE is found in the structure of the lexicon: SEF has an extra lexical item, *coulduf*, which is not available in other varieties.

The Multiple Spell Out of *have* was shown to be composed of the following stages:

- the raising of *have* to $\Sigma$ to check [EMPH] and/or [NEG] features,
- the reanalysis of *have* and *not* (in $\Sigma$) as a morphological word, making *have* invisible to the LCA so it is not deleted by the application of Chain Reduction,
- the phonological realisation of *have* in $\Sigma$ and *have* in Perf.

By using a MSO analysis to account for DHCs, few changes must be made to analyses of the English auxiliary system. Upon initial presentation of the data, it seemed that it would be necessary to allow the possibility of merging *have* into the derivation twice, but this was avoided in the MSO analysis. The data presented in this chapter showed that two minor modifications to the analysis of auxiliaries proposed in Chapter 2 are required: (i) ΣP must be allowed to occur below ModP in DHCs (following suggestions by Laka (1990)) and (ii) non-finite *have* must be permitted to undergo raising to Σ.

As well as providing syntactic accounts of the non-standard phenomena presented in this thesis, a major aim of this work was to uncover some of the parameters along which dialects may differ. In this chapter, I showed that there is variation in three areas:

- The structure of the lexicon.
- The position of functional heads within the clause.
- The morphological reanalysis of a complex head to a compound word.

The first of these points of variation derives a difference between individual DHC dialects on the one hand, and DHC and non-DHC dialects on the other, i.e. the structure of the lexicon is not necessarily the same in all DHC dialects. The second and third points, however, are the key to the variation found between dialects that allows DHCs and those which do not. It is the position of Σ and the morphological reanalysis which lead to the eventual multiple realisation of *have* in SEF and DE.

This link between dialect variation and the structure of the lexicon will be a theme continued in Chapter 4 where I will show that the structure of the lexicon plays a significant role in the variation found within Double Modal dialects, and also in the variation found between Double Modal and non-Double Modal dialects.

# Chapter 4

# Double Modals in American English

## 4.1 Introduction

In Chapter 1, I made the statement that the syntactic studies carried out in non-standard dialects of English are few when compared to those in Standard English and comparative syntax. The number of studies available on Double Modals alone seem to undermine this statement. However, when compared to, say, work on a Standard English construction such as relative clauses, the Double Modal literature does not seem so vast, though Double Modals are probably the most studied non-standard variant in English.

This chapter will focus on Double Modal constructions (henceforth DMs) in varieties of English located in the southern states of America. Double Modals appear to be instances in which two modal verbs co-occur within what looks like a single clausal structure, as shown in (1):

(1) a. I don't think I have any grants you might could apply for.
(='I don't think I have any grants that you might be able to apply for')
b. He mightnae could have done it.
(='It is possible that he was unable to do it')
(examples from Di Paolo (1989) and Brown (1991) respectively)

DMs have been chosen for study for a number of reasons. Firstly, there are numerous accounts of DMs in the literature, but no account of DMs in the Minimalist framework and no account which can provide a satisfactory account of the data. Secondly, like Auxiliary Contraction (see Chapter 2) and Double *Have* Constructions (see Chapter

3), DMs appear to present a problem for analyses of the English auxiliary system that have been based on Standard English data. The idea that DMs are combinations of two modal verbs provides an instant challenge to the idea that there is space in the clause for only one modal verb (whether that modal verb is inserted in T, or undergoes raising to T from its merge position in ModP). Double Modals also appear to challenge the idea that there may be only one finite verb in each clause.

In investigating DMs, I aim to formulate an analysis of DMs in those dialects which permit them, and discover the differences between those dialects that allow DMs and those that do not. By doing this, I hope to be able to come to some conclusions about the structure of the English auxiliary system. Previous accounts of DMs have suggested that only one of the modals in a DM is a 'true' modal - the other is treated as an adverbial element (Labov 1972, Battistella 1991), although this idea has been challenged many times (Di Paolo 1989, Nagle 1994). One of the main aims of this chapter is to show that in the variety of English spoken in Arkansas, the first modal is indeed an adverb (see section 4.3). This is confirmed by the behaviour of both modals in negative and interrogative contexts. A contrast to Arkansas English will be provided in section (5), where I will show from the formation of *wh*-questions that in an idiolect of Tennessee English, both elements in a DM are true modal verbs.

Double Modals are widely attested in Southern dialects of the United States (see Whitley 1975, Di Paolo 1989, Mufwene 1994), and are also attested in varieties of Northern and Scottish English (see McDonald 1981, Brown 1991, Beal 1993). According to Nagle (1995, 209), 'the historical home of the current "Double Modals" would appear to be in Scotland and Scots English (Montgomery 1989) since Scots speakers settled in great numbers in northern Ireland in the seventeenth and eighteenth centuries, and later generations migrated from there to the American South.' Nagle states that DMs are probably unrelated to the combinations of modals used during the Middle English period as the most commonly occurring DM in the Middle English period, *shall may*, does not occur in current DM dialects, and other combinations of modals were infrequent in Middle English. I have chosen to focus on AmSE in this chapter as there is a large amount of data in the literature, which can be compared with data I have collected from speakers of AmSE. To provide a more complete account of the phenomenon of DMs, in the following chapter I will go on to investigate DMs in Scottish English in Hawick (SEH) to uncover the differences between DM constructions in AmSE and SEH, and to discover the syntactic restrictions at work in different DM dialects.

DMs are a dialectal phenomenon deemed unacceptable in Standard varieties of British and American English, and the DM data suggests that all DM dialects do not have the same syntactic structure. The variability like that found within and across DM dialects raises interesting questions about the nature of variation. Understanding the underlying difference(s) between DM dialects and non-DM dialects is a possible way to see the ways in which dialects may differ from one another. According to Di Paolo

(1989, 196-7), 'some Northerners who migrate to Texas begin to use DM's within a year of their arrival, thus indicating that Northern English can easily accommodate DM's...[suggesting that] the grammars of these dialects must differ minimally.' An investigation into the structure of DMs is thus a simultaneous investigation into the 'dialectal parameters' of variation.

This chapter is organised as follows: in section 4.2 I will discuss some of the previous analyses of DMs in AmSE; in 4.3 I will present data and an analysis of DMs from a dialect of English spoken in the American state of Arkansas; and, finally, in section 4.4 I will contrast the data and analysis from section 4.3 with that from a Tennessee idiolect.

## 4.2 Previous Accounts of Double Modals

There are many accounts of Double Modals in the literature; some concentrate on the history of DMs (Montgomery 1989, Nagle 1994; 1995), whilst others provide analyses to account for the data that has been collected (Boertien 1986, Di Paolo 1989, Battistella 1991, Mufwene 1994). There are three major lines of analysis in the investigation of DMs:

- Double Modals are not an instance of two separate modals, but a single lexical item analogous to compound words (Di Paolo 1989).
- Both elements in a DM are modals which appear under a single verbal node (Boertien 1986, Mufwene 1994).
- Double Modals are not instances of two modals at all - one of the modals is an adverbial element (Battistella 1991).

In this part of the chapter I will provide a critical assessment of these syntactic accounts of DMs in AmSE that have been presented in the literature.

### 4.2.1 Double Modals as Single Lexical Items

The data used by Di Paolo (1989) was collected from 62 Texan informants using tape recorded interviews and questionnaires. This data was supplemented by 180 items collected from Texan informants. Using this data, Di Paolo (1989, 196-7) arrives at the conclusion that 'since DM's are intelligible to speakers of single modal dialects [...and as] some Northerners who migrate to Texas begin to use DMs within a year of their arrival [...] the structure of DM dialects must be compatible with those of single

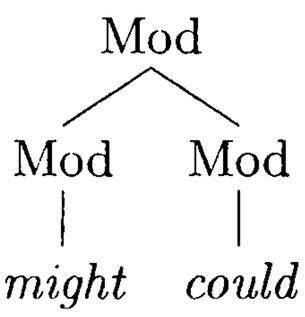
modal dialects.' This implies that DM dialects are not vastly different from non-DM dialects.

Di Paolo (1989) sees the existence of DMs as a problem for analyses of English auxiliary verbs, because the iteration of modal verbs in DM dialects is not permitted by analyses of the auxiliary system that have been formulated based on StE data. Thus, Di Paolo aims to provide an analysis of DMs which allows a direct comparison between the use of single modals in non-DM dialects and the use of DMs in those dialects which allow them to occur. She immediately rules out an analysis involving Phrase Structure rules, whereby rules which only allow one modal per clause would be extended to allow two or more in DM dialects; and an analysis in which modals are simply seen to have stem forms like main verbs. Her reasoning behind the rejection of these analyses is quite simple: basically, these analyses incorrectly predict that a DM is formed by combining any two modals, and thus offer no explanation for the complex restrictions on combining modals to form a DM.

#### 4.2.1.1 Di Paolo's Analysis

Di Paolo (1989, 214) proposes that 'DM's are only an apparent, but not a real variation of the prohibition against iterated Aux verbs, and that they are not a problem for syntactic theories of the auxiliary system of English.' She suggests that the syntactic structure of the auxiliary system of a DM dialect is no different from that of non-DM varieties; that is, that DMs are not derived syntactically, by the iteration of a modal head, but are lexically derived (i.e. they are single lexical items). Di Paolo does not suggest a syntactic structure for DMs, but from her discussion it is reasonable to assume that DMs would form a complex head:

(2)




She claims that this analysis of DMs is supported by the fact that the behaviour of DMs can be compared to the behaviour of other multi-word lexical items. For example, like DMs, both English V-Prt and V-Adj constructions are non-productive; with respect to V-Adj combinations, Di Paolo argues (presumably some allowance must be given for semantic restrictions), which is not the case. As Green (1970) and Dowty (1978) point out, while *hammer flat* is possible, **hammer round* is not.

It is clear from any set of DM data that there are some restrictions on how a DM may be formed. Di Paolo (1989) states that, given the number of modals (nine) and quasi-modals (four) used in DM dialects, the predicted number of DMs should be 156 (13x12). The fact that there are actually only 25 possible DMs in her data (shown in the table below) indicates that the combination of modals to create a DM is restricted, meaning that it is not possible to simply pair any two modals together.

| | | | |
|---|---|---|---|
| may could | may oughta | can might | may used to |
| may can | might can | used to could | might supposed to |
| may will | might should | musta could | might've used to |
| may should | might would | would better | may need to |
| may supposed to | might better | could might | better can |
| should oughta | might had better | oughta could | might woulda had oughta |
| might could | | | |

Table 4.1: Actually Occurring Double Modals (taken from Di Paolo (1989, 197, her table 1).)

Following her assumptions about V-Adj constructions (that if these were syntactically formed any adjective would be expected to follow any verb), Di Paolo claims that the restrictions on the combination of modals can be accounted for if DMs are analysed as single lexical items available in the lexicon alongside regular modals. However, this does not capture the fact the first modal is usually *might* or *may*.

Di Paolo (1989, 206) makes a very controversial claim regarding the tense of DMs; she argues that 'both modals of a DM show tense specification in past contexts in a manner similar to single modals in such contexts'. Essentially, Di Paolo is suggesting that both modals are finite. This is expected if the modals are generated as a complex head under Mod, and it is thus crucial to her analysis of DMs as single lexical items that she can support this claim.

According to Di Paolo, the fact that *was*, *could* and *might* are found to be more acceptable than the present tense forms in the following examples is evidence that both *could* and *might* are tensed:

(3) I talked to Jim just before he left for Dallas last week.
  a. He really thought that he was gonna get there late.
  b. He really thought that he is gonna get there late.

(4) a. It scared him because he might've been killed.
  b. It scared him because he may have been killed.

(5) The bomb was gonna go off in thirty seconds and he was right next to it.
  a. He knew that he could get killed if he didn't do something fast.

b. He knew that he can get killed if he didn't do something fast.

(6) a. It scared him because he could have been killed.
b. It scared him because he can have been killed.

(7) I talked to Jim just before he left for Dallas last week.
a. He thought that he could get there in time for his sister's wedding.
b. He thought that he can get there in time for his sister's wedding.

She points out an argument by Labov et al. (1968) who suggests that *might* is tensless to explain the fact that clauses with *might* require *do*-support.

(8) She still might don't like it.

According to Di Paolo, as this is not acceptable to white Texas English speakers, *might* could, therefore, be tensed. However, (8) is also predicted in analyses of DMs where *might* is an adverb.

Di Paolo's main argument for both modals in a DM being tensed comes from data corrected by informants.

(9) a. It scared him because he may could have been killed.
b. It scared him because he may can have been killed.

She claims that if both modals are sensitive to tense, tense-matched forms like that in (9b) should be preferred over tense-mixed forms like that in (9a). This is not supported by her data, however, as the tense-mixed form *may could* is actually accepted by 53.2% of informants. This is not a good result for Di Paolo, but she attempts to maintain her claim that both modals are tensed by suggesting that 'if we consider that informants had to do very little in order to agree to *may could* relative to the effort it took to produce corrections to the sentences presented to them, then the large number of corrections provide evidence that tense-matched forms are more acceptable than the tense-mixed forms' (Di Paolo 1989, 210). Rather than support her analysis, this argument seems to undermine her data. It is possible that there are other reasons for the acceptability of *may could* without assuming that the informants simply failed to correct it. For instance, as she suggests, perhaps the tense-mixed form *may could* is more acceptable than the tense-matched form *may can* because at least the former shows some form of past tense marking.

In general, Di Paolo's arguments in favour of both modals being tensed are somewhat weakened by the results compiled from the data. Basic correction tasks like changing

*may can* to *may could* seem to suggest that the second modal is sensitive to tense (i.e. is finite) but say very little about the first modal. Di Paolo's argument that the first modal, as well as the second, is tensed seems especially weak in light of the fact that *may* and *might* are not sensitive to tense for most speakers of English. She points out that for many speakers, either *may* or *might* can be used in examples like the following:

(10) I'm not sure what the problem was. But he ?may/might have had too much to eat before the race.

The acceptability of (10) with *may* could be taken as evidence that *might* and *may* are tenseless modals. This is direct evidence against Di Paolo's suggestion that both modals are tensed and may lead to the answer to the DM puzzle. As the first modal in a DM in AmSE is typically *may* or *might*, perhaps the tenseless nature of these modals allows for insertion of another *tensed* modal verb into the clause. The status of the elements in a DM will be explored more fully in section 4.4.

Another test for tense that Di Paolo uses is to consider whether the first modal varies within past or non-past contexts. She presents the data in (11) and (12) and argues that 'if the second modal is *can* in this past tense context, the results are DMs that are of equally low acceptability for either first modal. But if the second modal is *could*, the results depend on whether it [the first modal] is in the present tense' (Di Paolo 1989, 211-212).

(11) a. It scared him because he may could have been killed. (21/60 = 35.0%)
b. It scared him because he may can have been killed. (2/60 = 3.3%)

(12) a. It scared him because he might can've been killed. (0/61 = 0.0%)
b. It scared him because he might coulda been killed. (44/60 = 72.1%)

However, it seems highly likely that this might not be related to tense at all but to the fact that for most AmSE DM speakers, *might could* is the most frequently used DM.

Di Paolo's arguments for both modals being tensed are not strong, and lend little support to her analysis of DMs as single lexical items. I will now examine more data to discover whether there are particular properties of DMs that can be satisfactorily accounted for in Di Paolo's analysis.

#### 4.2.1.2 Applying Di Paolo's Analysis to the Data

To determine whether Di Paolo's analysis is correct, I will examine her data for particular constructions which would support her analysis. If DMs are single lexical items

we would expect to find the following patterns in the data:

- Adverbs will not intervene between the two modals.
- Both modals will invert in interrogatives.
- Negation will appear after the second modal; it will not occur between the modals.

This is not the case; in Di Paolo's data there are instances such as (13a) and (13b) in which DMs are separated by adverbs like *just* and *still*, (14) in which modals undergo inversion as a non-unit and (15) in which modals can be separated by the negative marker *not*.

(13) a. I might just couldn't see it.
b. If we had known, we may still could have done it.

(14) Heather, could you might find you a seat somewhere?

(15) I thought maybe I better put it [her hearing aid] on (or) I might not could understand you.

Di Paolo attempts to account for the non-unit-like behaviour of DMs by comparing it to the non-unit-like behaviour of other multi-word lexical items. For examples, in V-Prt constructions it is possible to separate the V and the Prt with an intensifying adverb like *right*:

(16) a. It broke right down.
b. Scott came right back.

In V-Adj constructions it is possible to add inflections to the verb and adjective and to separate the verb and adjective:

(17) a. Mary hammered it flatter than ever today.
b. He wiped it cleaner than I thought I could get it.

While the separation of DMs can be deemed similar to the separation of V-Adj and V-Prt constructions, the behaviour of DMs in negative and interrogative contexts seems far too complicated to be accounted for in an analysis in which DMs are assumed to be single lexical items. For instance, negation does not always occur in the same position

for all Texan speakers and it is possible to invert either one or both modals in a yes-no question.

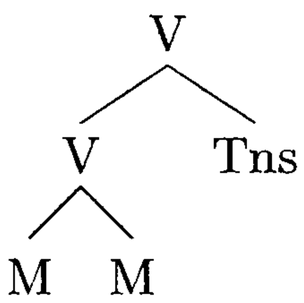
As the properties of DMs predicted by Di Paolo's analysis are not found in her data, her account of DMs will be rejected.

#### 4.2.1.3 Mufwene's (1994) Account

Mufwene (1994) uses data collected by Di Paolo (1989) to formulate an analysis of DMs in AmSE. He claims that Di Paolo's analysis of DMs cannot be correct, as DMs do not behave like a single lexical item in all contexts (see (13), (14) and (15) above). Mufwene's aim is thus to provide an analysis which can account for the data more successfully than the analysis suggested by Di Paolo (1989). The main question that Mufwene asks about DMs is 'what morphosyntactic constraints license them [?]' (Mufwene 1994, 105).

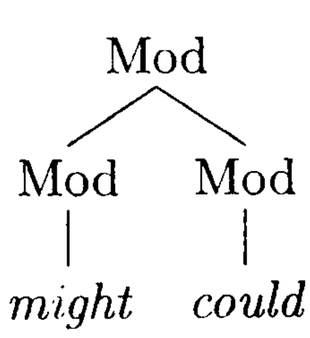
Mufwene (1994) states that DMs in the same tense are more acceptable than those involving modals of different tenses (see section 4.2.1 and Di Paolo (1989)). He concludes from this that AmSE allows two verbs to be attracted to Tense, thus forming a double verbal node.

(18)




As a result, Tense is therefore distributed on both modals. The structure in (18), above, is very similar to that assumed in (2), repeated below as (19), by Di Paolo (1989).

(19)



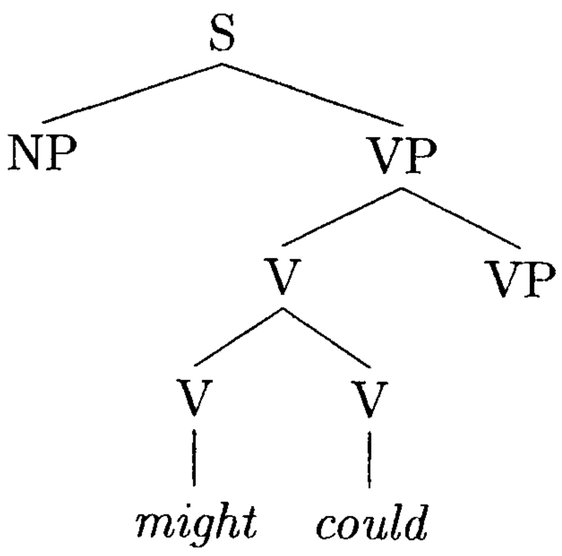

As a result of its similarities to the structure proposed by Di Paolo, Mufwene's analysis also makes predictions that are not supported by the data, i.e. that negation and ad-

verbs should not intervene between the two modals, and that both modals should invert in interrogatives. Mufwene's analysis of Double Modals will, therefore, be rejected.

#### 4.2.1.4 Boertien's (1986) Account

Boertien (1986) presents two different constituent structures for DMs and argues that the first modal is a true modal, contrary to some suggestions. For DMs like *might could*, he gives the following structure:

(20)




Again, this is very similar to the proposals made by Di Paolo (1989) and Mufwene (1994) with one major difference: only the second modal is marked for tense. He gives the following data as evidence:

(21) a. *It scared him that he can have been killed yesterday.
b. It scared him that he could have been killed yesterday.

(22) a. *It scared him that he might can have been killed yesterday.
b. It scared him that he might could have been killed yesterday.

This contrast is good evidence that the second modal is marked for tense, yet it tells us very little about *might* as an initial modal.

(23) a. It scared him that he might have been killed yesterday.
b. It scared him that he might be killed tomorrow.

As evidence that only the second modal is tensed, Boertien appeals to negative contraction data. Negative contraction only occurs with tensed auxiliaries or modals in English, and the fact that it may not appear on first position modals can be explained if these are not marked for tense. An alternative explanation, which is equally plausi-

ble, is that *might* is a common initial modal and *mightn't* is often dispreferred in many dialects.

Prior to the presentation of Boertien's analysis of DMs, I rejected analyses by Di Paolo (1989) and Mufwene (1994). For the same reasons, I am disregarding Boertien's analysis of DMs as unsuitable.

#### 4.2.1.5 Summary

I have shown that analyses of DMs as single lexical items must be rejected on the grounds that they cannot account for the data. Di Paolo (1989, 218-219) argues that DMs should be analysed as 'Modal-Modal compounds [...and that this...] simplifies the syntax of the auxiliary system of English but requires only independently motivated machinery in the lexicon'. According to Di Paolo, support for this analysis comes from the behaviour of DMs and the ways in which this can be compared to the behaviour of other multi-word lexical items. She also backs up her argument from the existence of so-called Verb-Verb compounds such as *stir-fry*, *slam-dunk* and *drop-kick*. The behaviour of these V-V compounds, however, is vastly different from that of Modal-Modal constructions, so much so that it seems to provide evidence **against** treating DMs as compounds. These V-V compounds, for instance, can never be separated unlike DMs which can be separated in a wide range of contexts as shown in examples (13), (14) and (15) above.

Mufwene proposes a similar analysis in which both modals are attracted to Tense, forming a double verbal node. Boertien, too, proposes that both modals occur under the same verbal node. If this is the case, inversion would be expected to target either both modals (by raising the V head which dominates both modals) or only the first modal, as this is closer to T than the second. However, many speakers reject inversion of both modals as a unit.

Overall, the analyses of DMs as single lexical items proposed by Di Paolo and Mufwene would perhaps be more plausible if it were not possible to separate DMs in a range of contexts including in negative and interrogative clauses. With the data Di Paolo provides, however, the analyses provided by herself, Mufwene and Boertien do not seem appropriate, and will be rejected. I will now review an account proposed by Battistella (1991) in which *might* is analysed as an adverbial modal.

### 4.2.2 Battistella (1991): *Might* as an Adverbial Modal

Battistella (1991) focuses on the use of *might could* in AmSE.[1] His main aim is to

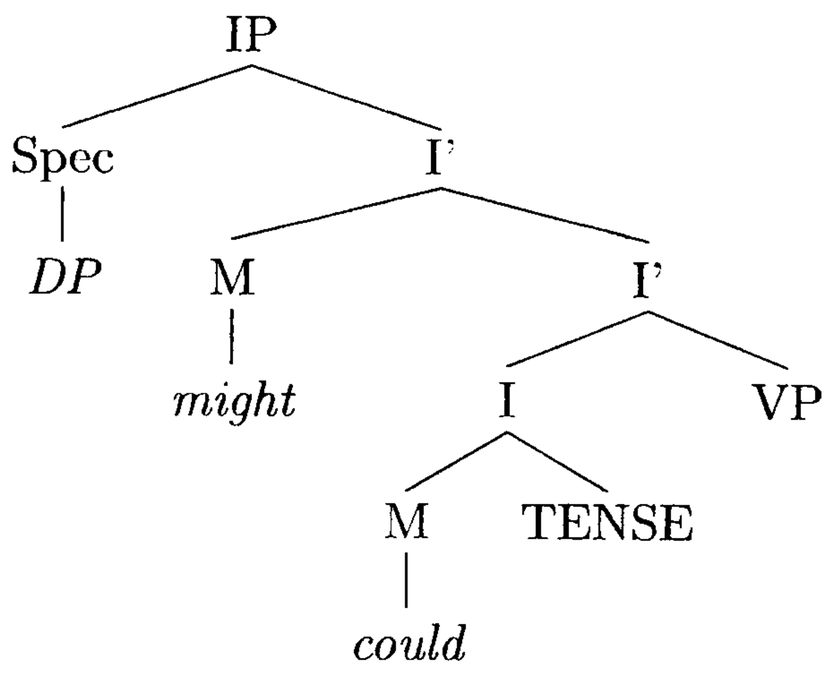
[1] He refers to this variety as 'Southern States English (SSE)', but I will refer to it as AmSE in order to be consistent throughout the chapter.

analyse the order of negation and auxiliaries within a DM construction in order to show that DMs support the treatment of negation proposed by Baker (1991).

#### 4.2.2.1 Battistella's Analysis

Battistella (1991) states that *might* should be treated not as an adverb nor as an operator, but rather as 'an adverbial modal which modifies *could*.' In terms of syntactic structure, Battistella assumes that *might* is left-adjoined to I' as shown in the following tree:

(24)




To derive the correct word order in negative sentences, Battistella adopts Baker's (1991) rule of Auxiliary Shift. Baker (1991) suggests that auxiliaries may be shifted leftwards across preceding adverbs, including *not*. The fronting of tensed auxiliaries is optional after adverbs like *seldom* or *never*, but obligatory in sentences like (25):

(25) Fido *will* probably never even t be given a biscuit.

Baker suggests that, from an input such as (26), where [+special] indicates an auxiliary or copula rather than a main verb, the output in (27) is derived by movement of the auxiliary to the left of negation:

(26) ...not ...V [+Tense]
Condition: V must be [+Special]

(27) ...V not ...

In order to account for the data fully, this rule of auxiliary fronting cannot be adopted without modification. Consider the following:

(28) You not might could...

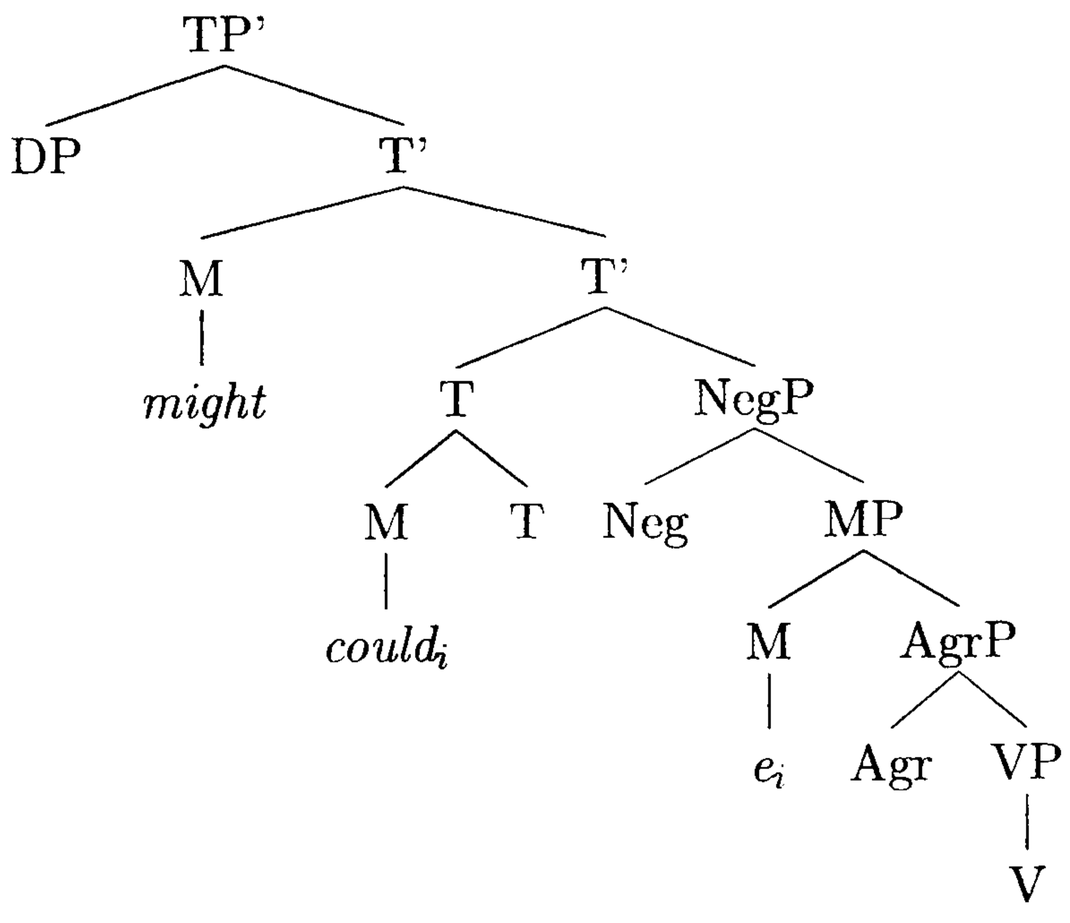
(29) a. You *might* not could...
b. You *might could* not...

With (28) being the input to the rule, both (29a) and (29b) are possible outputs given that the rule of Auxiliary Shift can occur more than once. If reapplication of the rules is obligatory, (29a) would never be produced. Therefore, Battistella proposes that the obligatory nature of shifting is not written into the rule itself but must be due to a surface filter which requires that an auxiliary must precede *not*. Reapplication must not be prevented nor required in order for (29a) and (29b) to be equally possible.

The adoption of Baker's rule of Auxiliary Shift is not straightforward. Battistella attempts to resolve one the main questions that it raises. As mentioned, in order to derive the two possible outputs where negation is concerned, *might* must undergo auxiliary shift. However, in inversion contexts *might* does not appear to have the qualities of an auxiliary, i.e. it does not undergo inversion. Why then, may it be treated as an auxiliary where negative placement is concerned but not in interrogative contexts? Battistella (1991) argues that the way around this problem lies in the fact that *tense* is relevant notion at syntactic and morphological levels. It is possible that the feature [+tense] is inherently present in *might* and *could* but that only *could* has a syntactic TENSE morpheme that heads IP.

Battistella (1991) attempts to use the framework of Pollock (1989) to account for DMs. He suggests that the modal operator of a clause heads a modal phrase MP and raises to T. For DMs, a further modal is base-generated in left peripheral position in T'- parallel to an adverb.

(30)



This analysis is able to account for a number of facts. For instance, if *might* is not in a head position then it will not block T-to-C raising of *could*. Also, if it is not a modal head, it would not be expected to raise to C in inversion contexts.

The problem with this analysis comes with the introduction of negation. If NegP occurs between TP and MP and *could* raises from M to T, this will give:

(31) a. ...might couldn't...
b. ...might could not...

But not:

(32) a. ...might not could...
b. ...mightn't could...

To derive a word order in which negation occurs in between the two modals would require either that TENSE is stranded or that TENSE is able to lower across *not*. Neither are allowed within Pollock's system. Battistella is thus unable to adopt Pollock's framework in a syntactic account of DMs.

#### 4.2.2.2 Inversion and Negation

Battistella (1991) states that three patterns of inversion are attested in DMs:

1. inversion of both modals (as pointed out by Coleman (1975) who states that *Might could he go?* is one possibility although many speakers actually reject this);

2. no inversion (although for these speakers inversion of *might* is worse than inversion of *could*); and

3. inversion of *could*. Some speakers reject inversion of either modal although *might* is more dispreferred than *could* from *might could*.

Assuming that what is inverted in questions is a [TENSE] feature, Battistella (1991, 50) argues that *could* is 'in construction with TENSE (and thus inverts),' i.e. *could* is the "real" modal of the pair. This appears to be supported by the use of *could* rather than *might* in yes-no questions.

(33) a. Could you might possibly use a teller machine?
b. Could we might stop and get a cheeseburger and nothing else?

c. Could you might move that lamp so's I could dust under it?
d. Could you might go?
e. Could you might tell me where the administration building is?

Tag questions point to similar conclusions:

(34) a. I might could do that, couldn't I?
b. *I might could do that, might couldn't I?
c. *I might could do that, mightn't I?

In negative contexts, the situation is much more complicated. Based on the data from interrogatives in which *could* inverts, *might* seems to be behaving more like an adverb than a modal. Negative contexts do not support this claim, however; *not* can occur to the right of *might* as well as to the right of *could*:[2]

(35) a. They *might not could* have gone over to the state line to get her.
b. I don't hear too well (...) I thought maybe I better put it [her hearing aid] on (or) I *might not could* understand you, so...

(36) a. I was afraid you *might couldn't* find this address.
b. You speak up or they *might could not* understand you.

This causes problems for analysing *might* as an adverb, as the order adverb-*not* is only found in a restricted subset of contexts; *not* cannot follow an adverb when that adverb follows the subject (37a), *not* can immediately follow an adverb when that adverb is located to the right of a modal verb (37b), and *not* can occur after an adverb when the fragment ADVERB - NOT is the answer to a question (37c).

(37) a. *He maybe not could come.
b. He could maybe/probably not come.
c. Could he come? Maybe not.

As (35) is most similar to (37a), and as (37a) is ungrammatical, it seems counter-intuitive to assume that *might* is an adverb.

Battistella's solution to the problem of negation occurring to the immediate right of *might* is to analyse *might* neither as an adverb or a modal but as 'something other

[2]Battistella (1991) questions whether the negation which follows *could* is constituent negation rather than sentential negation. This is unlikely when negation may appear in the clitic form when it follows *could* (constituent negation typically takes on the full form). To test if it is sentential negation, tag questions would have to be used. For now, the fact that it appears in the clitic form is evidence enough.

than the true operator modal of a tensed clause' (Battistella 1991, 52), as shown in (24) above.

#### 4.2.2.3 Summary

Battistella's analysis is flawed for a number of reasons. Firstly, he makes reference only to *might could* and not any of the other possible combinations. This does not mean that his analysis could not be applied to other combinations but there may be some difficulties in doing this. For instance, if *might* is an adverbial modal which modifies *could*, this implies that there may be other adverbial modals which may modify *could* as well as other modals such as *should* or *would*. There are two questions raised by this idea: (i) what is the set of qualities which can be used to identify adverbial modals and (ii) can a member of the set of adverbial modals also be a member of the set of true modals? As these questions will arise in my own analysis, I will not address them here but will offer a resolution in section 4.4. Secondly, if this analysis was to be updated to fit in with a Minimalist framework, a number of crucial ideas would have to be rejected. For instance, Battistella's analysis relies on the application of Baker's Auxiliary Shift rules, yet in Minimalism there are no transformational rules. Some of the generalizations based on Baker's rule could be rescued if Baker's rule is reduced to the fact that auxiliaries are forced to raise to T in order to check [TENSE] features. A further complication would arise from this, however, as Battistella's assumption that both *might* and *could* have [TENSE] features would mean that both would be available for checking. The fact that *might* is closer to T would lead to *might* undergoing inversion in interrogatives - an incorrect prediction based on Battistella's data. This would account for (17a) but not (17b). Although this is a problem it does not appear any worse than the problem with Battistella's analysis as it stands.

### 4.2.3 Summary of the Literature

In this section I outlined analyses by Di Paolo (1989), Mufwene (1994), Battistella (1991), and Boertien (1986), and showed that all of these analyses have flaws. For instance, Di Paolo (1989) claims that DMs are single lexical items, yet the data shows that DMs often fail to act as a unit; Mufwene (1994) fails to account for the fact that the second modal is affected by Negative Placement and Inversion; Battistella (1991) argues that the first modal is an adverb yet the data suggests that this is not the case; and Boertien (1986), like Di Paolo, generates DMs like *might could* under the same verbal node, which cannot account for all of their behaviour with respect to negation and inversion.

In the following section, I will present data from Arkansas English which was collected using questionnaires, and will go on to formulate a syntactic analysis of this data

in section 4.4. I will formulate an analysis of this data by addressing the particular properties of DMs in this dialect. In particular, I will focus on the position of negation and inversion patterns.

## 4.3 Double Modals in Arkansas English

DMs are attested in many different varieties of AmSE.[3] The data from the literature, and that which I have collected, suggests that different dialects appear to have different restrictions on forming DMs. Differences in the use of DMs can even be found among speakers from the same geographical region. It is thus difficult to group together large numbers of speakers from different dialect areas in order to formulate an analysis of DMs; an analysis which may be appropriate for one region, may not apply at all to another.

In this part of the chapter I will present data from a dialect of English spoken in the American state of Arkansas, and will formulate a syntactic analysis of DMs in this variety. I will argue that DMs in ArkE are not the double occurrence of modal verbs, but the combination of an adverb *might* or *may* with a modal verb.

### 4.3.1 Data Collection

In Close (1999), I collected and analysed DM data from 14 informants from different dialect areas of the Southern United States. This data was collected using grammaticality judgement questionnaires which were emailed to informants.[4] The use of grammaticality judgement questionnaires has been the most common method for collecting DM data; Montgomery (1989, 262) states that, ' Most American studies have relied entirely or largely on [... the data collection method of] direct elicitation [...] because modal combinations occur so infrequently.' This is a popular method of data collection in syntactic theory for a number of reasons. The crucial data for the syntactician studying DMs is the data which occurs most infrequently in narratives: negatives and interrogatives. Collecting data using recorded interviews would, therefore, be unlikely to include all of the data required to formulate a syntactic analysis. This is justification enough for relying on elicitation techniques to gather judgements from speakers.

Speakers were asked to rate the grammaticality of sentences: 'N' was used to indicate an ungrammatical sentence (a sentence which the speaker would never use), '?' was

[3]In the data I collected and from the literature, DMs are found in the following regions: Arkansas, Texas, North Carolina, Virginia, Missouri, Georgia, Mississippi, and Alabama.

[4]This data was not collected with the intention of being used in a PhD thesis and I must point out that this particular questionnaire was very simple. However, it does contain judgements which prove crucial in formulating a syntactic analysis of DMs, such as their use in negatives and interrogatives, and will be used where appropriate.

used to mark a marginal sentence (one which the speaker felt was not totally grammatical, nor ungrammatical), and 'Y' was used to mark a grammatical sentence. For the purpose of consistency within the thesis, and with syntax work in general, I have translated these into a standard system in which grammatical sentences are unmarked, and ungrammatical and marginal ones are marked '*' and '?', respectively. For cases where speakers gave a judgement followed by a statement such as 'this is the only possibility', I will mark the contrasting judgement as appropriate. For example, where negation is placed in a medial position (i.e. between the two modals), and this is marked as the only possibility, I may present the data as follows:

(38) a. He might not could come.
b. *He might could not come.

This is to ensure that the data is presented as clearly as possible.

In this part of the chapter I am going to investigate DMs in Arkansas English, using data elicited from four informants who were born and/or raised in this region. I realise that four speakers is a small number and, as a result, conclusions about the syntax of DMs that will be drawn from this data will be tentative. In the following sections, I will present the data collected from the ArkE speakers, focussing on the use of DMs in interrogative and negative contexts.

### 4.3.2 The Data

The data collected from the 14 speakers of AmSE showed many different patterns in the use of DMs. For instance, some speakers allowed only *might could*, while other permitted more combinations such as *might would, might should, may could*; for some speakers DMs were only used in positive declarative contexts, while others used them in negative and interrogatives also; and for those speakers who did permit DMs in negative and interrogative contexts, there were many different patterns of negative and question formation. Grouping data and/or speakers together in order to formulate a syntactic analysis of DMs is thus not an easy task. From the initial data collected from the 14 informants, four speakers from Arkansas gave similar judgments on their use of DMs. I will thus focus on this group of 4 speakers in order to come to some conclusions about the syntax of DMs in Arkansas English (ArE). I recognise the limitations of using data from such a small number of speakers, but this is preferred over grouping together data from speakers who originate from different geographical regions.

In the study of DMs in ArkE, I will focus on three main areas:

1. Possible combinations of modals.

2. The position of negation within a DM construction.

3. Possibilities for inversion of DMs in interrogatives (positive and negative).

I will discuss the data from each of these areas in turn. The overall aim is to formulate a syntactic analysis of DMs in ArkE. As different speakers from this region do not all share the same judgements,[5] it will not be possible to apply the analysis to every speaker of ArkE, or to all DM dialects in the Southern states of America.

#### 4.3.2.1 Combinations of Double Modals

As mentioned many times in the literature (see Boertien 1986, Di Paolo 1989, Mufwene 1994), accepted DMs often differ from speaker to speaker, even across speakers from the same region. Whitley (1975, 95) points out that 'all Southern lects can generate combinations of two modals in their Aux, although they vary somewhat in the particular combinations which are allowed'; he lists the following combinations and states that there is a 'gradience of acceptability, ranging from the ubiquitous *might could* to unspeakable combinations such as *can should*':

1. might could, might would, might should, might better

2. might can, might will, might ought to, used to could

3. used to would, ought to could, ought to should

4. may can, may could, may should, has got to can, had better can

5. will can, must can

6. ?*used to should, may will, might used to

7. *will may, will might, will should, can might, could might, would might, should might

According to the ArkE informants, all of the following are possible combinations of modals:[6]

- might could (4)
- might oughta (4)
- might can (3)[7]

[5]This is apparent even in data collected from a small group of informants.

[6]The number in brackets indicates the number of speakers (out of a total of four) who marked this form as acceptable.

[7]Note that only three of the informants gave a response to *might can*.

- might should (3)
- might would (2)
- might better (3)
- might had better (2)
- might've used to[8] (1)
- may could (1)
- may can (1)
- may need to (4)
- should oughta (1)
- used to could (3)
- oughta could (1)
- better can (2).

As shown by the data, DM combinations which may be acceptable for one speaker, may be rejected by another; in fact, the only true DM to be accepted by all four speakers is *might could*.[9] This supports the generalization often found in the literature that *might could* is the most commonly occurring DM combination.[10]

The difficulty faced by previous studies on DMs is also faced here: the possible combination of DMs does not appear to be affected by region, but appears to differ across individual speakers.[11] According to Whitley (1975), there is a gradience of acceptability, and the use of some combinations and not others is not random (see section 4.3.2.1 above). It will thus prove difficult to present an analysis of DMs as a whole, and for this reason I will concentrate on the most preferred combinations: *might could, might should, might would.* One aim will be to investigate the possibility of applying a single analysis to all three combinations in ArkE.

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[8]One of the informants who marked this as ungrammatical noted that *might used to have* is grammatical.

[9]When calculating the number of speakers who accept particular question and negative forms of DMs, the fact that *might should* and *might would* are not accepted in declaratives by all four speakers will be taken into account, as will the fact that one of the speakers does not permit DMs in negative and questions. This, of course, means that the number of speakers will be further reduced, which is a problem that cannot be avoided.

[10]Responses to the original questionnaire by the 14 informants showed that if speakers accepted only one true DM it was, without exception, *might could.*

[11]The exception to this is *will can* which is cited in Scots by Brown (1991) but is typically rejected by American speakers.

#### 4.3.2.2 Double Modals in Interrogatives

In DM dialects there are two main groups of speakers: those who cannot form questions with DMs using subject-auxiliary inversion and those who can.[12] I will present data from the four speakers of ArkE, and compare this with Di Paolo's data in the table below:

| Double Modal | Most common way of forming a question | % of this form |
|---|---|---|
| might could | could subject might | 81 |
| might should | might should subject | 55 |
| might would | would subject might | 63.6 |

Table 4.2: Question Formation Using Double Modals(taken from Di Paolo (1989, 216))

Di Paolo's data indicates that there is more than one way of inverting DMs to form a question, and that the most common form of inversion differs depending on the particular DM being used. For instance, the most common way of making a question with *might could* involves inversion of the second modal only, while for *might should* speakers prefer to invert both modals as a unit. The patterns of inversion outlined by Di Paolo are not typical of every DM variety. Different results are found by Boertien (1986, 297) who states that question formation rules for DMs are 'far from uniform, but at least two initial modals and nearly half of the second position modals can be inverted to form yes-no questions by one or another speaker', and by Brown (1991) who finds that only the first modal can be inverted.[13]

I will first present the results for forming questions in the DMs *might could, might should*, and *might would.*[14] In this section, it is only possible to use data from three out of the four speakers to draw conclusions about question formation, as one of the speakers does not accept DMs in interrogatives.[15]

The preferred ways for forming questions with DMs are presented in the following table:

[12]Speakers have indicated a range of different techniques in which they avoid using inverted DMs in questions. These include the use of *do*-support in a higher clause with a verb like *think*, a tag such as *right*,

(i) Do you think I might could go?

(ii) I might could go, right?

[13]The data collected by Brown (1991) from Hawick will be presented and discussed in greater detail in the following chapter, where I will present a syntactic analysis of this data to contrast with the analyses of DMs in AmSE presented here.

[14]These DMs were chosen as they are accepted by most AmSE DM speakers regardless of region.

[15]The same speaker rejects DMs in negative contexts.

| Expected question form | number of informants (out of 4) who accepted this |
|---|---|
| could subject might | 2 |
| could might subject | 0 |
| might could subject | 1 |
| might subject could | 0 |
| should subject might | 1 |
| should might subject | 0 |
| might should subject | 0 |
| might subject should | 0 |
| would subject might | 1 |
| would might subject | 0 |
| might would subject | 0 |
| might subject would | 0 |

Table 4.3: Question formation in Arkansas English

The data from ArkE shows a different pattern to that collected by Di Paolo from Texas English speakers; her data showed that *might could* and *might would* had the same preferred pattern of inversion, but that *might should* was different:

- *could subject might* was the preferred form used by 81% of speakers
- *would subject might* was the preferred form used by 63.6% of speakers
- for *might should*, *might should subject* was the preferred form used by 55% of speakers

It is not realistic to compare the ArkE data with the data collected by Di Paolo as she had many more speakers. However, although the numbers for ArkE are small, there is a preference for inversion of the second modal rather than the first in interrogatives. As shown in the 4.4 below, this is true for all three DMs tested:

| Double Modal | Most common way of forming a question |
|---|---|
| might could | could subject might |
| might should | should subject might |
| might would | would subject might |

Table 4.4: The Most Common Types of Question Formation in Arkansas English

The inversion of M2 is unexpected if both elements in a DM are modal verbs, as the raising of M2 over M1 would violate the HMC. The data therefore points toward an ADVERB-MODAL analysis of DMs in ArkE. That this is indeed the case will be discussed in more detail in section 4.4.

#### 4.3.2.3 Negating Double Modals

Again, data from only three speakers will be used in this section as one of the speakers rejects negated DMs. For the three speakers who did allow negation to co-occur with DMs, there was a strong preference for clitic negation to occur on M2, as shown in the following table:[16]

| Expected possible negative form | number of informants (out of a 3) who accept this |
|---|---|
| might not would | 0 |
| might would not | 1 |
| mightn't would notice | 0 |
| might wouldn't notice | 3 |
| couldn't might | 0 |
| could mightn't | 0 |
| might couldn't | 3 |
| mightn't could | 0 |

Table 4.5: The Most Common Types of Negative Double Modals in Arkansas English

The only other form permitted by any of the speakers was *might would not*, again with negation appearing to the right of M2.

Negation in English always occurs to the right of the finite auxiliary; in a sentence with an adverb, a modal (finite), and a non-finite auxiliary, the only permitted place for negation is following the modal: [17]

(39) a. He probably couldn't have gone.
b. *He probably could haven't gone.
c. *He probablyn't could have gone.

The distribution of negation in DMs tells us that M2 is a finite verb, and suggests that M1 is an adverb rather than a modal. This idea is supported by negative questions. Speakers were asked how they would form a question from the negative statement *I might couldn't go*. Three out of the four speakers accept the inversion of *couldn't*, and all four speakers reject the inversion of *might*:

(40) a. Couldn't I might go?
b. *Might I couldn't go?

[16]Data was not collected for *might should* in negative contexts.
[17]With the exception of constituent negation which may occur to the right of the non-finite auxiliary:
(i) He could have not gone (couldn't he?).

The negative and interrogatives data shows a strong correlation of the behaviour of DMs in negatives and in questions: M2 occurs with clitic negation, and inverts in positive and negative questions. This will be used in section 4.4 as support for a syntactic analysis of DMs in which M1 is an adverb, and M2 a modal.

## 4.4 The Syntax of Double Modals

As mentioned in section 4.1, DMs are problematic for analyses of the auxiliary system that have been formulated using StE data. As stated by Di Paolo (1989), the co-occurrence of modal verbs has been ruled out in Standard British English and Standard American English usually for one of two reasons:

1. Phrase-structure rules only allow for one modal per clause; there is no rule in which a modal may select for another modal.

2. In terms of subcategorization, modals are finite forms which are subcategorized for stem forms.

Both of these arguments amount to the same principle, namely that each clause only has one modal head and that this modal head may select for an AuxP or a VP, but not for a ModP. If this is what rules out co-occurring modals, then to rule them in appears to be simple; we simply allow for modals to select for a ModP complement. As Di Paolo (1989) points out, however, this would allow for any combination of modals and, presumably, for more than two modals per clause.[18]

If DMs can be shown to consist of a modal and an adverb, they no longer challenge analyses of English auxiliaries. The idea that DMs do not consist of two modal verbs is not a new one; a classic argument of the structure of DMs is that one of the modals is an adverb rather than a true modal. I will thus consider two possible analyses of DMs in ArkE:

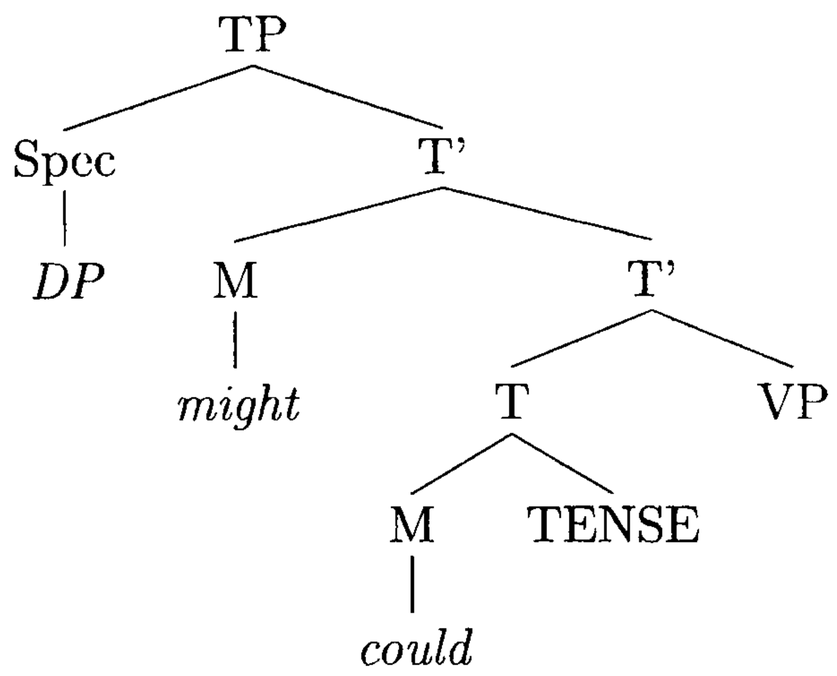
1. Both elements of a DM are true modal verbs, i.e. the structure of a DM is MODAL - MODAL.

2. One of the elements of a DM is an adverb, i.e. DMs are either MODAL - ADVERB or ADVERB - MODAL constructions.

In his analysis of DMs as ADVERB - MODAL structures, Battistella (1991, 52) proposed treating the initial modal '*might* as an adverbial modal which modifies *could*.' He suggests that *might* is adjoined to T', as shown in the following tree:

[18]This latter claim is not particularly problematic as triple modals are attested (see Brown (1991) on Hawick Scots, for instance) and infinite numbers of modals per clause could be ruled out by the same principles which allow only a finite number of auxiliaries per clause.

(41)

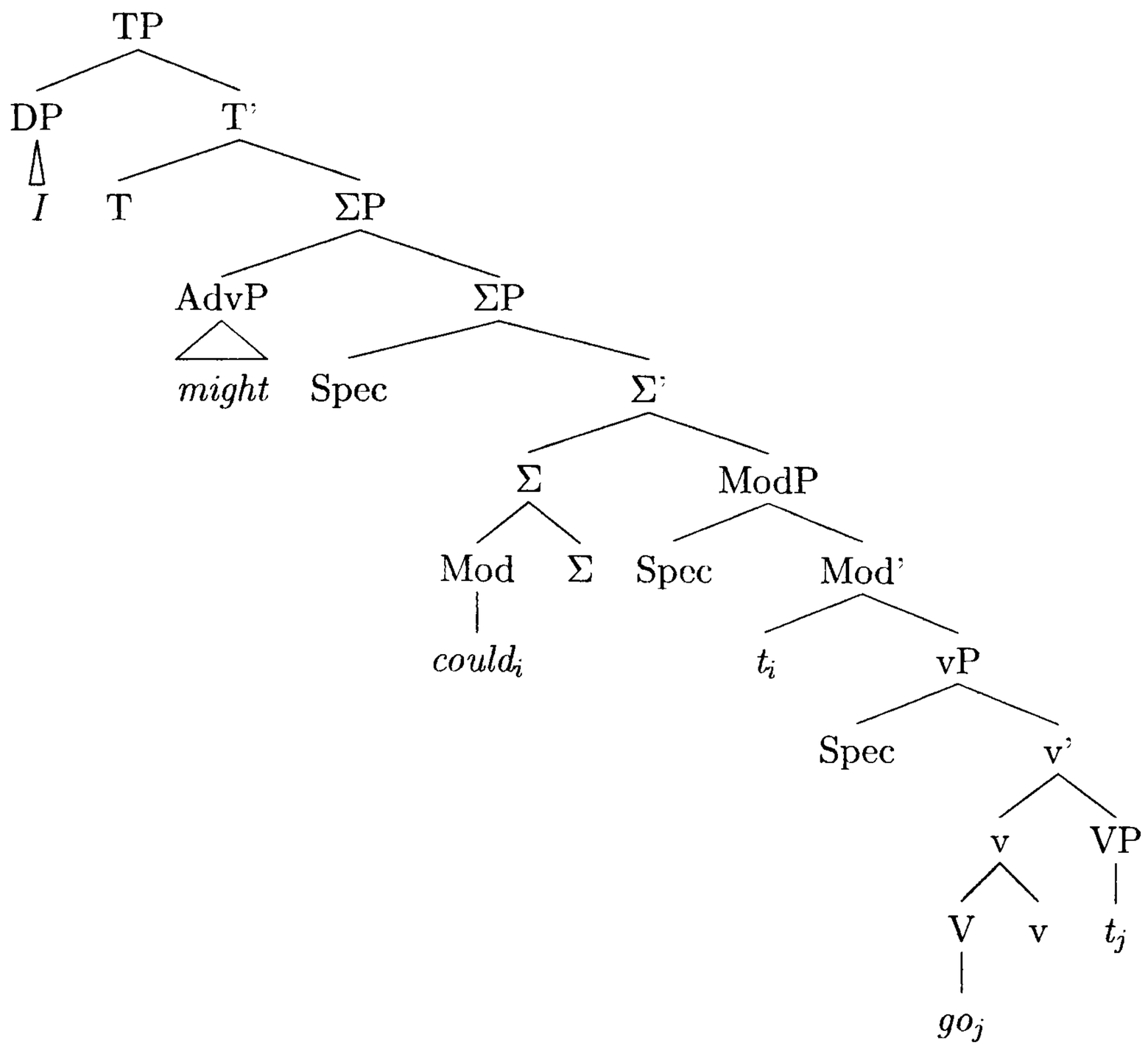



I will follow more traditional practice in assuming that adverbs are left adjoined to functional projections. I will therefore assume for an ADVERB - MODAL structure that the adverb is adjoined to the left of the projection in which the modal sits. This is consistent with the position of adverbs such as *probably*, which often intervene between a subject and modal verb:

(42) I probably could go.

In Chapter 2, I used similar data to suggest that there must be an extra functional projection (ΣP) in the clause if adverbs are able to appear in this position (if the subject is in Spec,TP, and the modal in T there is no projection to which the adverb can adjoin). Thus, an ADVERB - MODAL structure of DMs, would be represented as follows:

(43)

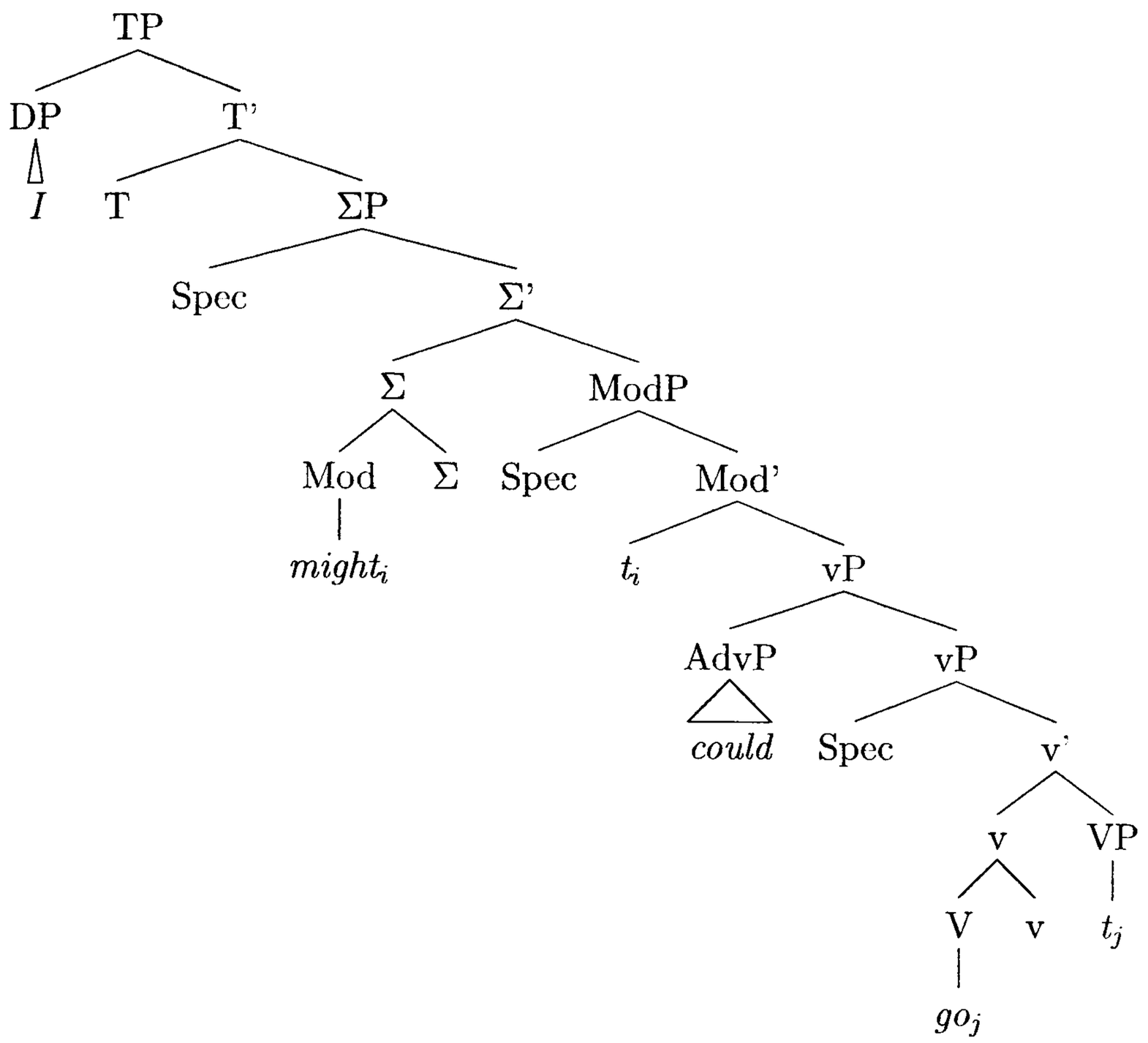



The true modal *could* is inserted into the derivation as head of ModP, and undergoes raising to Σ. As tense can be checked from Σ (see Chapter 2), *could* is not forced to raise to T.

For a MODAL - ADVERB structure, I will maintain that adverbs are adjoined to functional projections, and propose that the adverb (in this instance *could*) must be adjoined to a projection to the right of the modal (probably vP or one of the auxiliary projections):[19]

[19]For the sake of consistency, *might* has raised to Σ in (44), like *could* has in (43).

(44)




The second modal is less restricted than the first; the first modal is typically *may* or *might*, but the second can be *would, should, could*, to name but a few. As the first modal shares an interpretation with adverbs like *maybe* and *perhaps*, an ADVERB - MODAL structure seems more likely than a MODAL - ADVERB structure, but both will be investigated.

The third structure, MODAL - MODAL, which I will argue is the correct way to analyse DMs in Scottish English in Hawick in Chapter 5, will involve both elements of a DM being analysed as modal verbs, and inserted into the structure accordingly. This analysis raises a number of important issues, including the marking of tense, and the position of both modals in the clause, which will be discussed in more detail in Chapter 5.

In the three analyses there are two possible ways to analyse the derivation DMs: (i) both elements are inserted into the derivation as a single lexical unit,[20] or (ii) both elements are inserted separately into the clause structure.

The first of these possibilities is ruled out, as the elements in a DM in ArkE do not act as a unit; only the second may invert in interrogatives (45):

[20] As proposed by Di Paolo (1989) for DMs in Texas English.

(45) a. Could he might go?
b. *Might he could go?
c. *Might could he go?
(from 'he might could go')

As the inversion of both modals as a unit is ruled out, we must assume that both modals are inserted into the derivation as individual lexical items. I will now discuss the status of both elements of a DM, using the data as evidence for the rejection or justification of each of the three analyses.

### 4.4.1 Double Modals as Modal - Modal Constructions

If both elements in a DM are individual modal verbs, we might expect the data to display the following behaviour:

- In interrogatives, either modal will invert.
- In negative declaratives, clitic negation will appear on either the first or the second modal.

However, these predictions are only expected if there are no restrictions on the inversion of auxiliaries, but this is not the case: it has been noted that the movement of English auxiliaries obeys the Head Movement Constraint (Travis 1984). Thus, only the first auxiliary is permitted to invert in interrogatives:

(46) a. Could you have gone?
b. *Have you could gone?

As for the position of negation, this may turn out to be the key to solving the DM puzzle. Clitic negation in English is sentential, and restricted to occurring on the finite auxiliary:

(47) a. He couldn't have gone.
b. *He could haven't gone.

Clitic negation on a non-finite auxiliary such as *have* in the above example is ruled out because clitic negation is sentential; in (47b), however, negation is in a position in which it must have a constituent reading. Also, *have* is non-finite, and clitic negation occurs only on finite auxiliaries. In a DM construction, clitic negation should only occur on the finite modal. The position of clitic negation should, therefore, lead to some conclusions about tense in DM constructions.

Considering the restrictions on the position of negation, and those on the movement of auxiliaries imposed by the HMC, the predictions listed above must be restated as follows:

- In interrogatives, the first modal will invert.
- In negative declaratives, clitic negation will appear on the finite modal.

I will now examine the data to discover if these predictions are correct. The inversion of M1 is not borne out by the data; in interrogatives the only possibility is to invert M2:

(48) Could he might go?

This suggests that either M1 is an adverb, or that the HMC does not apply to DM dialects. The latter cannot be correct, as DM speakers obey the HMC in other constructions such as that in (46).

In negative declaratives with *might could* and *might would*, clitic negation attaches to M2:

(49) He might wouldn't/couldn't notice.

This tells us that M2 is a finite modal, but tells us little about the status of M1. From this data there are two possible conclusions that can be arrived at about M1: (i) M1 is an adverb, or (ii) M1 is a non-finite modal. The second of these suggestions is highly controversial as English modals are, without exception, always finite. Also, the first auxiliary is always said to be finite. Therefore, if we expected one of the modals to be non-finite, it would almost certainly be the second of the pair.

The fact that negation attaches to the second modal, and it is this modal that inverts in interrogatives, is good evidence for analysing M2 as a finite modal verb. The status of M1, however, is less clear; the fact that this modal never inverts or occurs with clitic negation suggests that it cannot be analysed as a finite modal verb. The question is, then, can English have non-finite modals? There is no evidence for this, so I will assume that M1 cannot be a modal, meaning that a MODAL - MODAL analysis of DMs in ArkE must be rejected.

### 4.4.2 Double Modals as Adverb - Modal Constructions

There is thus little reason to discuss the possibility that DMs are MODAL - ADVERB constructions, as it is clear from the data and the discussion above that M2 is a modal verb; as shown above, M2 behaves like a modal verb inverting in questions and occurring with clitic negation. I will thus consider the possibility that DMs in ArkE are ADVERB - MODAL constructions. Such an analysis would require little in the way of changes to the auxiliary system, aside from the addition of an extra functional head which has already been proposed on the basis of contracted auxiliaries in Chapter 2. To discover if analysing *might* as an adverb is a viable option, I will examine the DM data from ArkE, paying particular attention to the behaviour of the modals in negative and interrogative environments, contexts in which a contrast would be expected between modals and adverbs.

In ArkE, M1 is typically *may* or *might*, both modals which share similar meanings with the adverbs *maybe* and *possibly*. Brown (1991) suggests that it is possible to paraphrase the first modal, and replace it with an adverb:[21]

(50) a. He might could do it; He could maybe do it.
b. He must can do it; He can surely do it.
c. He should can do it; He can likely do it.

This has led some people (see Battistella 1991) to assume that the first modal is an adverb rather than a true modal.

There are two main reasons for supposing that M1 is an adverb: (i) it occurs in a surface position often occupied by adverbs, and (ii) is has a semantic interpretation of 'possibility' similar to adverbs like *maybe* and *possibly*:

(51) He might could do it.

(52) a. He maybe could do it.
b. He possibly could do it.

If we are correct in analysing M1 as an adverb, and M2 as a modal, the data should display the following patterns:

- In interrogatives, the second modal will invert.
- In negative declaratives, clitic negation will appear on the second modal.

[21] This statement by Brown (1991) is made in reference to DMs in Scottish English in Hawick, but can be extended to include DMs in American varieties of English.

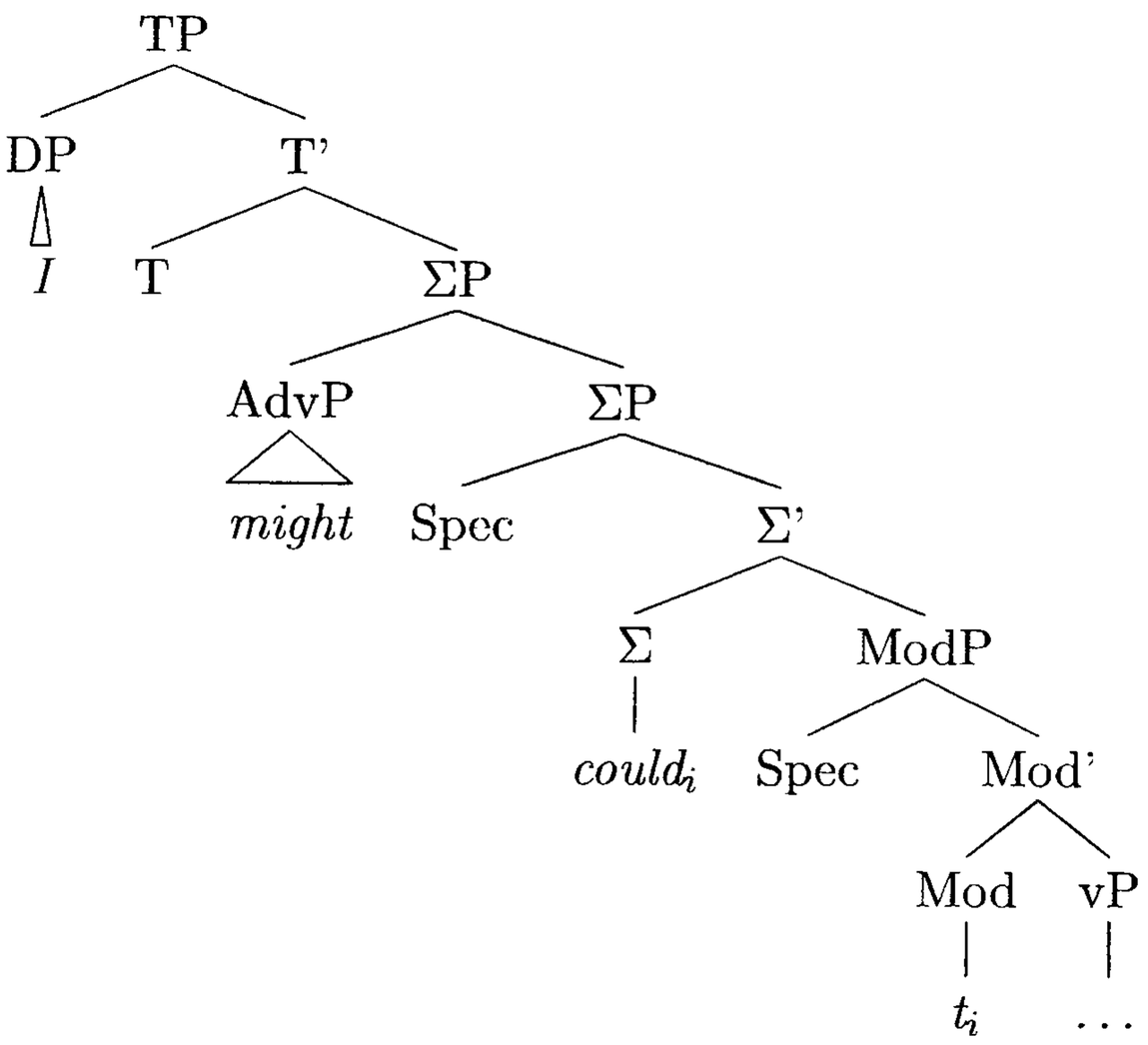
With these predictions in mind, I will now examine the data from ArkE, to determine whether it is consistent with an ADVERB - MODAL analysis of DMs.

In interrogatives, only M2 may invert in ArkE:

(53) a. Could he might go?
b. *Might he could go?
c. *Might could he go?

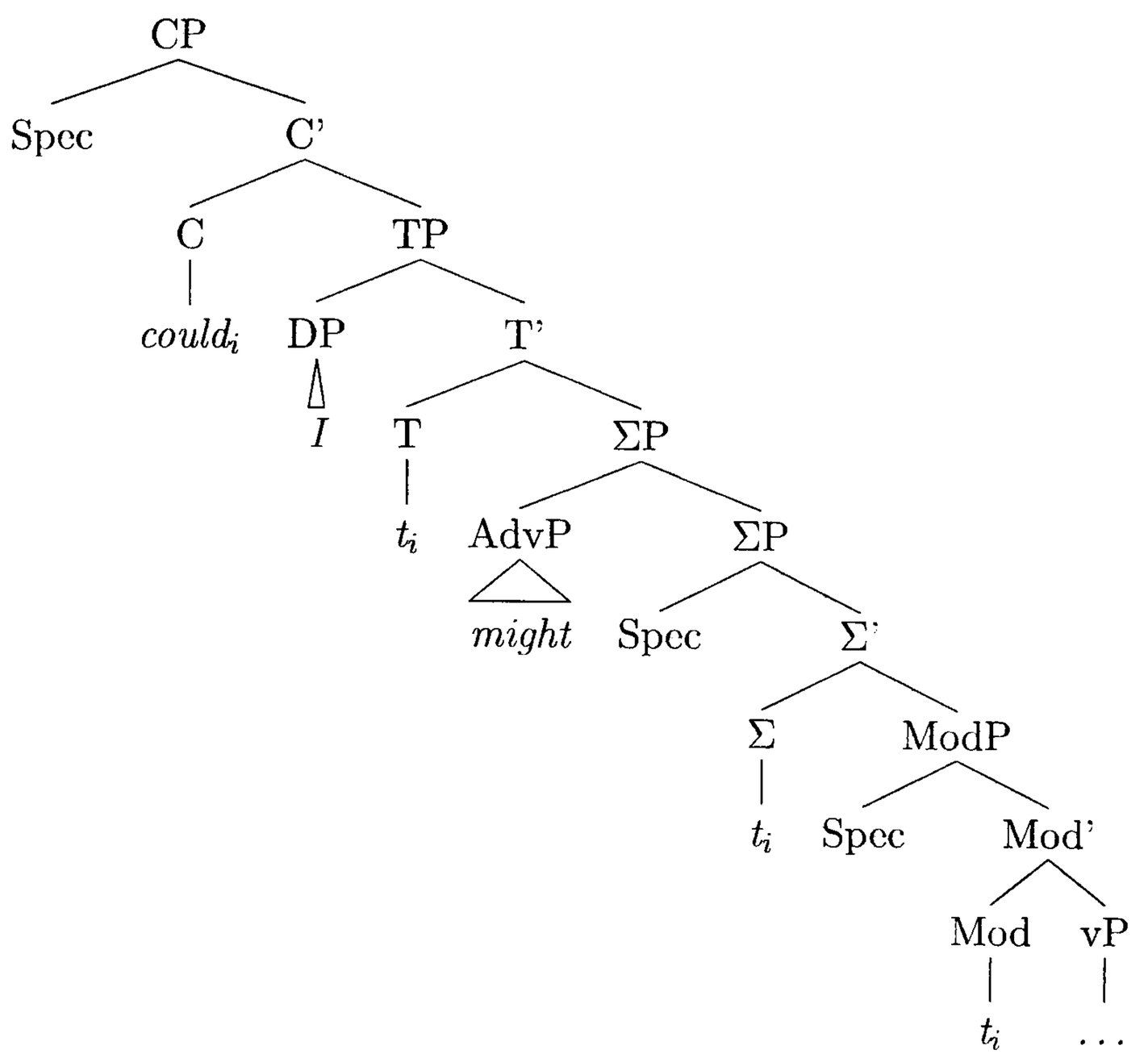
The fact that M1 does not invert and that M2 is able to invert over M1, suggests that M1 is not a modal verb but is an adverb.

(54)




As M1 is an adverb, in interrogatives M2 is able to raise to C across M1 without violating the HMC. Auxiliary inversion is typically viewed as T-to-C movement but, as discussed in Chapter 2, inversion can also target Σ if T is not filled. Thus, inversion of M2 proceeds from Σ to C via T.

(55)

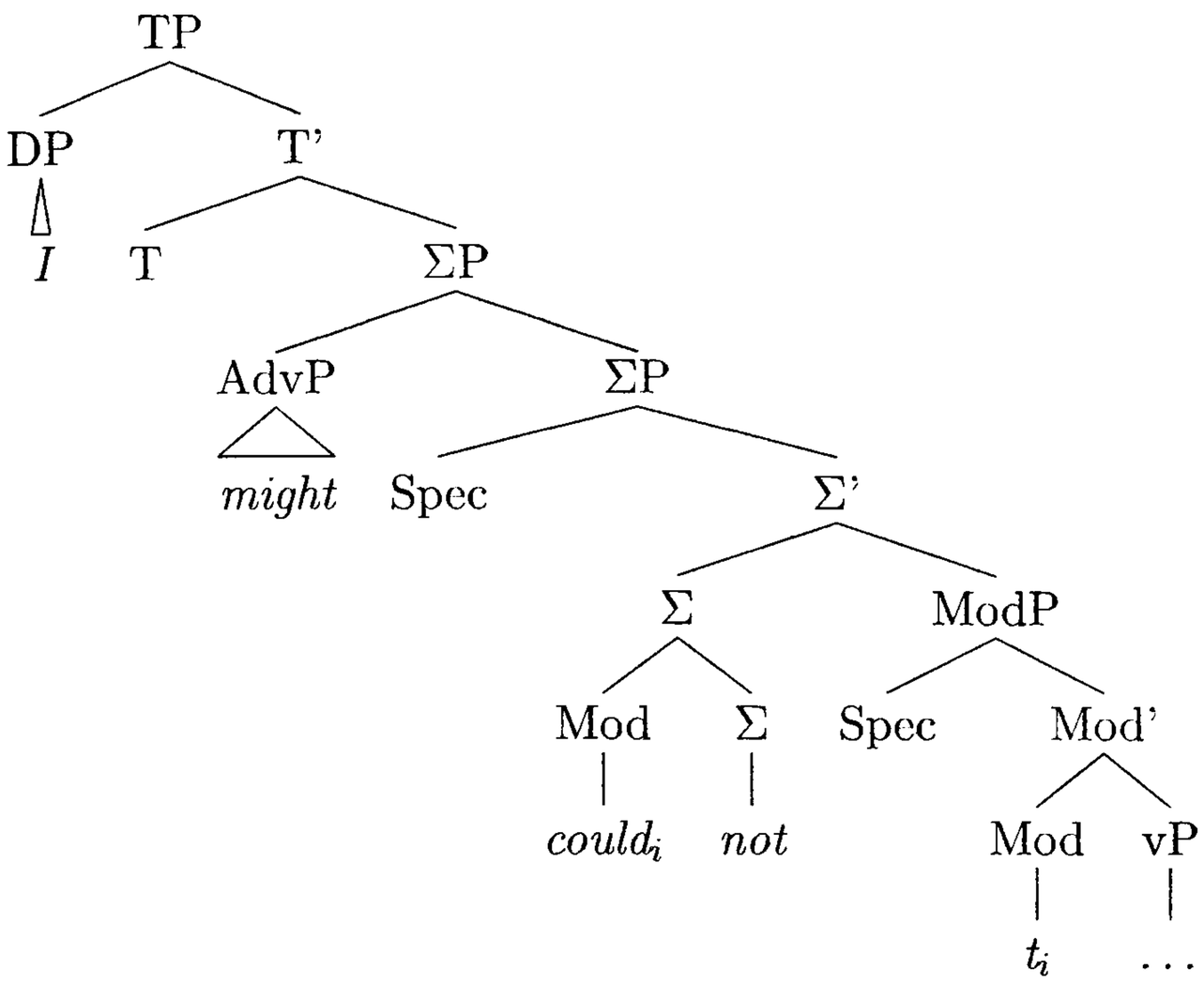



Data involving negation suggests the same; negation may only appear to the right of M2, it may not appear to the right of M1:

(56) a. He might couldn't/wouldn't notice.
b. *He mightn't would/could notice.

If Neg is situated in ΣP (above ModP) in the clause structure, then M2 will be expected to occur to the left of negation once it has raised from Mod to Σ:

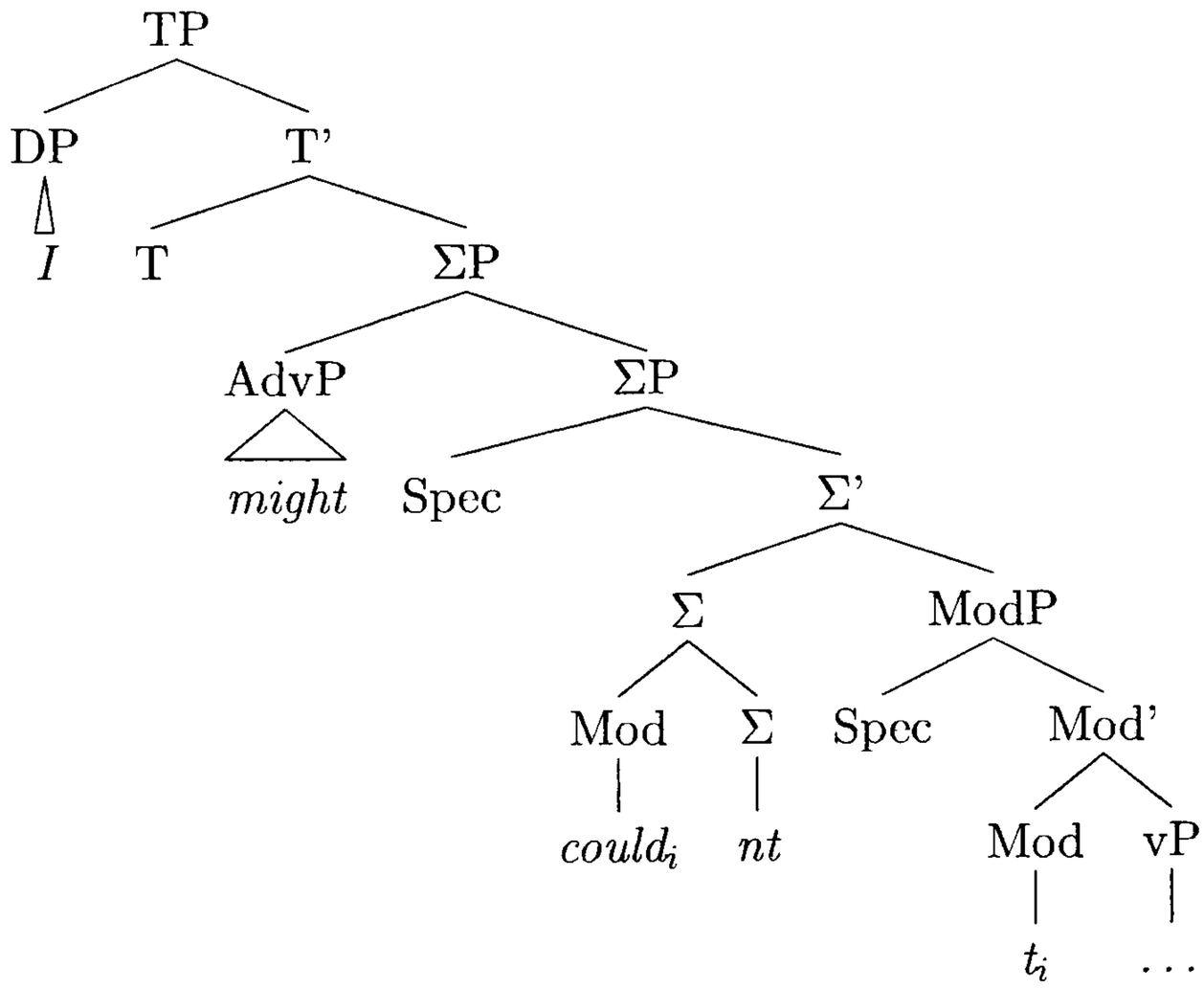
(57)




As M2 will always raise and right adjoin to ΣP, and negation is situated in Σ, negation will always appear to the right of M2.[22]

When it is a clitic, negation attaches to M2 in Σ.

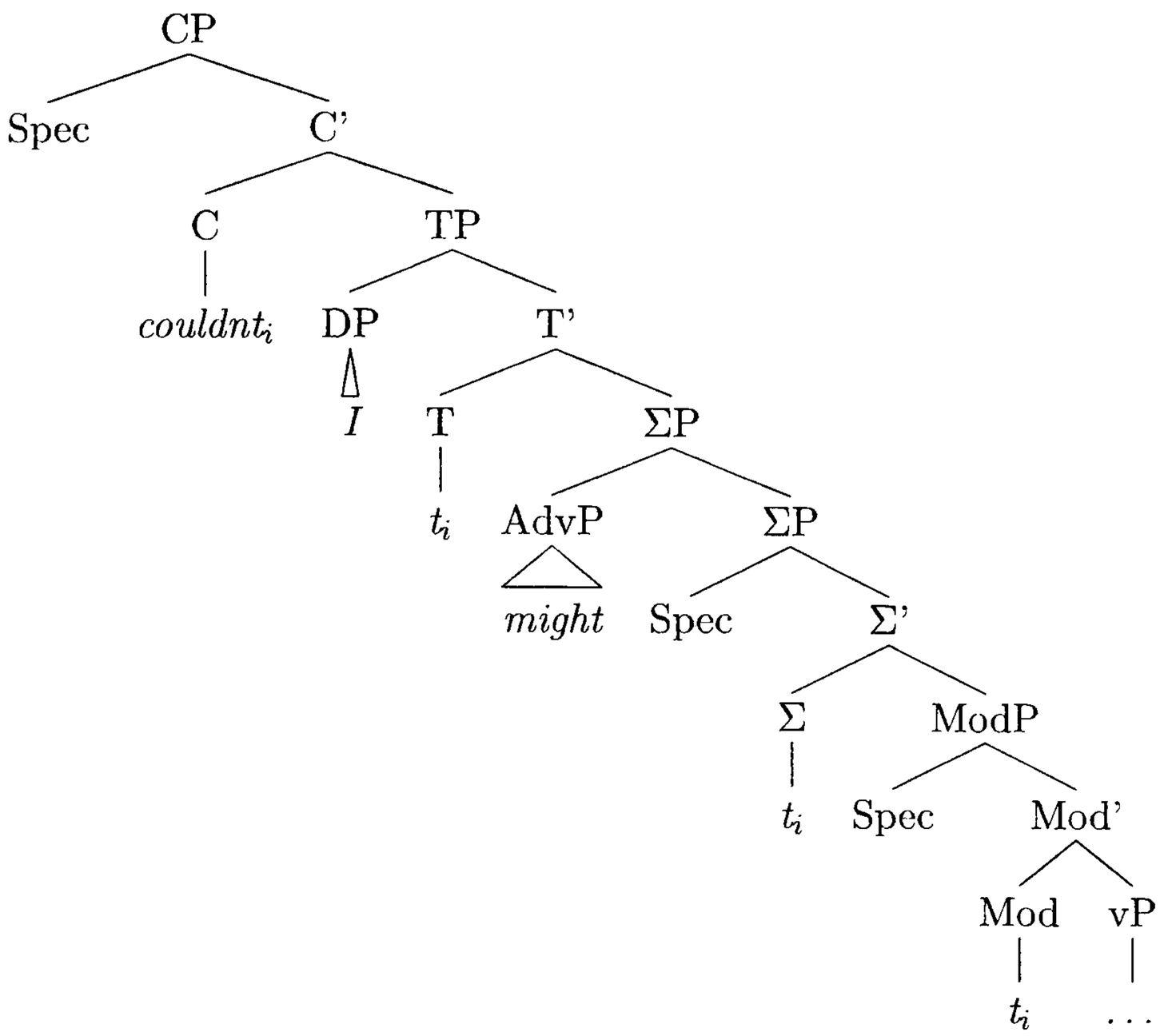
(58)




Negative questions are thus formed by the raising of negated M2, *couldn't*, to C:

[22]For further discussion of auxiliary-raising to T and Σ see Chapter 2.

(59)




The behaviour of M2 in negative and interrogative contexts is consistent with the analysis of M1 as an adverb. The fact that M2 is able to invert across M1, and that M1 does not invert or take clitic negation strongly suggests that M1 has adverbial status. The adverbial status of M1 has been rejected in the past by Nagle (1994, 204) on the grounds that 'negation of the first modal seems strong evidence that it is not an adverb, since auxiliaries - not adverbs - are negated.' However, it is not possible to negate M1, only M2 can be negated, thus providing evidence **for** an adverbial analysis of M1.

### 4.4.3 The Implications of Analysing *Might* as an Adverb

The highly restricted distribution of *might* is not immediately obvious in an adverb analysis. If *might* is an adverb, it would be expected to occur in constructions without other modals. However, this is not the case; most DM speaker reject (60b):

(60) a. He might have sung.
b. *He might had sung.

Also, *might* would be expected to occur in a wide range of clausal positions; again, this is not supported by the data.

(61) a. *Might, we could go Tuesday.
b. We could go Tuesday, might.

These positions are not available to all adverbs:

(62) a. *Eventually, we could go on Tuesday.
b. *We could go on Tuesday, eventually.
c. We could eventually go on Tuesday.

Like other adverbs (see Jackendoff 1972), the semantic properties of *might* could prevent it from occurring in a wider range of positions.

Some speakers accept *might* to follow *could*.

(63) He could might go.

This is expected if *might* is an adverb.

The positioning of *might* as an adverb in the clause appears to be linked to the semantic properties of *might*, and, like other issues related to the semantics of DMs, is beyond the scope of this work.

A major advantage analysing *might* as an adverb is that, as well as capturing the behaviour of DMs in negative and interrogative contexts, it provides a neat account of the combinational properties of DMs. Recall that in section 4.3.2.1 I presented the possible DMs in ArkE. This data, and that presented in the literature, shows that the DMs most often accepted are those which involve *might* in initial position. If *might* is an adverb, then it will be expected to occur in constructions with modals. Other modals, which do not have an adverbial counterpart, however, will be ruled out from occurring in DMs.

### 4.4.4 Extending the Analysis to Further Data

The analysis formulated for DMs in ArkE, is not restricted to referring only to this variety. Upon examination of other data it seems that this analysis can be extended to account for a subset of the data presented in Di Paolo (1989). Recall that Di Paolo states that with *might could* and *might would*, the preferred pattern of inversion was to invert M2. This is consistent with an ADVERB - MODAL analysis of DMs. It is not possible, however, to apply this analysis to all of her data as other inversion patterns were possible with *might could* and *might would*, and for *might should* most speakers preferred to invert M1 and M2 as a unit. This suggests that in Di Paolo's data, there

may be a number of DM-generating grammars, one of which treats *might* as a modal.

With respect to negative DMs, the ADVERB - MODAL analysis predicts that negation will appear to the right of M2. This is not supported by the data; Di Paolo finds that negation can occur either between both modals or to the right of M2. Unfortunately, she does not state whether there is a correlation between the speakers who invert M2 and those who negate M2. The ADVERB - MODAL analysis predicts such a correlation. In the original data set from which the ArkE data is a subset, there was a correlation between negating M2 and inverting M2; speakers that permitted (64a) also allowed (64b):

(64) a. He might couldn't go.
b. Couldn't he might go.

Again, this data can be accounted for in the same analysis proposed for ArKE, confirming that analyses formulated on small sets of data can be extended to account for more data in different varieties. I will show in section 4.5 that the ADVERB - MODAL structure of DMs, is not available in all varieties; I will argue that in Tennessee English, M1 and M2 are both modals.[23]

### 4.4.5 Summary

I have argued that DMs in ArkE are not instances of the double occurrence of modal verbs, but ADVERB - MODAL constructions in which M1 is an adverb, and M2 a modal. This accounts for the adverbial interpretation that M1 receives, and the fact that only M2 inverts in interrogatives and takes clitic negation. The fact that M1 is an adverb means that these DMs do not pose a challenge for standard analyses of English modals; no extra projections are required as landing sites for the modals, other than ΣP which was introduced in Chapter 2 based on Auxiliary Contraction data. As M1 is an adverb, the movement of M2 over M1 in interrogative contexts does not violate the HMC, suggesting that DM dialects obey the same constraints as non-DM dialects.

As mentioned in section 4.3, not all DM dialects share the same use of DMs. The ADVERB - MODAL analysis that I proposed accounts for DMs in ArkE will, therefore, not be expected to account for the data from all DM dialects. In Chapter 5, for instance, I will present data from Scottish English in Hawick collected by Brown (1991)

[23]It is, of course, possible that some dialects may have more than one DM-generating grammar at their disposal. The idea that there may be more than one grammar at work in a dialect is proposed by Kroch (1994) to account for fact syntactic change occurs at the same rate in different environments. It is also possible to have a dialect split as pointed out by Henry (1995) in the use of Overt Subject Imperatives in Belfast English; she states that 'speakers of dialect A have a more restricted use of inversion than those who speak dialect B; whereas dialect B speakers permit inversion with any verb, in dialect A, inversion is only possible with a restricted range of verbs' (Henry 1995, 52).

which cannot be accounted for by an ADVERB - MODAL framework. Even within dialects of AmSE, there is a large amount of variation. For example, data collected from speakers from different southern American states indicates that M1 in DMs is not always an adverb. I will now present data from a Tennessee idiolect, along with suggestions for an analysis to contrast with that formulated for DMs in ArkE.

## 4.5 Double Modals in a Tennessee Idiolect

In the preceding section I presented DM data from Arkansas English, which I argued was best analysed as involving an adverb and a modal verb rather than two modals. This accounts for the fact that, in this variety, M1 never occurs with clitic negation or inverts in interrogatives, i.e. does not behave like other modal verbs. In this part of the chapter, I will present data which shows that not all DM dialects can receive the same syntactic analysis. This will add to the discussion about cross-dialectal variation, and the parameters along which dialects may differ. Precisely, I will argue that, although ArkE DMs have an adverb in initial position, DM dialect speakers from other regions appear to treat M1 as a modal.[24] As evidence, I will use data collected from AmSE speakers using emailed grammaticality judgement questionnaires.[25] Rather than grouping speakers by region, I will highlight some individual uses of DMs. This is appropriate as judgements can vary even among speakers from the same geographical region, and as *wh*-questions are rejected by a high proportion of speakers in the same way that *yes-no* questions are, it is difficult to find enough speakers from the same area who use DMs in the same ways in these contexts. As individual speakers will be referred to, I will use the term 'idiolect' rather than 'dialect'. [26] I will focus mainly on a Tennessee idiolect (TenI), as the data from this speaker shows a very different use of DMs from that presented from ArkE informants.

As I will be concentrating on the status of M1, reliable diagnostics for the grammatical function of M1 are required. I will use *wh*-questions and negation as these diagnostics, for reasons outlined below. To confirm that M1 can behave as a modal in some DM dialects, the data must show inversion of M1 in *wh*-questions, and the negation of the first modal, both of which are found in the data.

### 4.5.1 Negative and Interrogative Forms of Double Modals

Many accounts of DMs use the initial placement of M1 in interrogatives to argue that M1 has modal status. However, it is possible for an adverb to appear in sentence initial

[24]It is also possible that there exists speakers of ArkE who would have M1 as a modal rather than an adverb, but this cannot be confirmed by the data I have collected.

[25]This is a different questionnaire and set of data from that referred to in section 4.3.

[26]To determine whether the idiolect of the speakers can be applied to the dialect area from which the speaker originates, more data from these areas is needed.

position in questions. Consider the following constructions, and the way in which they are interpreted when they are spoken with rising intonation:

(65) a. Maybe we could come?
b. Perhaps you should go?

The initial placement of *maybe* and *perhaps* in these constructions shows that it is possible for adverbs to occur in sentence initial position in interrogatives. It could be argued that these constructions share the same structure as the following in which *might* occurs in initial position:

(66) Might we could come? (from 'We might could come.')

This would, therefore, be consistent with an ADVERB - MODAL analysis of DMs, contrary to previous opinions. *Yes-no* questions are therefore not a completely reliable indicator of the status of M1. For this reason, while investigating DMs in TenE, I used WH-questions as a diagnostic for the status of M1. First consider *wh*-questions in StE.

From the declarative (67), it is possible to form the questions shown in (68a) and (68b):[27]

(67) We maybe could read Harry Potter this week.

(68) a. What maybe could we read this week?
b. What could we maybe read this week?
c. *What maybe we could read this week?

Unlike in *yes-no* questions, in *wh*-questions it is not possible for an adverb like *maybe* to appear in front of the subject, as shown by the ungrammaticality of (68c). Thus, the grammatical status of (68c) in DM dialects is a clear indicator of the status of M1, making *wh*-questions a more reliable diagnostic for the modal status of DMs.

In the TenI, there are two possible ways to form a direct question from a declarative such as (69):

(69) We might could read Harry Potter this week.

[27]The following is also ruled out but this will not be considered here as it is derived from a different structure:

(i) *What could maybe we read this week?
(from: We could maybe read Harry Potter this week.)

(70) a. *What might could we read this week?
b. What could we might read this week?
(questioning **whether** to read)
c. What might we could read this week?
(questioning **what** to read)

Interestingly, the interpretation of the question differs depending on the modal that has been inverted. This is reminiscent of Scottish English in Hawick in which the interpretation of a tag question relies upon the modal used in the tag:

(71) a. He'll can do it, will he no? FUTURITY
b. He'll can do it, can he no? ABILITY

As shown in (71), *will* signals a 'futurity' interpretation, and *can* 'ability'.[28]

The fact that *might* can appear in front of the subject, unlike the adverb *maybe* in (68c), indicates that *might* is not an adverb in (70c), suggesting that the adverbial analysis of M1 provided for ArkE cannot be generalized to all DM speakers.

A possible difference between DM dialects could be the element which is chosen to be an adverb, i.e. some speakers may have M1 as an adverb, and others M2. While this cannot be ruled out for other varieties, it is not the case for the TenI under consideration here as this speaker also allows the inversion of *could* in *wh*-questions (see (70b) above) , which is unexpected if *could* is an adverb.

In *yes-no* questions also, the inversion of *could* is possible, as shown in (72):[29]

(72) Could I might go?

In interrogatives at least, the speaker of TenI appears to treat either M1 or M2 as modals. I will now consider negated DMs to discover if similar results are found here.

When negating DM, the speaker of TenI negates M2:

(73) He might couldn't come.

This is similar to the speakers of ArkE, the dialect for which I argued that DMs consist of an adverb and a modal. Like in *yes-no* questions, in negative contexts the speaker of TenI treats M2 as a modal and M1 as an adverb. In *wh*-questions, on the other

[28]See Chapter 5 for a fuller discussion of these facts.
[29]Actually, this is the only possibility here; *might* cannot invert in *yes-no* questions for this particular speaker.

hand, M1 can be inverted as though it were a modal, contradicting the idea that it might be an adverb.

### 4.5.2 Suggestions for an Analysis of Double Modals in a Tennessee Idiolect

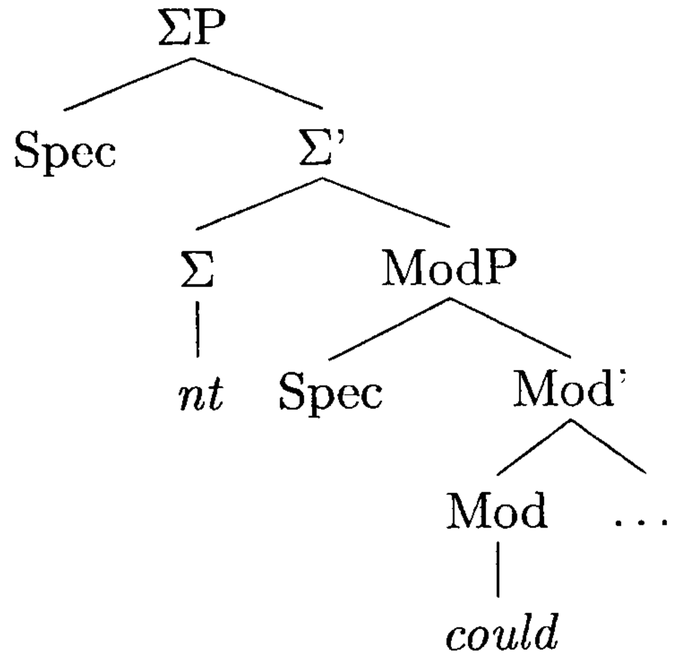
As shown above, depending on the context, M1 can behave like an adverb or a modal. In this section I will attempt to distinguish the grammatical function of M1, and make some suggestions for the analysis of DMs in TenI.

Importantly, in terms of the structure of the derivation, negation must follow the second modal, it cannot occur between the two modals:

(74) He might couldn't go.

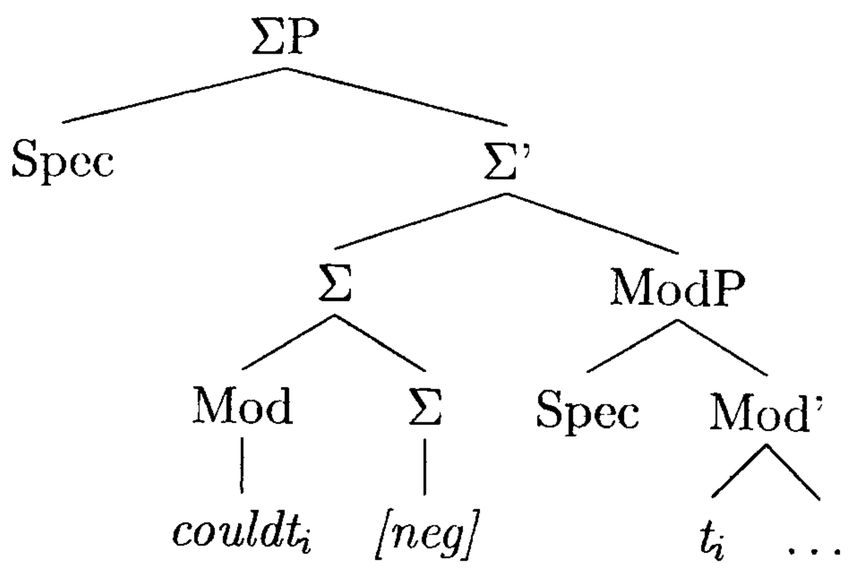
This can be derived by assuming, as in StE, that *could* is merged below negation, i.e. ModP is merged below ΣP:

(75)




*Could* left-adjoins to ΣP, hence negation occurs to the right of *could*

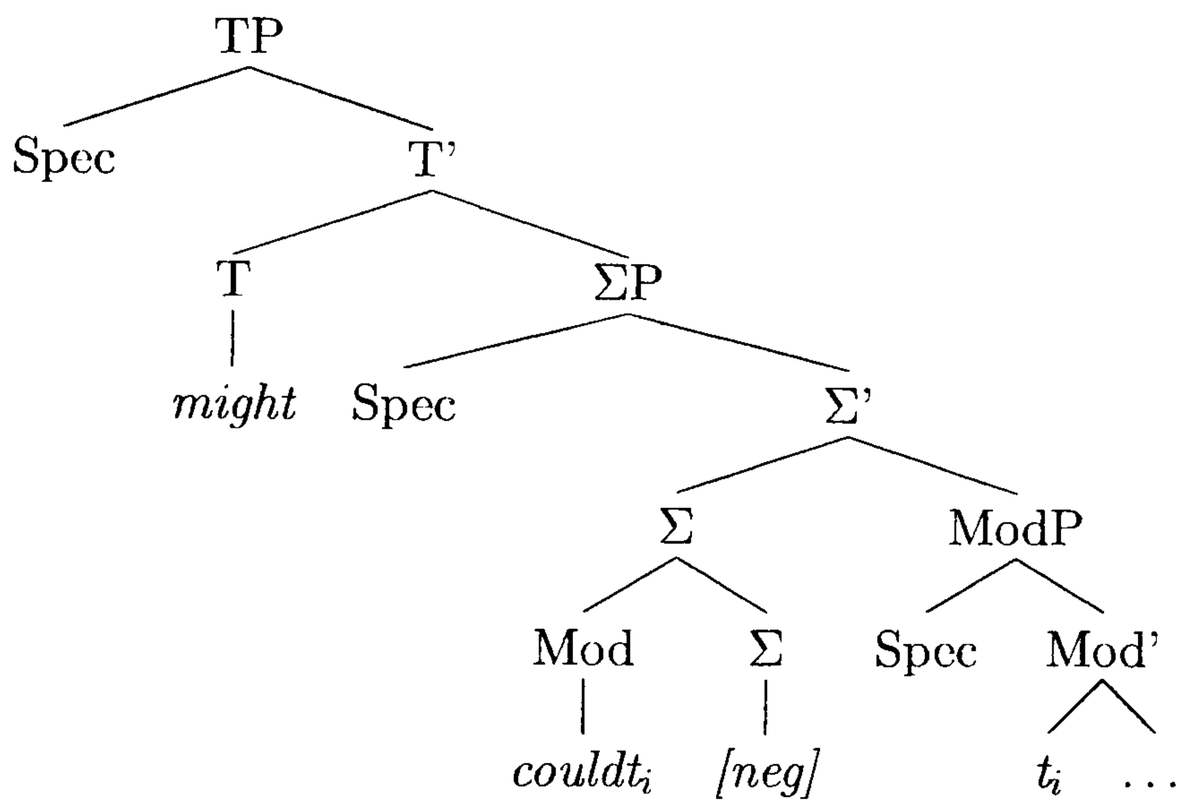
(76)




By assuming that *could* is merged into the derivation like a typical modal verb, the negation facts are captured. The position of *might*, and the analysis of *wh*-questions remains to be explained.

If, as laid out in Chapter 2, auxiliaries are permitted to not raise to T, but are instead required only to raise as far as Σ, then T is an empty head in the derivation into which *might* can be merged:

(77)




Under traditional assumptions, the fact that *might* appears in T would mean that *might* is finite, i.e. tensed. However, as proposed in Chapter 2, auxiliaries need not raise as far as T to check [TENSE] features: these features can be checked from Σ.[30] As *could* has already raised to Σ and checked the [TENSE] features of T, *could* therefore carries tense marking. Thus, although *might* has been merged in T, there are no Tense features left to check, and it must remain untensed.

With this in mind, let us turn to *wh*-questions in TenI. As mentioned, either *might* or *could* can be inverted in *wh*-questions:

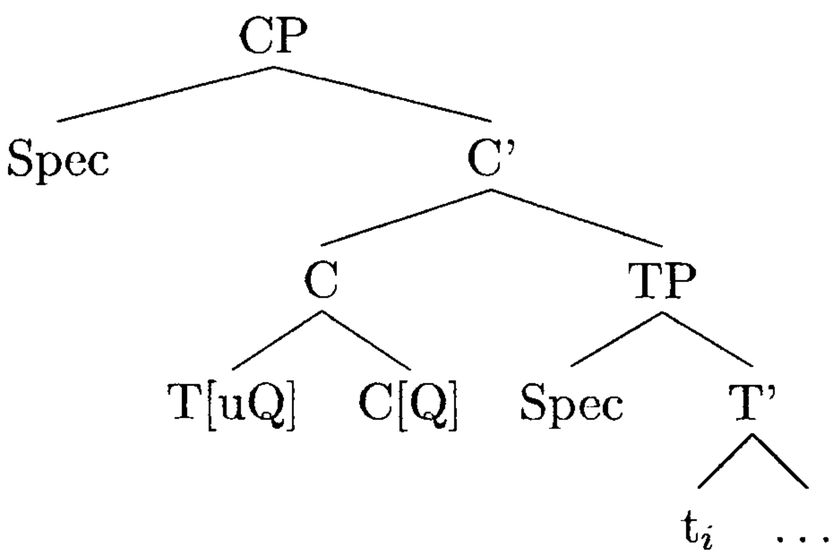
[30]Hence auxiliaries are required to raise to Σ.

(78) a. What might we could read?
b. What could we might read?

To form questions in DM dialects, either Σ or T are permitted to raise to C; Σ-raising results in the inversion of *could*, and T-raising in the inversion of *might*.

In Minimalism, question formation is triggered by the need check T's [uQ] feature against the [Q] feature on C (Adger 2003):

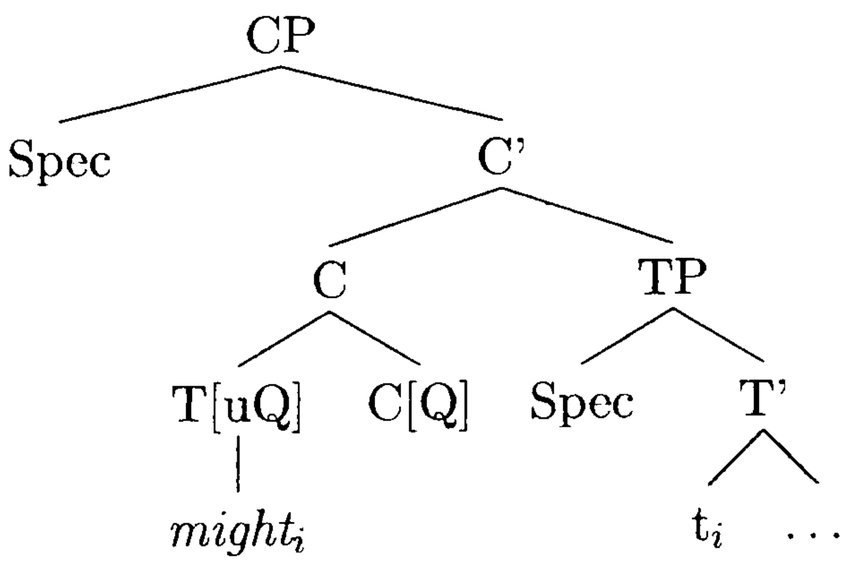
(79)




As pointed out by Siobhan Cottell (personal communication), in order for the inversion of either *might* or *could* to be possible in DM dialects, both modals must be equidistant from the target C. This is only true if both T and Σ are marked with a [uQ] feature. According to Adger (2003), [uQ] is marked on T. If this were the case, only *might* should be able to invert. As this is not the case, I propose that in all varieties of English [uQ] can be marked on either Σ or T.[31] As it is only DM dialects which permit T and Σ to be simultaneously filled, it is only in these varieties that we can see the raising of both T and Σ to C.

Inversion of *might* involves raising of T to C:

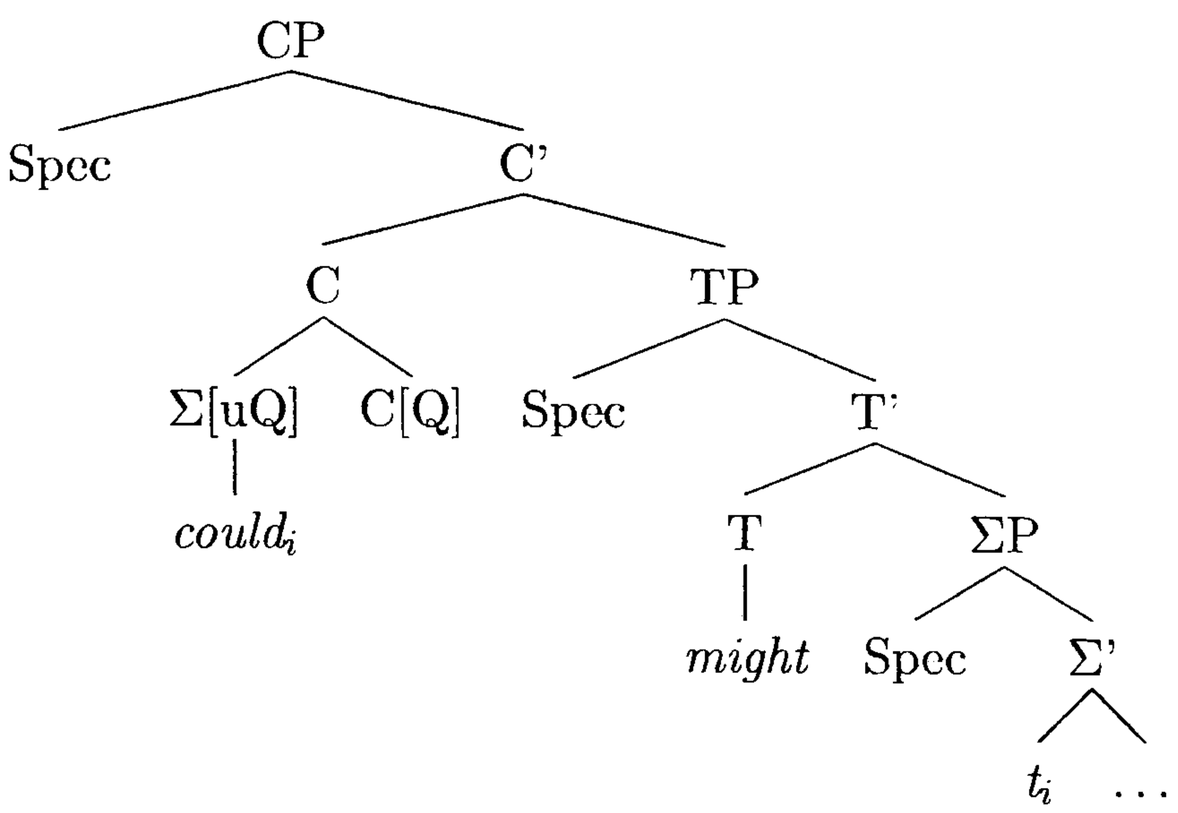
(80)




[31] Arguments for a [uQ] feature on T and Σ were presented in Chapter 2.

When *could* inverts, it is Σ that has raised to C:[32]

(81)




There is a potential problem with the inversion of *could*: it crosses the head position T which is filled by the modal *might*, thus causing a violation of the HMC. However, a significant detail here is that the inversion M1 or M2 affects the interpretation of the question; as pointed out above, inverting *might* questions **what** should be read, and inverting *could* questions **whether** something should be read. It is possible that the distinct interpretations behind the two inversion patterns permit either M1 or M2 to be inverted, without causing the derivation to crash by violating the HMC.[33]

A further complication in the formation of questions in TenI is that *yes-no* questions only permit the inversion of *could*. The analysis can be maintained, however, as it is possible to rule out the inversion of *might* in *yes-no* questions simply based on the inversion properties of *might* in many varieties of English. For many speakers of English, there is a contrast between the following:

(82) a. */??Might we go tomorrow?
b. Where might we be going tomorrow?

For many speakers, the inversion of *might* is more acceptable in *wh*-questions than it is in *yes-no* questions, perhaps explaining the lack of inversion of *might* in *yes-no* questions in TenI.

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[32] *Could* has, of course, first raised to Σ from its merge position as the head of ModP.

[33] To determine whether this is indeed correct, data from more languages or dialects in which T and Σ may be simultaneously filled is required. At this moment, I know of no such data.

### 4.5.3 Summary

In this part of the chapter I have presented data from a Tennessee idiolect. I argued that in this variety, DMs do consist of two modal verbs, and that the ability to invert either modal depends upon the position of the [Q] feature in the clause, i.e. whether it is marked on T or on Σ. The position of negation simply falls out from the position of the modals in the derivation: M2 is situated below negation but raises above it on the path towards Σ. TenI thus contrasts with ArkE in which M1 is an adverb.

## 4.6 Conclusion

In this chapter, I have presented Double Modal data from two dialects of American English. I have argued that DMs in ArkE are best analysed as ADVERB - MODAL constructions as the initial modal shares the interpretation and, more importantly, syntactic behaviour of an adverb. For instance, the initial cannot invert in questions, and cannot occur with clitic negation. The second position modal, on the other hand, does show modal traits, occurring with clitic negation and inverting in interrogative contexts. I have suggested that, as an adverb, *might* should be left-adjoined to a functional projection in the inflectional layer of the clause. As shown in Chapter 2, in order for adverbs to intervene between a subject and an auxiliary and be left adjoined to an XP rather than an X or X', an extra functional projection is required in the inflectional layer of the clause. I argued in Chapter 2 that this extra projection is ΣP. Thus within DM constructions M1 is left-adjoined to ΣP and the second modal appears in the head Σ.[34]

In Tennessee English, on the other hand, the initial modal can invert in questioning leading to the suggestion that it was a modal. However, the fact that this modal could not occur with clitic negation lead to the conclusion that it was untensed (clitic negation can only occur with finite auxiliaries). DMs in ArkE and TenE are syntactically distinct; the distinction can be reduced to the structure of the lexicon; ArkE speakers have an adverb *might*, while TenE speakers have an untensed modal *might*. These both differ from Standard English which has only regular modals.

[34]It has raised to this position from its original merge position as the head of ModP.

# Chapter 5

# Double Modals in Scottish English

## 5.1 Introduction

Double Modals are attested in a number of areas in the British Isles, including Tyneside and Northumbrian English (McDonald 1981, Beal 1993) and varieties of Scottish English (Miller 1982, Brown 1991). In this chapter, I will focus on the use of Double Modals (DMs) in a dialect of Scottish English in Hawick (SEH), using data collected by Brown (1991). Although Brown collected data, and made some suggestions for an analysis, there is no full syntactic account of the DM data that was collected from SEH. Thus, the main aim of this chapter is to provide a syntactic analysis of DMs in SEH.

The data presented in this chapter is taken from Brown (1991) who, rather than presenting the contrasting grammatical and ungrammatical examples, often presents only the grammatical example and states that other variants are ungrammatical. Where appropriate, I will add the corresponding ungrammatical examples in order to present the data as clearly as possible.

An initial examination of the data strongly suggests that DMs in SEH are syntactically distinct from those in American Southern English (AmSE), making the investigation of DMs in SEH unavoidable; the comparison of AmSE and StE is important in the understanding of the differences between DM and non-DM dialects, and the contrast between AmSE and SEH is crucial in uncovering the differences between DM dialects. Thus, this chapter has two further aims: (i) to uncover if SEH differs from StE along the same parameter(s) along which AmSE differs from StE, and (ii) to discover the parameters (if any) along which the two DM dialects differ.

This chapter is organised as follows: in section 5.2 I will outline some of the syntactic features of SEH, as listed by Brown (1991), which may affect the use of DM constructions in this dialect; in section 5.3 I will present the DM data collected by Brown (1991); and finally in sections 5.4 and 5.4.2 I will formulate a syntactic analysis of DMs in SEH based on the data, suggesting ways in which SEH differs from AmSE. I will argue that the both the first modal (henceforth M(odal)1) and the second modal (henceforth M(odal)2) of a DM are best analysed as true modal verbs.

## 5.2 Syntactic Characteristics of Scottish English in Hawick

Before going on to discuss DMs in SEH, I will present some of the features of SEH described by Brown (1991).

### 5.2.1 Auxiliaries

Like most other varieties of English, including StE, auxiliaries in SEH have strong and weak forms (see Chapter 2 for a full discussion of the syntax of reduced auxiliaries). According to Brown (1991), the strong forms of the auxiliaries occur under stress and the weak forms are reduced and typically enclitic (when the auxiliary is an operator).

As in all dialects of English, auxiliaries in SEH are able to invert across the subject in interrogative contexts:

(1) a. Is he coming?
    b. Will he tell you?

This suggests that, with respect to inversion, auxiliaries and modals in SEH behave in the same way as in StE.

### 5.2.2 Negation

SEH utilises the clitic negative marker *-nae* and the full form *no*. These forms replace English *n't* and *not*, respectively, and are common in many varieties of Scottish English including Edinburgh Scots as illustrated by Brown and Millar (1980). and Scottish English in Fife as discussed in Chapter 3.

According to Brown (1991) there are three possible types of negation available to speakers of Hawick Scots:

1. **Sentential negation** - takes wide scope over a sentence when it occurs with the modal *could* and typically involves clitic negation:[1]

   (2) She couldnae have told him.
   ('It is not possible for her to have told him.')

2. **VP negation** - takes narrow scope, scoping over the VP rather then the whole clause. VP negation is typically realised as the isolate form *no*:

   (3) She could no have told him.
   ('It was possible for her not to have told him.')

3. **Main verb negation** - can only be realised by the isolate form *no* and must immediately precede the verb over which it takes scope:

   (4) He's still no working.
   ('It is the case that he is still out of work.')

   Main verb negation can co-occur with sentential negation:

   (5) a. He isnae still no working.
   ('It isn't the case that he is still out of work.')
   b. He hasnae been no working.
   ('It isn't the case that he has been out of work.')

In SEH declarative clauses, the negative marker is either enclitic to an finite modal or auxiliary verb or an isolate:

(6) a. He isnae coming.
   b. He willnae tell you.

(7) a. He's no coming.
   b. He'll no tell you.

According to Brown (1991), there is a preference for the isolate form when the negative itself is stressed.[2] When a modal is involved, the choice of negation (full vs. clitic) can indicate a difference in scope. For example:

(8) She could no have told him.
   ('It was possible for her not to have told him.')

[1] See Chapter 3 for a discussion of the contrast between the use of negation with the modal *should*.

[2] Like other varieties of English, it is not possible for a reduced auxiliary and clitic negation to co-occur.

(9) She couldnae have told him.
('It is not possible for her to have told him.')

This is reinforced by the contrast between the following:

(10) a. ?She couldnae have told him, but she did.
b. She could no have told him but she did.

Unlike other varieties of English (for example, Southern British Standard English) the clitic form of negation may never invert in SEH:

(11) a. He's no coming.
b. Is he no coming?

(12) a. He isnae coming.
b. *Isnae he coming?

When considering differences between DMs in Hawick and American Southern English, negation can thus be expected to behave differently. This will undoubtedly have an effect on the combination of DMs and negation, especially in interrogative contexts.

### 5.2.3 Reversed Polarity Tags

As expected, auxiliaries occur in reversed polarity tags in SEH:

(13) a. John isnae coming, is he?
b. John's no coming, is he?
c. John's coming, is he no?
d. John's coming, isn't he?

The clitic form *-nae*, which is unavailable in interrogatives, is also unavailable in tags:

(14) *John's coming, isnae he?

However, the clitic form *-n't*, which is typical in StE but not usually possible in main clause negatives in SEH, is frequently found in tags.

### 5.2.4 Summary

As discussed above, auxiliaries and modals in SEH behave very similarly to those in StE; they invert in interrogatives and in tag questions. Negation, however, behaves quite differently; clitic negation *nae*, for instance, can never invert with the auxiliary in interrogatives or tags.

In the following section, I will present the DM data from SEH collected by Brown (1991).

## 5.3 Double Modals in Scottish English in Hawick

Brown describes DMs in SEF as instances in which '*can/could* follows a modal auxiliary in what appears to be the same 'verb group" (Brown 1991, 74), as shown in the following examples:[3]

(15) a. He should can go tomorrow.
(='He ought to be able to go tomorrow.')
b. He would could do it if he tried.
(='He would be able to do it if he tried.')

DMs in SEF differ from those in AmSE in that their most common DM is *will can*, not *might could*.

(16) He'll can get you one.
(='He will be able to get you one.')

In this chapter, I will focus on these constructions in which two modal verbs co-occur, presenting data from negative, interrogative, and declarative sentences. Firstly, however, I will outline the possible combinations of DMs in SEH, as stated by Brown (1991).

### 5.3.1 Possible Combinations of Double Modals

Brown (1991, 75) lists the following combinations of modals:

[3]Brown (1991) points out that *will* can also precede combinations such as *might could*, yielding triple modals:

(i) He'll might could do it for you.
(='He might be able in the future to do it for you.')

(17) a. might can, should can, will can, ?would can, must can
b. might could, should could, ?will could, would could, must could, used to could

It is immediately obvious from this data that in order to produce an acceptable DM in SEH, M2 must be either *can* or *could*. This differs from AmSE in which there appears to be a condition on M1, which is typically *might* or *may*.

### 5.3.2 Inversion of Double Modals

As mentioned in Chapter 4, there are a number of possible ways to create an interrogative using a DM in varieties of American English (see Boertien 1986, Di Paolo 1989, Battistella 1991, Mufwene 1994). According to Brown (1991), there is only one possible way to form a question with a DM, to invert M1:[4]

(18) He will can do it.

(19) a. Will he can do it?
b. *Will can he do it?
c. *Can he will do it?
d. *Can will he do it?

Thus, the only possible interrogative formed from (18) is (19a); it is not possible to invert both modals (19b), only the second modal (19c), or both modals in inverse order (19d).

### 5.3.3 Negation in Double Modals

According to Brown (1991), the possibilities for negation are the same in DM constructions as they are in clauses with only one modal: sentential negation and VP negation, which takes the second modal and other auxiliaries in its scope.

*Might* and *must* only take narrow scope negation so the following examples all share the same meaning:

(20) a. He might no could do it.
b. He might could no have done it.

[4]The examples given use the DM *will can*, but Brown (1991) claims that this pattern is applied to all DMs.

c. He mightnae could have done it.
('It is possible that he was unable to do it.')

(21) a. He must no can do it.
b. He must can no do it.
c. He mustnae can do it.
('I conclude he is unable to do it.')

The position of negation and the scope it takes is different with *would* and *should*:

(22) a. He shouldnae can come.
('It should not be possible for him to come.')
b. He should no can come.
('It should be impossible for him to come.')

Double negation is also allowed:

(23) a. He shouldnae no could have come.
b. He shouldnae could no have come.

The same pattern occurs with *would* and *will*, though the scope distinction seems to be neutralized in declarative sentences:

(24) a. He willnae can come.
b. He'll no can come.

In interrogatives, the scope distinction emerges:

(25) Will he no can come?
(='won't he be able to come?/=will he be unable to come?')

### 5.3.4 Double Modals in Reversed Polarity Tags

In DMs with *could/can* either, but not both, of the modals can occur in a tag.

(26) a. He'll can do it, will he no? FUTURITY
b. He'll can do it, can he no? ABILITY
c. *He'll can do it, will can he no?

The emphasis of the sentence depends on which modal appears in the tag; for example, when *can* is tagged the emphasis is on 'ability', and when *will* is tagged the emphasis is on 'futurity.'[5]

### 5.3.5 Conclusion

Double Modals in Scottish English in Hawick have the following properties:

- In interrogatives, the first modal inverts.
- Clitic negation occurs on the first modal.
- In tag questions, it is possible to use either of the modals.

In Chapter 4 I investigated DMs in American English with the aim of fitting them in to one of three constituent structures: ADVERB - MODAL, MODAL - ADVERB and MODAL - MODAL. In this section, I will present evidence against analysing DMs in SEH as ADVERB - MODAL or MODAL - ADVERB strcutures, and will suggest that they should be analysed as structures involving two modals.

## 5.4 The Syntax of Double Modals in Scottish English in Hawick

The data presented by Brown (1991) contrasts with the data from AmSE that was presented in Chapter 4. In this part of the chapter, I will consider the DM data from SEH, with the aim of formulating a syntactic analysis of the data. A direct consequence of this analysis is the highlighting of differences between the two DM dialects, SEH and AmSE, and the ways in which these dialects differ from non-DM varieties of English such as StE.

### 5.4.1 Possible Constituent Structures of Double Modals

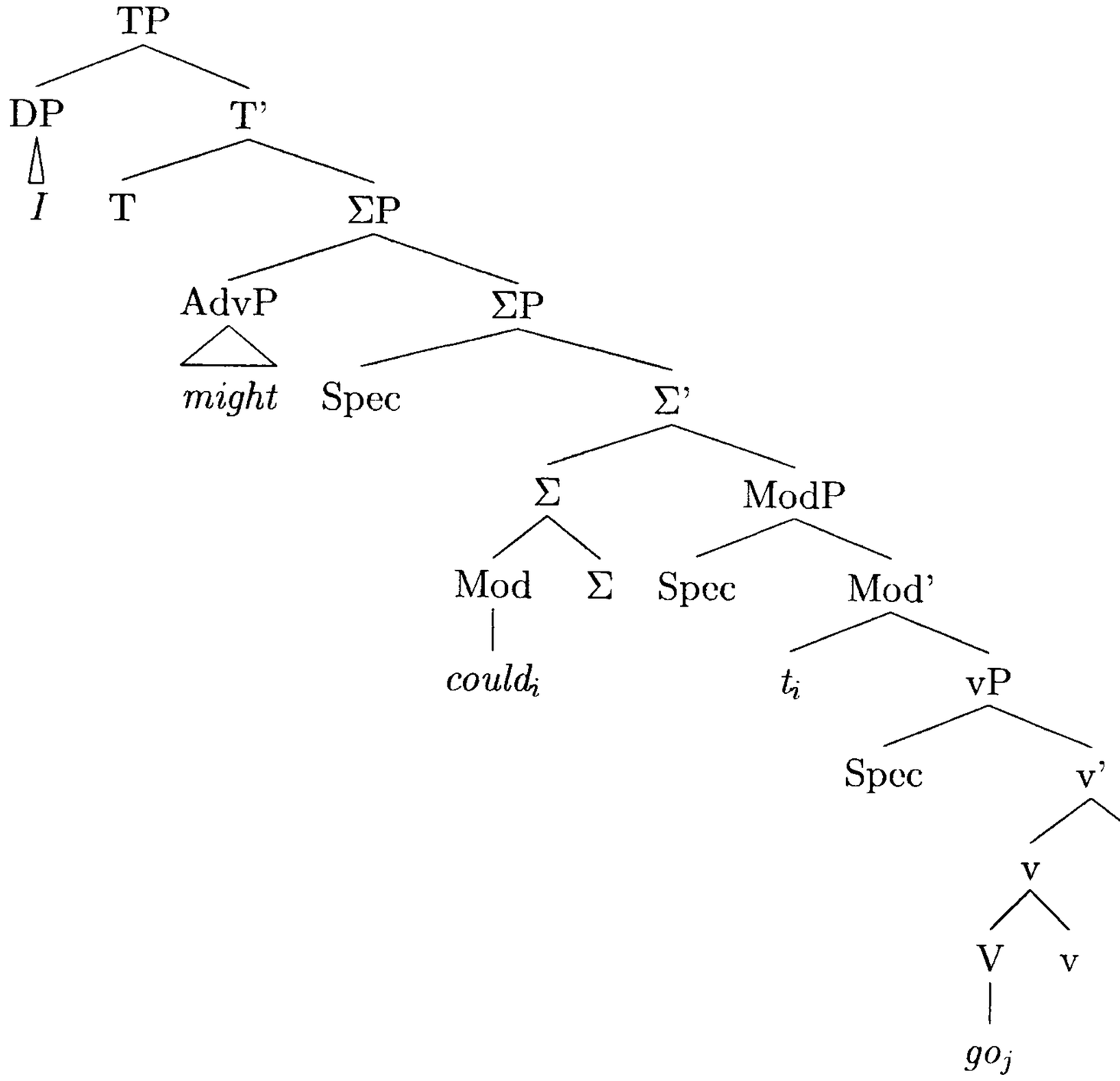
If DMs can be shown to consist of a modal and an adverb, they are no longer a challenge for analyses of English auxiliaries. In Chapter 4 I showed that in Arkansas English *might* is an adverb in DM constructions, and I will now consider the possibility that one of the adverbs in SEH is an adverb.

[5]Brown (1991) does not discuss the possibility of having a negative sentence and a positive tag in DM constructions.

#### 5.4.1.1 Adverbs in Double Modal Constructions

In Chapter 4, I suggested two possible structures in an analysis of DMs where one of the elements in a modal. For the ADVERB - MODAL structure I assumed that the adverb is adjoined to the left of the projection in which the modal sits.

(27)




In American dialects, the most frequently used DM is *might could*. As M1 in this particular DM shares a very similar meaning to the adverb *maybe*, it has been suggested that *might* is an adverb rather than a true modal verb. Brown (1991) suggests that it is possible to paraphrase the first modal and replace it with an adverb, in a number of DMs:

(28) a. He might could do it; He could maybe do it.
b. He must can do it; He can surely do it.
c. He should can do it; He can likely do it.

The fact that M1 occurs in a surface position often occupied by adverbs lends support to an ADVERB - MODAL analysis of DMs:

(29) He might could do it.

(30) a. He maybe could do it.
b. He possibly could do it.

This analysis cannot be applied to SEH, however, as it makes incorrect predictions about the data; If M1 is an adverb, and M2 a modal, the data would be expected to display the following patterns:

- In interrogatives, the second modal will invert.
- In negative declaratives, clitic negation will appear on the second modal.

This is not the case. In interrogatives only M1 inverts, as shown in (19), repeated below as (31):

(31) a. Will he can do it?
b. *Will can he do it?
c. *Can he will do it?
d. *Can will he do it?

Most previous analyses of DMs (refs) have used this data as evidence for the modal status of the first element in a DM. However, it is possible for an adverb to appear in sentence initial position in questions. Consider the following constructions, and the way in which they are interpreted when they are spoken with rising intonation:

(32) a. Maybe we could come?
b. Perhaps you should go?

The initial placement of *maybe* and *perhaps* in these constructions shows that it is possible for adverbs to occur in sentence initial position in interrogatives. It could be argued that these constructions share the same structure as the following in which *might* occurs in initial position:

(33) Might we could come?
(from 'We might could come.')

The inversion of M1 could, therefore, be consistent with an ADVERB - MODAL analysis of DMs.

The negation data rules out an ADVERB - MODAL analysis of DMs: as shown in (20), repeated here as (34), negation occurs in the following positions when it occurs with *might could*:

(34) a. He might no could do it.
b. He might could no have done it.
c. He mightnae could have done it.
('It is possible that he was unable to do it.')

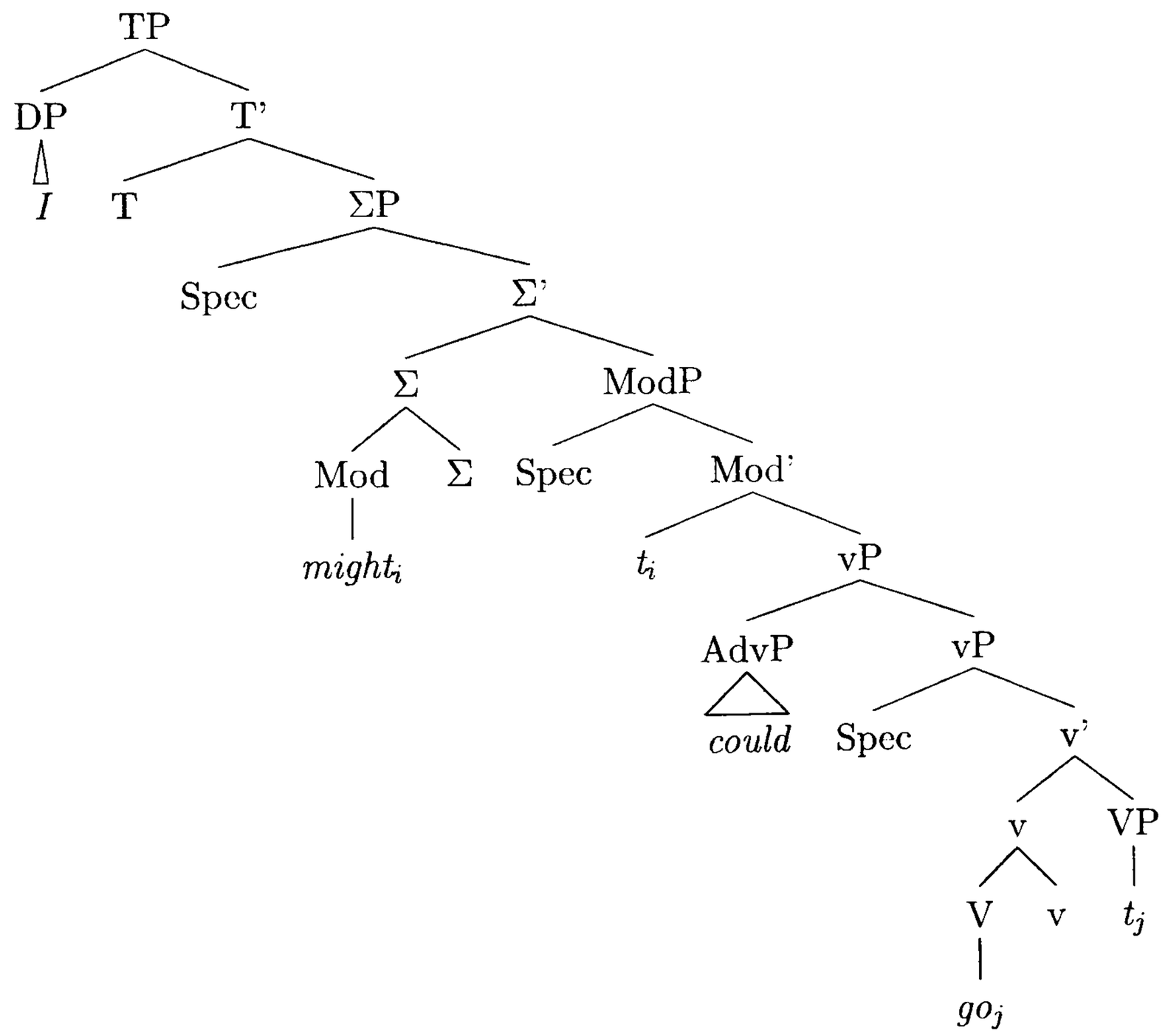
As negation is able to cliticise on to *might*, this is a strong indication that *might* is not an adverbial element. With other DMs, such as *should can*, negation is also able to contract onto the first modal, as shown in (22), repeated here as (35):

(35) a. He shouldnae can come.
('It should not be possible for him to come.')

Again, suggesting that an ADVERB - MODAL analysis of DMs is not correct.

As the second modal does not occur with clitic negation or invert in interrogatives, I will consider the the possibility that it is the second modal, rather than the first, that is an adverb in SEH. As shown in Chapter 4, in a MODAL - ADVERB structure of DMs. the adverb must be adjoined to a projection to the right of the modal (probably vP or one of the auxiliary projections):[6]

(36)




[6]For the sake of consistency, *might* has raised to Σ in (36), like *could* has in (27).

In SEH, the first modal in a DM can be either *might, should, will, would* or *must*; and the second modal must be *can* or *could*. As mentioned, in AmSE the first modal is most often *might*, which shares a similar meaning with *maybe*. This has led to the suggestion that *might* is an adverb. As there is a restriction on the second modal in SEH (it must be *could* or *can*), perhaps it is this modal which is an adverb in this particular dialect. To discover if this is a viable option, I will examine the DM data from SEH, paying particular attention to the behaviour of the modals in negative and interrogative environments, contexts in which a contrast would be expected between modals and adverbs.

If the first element in a DM is a modal, and the second an adverb, this predicts the following patterns to emerge from the data:

- In interrogatives, the first modal will invert.
- In negative declaratives, clitic negation will appear on the first modal.

The negation data supports the idea that M1 is a modal, and M2 is an adverb, as clitic negation can only occur on the M1. This is the case whether negation takes narrow scope in *might could*, or high scope in *should can*:

(37) a. He might no could do it.
b. He might could no have done it.
c. He mightnae could have done it.
('It is possible that he was unable to do it')

(38) a. He shouldnae can come.
('It should not be possible for him to come.')
b. He should no can come.
('It should be impossible for him to come.')

When low scope occurs with *should* (38b), negation occurs in its full form below *should*. In none of the data presented by Brown (1991) does clitic negation attach to M2. This is consistent with the idea that only the M1 is a true modal.

The fact that full form negation *no* can occur after the second modal (37b), does not challenge the idea that DMs are MODAL - ADVERB sequences, as it is possible for negation to occur after an adverb in examples like the following:

(39) a. He should probably not have come.
b. He will definitely not come.

The negation data supports the idea that DMs are MODAL - ADVERB sequences. The interrogatives data also supports the idea that the M1 is a modal, as the only the first element in a DM is permitted to invert in interrogative contexts:

(40) a. He will can do it.
b. Will he can do it?

Examples like (40b) cannot be used as a diagnostic for the status of the second modal in a DM, however, as the second modal would not be expected to invert whether it was a modal or an adverb.[7]

Tag questions provide evidence against analysing DMs as ADVERB - MODAL or MODAL - ADVERB sequences; either M1 or M2 can occur in a tag, suggesting that neither should be analysed as adverbs.

(41) a. He'll can do it, will he no? FUTURITY
b. He'll can do it, can he no? ABILITY

The ability for either element in a DM to occur in a tag question suggests that both elements in a DM are true modals. This leads to the conclusion that both elements in a DM are true modals. I will pursue this idea and the issues it raises in the following section.

#### 5.4.1.2 Double Modals as modal - modal Constructions

The third structure, MODAL - MODAL, which I will argue is the correct way to analyse DMs in SEH, will involve both elements of a DM being analysed as modal verbs, and inserted into the structure accordingly. This analysis raises a number of important issues, including the marking of tense, which will be discussed after the arguments for this analysis have been presented.

If both elements in a DM are modal verbs, then there are two possible ways to analyse DMs: (i) both modals are inserted into the derivation as a single lexical unit,[8] or (ii) both modals are inserted separately into the clause structure. The first of these possibilities is ruled out, as the modals in a DM do not act as a unit: they may be separated by negation (42), only the first may invert in invert in interrogatives (43), and it is not possible to invert a DM as a unit in a tag question (44):

(42) He might no could have done it.

[7]The Head Movement Constraint would prevent it from raising across the first modal.
[8]As proposed by Di Paolo (1989) for DMs in Texas English.

(43) a. Will he can do it?
b. *Will can he do it?

(44) *He'll can do it, will can he no?

We must assume, therefore, that both modals are inserted into the derivation as individual lexical items.

If both elements in a DM are individual finite modal verbs, we might expect the data to display the following behaviour:

- In interrogatives, either modal will invert.
- In tag questions, either modal will invert.
- In negative declaratives, clitic negation will appear on either the first or the second modal.

These predictions are only expected if there are no restrictions on the inversion of auxiliaries. However, it has been noted that the movement of English auxiliaries obeys the Head Movement Constraint (Travis 1984). Thus, only the first auxiliary is permitted to invert in interrogatives:

(45) a. Could you have gone?
b. *Have you could gone?

As for the position of negation, this may turn out to be the key to solving the DM puzzle. Clitic negation in English is interpreted sententially, and is restricted to occurring on the finite auxiliary:

(46) a. He couldn't have gone.
b. *He could haven't gone.

Clitic negation on a non-finite auxiliary such as *have* in the above example is ruled out because clitic negation must be interpreted as sentential negation; in (46b), however, negation is in a position in which it must have a constituent reading. Also, *have* is non-finite, and clitic negation occurs only on finite auxiliaries. In a DM construction, clitic negation should only occur on the finite modal. The position of clitic negation should, therefore, lead to some conclusions about tense in DM constructions.

Considering the restrictions on the position of negation, and those on the movement of auxiliaries imposed by the HMC, the predictions listed above must be restated as

follows:

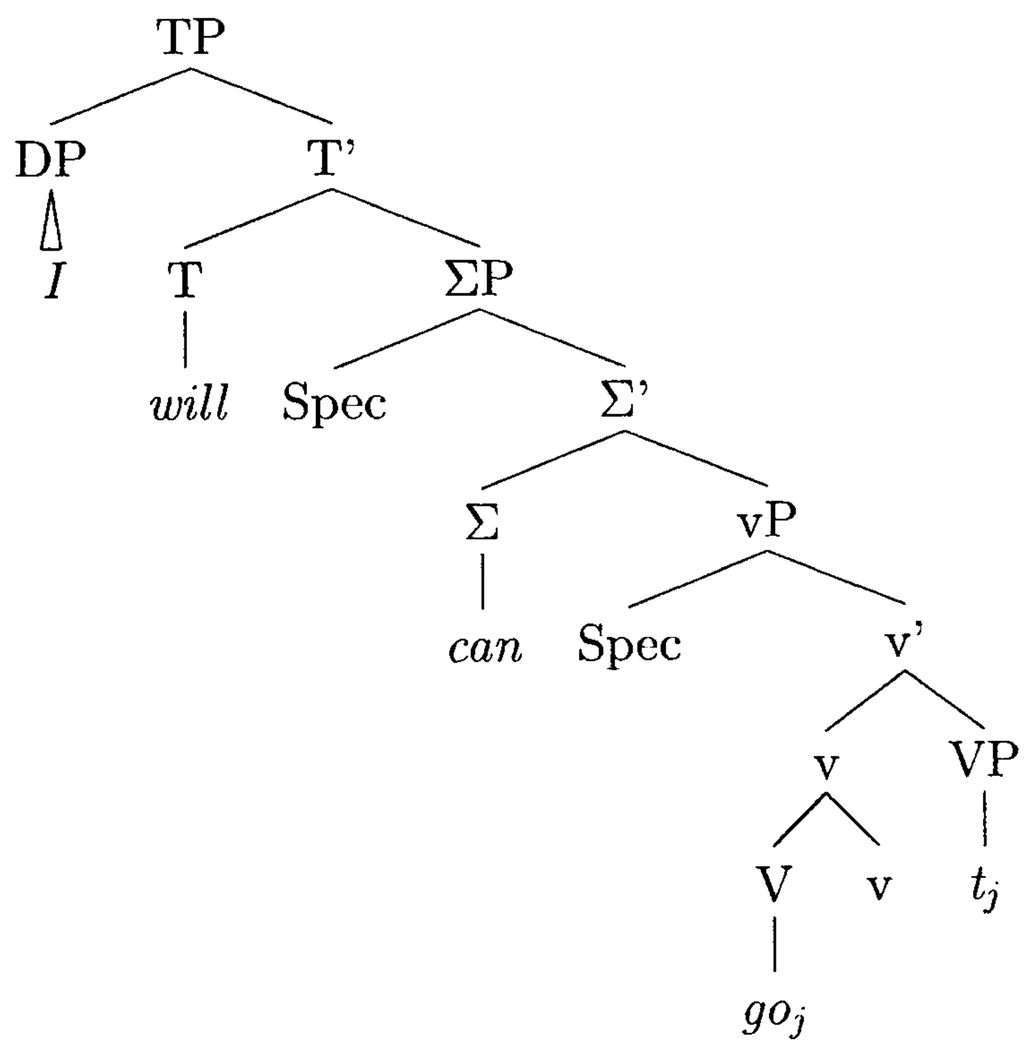
- In interrogatives, the first modal will invert.
- In tag questions, the first modal will invert.
- In negative declaratives, clitic negation will appear on the finite modal.

I will now examine the data to discover if these predictions are correct. The inversion of M1 is borne out by the data; in interrogatives the only possibility is to invert M1:

(47) Will he can do it?

In terms of structure, this suggests that M1, in this example *will*, must be positioned in T (at some point in the derivation) in order to undergo T-to-C raising in interrogatives. It is intuitive to assume that the second modal must be positioned in a head lower than T:[9]

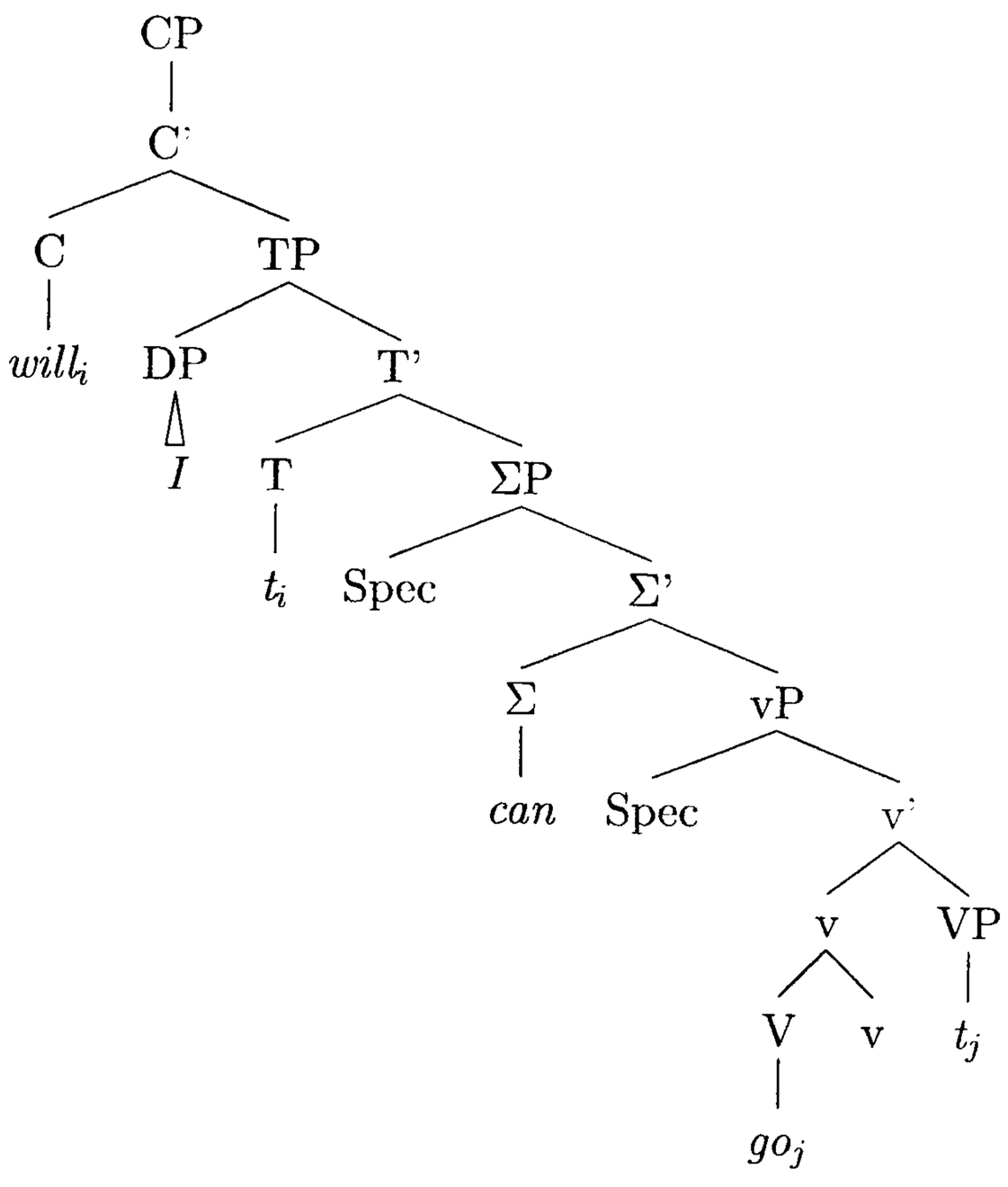
(48)




[9]I will assume that this head is Σ, as put forward in Chapter 2; and, for the moment, I will assume that both modals are inserted directly into the heads T and Σ to keep the clause structure as simple as possible. I will discuss the true merge positions of the modals later in the chapter.

From T, *will* is able to raise to C in interrogative contexts.

(49)




If the first modal is located in T, this suggests that it is tensed, and therefore finite. As a result of being finite, the first modal should thus play host to clitic negation. This is also supported by the data.

(50) He mightnae could come.

The second modal is unable to raise to C in interrogatives:

(51) *Can he will come?

This is most likely due to the restrictions on the movement of auxiliaries imposed by the HMC, and thus tells us nothing about the tense of the second modal. The fact that negation is not permitted to contract onto the second modal also gives little in the way of evidence for the tensed status of the second modal; it could be the case that the second modal is located to the right of negation in the tree, and thus negation cannot contract onto it. This will be discussed further in section 5.4.2.

Again, the data that seems to raise problems for any analysis of DMs is the tag question data, in which it is possible for either modal to invert in a tag:

(52) a. He'll can do it, will he no? FUTURITY
b. He'll can do it, can he no? ABILITY

If it were the case that only the first modal could invert, it would seem that it was correct to assume that the first modal is located in T and is tensed. The fact that the second modal may appear in a tag, calls this theory of DMs into question. This will be discussed further in section 5.4.2, where I will attempt to provide a syntactic analysis to account for the SEH data.

#### 5.4.1.3 Summary

So far, I have shown that DMs are best analysed as MODAL - MODAL structures, as the data is inconsistent with both ADVERB - MODAL and MODAL - ADVERB sequences. This is an extension of the work by Brown (1991), as Brown presented the data but failed to provide an analysis.

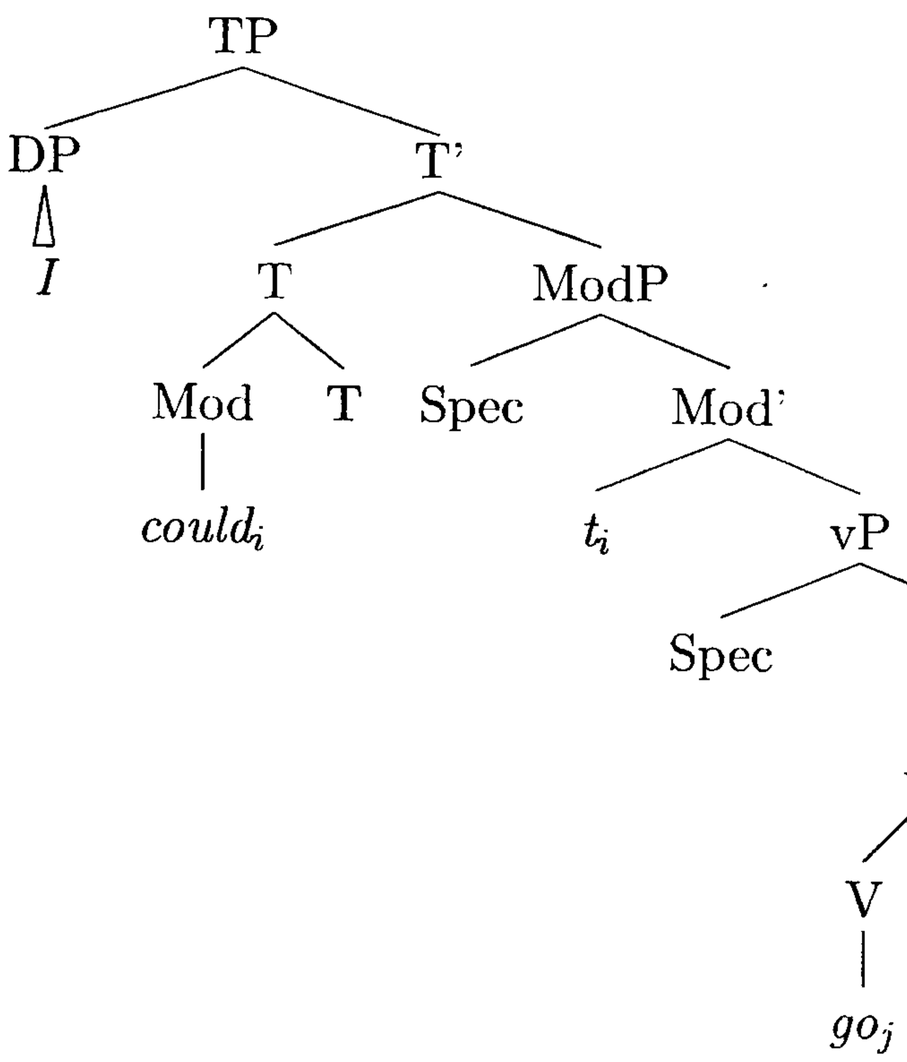
The analysis of DMs as involving two true modal verbs is not straightforward. Brown (1991, 101-102) states that 'a variety of solutions [to the DM puzzle] suggest themselves [... but they] all seem to raise as many problems as they solve.' In the following section, I will pursue the questions about tense and the positioning of both modals in the clause, progressing further in the analysis of DMs in SEH.

### 5.4.2 Locating Double Modals in the Clause

In the preceding section, I raised a number of issues related to the structure of DM constructions, including the location of both modals in the clause and the tense marking of the modals. In this section, I will follow up on the argument that DMs are composed of two modal verbs, and will suggest ways in which the modals should be integrated into the clause structure. I will also attempt to provide an account for the behaviour of the modals in relation to tense, and to distinguish the parameters along which SEH differs from a non-DM dialect such as StE. I will begin by discussing some of the suggestions for the analysis of DMs made by Brown (1991).

In section 5.4.1.2, I argued that the two modals in a DM are inserted into the clause as individual lexical items. This instantly raises problems for analyses of the English auxiliary system as there is only one position available for modal verbs. I will assume that modals are inserted in ModP and undergo raising to T to check TENSE features.

(53)




DMs are incompatible with this analysis for two reasons: only one modal can be inserted into ModP, and it is possible for only one modal to raise to T. In the following section I will discuss the tense of DMs, and will suggest that only the first modal is tensed. This implies that it is this modal which raises to T. Support for this comes from the behaviour of DMs in interrogatives.

In interrogative contexts, M1 inverts (see (49) above):

(54) Will he can do it?

This suggests that M1 raises from T to C, presupposing that at some point during the derivation, M1 appears in T. If this is a correct analysis of M1, the question is: what is the position of M2? The answer to this can be found by investigating the position of M2 with respect to M1 and, more importantly, to negation. In positive and negative declarative contexts, M2 appears to the right of M1, suggesting that M2 must be located below M1 in the clause.

Single modals in non-DM dialects may be negated by clitic negation, as may M1 in a DM construction from SEH:

(55) a. StE: He couldn't have done it.
b. SEH: He mightnae could have done it.

Again, M1 seems to behave like a single English modal, raising to T via $\Sigma$ (the host of [NEG]). This implies that both modals are inserted into the clause below $\Sigma$P. When

full form negation is used, it can occur between M1 and M2. suggesting that M1 has raised to (or through) ΣP, but M2 has remained in a low position below ΣP. In SEH, the clitic negative *-nae* may only appear on the topmost modal.

(56) a. He mightnae could come.
b. *He might couldnae come.

This suggests that M2 never raises out of the position into which it was originally merged.

Non-clitic negation, on the other hand, may occur to the immediate right of M2.

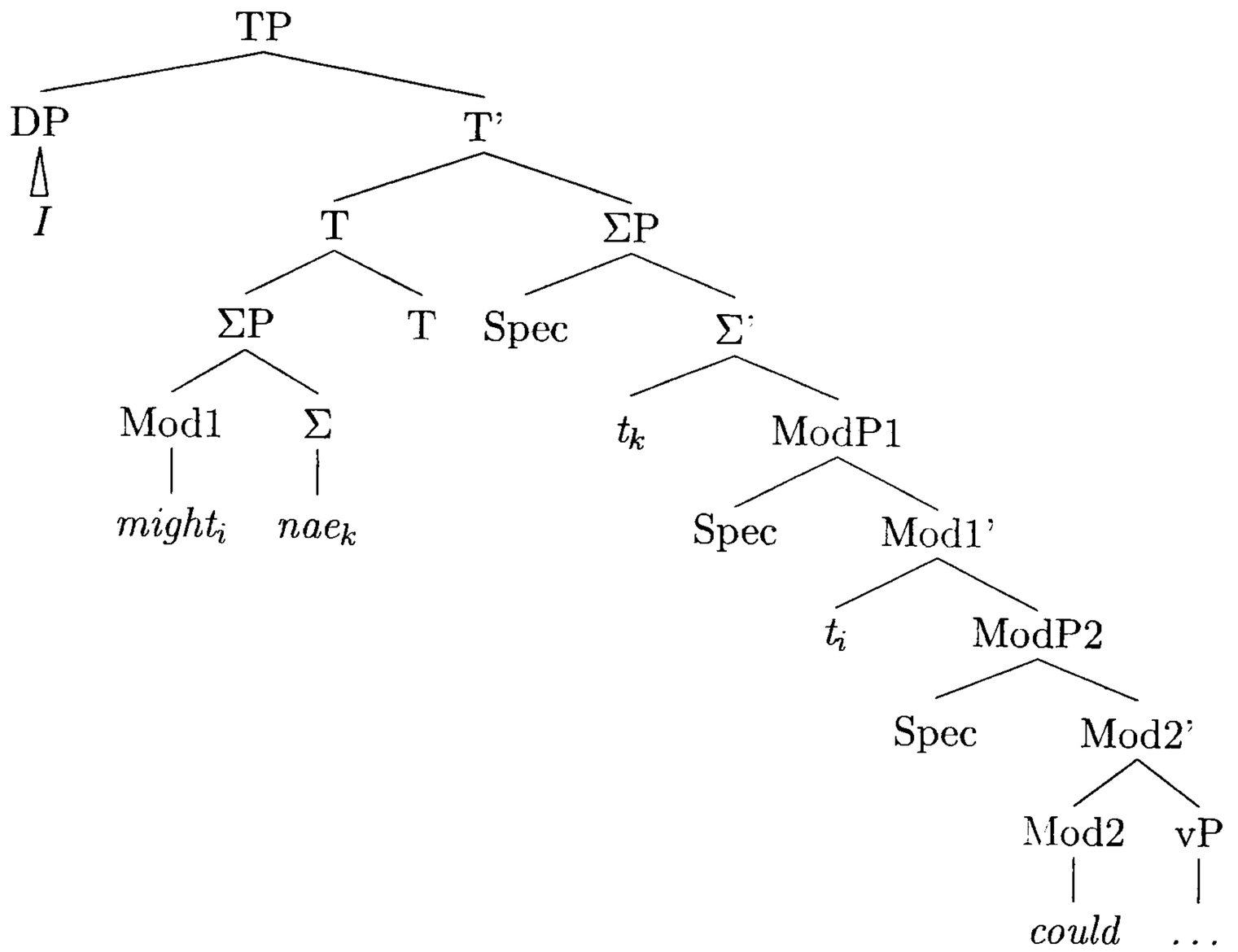
(57) He might could no have done it.

In this instance, negation is assumed to occur in a lower position in the clause. This is supported by the fact that, as pointed out by Brown (1991), this negation can co-occur with negation taking wide scope:

(58) He shouldnae could no have done it.

The positions of negation with respect to M2 leads to the conclusion that M2 is located to the right of (sentential) negation, and to the left of vP and any auxiliaries. Like M1, I will assume that M2 is inserted into the clause as the head of a Modal Projection, as shown in (59):

(59)




If M2 is inserted into the clause structure as the head of a ModP, then this predicts that it should behave like any other non-finite auxiliary; it should not take clitic negation or invert in interrogatives. This is supported by the data. The oddity, however, is that M2 inverts in tag questions. An explanation for this will be given in the following section.

### 5.4.3 Tense in Double Modals

The appearance of two modal verbs in the clause structure creates a paradox: only one finite item is permitted to appear in the clause, and modals are always finite. To overcome this, I will consider the option that only one of the modals is tensed, i.e. finite. The idea that modals may be non-finite is controversial, but it is not unprecedented. Denison (2000, 126) states that 'some Scots dialects even now allow untensed forms of modal verbs like *can*', and among the tentative suggestions by Brown to account for DMs, is the idea that the second modal *can* has finite forms (*can* and *could*) and non-finite forms, which are phonologically identical. Syntactically, however, the finite and non-finite forms are distinct; the former occurs initially in a string of auxiliaries, and the latter occurs after a modal or *to* (a typical position for non-finite auxiliaries). This theory would allow for the co-occurrence of non-finite *can/could* with a finite modal verb, such as *will* or *might*, and would predict the correct order (*will can, might could*). Rather than immediately following Brown's suggestion that it is M2 that is untensed, I will first consider the possibility that M1 is not marked for tense.

It is instantly obvious that M1 must be tensed, as it occurs with clitic negation (60a) and inverts in interrogatives (60b):

(60) a. He mightnae could do it.
b. Will he can do it?

Raising to C in interrogatives is a strong indicator that an auxiliary has first raised to T. As raising to T occurs out of the need to check tense features, it must be the case that M1 is tensed. If one of the two modals is not marked for tense, then it must be M2.

This analysis of M2 as non-finite appears to face a number of difficulties. Firstly, if there are finite and non-finite forms of *can* and *could*, we might expect to find DMs constructed of finite *can/could* and non-finite *can/could*, but, as far as I am aware, examples such as (61) do not exist:

(61) a. *He could can go.
b. *He can could go.
c. *He can can go.
d. *He could could go.

To rule these out, it is probably necessary to state in the lexical entry of finite *can* and *could* that they cannot select for non-finite modals. Alternatively, it is plausible to suggest that the semantic sense of a DM rules out the co-occurrence of semantically identical modals such as finite *can/could* and non-finite *can/could*.

Secondly, if *can*, as the second modal in a DM, is non-finite, it should not invert in tag questions. This is not the case; in tag questions, *can* may appear in the tag with an 'ability' sense:

(62) He'll can do it, can he no? ABILITY

If *can* is a non-finite verb in DM constructions, then it is not predicted to occur in a tag question as only finite auxiliaries may be inverted in a tag:

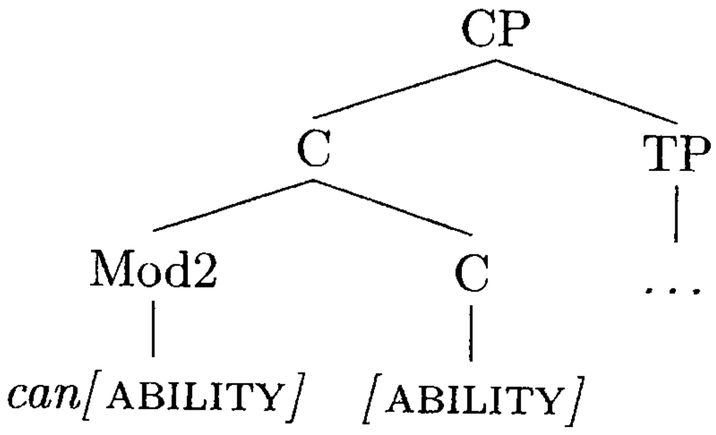
(63) a. You could have gone, couldn't you?
b. *You could have gone, haven't you?

I will provide a tentative solution to this problem.

Within a Minimalist framework it is raising to C in interrogatives is believed to be

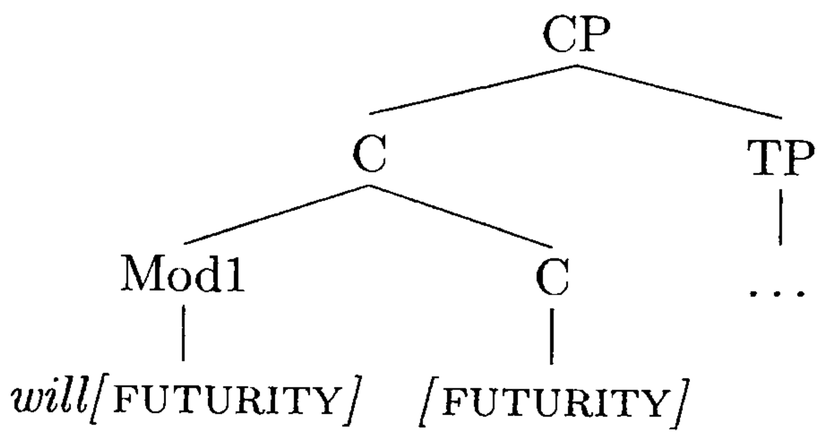
triggered by a [Q] on C (see Adger 2003). In tag questions in SEH, the interpretation depends upon the modal that is inverted. I propose, therefore, that in tag questions in this variety, inversion is triggered not by a [Q] feature but by a feature related to the semantics of the tag, i.e. [FUTURITY] or [ABILITY]. When C is marked [ABILITY]. inversion of *can* is triggered.

(64)




When C is marked FUTURITY, however, *will* undergoes raising to C:

(65)




In this approach to the analysis of tag questions, the inversion of *could* is expected as its features match those of C[ABILITY].

### 5.4.4 Summary

In this part of the chapter I have provided a syntactic analysis of DMs in SEH in which both elements of a DM are treated as modal verbs. I showed that the behaviour of DMs in negative and interrogative contexts can be linked to the tensed status of the modals. In particular, I suggested that only M1 is tensed; it, therefore, inverts and occurs with clitic negation. The inversion of either modal in tag questions was somewhat unexpected in this approach, and I attempted to resolve this issue by suggesting that, in SEH, C may be marked with [ABILITY] or [FUTURITY] features (the former triggers raising of *can*, and the latter *will*).

In the following section I will relate the syntactic properties of DMs in SEH to parame-

ter setting in this variety. I will compare SEH to American varieties and to Standard English.

## 5.5 Conclusion

One of the aims of this thesis is to provide an insight into the parameters of dialect variation. In Chapters 3 and 4, I showed that variation can be linked to lexical choice; with respect to Double *Have* Constructions, Speakers of Scottish English in Fife have a lexical item *coulduf* alongside the regular modal *could*, and in DM dialects *might* can be an adverb (Arkansas English) or a modal (Tennessee English). It seems that lexical choice is also a point of variation in the variety of Scottish English presented in this chapter; I have shown that DMs in SEH are best analysed as MODAL - MODAL constructions in which M2 is untensed. It is the presence of untensed modals *can* and *could* in the lexicon that derives the difference between SEH and StE; if SEH did not have untensed modals, DMs would not be possible as English restricts the appearance of finite verbs to one per clause. Untensed modals are also a point of contrast between DMs in SEH and those found in American varieties. In Chapter 4, I argued that *might* is an adverb in Arkansas English - again, reducing variation to lexical choice.

The analysis of DMs and of the difference between SEH and StE is significant in the field of English dialect syntax, as it has pinpointed an area in which variation between dialects may be found: the lexicon. The fact that DM and non-DM dialects cannot be said to differ from each other in terms of parameter setting does not mean that parameters are not a factor in dialect variation, but rather that in this case, parameter setting is not (or does not appear to be) the cause of the variation. The discussion of parameter setting is rather brief here as it will be discussed in some detail in the concluding chapter that follows.

# Chapter 6

# Conclusion

## 6.1 Conclusion

This thesis makes significant theoretical and empirical contributions to the field of linguistics; it introduces new data into the field, deals with previously reported data by re-structuring the English clause, and shows that the analysis of small-scale data can be crucial in formulating a successful syntactic analysis. If analyses of auxiliaries can account for only Standard English data, then it is inevitable that analyses of other phenomena will suffer similar problems when faced with data from non-standard varieties. This work refers solely to the auxiliary system, but its extension to other areas would undoubtedly lead to a wider understanding of many other aspects of English syntax.

With respect to the properties of English auxiliaries, this thesis analyses data that has been previously reported, such as the properties of Auxiliary Contraction (Chapter 2) which have been discussed in many contrasting frameworks (see Bresnan 1978, Selkirk 1984, Kaisse 1985), and the behaviour of Double Modals (see Chapters 4 and 5) which has been often discussed but never analysed satisfactorily (see Di Paolo 1989, Mufwene 1994, Brown 1991). It also introduces new data, such as the double appearance of non-finite auxiliary *have* in Northern and Scottish varieties (Chapter 3), which are analysed using a Multiple Spell Out analysis proposed by Nunes (2001) to account for the multiple realisation of clitics.

The two main aims of this thesis were to:

1. Consider the implications of dialect variation for analyses of the English auxiliary system, and
2. Uncover the parameters along which dialects may differ.

With respect to the first aim, I argued in Chapter 2, using the different phonetic forms and structural positions of auxiliaries as evidence, that Auxiliary Contraction should be analysed syntactically and, as a result, that the following changes must be made to the structure of the English clause:

- NegP must be replaced by ΣP, a projection which hosts [NEG] and/or [EMPH] features.
- Auxiliaries are not, contrary to what has been suggested in the literature, obliged to raise to T (i.e. the highest projection in Infl).

These two proposals alone have a significant impact on the way in which auxiliaries are analysed in all varieties of English. This clause structure, with no major modifications, was also utilised in the analyses of Double *Have* Constructions and Double Modal Constructions, showing that by making a minor change to the syntactic structure of English we can capture a much wider range of data.

A further aim of this thesis was to uncover some of the parameters along which dialects may differ. The question of what makes a language different from a dialect is a controversial one (Henry 1995, Wilson and Henry 1998) and it is hoped that, by investigating the theoretical consequences of non-standard variation, this question may be addressed from the point of view of parametric variation, i.e. do dialects differ from other dialects in the same way that one language differs from another? In Chapters 3-5 I investigated non-standard phenomena and came to the conclusion that, in both Double *Have* and Double Modal dialects, some of the variation between the dialects under consideration is related to lexical choice and the order of functional projections within the clause. As shown in Chapter 3, Double *Have* dialects differ from those which do not permit double *have* in two ways:

- non-finite *have* is permitted to raise from its merge position, and
- non-finite *have* may be spelled out in multiple positions.[1]

In Chapter 3 I suggested that it is the ordering of Σ below ModP in double *have* dialects which leads to the eventual multiple realisation of the perfective auxiliary in these dialects; it is this that makes these varieties different from Standard English. I also presented a lexical difference within the two double *have* dialects: the Scottish variety has a perfective modal *coulduf* which is available in the lexicon alongside the other modals, allowing the triple realisation of *have*.

[1]This property is a consequence of the first, as *have* could not be spelled out multiply if it did not appear in multiple positions.

In Chapter 4 I showed that in a variety of American Southern English, Arkansas English, Double Modals are not an instance of co-occurring modal verbs but adverb-modal combinations. Again, I argued that this construction surfaces as a result of a lexical choice; Arkansas English speakers have an adverb *might* in their lexicon which is restricted to modifying modal verbs. Arkansas English differs from Tennessee English which does not have an adverb *might* but a non-finite modal *might* in its lexicon. In Chapter 5, I presented a Scottish Double Modal dialect, and showed that in this variety both elements in a DM are true modal verbs.

Thus, there is a two-way distinction between Double Modal dialects, on the one hand, and Double Modal and non-Double Modal dialects, on the other:

- Double Modal dialects may differ from one another according to whether they have a lexical item *might (adverb)* or *might (modal, non-finite).*
- Double Modal dialects differ from dialects which do not permit Double Modals according to whether *might* is a non-finite modal or an adverb in the lexicon (Double Modal dialects), or a finite modal (non-Double Modal dialects).

Thus, two separate phenomena, Double *Have* and Double Modal constructions, can be accounted for by referring to parameters of lexical choice. I do not intend to infer, however, that lexical choice is the only determining factor in dialect variation, but that lexical choice is the key to the particular phenomena studied in this thesis.

This thesis has, therefore, achieved the two aims intended from the outset:

1. It has shown that, in order to account for Auxiliary Contraction and the behaviour of modals and auxiliaries in non-standard dialects, analyses of auxiliaries formulated using standard English data must (i) include ΣP in the clause, (ii) not force auxiliary raising to T, and (iii) allow non-finite auxiliaries to raise from the position into which they were originally merged.
2. It has shown that syntactic differences across dialects can be dealt with by referring to the structure of the lexicon.

In achieving these aims it makes a contribution to the study of English auxiliaries and the knowledge of cross-dialectal variation, and highlights the importance of the often neglected study of English dialects in syntactic theory.

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