

# Variants:

a phi-feature account of lexical, auxiliary, modal alternations

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# Abstract

This thesis is about the verbs *have*, *want*, and *need*, and the different forms that they can take.

Both within English and cross-linguistically, the verb *have* can serve (among other things, e.g., causative and experiencer *have*) as a verb of possession, an auxiliary verb that expresses the perfect, or a verb with modal semantics of obligation. This thesis argues that each of these three uses of *have* are morphologically complex, but built from the same pieces. Specifically, this thesis argues that *have* is not a lexical primitive and is instead composed of *be* plus an extended prepositional phrase, containing both a preposition *P* and a functional “shell” layer headed by the element *p*. The head *p* is roughly analogous to the functional element *v* found in verbs, in that it is an argument-introducing head that can Merge an external argument and assign case to the internal argument of its complement PP.

Like *v*, *p* can undergo transitivity alternations that produce different variants of a particular word, where each variant has a distinct derivation. Much the same way that alternating the features on the head *v* produces active, unaccusative/middle, or passive variants of a transitive verb, alternating the features on *p* produces possessive, auxiliary or modal variants of the verb *have*. I argue that possessive *have* contains a *p* analogous to active, transitive *v*, in that it can both introduce an external argument and assign case to its internal argument. I propose that auxiliary *have* contains a *p* roughly analogous to the unaccusative *v*, in that it can neither introduce an external argument nor assign case to its internal argument. Modal *have* is a third, distinct variant of *have* that is not reducible to either possessive or auxiliary *have*, as evidenced by the fact that its behavior does not pattern with either *have*’s possessive or auxiliary variant. Instead, modal *have* contains a *p* that is neither entirely phi-complete nor entirely phi-defective; that is to say, it contains a *p* with a subset of the features present on the *p* of possessive *have*, but, like the *p* auxiliary *have*, this head is also lacking the phi-features necessary to assign case or a theta-role to any argument in the derivation, although it is phi-complete enough to give an “affected” reading to the surface subject.

I then propose that the verb *want*, which has been demonstrated to show multiple variants cross-linguistically, shows three variants that pattern nearly identically with the variants of *have*. *Want* has a transitive variant that appears phi-complete and non-defective in that transitive *want* can introduce an

external argument and assign case to an internal argument. *Want* also shows an auxiliary variant that can only express a temporal relationship (i.e., the future tense). Because this variant of *want* cannot introduce an external argument or assign case to an internal argument, this variant of *want* is analogous to auxiliary *have*. Finally, *want* shows a variant that appears to be neither entirely phi-complete nor entirely phi-defective, in that it cannot introduce an external argument or assign case to an internal argument but it can impose selectional restrictions on the surface subject of the clause.

I propose that these variants of *want* so closely resemble the variants of *have* because *want* itself is not a lexical primitive. Instead, *want* is a morphological complex verb with a derivation that is, in part, parasitic on the structure of *have*. Very informally, if *having* something, with *have* reduced to its unincorporated state of *be+P*, can be understood as *being with/at/near/of* something, *wanting* something can be reduced to *being in want* of it.

In this way, my proposal for the internal structure of *want* is similar to recent proposals about the internal structure of *need*, which is argued (Harves 2008, Harves and Kayne 2012) to be a morphologically complex verb parasitic upon a transitive verb *have*. Much like *want*, *need* also shows three variants, one which appears parasitic on possessive *have*, one which appears parasitic on auxiliary *have*, and one which appears parasitic on modal *have*.



# Chapter 1

## Introduction

### 1.1 Overview

A core notion in modern linguistic theory is the idea that words can be separated and classified into grammatical categories, or “parts of speech,” such as nouns, verbs, adjectives, etc. In many languages, the distinctions between these categories are quite clear. In inflectional languages, for example, (at least) nouns and verbs are morphologically distinguished. Across other types of languages (agglutinating, isolating, polysynthetic) members of one grammatical category often show different syntactic behaviors than members of other categories—i.e., nouns behave differently than verbs.

Within categories, however, syntactic behavior is not always necessarily uniform. English verbs, for instance, are divided into (at least) three categories—lexical, auxiliary and modal—depending on their syntactic and semantic properties. Informally, lexical verbs are easily definable and refer to an action or state (e.g., *run*, *jump*, *skip*, *think*), auxiliary verbs have little lexical content and express grammatical concepts such as tense and aspect (perfective *have*, progressive *be*), and modal verbs express varying degrees of necessity, possibility, permission and obligation (e.g., *should*, *could*, *must*). Syntactically, these categories are more difficult to define but easy to distinguish. Lexical verbs require do-support in the context of negation, and the negative element also precedes the verb. English auxiliary and modal verbs behave differently. They do not require do-support in the context of negation, and the negative element follows the verb. Additionally, while English lexical and auxiliary verbs are marked for agreement in the 3SG, English modal verbs are not sensitive to either person or number. Modal and auxiliary verbs can contract in English and form clitics. Lexical verbs cannot. Examples of some of the distinct behaviors of lexical, auxiliary and modal verbs are given in (1)-(3), below.

- (1) English lexical verbs
- a. Sam often eats chicken parm sandwiches.
  - b. Sam **doesn't eat** avocados. (do-support)
  - c. \*Sam eats not avocados.
  - d. \*Sam not eats avocados.
- (2) English auxiliary verbs
- a. Sam has eaten his entire chicken parm sandwich.
  - b. Sam hasn't eaten any of his avocado. (no do-support)
  - c. \*Sam not has eaten any of his avocado.
  - d. \*Sam doesn't has eaten any of his avocado.
- (3) English modal verbs.
- a. Sam should eat more avocados.
  - b. Sam wouldn't ever give up chicken parm! (no do-support)
  - c. \*Sam (does) not would eat more avocados.

For the most part, this three-way distinction is clear. However, a problem arises when the verbs that fit into multiple categories are considered. The English verb *have* can behave as a either lexical, auxiliary, or (semantically) modal verb<sup>1</sup>.

- (4) Lexical (possessive) *have*
- a. Marie **has** a new keyboard.
  - b. Marie *doesn't have* a new keyboard.
  - c. \*Marie **has** not a new keyboard.
- (5) Auxiliary *have*
- a. Marie **has** purchased a new keyboard.
  - b. \*Marie *doesn't have* purchased a new keyboard.
  - c. Marie **has not** purchased a new keyboard.
- (6) Modal *have*
- a. Marie **has** to return her new keyboard.
  - b. Marie *doesn't have* to return her new keyboard.
  - c. \*Marie **has not** to return her new keyboard.

That a single lexical element can be a member of multiple verbal subcategories supports the embedding of all lexical, auxiliary and modal verbs under a single verbal category, but calls into question what exactly the distinctions between subcategories are.

Just as the distinction between lexical, auxiliary and modal verbs is not specific to English, neither is the distinction between lexical, auxiliary and modal *have*. Within Indo-European H(AVE)-languages (i.e., languages that express possession with a transitive verb equivalent to *have*), English, Catalan, Galician,

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<sup>1</sup>For the time being, I am defining possessive *have* as a “lexical verb” based solely on its apparently transitive form and lexical behavior in English, as shown in (4). As the properties of lexical (possessive) *have* are further explained, this labeling convention will be altered accordingly.

Haitian Creole, Spanish, German and both European and Brazilian Portuguese exhibit both a lexical and modal variant of *have* (Bhatt, 1998)<sup>2</sup>. English, Spanish, Catalan, French, Portuguese, Italian, German and Dutch, among others, exhibit both a possessive and an auxiliary variant of *have*. That so many languages distinguish lexical, auxiliary and modal *have* renders improbable any claim that the English examples (4)-(6) are the result of homophony and coincidence. Some examples of the lexical, auxiliary, and modal *have* distinction are given in (7)-(10) for languages other than English.

- (7) Spanish<sup>3 4</sup>
- a. **Tengo** un libro.  
**have.1SG** a book  
 ‘I have a book.’ (lexical)
- b. **Tengo** que probar esas papas fritas.  
**have.1SG COMP try.INF** those potatoes fried  
 ‘I have to try those french fries.’ (modal)
- c. Elvis **ha** salido del edificio.  
 Elvis **has.AUX** left of.the building  
 ‘Elvis has left the building.’ (auxiliary)
- (8) Catalan<sup>5</sup>
- a. En Joan **té** dos germans.  
 DET John **has** two brothers  
 ‘John has two brothers.’ (lexical)
- b. En Joan **ha** d’anar a Girona.  
 DET Joan **has.AUX** of-go.INF to Girona  
 ‘Joan has to go to Girona.’ (modal, Bhatt 1998:12)
- c. Ell **ha** marxat.  
 he **has.AUX** left  
 ‘He has left.’ (auxiliary)
- (9) German<sup>6</sup>
- a. Ich **habe** einen roten Wagen.  
 I **have** one red car  
 ‘I have a red car.’ (lexical)

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<sup>2</sup>For the purposes of this paper a “transitive” verb will be defined as in Harves and Kayne (2012): a verb that takes a nominative subject and an accusative direct object with no intervening preposition.

<sup>3</sup>the following glossing conventions are adopted in this thesis: ABS=absolute, ACC=accusative, ADES=adessive, ART=article, AUX=auxiliary, COND=conditional, COMP=complementizer, COP=copula, CL=clitic/classifier (context makes clear), DAT=dative, DET=determiner, DIM=diminutive, ERG=ergative, FEM=feminine, FUT=future tense, GEN=genitive, GER=gerund, IND=indicative, INF=infinitive, LOC=locative, M=male, N=neuter, NACT=non-active, NEG=negation, NOM=nominative, PASS=passive, PART=partitive, PERF=perfect, PL=plural, PST=past, POSS=possessive, PREP=preposition, PRS=present, PTCP=participle, REFL=reflexive, SG=singular, SBJV=subjunctive, TRAN=transitive

<sup>4</sup>This thesis is a cross-linguistic study, and so contains data from a wide variety of languages. When data comes from a paper or grammar, it is cited as such. Uncited data comes from my own fieldwork with native speakers of the language in question.

<sup>5</sup>Thanks to Karen Kuhn for help with Catalan.

<sup>6</sup>Thanks to Eleanor Chodroff for help with German.

- b. Ihr **habt** jetzt zu schlafen.  
 You.PL **have** now to sleep.INF  
 ‘You have to sleep now.’ (modal)
- c. Ich **habe** mein Buch gelesen.  
 I **have** my book read  
 ‘I have read my book.’ (auxiliary)
- (10) French<sup>7</sup>
- a. Elle **a** une très forte personnalité.  
 she **has** a very strong personality  
 ‘She has a very strong personality.’ (lexical)
- b. J-’**ai** á finir mes devoirs.  
 I-**have** to finish my homework  
 ‘I have to finish my homework.’<sup>8</sup> (modal)
- c. J-’**ai** perdu mes clés  
 I-**have** lost my keys  
 ‘I have lost my keys.’ (auxiliary)

At its core, this thesis aims to answer the question of how to syntactically account for individual verbs that span multiple verbal subcategories. To answer this question, this thesis will concern itself, primarily, with two verbs that cross-linguistically take lexical, auxiliary and modal forms. The first, *have*, has already been described. The second verb is *want*.

In Standard English, *want* only exhibits a lexical form. However, cross-linguistically, *want*’s behavior is much more varied. Like *have*, *want* can appear as a transitive or seemingly functional verb. The unbearable lightness of *wanting* has been well-noted cross-linguistically. *Want* can serve as a functional restructuring element, à la Cinque (2004) and Wurmbrand (2004), in languages like Italian, German and Catalan (Picallo 1990). It can act as a passive auxiliary in German, Sardinian, Venetian and many other non-standard Italian dialects (Remberger 2010), as well as in many non-standard English dialects, including ‘Pittsburghese’ (Tenny 1998, among others), and in Indonesian, Samoan, Malayalam and many other related languages (Polinsky and Potsdam 2008, Sato 2010). *Want* functions as the future auxiliary in a variety of languages, including Ancient Greek, Romanian, Mandarin, Ojibwa, Yiddish, much of Scandinavian, and the majority of Balkan languages, including Serbian, Croatian and Bulgarian (Tomič 2003). The English future auxiliary *will* also has been argued to be a grammaticalized form of *want* (Givón 1997). *Want* has an attested modal usage in Hindi (Bhatt 1998, among many others) and Albanian. Additionally, *want* has a variety of other idiosyncratic usages in such languages as Slovenian (Marušič and Žaucer 2006), Slavic more generally, and Italian (Kayne 2009). Examples of *want*’s usage as an auxiliary or modal verb are given in (11)-(16).

<sup>7</sup>Thanks to Neil Myler for help with French.

<sup>8</sup>This example is colloquial (perhaps non-standard) and is not accepted by all speakers.

- (11) Hindi (modal)
- a. Ram-ko seb khaa-naa caah-iye thaa.  
 Ram-DAT fruit eat-GER want-NACT be.PST  
 ‘Ram should have eaten the apple.’ (Bhatt 1998:10)
- (12) Albanian (modal)
- a. Albinot-it i duhet që të niset herët.  
 Albinot-DAT DEF want.3SG.NACT COMP SBJV leave early  
 ‘Albinot must/has to leave early.’
- (13) Yiddish
- a. yech vil a meidel-e.  
 I want a girl-DIM  
 ‘I want a baby girl.’ (lexical)
- b. John vil koif-en a naijer hemd.  
 John want/FUT.AUX buy-INF a new shirt  
 READING A: ‘John wants to buy a new shirt.’ (lexical)  
 READING B: ‘John will buy a new shirt.’ (fut. auxiliary)
- (14) Italian (modal)
- a. Ci vogliono tre uova per fare questa torta. there want.3 three eggs  
 One needs three eggs/Three eggs are needed to make this cake (Remberger  
 to make this cake  
 2010:165)
- (15) Non-standard English (passive auxiliary)
- a. This house wants painted by (its) owner.  
 ‘This house should be painted by its owner.’  
 ‘\*Its owner wants to paint this house.’ (Tenny 1998:6)
- (16) Indonesian (passive auxiliary)
- a. anak itu mau/ingin di-cium oleh ibu.  
 child that want pass-kiss by mother  
 READING A: The child wants to be kissed by the mother.  
 READING B: The mother wants to kiss the child. (Polinsky and Potsdam 2008:2)

Though the data in (11)-(16) may appear disjointed at first, I propose that the unusual behavior(s) of *want* are reducible to *want*'s ability to demonstrate three morphosyntactic variants, similar to the three variants of *have*. Specifically, *want* can appear as a full, transitive verb (as in its regular English usage), showing a variant analogous to possessive *have*. *Want* can also show an auxiliary variant that only expresses the temporality (the future tense), showing a variant analogous to auxiliary *have*. Additionally, *want* has a form that appears to be somewhere “in between” its transitive and auxiliary variants. This variant of *want* is semantically “light” enough to lack the ability to assign a theta-role to any argument present in the

derivation, but can still contribute intensional and possible world semantics to the derivation, much like a modal verb. This use of *want* is analogous to the modal variant of *have*. Examples of these variants, organized by behavior, are given in (17)-3.4.3.

- (17) Transitive *want*
- a. Sam **wants** another avocado.
- b. yech **vil** a meidel-e.  
I **want** a girl-DIM  
'I want a baby girl.' (Yiddish)
- c. **Quiero** un gato.  
**want**.1SG a cat.  
'I want a cat.' (Spanish)
- (18) Auxiliary *want*
- a. John **vil** koif-en a naijer hemd.  
John **want** buy-INF a new shirt  
'John will buy a new shirt.' (Yiddish)
- b. Anna **vill** ha en ny bil.  
Anna **want**.3SG have-INF a new car  
'Anna will have a new car.' (Swedish, Harves 2008:7)
- c. Wǒ **yào** qù Běijīng.  
I **want** go Beijing  
'I will go to Beijing.' (Mandarin)
- (19) Modal *want*
- a. Ram-ko seb khaa-naa **caah**-iye thaa  
Ram-DAT fruit eat-GER **want**-NACT be.PST  
'Ram should have eaten the apple.' (Hindi, Bhatt 1998:10)
- b. Albinot-it i **duhet** që të niset herët  
Albinot-DAT DEF **want**.3SG.NACT COMP SBJV leave early  
'Albinot must/has to leave early.' (Albanian)
- c. This house **wants** painted by (its) owner.  
'This house should be painted by its owner.'  
'\*Its owner wants to paint this house.' (Non-Standard English, Tenny 1998:6)
- d. anak itu **mau/ingin** di-cium oleh ibu  
child that **want** pass-kiss by mother  
'The mother wants to kiss the child.' (Polinsky and Potsdam 2008:2)

I propose that the behavioral similarities between all variants of *want* and *have* follow from (i) the structure of *want* being derivationally related to the structure of *have* in a manner parallel (though not identical) to the proposed relationship between the verbs *need* and *have* (Harves and Kayne 2012) and (ii) a close syntactic relationship between all variants of *have*. The structure of all variants of *have* contains the same categorical

elements, and the semantic differences between variants arise from differences in the feature composition of the elements involved.

Specifically, I propose (following Freeze 1992, Kayne 1993, Bhatt 1998, among many others) that all variants of *have* are morphologically complex in that they are composed of *be*+P(reposition). I believe the preposition present in the derivation of all variants of *have* is part of an extended prepositional phrase, in the sense of Svenonius (1994, 2003), meaning that it contains a functional, argument-introducing head *p*, capable of undergoing transitivity alternations, reminiscent of *v*. Just as feature alternations on *v* produce active, passive and middle variants of transitive verbs, feature alternations on the functional head *p* produce possessive, auxiliary and modal variants of the verb *have*.

The reason that *want*, then, shows three variants (transitive, auxiliary, modal) is because it contains an underlying possessive structure. Specifically, I will propose that *want* is an inherently nominal element that incorporates into the structure of *have*. This is parallel to a recent proposal about the verb *need* (Harves and Kayne 2012), which claims that *need* is a parasitic on *have*. The asymmetrical behaviors of both *want* and *need* follow directly from my proposed structures for *have* and my account of *have*'s multiple variants.

## 1.2 Background and definitions

The previous section defined lexical, auxiliary and modal verbs primarily in terms of their behavior in English. However, many languages do not share these patterns, and so defining modal and auxiliary verbs by their behavior in English is not sufficient for a cross-linguistic study. In order to discuss the behavior of lexical, auxiliary, and modal verbs cross-linguistically, broader definitions of all terms are needed.

Lexical verbs, informally, are verbs as we traditionally think of them—words that describe events or states. Lexical verbs behave as other lexical categories. They are open-class elements that can alternate with other syntactic categories with the addition of special morphology. More formally, lexical verbs can be defined as verbs which (i) assign theta-roles to arguments (20), (ii) are neither rigidly ordered nor subject to strict co-occurrence restrictions within the syntactic structure (21) and (iii) can (potentially) take more than one type of complement (22) (Cinque 2004).

- (20) Theta-role assignment
- a. Mary ate the cake.
  - b. Theta-grid

Agent	Theme
Mary	cake

- (21) Flexible Ordering (Italian)
- a. [Fortunatamente **arrivato** in.anticipo], Gianni pote rimediare.  
 fortunately arrived early Gianni could remedy  
 ‘Having luckily arrived early, Gianni could remedy [the situation].’
- b. [**Arrivato** fortunatamente in.anticipo], Gianni pote rimediare.  
 arrived fortunately early Gianni could remedy  
 ‘Having luckily arrived early, Gianni could remedy [the situation].’ (Tortora 2005:17)
- (22) Multiple Complement Types
- a. John thought [<sub>SC</sub> Bill a fool. ]  
 b. John thought [<sub>CP</sub> that Bill was a fool. ]  
 c. John thought [<sub>PP</sub> about his brother ] frequently.

However, problems arise when trying to find similarly well-accepted definitions for the terms “auxiliary” and “modal” verbs, which are frequently classified by language-specific means. English modals, as shown in (3) and (23), do not inflect for person or number in the 3SG, as lexical English verbs do. In Spanish however, such inflection is necessary for modals such as *poder*, ‘can’.

- (23) a. John can ride a bike.  
 b. \*John cans ride a bike.
- c. \*Juan poder andar por bici.  
 Juan can.INF go by bike.
- d. Juan puede andar por bici.  
 Juan can.3SG go by bike  
 ‘Juan can ride a bike.’

English auxiliaries, as shown in (24-a)-(24-b), precede the matrix verb. However, auxiliaries in Breton follow the matrix verb (24-c)-(24-d).

- (24) a. John has read the book.  
 b. \*John read has the book.
- c. \*Deus en lennet Yann al levr.  
 Has 3SG.M read Yann the book
- d. Lennet en deus Yann al levr.  
 Read 3SG.M has Yann the book  
 ‘Yann has read the book.’ (Borsley and Roberts 1996:22)

Because “auxiliary” and “modal” verbs are often defined by their behavior within a specific language, for the time being I will group “auxiliary” and “modal” verbs together as **functional verbs**. In contrast to lexical verbs, functional verbs are those which (i) do not assign theta-roles to arguments (26) (cf. (20), (25)), (ii) are subject to rigid ordering and co-occurrence restrictions (27)-(28) (cf. (21)) and (iii) allow only one type of complementation (29)-(30) (cf. (22)) (Wumbrand 2004, citing Cinque 2004).

- (25) Theta-role assignment  
 a. Sam has eaten an avocado  
 b. Theta grid: *eat*

Agent	Theme
Sam	avocado

- (26) \*Sam can an avocado.  
 (No theta-grid)

Assuming the Theta Criterion, the theta grids in (20), (25), (26) show that DPs cannot be given a theta-role by auxiliary or modal verbs. An example of the rigid positioning and co-occurrence of functional verbs comes from English auxiliaries, where the perfective auxiliary *have* must occur before the progressive auxiliary verb (27). Similar effects are found in German, where epistemic modals must precede other modals and auxiliaries (28).

- (27) a. He has been living in New York for two years.  
 b. \*He been has living in New York for two years.

- (28) German

- a. Er dürfte zu Hause sein müssen.  
 He might at home be must  
 ‘He might have to be at home  
 ‘\*It might be that it must be the case that he is at home.’
- b. \*Er muß wieder singen dürften.  
 He must again sing might  
 ‘It must be the case that he might sing again.’

(Wumbrand 2004:1000)

The following examples show that auxiliary (29) and modal (30) verbs are not able to S-select for multiple complement types.

- (29) Spanish

- a. Sam ha [VP comido la palta.]  
 Sam has.AUX [VP eaten the avocado.]  
 ‘Sam has eaten the avocado.’
- b. \*Sam ha [CP que comer esa palta.]  
 Sam has.AUX [CP that eat.INF this avocado.]
- c. \*Sam ha [DP una palta.]  
 Sam has.AUX [DP an avocado.]

- (30) a. Sam must [VP eat an avocado. ]  
 b. \*Sam must [TP to eat an avocado. ]  
 c. \*Sam must [CP for eating an avocado. ]  
 d. \*Sam must [DP an avocado. ]

I will continue, for the time being, to distinguish auxiliary and modal verbs from each other by their semantics. Auxiliary verbs will be defined as those functional verbs whose semantic contribution is grammatical, e.g., they contribute information about tense or aspect. Modal verbs are those verbs which allow one proposition to be evaluated against a set of other propositions. In doing so, modals express levels of possibility or necessity, e.g., the possibility or necessity of one proposition being true in comparison with the set of the same proposition in all other possible worlds (von Fintel 2006). In 2.4.3, I will show how the semantics of modal *have* come automatically as a result of its syntax. A similar account will be given for the modality of *want* in 3.3 and *need* in 4.2.3.

A challenge to a strictly semantic distinction between modal and auxiliary verbs arises immediately when the verb *want* is considered. *Want* is an intensional predicate, often described as a bouletic modal, meaning that it should, in all its forms, “concern what is possible or necessary, given a person’s desires” (von Fintel 2006:2). Due to this, *want* occasionally seems to function as something of a “modal auxiliary”—a functional verb that contributes both grammatical and possible world semantics. An example of this is *want*’s role as a passive auxiliary. In the following (31) (cf. (15)), *want* contributes information about Voice as well as a level of necessity. For more in-depth tests that demonstrate that *want*, in this and similar contexts, is indeed a passive auxiliary, see Section 3.3.

- (31) Non-standard English  
 This house wants painted by (its) owner.  
 ‘This house should be painted by its owner.’ (Tenny 1998:6)

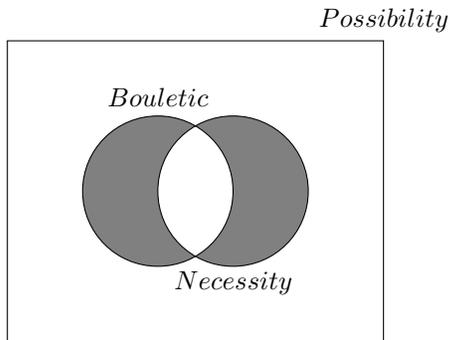
Modality can sometimes be contextually determined. The following (32-a)-(32-b) are instances of bouletic modality, given the context of a stern father talking to his son. One uses *want* (32-a), and the other uses modal *have* (32-b), which is typically designated as a deontic or epistemic modal, as seen in (33).

- (32) a. I want you to go to bed in ten minutes.  
 b. You have to go to bed in ten minutes. (von Fintel 2006:2)
- (33) a. It has to be raining. [After observing people coming inside with wet umbrellas; epistemic modality]  
 b. Visitors have to leave by six pm. [Hospital regulations; deontic] (Von Fintel 2006:2)

In 3.3 I propose not only that the solution to this problem lies in a careful investigation of what, exactly, is the basic modality of *want*, but that *want*’s ability to express three degrees of modality is consistent with and predicted by an analysis of *want* as showing three distinct variants, each with a distinct derivation (although each variant of the verb *want* itself is composed of the same categorical elements). I reject Remberger’s (2006, 2010) claim that *want* is inherently a modal of necessity and instead adopt a position more in-line with Tomič, namely that *want*’s modality is more closely tied to the modality of the “future auxiliary” (e.g.,

English *will*). In that sense, *want* is a modal of possibility. When *want* is capable of assigning an experiencer theta-role to an argument of the clause, it functions as a bouletic modal. This is consistent with a definition of bouletic modality as a subset of possibility; bouletic modality expresses the possibilities desired by an individual. *Want*'s ability to function as a modal of necessity arises when a variant of *want* is defective in its ability to assign a theta-role to an argument, but still capable of placing selectional and semantic restrictions on arguments of the clause (cf. Polinsky and Potsdam 2008). This is consistent with a definition of necessity as a subset of possibility that needn't be desired by an individual, but which still must effect either an argument or a proposition. The relationship between the three modal forces *want* can lead to a derivation is schematized in (34). An example of *want* lending bouletic modality, a possibility reading, and a necessity reading, is giving in (35). Note that modal *want* yields deontic modality, transitive *want* lends bouletic modality, and auxiliary *want* is a modal of possibility.

(34) Modality of *want*



(35) Modal variants of *want*

- a. This car wants washed (by owner)  
 'This car should be washed by (its owner).'
- (deontic)
  
- b. John vil koif-en a neijer hemd  
 John want buy-INF a new shirt  
 READING A: 'John wants to buy a new shirt.'  
 READING B: 'John will buy a new shirt.'
- (Yiddish, bouletic)  
 (possibility)

I argue that the distinct modal interpretations in (35)—of possibility, necessity, or bouletic modality—arise from *want*'s having syntactic variants, each with a distinct derivation. Thus, although the presence of *want* will always contribute some modal semantics to the derivation, each variant of *want* only has one particular semantic interpretation.

Finally, this thesis adopts the proposal put forward by Borer (1984), Kayne (1994) and Chomsky (1995)

(sometimes called the Borer-Chomsky Conjecture) that only functional elements are capable of setting syntactic parameters. That is to say, syntactic parameters are triggered solely by differences of features and properties of functional elements. A summary of the properties of lexical and functional verbs is given in (36). Note that functional and lexical verbs are in complementary distribution with regard to their behaviors and properties.

(36) Properties of functional and lexical elements

Functional verbs	Lexical verbs
open class	closed class
Responsible for setting syntactic parameters	Do not set syntactic parameters
Do not assign theta-roles to arguments	Assign theta-roles to arguments
Are rigidly ordered within the derivation	Are flexibly ordered within the derivation
Have strict co-occurrence restrictions	Do not have strict co-occurrence restrictions
Can only C-select for one type of complement	Can C-select for multiple complement types

The lexical/functional distinction described above raises questions about how to treat lexical verbs like *have* and *want*. If my goal is to explain the distinctions between lexical, auxiliary and modal verbs via the properties of a single functional element, it is not clear how to approach lexical verbs. Lexical verbs, by virtue of their definition and classification, do not have the properties of functional verbs. One way to account for this is through the proposal that *have* and *want* are not lexical primitives. I propose, following Szabolsci (1983), Freeze (1992), Kayne (1993), Baker (2003) Harves (2008), and Harves and Kayne (2011, 2012), that *have* and *want* are both morphologically complex. The variation between forms of these verbs is due to alternations of the properties of the functional elements present in each verb's derivation.

The remainder of this thesis is organized as follows. Chapter 2 describes the syntactic decomposition of *have* and proposes a way to account for its three way distinction between lexical, auxiliary and modals variations. Chapter 3 gives a parallel account for *want*. Chapter 4 shows that the same model can be applied to *need*, which also has a three way lexical-auxiliary-modal asymmetry and has recently been analyzed as parasitic on the structure of *have*. Chapter 5 summarizes my findings and outlines questions for further research.

# Chapter 2

## Have

### 2.1 *Have-be* alternations

English is one of a variety of languages that express possession with a transitive verb *have*. However, many of the world's languages lack a transitive *have*, and instead express possession with a form of the verb *be*, plus a preposition or additional case morphology. I will refer to languages that exhibit a transitive possessive verb *have* as H(AVE)-languages, and languages that express possession with the verb *be* as B(E)-languages. Some examples of B-languages are given in (1)-(3):

- (1) U menja (est') kniga  
at me.GEN (be) book.NOM  
'I have a book.' (Russian)
- (2) Man ir velosipeds.  
me.DAT is bicycle.NOM  
'I have a bicycle.' (Latvian)
- (3) bhí cúpla carr ag Seán an uair tíd  
be.PST several car at Seán ART time DET  
'Sean had several cars then.' (Irish)

*Have/be* alternations are not just apparent across languages. Some languages show an internal alternation between *have* and *be* in specific contexts. Many Slavic languages show an alternation between *have* and *be* exists in the context of negation or existential sentences.

- (4) Polish<sup>1</sup>
- a. W lodówce **jest** ser.  
in fridge **is** cheese.NOM  
‘There is cheese in the refrigerator.’
- b. W lodówce nie **ma** sera.  
in fridge not **have.3sg** cheese.GEN.NEG  
‘There is no cheese in the refrigerator.’
- (5) Bulgarian (Błaszczak 2007:326)
- a. Na masa-ta **ima/imaše** sirene.  
on table-the **has/had** cheese  
‘There is/was cheese on the table.’
- b. Sirene-to **e** na masa-ta.  
cheese-the **is** on table-the  
‘The cheese is on the table.’
- (6) Croatian (Błaszczak 2007:327)
- a. Na stolu **nema** sira.  
on table-LOC NEG-**has** cheese.GEN.NEG  
‘There is no cheese on the table.’
- b. Na stolu **je bilo** sira.  
on table-LOC is **been** cheese.PART.GEN  
‘There was some cheese on the table.’
- (7) Ukrainian (Błaszczak 2007:327)
- a. Petro ne **maje/mav** mašyny.  
Peter-NOM NEG **has/had** car.GEN.NEG  
‘Peter doesn’t have/didn’t have a car.’
- b. U Petra **je/była** mašyna.  
at Peter-GEN is/was car-NOM  
‘Peter has/had a car.’

In Czech, *have* and *be* can be used interchangeably in the context of Modal Existential Wh-Constructions (MEC). Both *have* and *be* give an existential reading (for a full analysis of MECs, see Šimík 2009).

- (8) Mám / Je si s kým promluvit.  
have.1SG / be.1SG REFL with who talk  
‘There is someone (for me) to talk with.’ (Czech, Šimík 2009:1)

Additionally, French (10), Albanian, Bulgarian and Macedonian all use a form of the verb *have* in all existential sentences, although they use *be* in locative and copular sentences. English (9), like many languages, uses *be* for both existential and copular sentences.

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<sup>1</sup>Thanks to Kate Lesko for help with Polish

- (9) English
- a. There **is** a boy in the garden.
  - b. The boy **is** in the garden.
  - c. \*There **has** a boy in the garden.

- (10) French
- a. Il y **a** une fille dans le jardin.  
It CL **have** a girl in the garden  
'There is a girl in the garden.'
  - b. La fille **est** dans le jardin.  
the girl **is** in the garden  
'The girl is in the garden.'

Additionally, within Romance and Germanic there is a well-noted auxiliary alternation between *have* and *be*. There are a variety of syntactic factors that can trigger this alternation, depending on the language in question. In French and German, the *have/be* alternation is dependent on whether the matrix verb is unergative/transitive or unaccusative. In some Italian dialects, the alternation can be triggered by tense, mood or person/number or the absence/presence of an object clitic. For a more complete discussion and analysis of auxiliary alternations, see Kayne (1993).

- (11) German (Becker 1997:15)
- a. Hans **hat** Maria gekusst.  
Hans **has** Mary kissed  
'Hans has kissed Mary.' (transitive)
  - b. Hans **hat** geschlafen.  
Hans **has** slept  
'Hans has slept.' (unergative)
  - c. Hans **ist** angekommen.  
Hans **is** arrived  
'Hans has arrived.' (unaccusative)
- (12) Object clitic alternations; Novara (Northern Italian dialect)
- a. Mi i **son** mia parla.  
Me.CL I **am** not spoken  
'I haven't spoken.'
  - b. Mi i t'-o mai parla.  
Me I you.DAT-**have** never spoken  
'I have never spoken to you.' (Kayne 1993:14)

Even within English, there are weak *have/be* alternations in some locative experiencer and possessive constructions (13)-(15). Outside of Romance and Germanic, Basque also shows a *have/be* auxiliary alternation (16).

- (13) English locative alternations  
 a. A book **is on** the table.  
 b. The table **has** a book on it. (Becker 1997:40)
- (14) English experiencer alternations  
 a. My knees **are** bent.  
 b. I **have** my knees bent. (Becker 1997:40)
- (15) English possessive alternations  
 a. Sleep **is of** category V.  
 b. Sleep **has** category V.  
 c. Y **is** a property **of** X.  
 d. X **has** the property Y. (Becker 1997:41)
- (16) hi etorr-i h-**aiz** baina bestea ez d-**itu**-k etorr-i  
 you come-PERF 2SG-be but other NEG 3PL-have-2SG come-PERF  
 ‘You have come but the others have not come.’ (Basque, Arregi 2004:8)

*Have* and *be* also appear to share certain syntactic behaviors that may be specific to the two verbs. One example is the definiteness effect. English existential constructions (as in other languages), which use the verb *be*, take an indefinite DP (17). Similarly, though not exactly parallel, is that fact that *have* cannot occur with a definite DP and yield an interpretation of full possession. Instead, this use of *have* can only imply a temporary association (Bjorkman 2011:130). Such effects are not generally found with other English verbs (18).

- (17) a. There is a/\*the car in the driveway.  
 b. I have a car. (have = own)  
 c. I have the car. (have ≠ own) (Bjorkman 2011:130)
- (18) a. I ate an orange.  
 b. I ate the orange.  
 c. Kate studied your notes.  
 d. Kate studies those notes.

As the data in (4)-(17) show, alternations between *have* and *be* are common cross-linguistically. These alternations—between verbs of possession in B- and H-languages, between auxiliaries, and in locative and existential sentences—suggest that *be* and *have* are derivationally related. Benveniste (1966) was the first to propose that *have* and *be* were diachronically related, with *have* evolving from a form of *be*. More recently Freeze (1992) and Kayne (1993) have proposed that *have* and *be* are morphologically and derivationally related. In other words, *have* is not a lexical primitive. Instead *have* is decomposable into *be* + P(reposition).

## 2.2 Decomposing *have*

While Freeze (1992) and Kayne (1993) agree on the core notion that *have* is an internally-complex verb composed of *be*+P, their accounts differ in certain regards. First is the question of which preposition incorporates into *be* in order to form *have*. Kayne (1993) strongly implies that the preposition in *have* is *of*, based on Szabolcsi’s analysis of possessive structures in Hungarian and *of*’s properties as a “prepositional determiner.” Freeze proposes an abstract locative preposition (closer to *in* or *on*), based on similarities he proposes between possessive and locative sentences structures cross-linguistically.

Determining which preposition incorporates into *be* in order to form *have* is not an easy matter. (19)-(22) show some of the cross-linguistic variation between which prepositions can be overtly displayed in B-languages<sup>2</sup>.

- (19) AT (Freeze 1992:586)
- a. **U** menja (**est**’) kniga.  
**at** me.GEN (**be**) book.NOM  
 ‘I have a book.’ (Russian)
- b. **bhí** cúpla carr **ag** Seán an uair tíd.  
**be.PST** several car **at** Seán ART time DET  
 ‘Sean had several cars then.’ (Irish)
- c. **yuan ti?** Pablo xuntlil ciimin.  
 COP **at** Paul one horse  
 ‘Paul has a horse.’ (Yucatec)
- (20) NEAR
- a. Mohan ke-**pass** ek kitaab **hai**.  
 Mohan GEN-**near** one book **be.3SG**  
 ‘Mohan has a book.’ (Hindi)
- (21) TO
- a. **le**-Dani **yeš** et ha-sefer.  
**to**-Dani **be** ACC the-book  
 ‘Dani has the book.’ (Hebrew)
- (22) WITH
- a. Ea pia **ya i-birai**.  
 I arrow **with be-FUT**  
 ‘I will have an arrow.’ (Shipibo-Konibo)
- b. Uyá-**náni** **la**?  
 house-**with be.3PL.PRS**  
 ‘They have a house.’ (Mamvu)

Additionally, some B-languages express possession with the verb *be* and no overt preposition, instead marking

<sup>2</sup>Of the above examples, those without a citation are thanks to Stephanie Harves (p.c.).

the possessor and possessee with a case-alignment other than NOM-ACC. There are two ways to account for this; either to claim (i) that the case marker is in fact an adposition, or (ii) that there is a null preposition present in the derivation capable of assigning oblique case to the possessee. However, Freeze (1992) argues that these B-languages still fit within his analysis, even citing languages such as Finnish, which Pylkkänen (1998) argues does not contain overt prepositions. I adopt Svenonius’s (2004) proposal that P is a universal category, and will assume, like Freeze (1992), that languages which express possession via the verb *be* and oblique case marking can still be understood as languages that express possession with *be* and (in some abstract sense) an adposition.

- (23) Case (no overt preposition)
- a. **Man ir** velosipeds.  
**me.DAT is** bicycle.NOM  
 ‘I have a bicycle.’ (Latvian)
- b. Liisa-**lla on** mies.  
 Lisa-ADES COP man  
 ‘Lisa has a husband.’ (Finnish, Freeze 1992:577)
- c. **wan iš-soʃsol-č’ič’** li išq.  
 COP 3SG.GEN-dragon.fly-metal the woman  
 ‘The woman has a helicopter.’ (K’ekhi’, Freeze 1992:589)
- d. baccee-**kee dāāt safeed hāi**.  
 Child-GEN.PL teeth white be.3PL  
 ‘The child has white teeth.’ (Hindi, Freeze 1992:591)

Languages do not just vary with respect to possessive prepositions cross-linguistically. Within languages as well, different prepositions<sup>3</sup> are often used to express possession. Often, different prepositions are used to express distinct types of possession. (24)-(26) show this kind of variation within Hindi (24), Nepali (25) and Palestinian Arabic (26).

- (24) Hindi (Bhatt 1998:17-8)
- a. Ram-ko seb hai.  
 Ram-DAT fruit be.PRS  
 ‘Ram has an apple.’ (Dative Case, covert preposition)
- b. Ram-me pratibhaa hai  
 Ram-LOC talent be.PRS  
 ‘Ram has talent.’ (Locative postposition/case, inalienable possession)

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<sup>3</sup>While prepositions have been proposed to be a universal category Svenonius (2004), translating prepositions from one language to another is often a complicated process. I have yet to encounter a language where one preposition systematically corresponds to another specific preposition in a different language. In the above examples, I have not altered the translation of prepositions from their original sources. However, such examples should be understood to simply be diagnostic of the wide range of preposition used to express possession cross-linguistically, not necessarily a claim about which prepositions express which types of possession.

c. Ram ke-paas ek kitaab hai.  
 Ram GEN-near one book be.PRS  
 ‘Ram has a book.’ (Genitive+Preposition, alienable possession)

d. Ram kii do beTiyãã hai.  
 Ram GEN two daughters be.PRS  
 ‘Ram has two daughters.’ (Genitive, kinship)

(25) Nepali

a. waahãã-ko paanc janaa choraa-chori chan.  
 his-DAT five people girl-boy are  
 ‘He has five children.’ (Dative, inalienable possession)

b. ma-sãga kalam chai-na.  
 I-with pen be.NEG  
 ‘I don’t have a pen.’ (with, alienable possession)

(26) Palestinian Arabic (Bonet and Sichel 2010:4)

a. kaan la-eš-šajara ʔruʔ ktar.  
 was.3SG.M to-the-thee branches many  
 ‘The tree had many branches.’ (to, part-whole)

b. kaan ʔind mona ktaab / tlat ulaad.  
 was.3SG.M at Mona book / three kids  
 ‘Mona had a book / Mona had three kids (as a mother or as a babysitter).’ (at, alienable)

Additionally, the distinction between H- and B-languages is not completely black and white. Icelandic has two transitive verbs *have* in addition to a productive *be+P* construction, using the preposition *with* (27). English and French are also like Icelandic in that they alternate between *have* and *(b+)P* in certain possessive contexts. However, in English and French this alternation is limited to DP-internal contexts. Unlike Icelandic, English and French can only express sentential possession with transitive *have*.

(27) Icelandic<sup>4</sup>

a. Jón **hefur** mikla reynslu.  
 John.NOM **has** much experience.ACC  
 ‘John has much experience.’ (*hafa*, ‘have’)

b. Ingólfur **á** gúða foreldra.  
 Ingólfur.NOM **has** good parents.ACC  
 ‘Ingólfur has good parents.’ (*eiga*, ‘have’)

c. Jón **er með** blá augu.  
 John.NOM **is with** blue eyes.ACC  
 ‘John has blue eyes.’ (vera með, ‘be with’; Levinson 2010:5-6)

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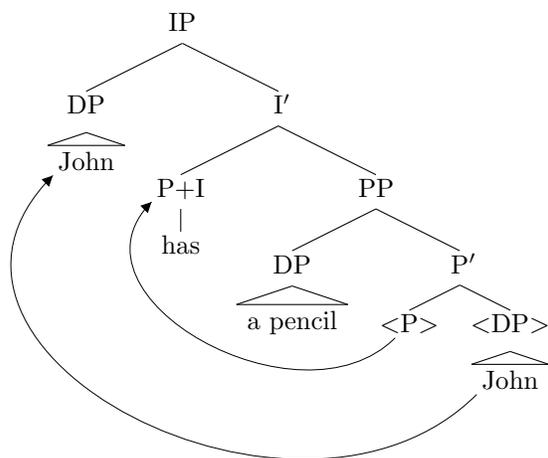
<sup>4</sup>Thanks to Jim Wood for help with Icelandic

- (28) English
- The man **has** a beard.
  - \*The man **is with** a beard.
  - [DP The man **with** a beard] is standing on the corner.
  - The man [TP who **has/\*(is) with** a beard] is standing on the corner.

- (29) French
- La fille **a** les yeux verts.  
the girl **has** the.PL green eyes  
'The girl have green eyes.'
  - La fille **aux** yeux verts est la soeur de P n lope Cruz.  
The girl **at.the.PL** green eyes is the sister of Penelope Cruz  
'The girl with the green eyes is the sister of Penelope Cruz.'
  - La fille **avec** les yeux verts est la soeur de P n lope Cruz.  
the girl **with** the green eyes is the sister of Penelope Cruz.  
'The girl with the green eyes is the sister of Penelope Cruz.'
- (Stephanie Harves, p.c.)

Just as there are questions as to which P incorporates into *be* to yield *have*, there are questions as to how to represent the underlying structure of possession. Freeze (1992) proposes the following structure to describe the incorporation of P to *be*.

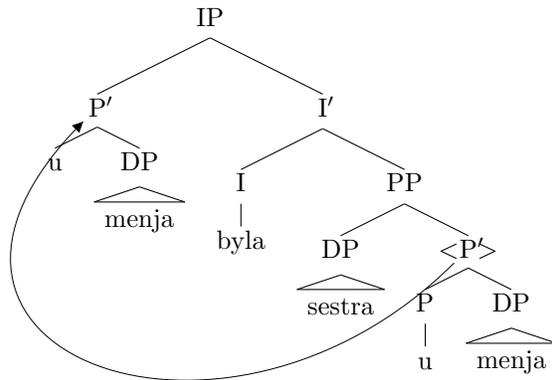
- (30) John has a pencil. (Freeze 1992:578)



In Freeze's derivation, possessive constructions are similar to locative and existential constructions. According to Freeze, in H-languages like English, the possessor (i.e., the subject of the possessive construction) is a derived subject, originally Merged as the complement to the PP and later moving to Spec, IP. The possessee, the object of the possessive construction, Merges in Spec, P and remains in situ. In B-languages like Russian, the possessee also remains in situ, but both the preposition, P, and the possessor (the P' layer) move to Spec, IP. Freeze's derivation for B-languages is given in (31).

- (31) U menja byla sestra  
 at me be.PST sister  
 'I had a sister.'

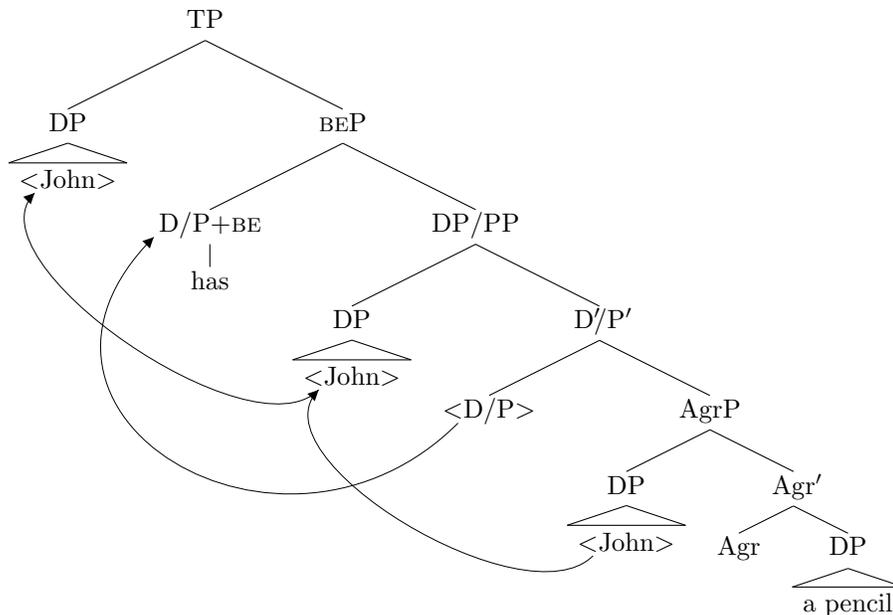
(Russian, Freeze 1992:578)



Kayne (1993) agrees with Freeze's (1992) core notion that the subject of possessive constructions is derived, but approaches the derivation differently. For Kayne, the possessee Merges as the complement of P and remains in situ while the possessor Merges in Spec,PP and Moves higher in the derivation dependent of whether the language in question is an H-language or a B-language. In H-languages, the possessor simply raises higher to Spec,TP after the incorporation of *be*+P. An example of Kayne's structure is given in (32).

- (32) John has a pencil.

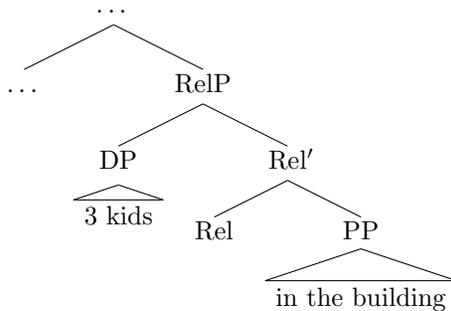
(adapted from Kayne 1993:7)



Boneh and Sichel (2010) adopt, essentially, the structures proposed by both Freeze (1992) and Kayne (1993) for possessive *have*. Boneh and Sichel (2010) argue that the debate surrounding the underlying structure of possessive constructions follows from the fact that "possession" is not a linguistic primitive. Instead "possession" is an umbrella term that describes three distinct syntactic configurations: location, part-

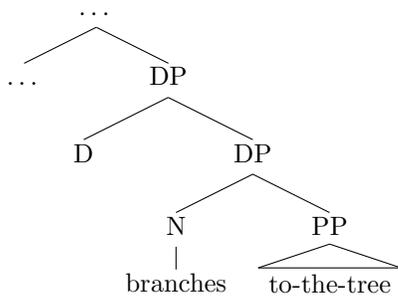
whole relationships, and a third relationship using an Applicative structure that gives special treatment to human arguments. Because each of these three structures can also express something other than possession, they cannot be argued to be exclusively possessive structures. The three structures presented and explained in Boneh and Sichel (2010) are summarized below. Note the parallels between their locative structure and Freeze’s (1992) proposal as well as the parallels between Kayne’s (1993) structure and Boneh and Sichel’s (2010) representation of inalienable possession with a DP source.

(33) Existential/Locative possession (Bonet and Sichel 2010:36)

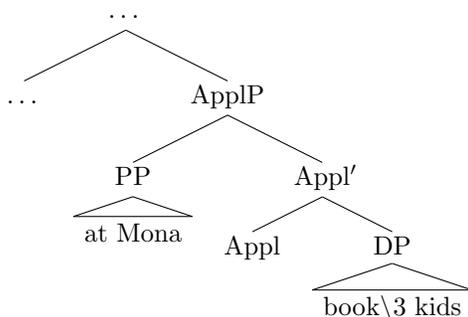


For existential and locative possession, Boneh and Sichel (2010) posit an account very similar to Freeze’s (1992), where the possessor Merges low in the derivation and the possessee Merges as the Specifier to a functional element. The Relator Phrase introduced by Boneh and Sichel allows for the elimination of movement at a bar level, as required in Freeze (1992) (cf. (31)).

(34) Inalienable Possession (Bonet and Sichel 2010:25)



(35) Alienable Possession (Bonet and Sichel 2010:26)



Bonet and Sichel’s structure for alienable possession (where humans are treated as special, (35)) is most similar to Kayne’s analysis of possessive structures (32), in that the possessor Merges in a Specifier position and the possessee is treated as a DP complement of ApplP. The largest difference between the structures proposed by Kayne (1993) and by Bonet and Sichel’s (2010) is the labeling of the sister head (and its maximal projection) that c-commands the possessee DP. Kayne treats such a node as an AgrP, while Bonet and Sichel treat it as an ApplP. However, such labeling distinctions might be minimal, as each node is treated as a functional, argument-introducing head responsible for Merging the possessor.

This thesis adopts the position that there are multiple possessive structures. Additionally, it adopts the position that *have* can be formed from a number of prepositions (including at least *at*, *to*, *with*, *near*, etc), raising to incorporate into *be*. This mirrors the fact that B-languages can overtly use a variety of prepositions to express possession with *be*.

Postulating the existence of multiple possessive structures using multiple prepositions greatly increases the possible ways to descriptively represent the underlying structure of possession. However, at the same time, it limits the possible ways to derive the differences between variants of *have*. If multiple possessive constructions exist (especially, if, as Boneh and Sichel claim, possession is not a linguistic primitive, meaning that there is no specifically distinguished possessive construction, *per se*, simply syntactic constructions that are used to express possession), than any account of the variation between lexical, auxiliary, and modal *have* must extend to all the possible possessive structures. Similarly, the distinction between variants of *have* cannot be explained via limitations on which preposition can incorporate into *be* to yield *have*. By this, I mean that one cannot depend on the translations of particular prepositions in order to explain the distinctions between variants of *have* (e.g. possessive *have* is formed via the incorporation of *of*, auxiliary *have* via the incorporation of *by* and modal *have* via the incorporation of *with*). Instead, an account must be proposed that is compatible with the use of any of the prepositions seen in (19)-(22), as well as any other prepositions that might be overtly displayed in possessive constructions cross-linguistically.

Becker (1997) argues that, at least for labeling purposes, the variants of *have* are best distinguished by their complements (additionally, Becker claims that *have*’s ability to take such a wide variety of complement-types would help a learner to understand the special, functional nature of *have* and its relationship to *be*). Lexical *have* takes a DP complement. Auxiliary *have* takes a *vP* complement. Modal *have* takes (arguably) a TP complement, etc<sup>5</sup>. Becker proposes that this distinction arises from lexical *have* incorporating a preposition that takes a DP complement, auxiliary *have* incorporating a preposition that takes a *vP* complement and modal *have* incorporating a preposition that takes (arguably) a TP complement.

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<sup>5</sup>Becker (1997) distinguishes between more than three variants of *have*—including a “locative *have*” (‘I have a pen on me.’) and causative *have* (‘John had me write up that report yesterday.’).

While I do not adopt Becker’s specific proposal, our proposals are similar in spirit. We both argue that variants of *have* are determined by the properties of the prepositions which incorporate into *be*. However, while Becker’s focus is the complement of the preposition, I believe the correct way to approach this problem is to investigate properties of the preposition itself, specifically the properties that contribute to the argument structure of prepositions more generally.

## 2.3 Specifiers and the theory of *p*

Svenonius (1994, 2003, 2004) proposes a parallel between the argument structures of verbs and prepositions. First, Svenonius notes an asymmetry between arguments of prepositions, which he refers to as the Figure and the Ground. The Figure, which he proposes is analogous to a verb’s subject “is the entity in motion or at rest which is located with respect to the Ground [...]” The Ground, which he proposes is analogous to a verb’s object, “is typically a location with respect to which the Figure is located” (Svenonius 2003:432-3). (36) gives an example of a Figure/Ground distinction within a PP, where the Figure is underlined while the Ground is in **bold**

- (36) a. The helicopter flew the firefighters up **the mountain**.  
 b. The cook twisted the lid off **the jar**.

Svenonius notes a variety of properties analogous between a preposition’s Figure and a verb’s subject or external argument. Following this, he notes a variety of properties analogous between a preposition’s Ground and a verb’s object, or internal argument. He then cites a number of properties analogous between verbs and prepositions more generally. Like verbs, prepositions appear to place selectional restrictions on their objects/internal arguments (Grounds) but not their subjects/external arguments (Figures). For example, *on* selects for a “surface” as its complement, and is not felicitous when the complement has the semantic interpretation of a container (37).

- (37) Selectional Restrictions  
 a. There was a fly on the wall.  
 b. ??There was a fly on my soup.  
 c. ??There was a fly in the wall.  
 d. There was a fly in my soup. (Svenonius 2003:434)

Second, cross-linguistically, prepositions are allowed to assign Case to their Grounds, but not to their Figures (38)-(39). In (38), the verb assigns Dative case to its object, regardless of whether or not a preposition is present in the sentence. In (39-a) the verb only assigns Dative case to its object when there is not a preposition present. In the presence of a preposition, however, the object of the verb, also the Ground of

the PP, is assigned accusative case by the preposition (39-b).

- (38) a. Hann fylgdi mér á stoppistöðina.  
he followed me.DAT to the.bus.stop  
'He accompanied me to the bus stop.'
- b. Hann fylgdi málinu fram.  
he followed the.goal.DAT forth  
'He pursued the goal.'
- (Icelandic, Svenonius 2003:435)
- (39) a. ég lokaði dyrunum.  
I shut the.door.DAT  
'I shut the door.'
- b. ég lokaði hundinn inni.  
I shut the.dog.ACC inside  
'I shut the dog inside.'
- (Icelandic, Svenonius 2003:435)

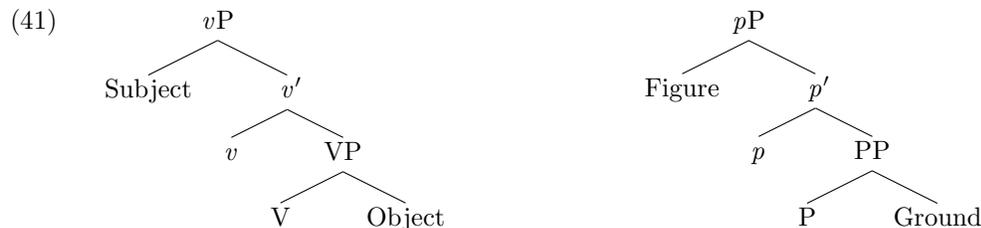
Additionally, and most importantly for this analysis, some prepositions allow “transitivity alternations,” taking either just a Figure (40-a) or both a Figure and a Ground (40-b). Like verbs, prepositions do not exhibit a transitivity alternation where the Figure/external argument is excluded but both the Ground/internal argument and the original semantics of the construction are maintained (40-c).

- (40) Transitivity Alternations
- a. I put the kettle on the stove
- b. I put the kettle on.
- c. #I put on the stove<sup>6</sup>

Given the similarities between the properties and argument structures of verbs and prepositions, Svenonius proposes giving VPs and PPs a similar syntactic structure. To do this, he posits a distinct layer for introducing arguments into a PP; to maintain the parallels to the current literature regarding verbs, he labels this layer *pP*. The Figure—the “subject” or “external argument” of the preposition—is Merged in Spec, *pP*, and is assigned case if and when it moves higher in the derivation, just as the subject of a *vP* Merges as Spec, *vP* and is assigned case when it Moves to Spec, TP. The Ground is Merged as the complement to P, and is assigned prepositional case by P, just as the object of a VP is assigned case by V and can remain in situ. *pPs*, like *vPs*, are argument-introducing phrases. The parallel structure of extended verb and prepositional phrases is shown in (41).

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<sup>6</sup>The above is only interpretable with a meaning ‘I turned on the stove’, not ‘I put something on the stove.’ Svenonius (1994) gives a full account of such alternations, such as *filling in holes*, claiming that they have been grammaticalized in the same way that verbal idioms have been.



The relationship between a verb and its subject is structurally parallel to the relationship between a preposition and its Figure. I propose, following Svenonius, that, just as  $v$  is the locus of argument structure alternations in verbs,  $p$  is the locus of argument structure alternations in prepositions. While alternations between active, unaccusative and passive verbs are conditioned by alternations of the features present on the head  $v$ , I propose that the alternations between possessive, auxiliary and modal variants of *have* are conditioned by feature alternations on  $p$ .

The argument structure of prepositions is not frequently used in analyses of possessive structures. To the best of my knowledge, only one account of the decomposition of *have* has taken into account the split-PP hypothesis. Levinson (2011) argues that the presence of a  $pP$  layer can determine a preposition's ability to incorporate into *be* and form *have*. Levinson (2011) explains the differences between the presence of possessive *have* and possessive *be+with* constructions in Germanic in terms of the presence or absence of a  $pP$  layer in the derivation.

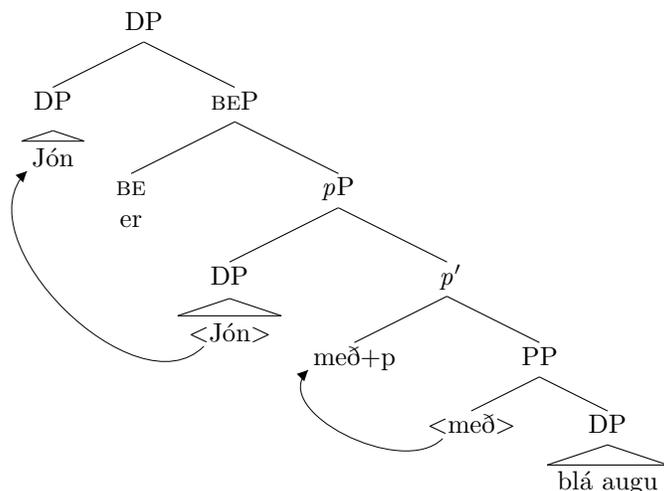
Levinson's analysis proposes that the presence of  $p$  is not obligatory in all languages. Languages like Icelandic have a possessive *be+with* construction because  $pP$  layers are required (in some contexts) in those languages. For Levinson, it is the presence of a  $pP$  layer in a language that prevents the incorporation of  $P$  into *be* in order to form possessive *have*. She argues that there are two options for preposition incorporation. One option is that a preposition,  $P$ , can raise and incorporate into the head of an argument-introducing and case-assigning head  $p$ . According to Levinson, the complex head  $p+P$  cannot incorporate further. Languages whose PPs have a  $pP$  shell layer, then, express possession using an overt *be+P*. Alternatively, a preposition,  $P$ , can raise and incorporate into *be*, yielding the verb *have*. Languages whose PPs lack a  $pP$  shell layer express possession via a single verb, *have*<sup>7</sup>. For Levinson, it is the presence or absence of a  $pP$  layer which determines whether a language expresses possession using *have* or *be+P*.

Levinson's structure for the Icelandic *be+with* possessive construction is shown below (42).

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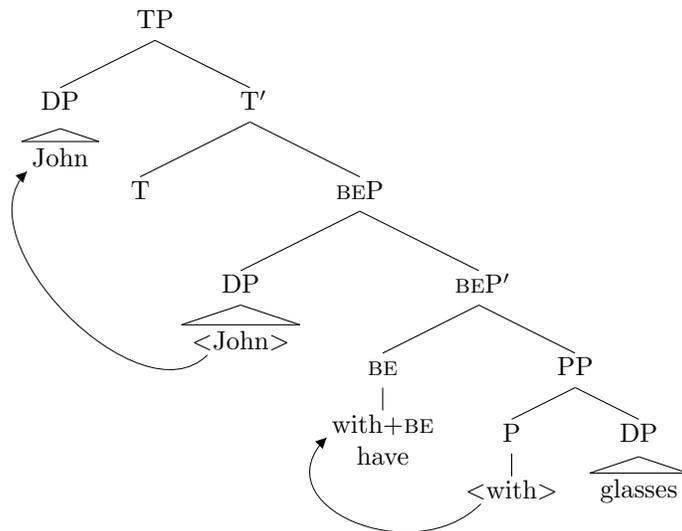
<sup>7</sup>Recall that Icelandic has multiple possessive constructions. Two of those possessive constructions use a possessive verb *have*. In Icelandic, then, Levinson's analysis requires that some prepositions require a  $pP$  layer while others do not. Such an account is compatible with the proposal that different prepositions can be used in possessive constructions.

- (42) Jón er með blá augu.  
 John.NOM is with blue eyes.ACC  
 'John has blue eyes.'



The structure for an English possessive sentence, which cannot utilize *be*+P due to the lack of a *p*P layer, is given in (43).

- (43) John has glasses.



At least two questions arise with respect to Levinson's analysis. First, her English *have* construction (43) shows *be* introducing an external argument in Spec,BEP. *Be* is canonically assumed to be an unaccusative verb, and thus cannot Merge an external argument in its specifier. This leaves the very serious question of where *John* can Merge in the derivation, as Levinson's structure contains no other argument-introducing heads (recall that *Jón* is Merged in the Spec of the argument-introducing *p* in the Icelandic derivation, cf. (42)). Second, Levinson does not motivate a key aspect of her theory. Levinson states that P-to-*p*-to-V movement is impossible, yet she never specifies why. Such movement would not violate the Head Movement

Constraint or Minimal Link Condition. If the *vP/pP* parallel can be viewed as accurate, then P-to-*p*-to-V movement poses no problems in terms of an A/A-bar theory of movement. Nor should there be any general restrictions on P+*p* movement, as there are no general restrictions on the movement of V+*v*. French overtly displays V-to-*v*-to-T movement, and in many verb-initial languages (e.g. Celtic), word order facts are explained by raising V+*v* higher in the derivation.

One way to resolve these problems is to further examine the *vP/pP* parallel. This thesis adopts the position, implicit in Chomsky (2001), that all verbs have a *vP* layer. This layer is roughly parallel to Kratzer’s VoiceP or Bowers’ PredP—the head *v* is a functional element. It has the ability to Merge external arguments and assign Case to the complement of a lower lexical verb. By extension, all PPs should obligatorily require a *pP* layer, which will give a preposition its “verb-like” properties, such as the ability to introduce a Figure and assign Case.

Of course, all verbs do not necessarily share the same properties. The unaccusative verb *arrive* cannot introduce an external argument like the transitive verb *eat*. As stated in the discussion of functional and lexical elements in 1.2, only functional elements can determine syntactic behavior. That means that the grammatical properties of *arrive* cannot be due to the lexical verb V. Instead, they can be triggered only by *v*. A *v* that cannot assign Accusative Case or introduce an external argument will be classified as defective, but still very much present in the derivation.

While a full discussion of the argument structure of PPs is beyond the scope of this thesis, such a claim about the nature of defective *vPs* and the strong parallels proposed between verbs and prepositions requires a brief investigation into the nature of “defective prepositions.” Svenonius (2003, 2004) refers to two classes of preposition-like elements, prepositions and particles. By Svenonius’s definition, particles are prepositions that show a transitivity alternation, or prepositions that do not obligatorily introduce a Ground.

Den Dikken (1995) takes a similar approach to the distinction between prepositions and particles. For den Dikken, particles are unergative or unaccusative prepositions, or otherwise independent heads of a Small Clause that are indispensable to the sentence. Particles are prepositions that may undergo particle alternation, but cannot be removed from a sentence if its semantics are to be maintained (den Dikken 1995:32).

- (44) a. He took out the trash.  
 b. He took the trash out.  
 c. \*He took the trash.  
 (with the semantics of (44-a)-(44-b))

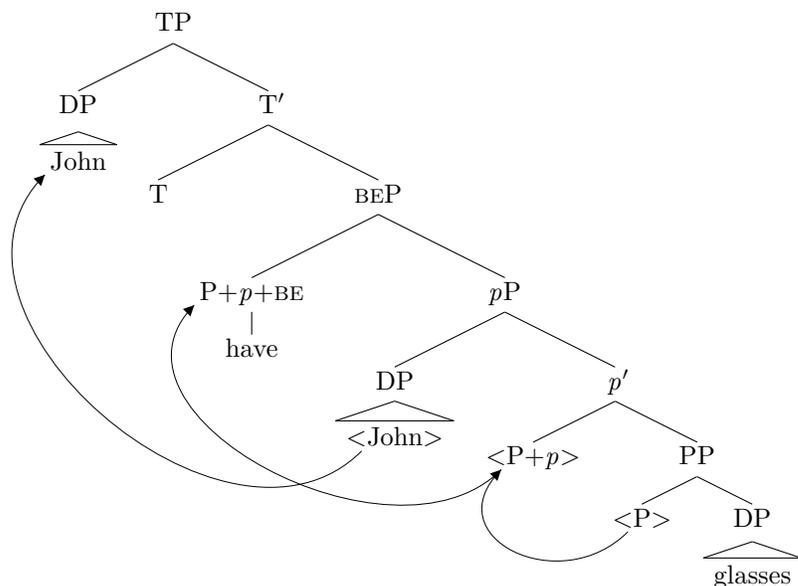
Throughout the literature, the terms “particles” and “defective prepositions” are often conflated. I believe this is appropriate. According to the *pP* hypothesis, a particle should result when the *p* of a preposition is

defective and cannot assign case or introduce an external argument. The  $vP/pP$  analogy is strengthened if those prepositions that can function either as prepositions or particles are thought to be analogous to verbs that can also show an unaccusative variant (e.g. *John sank the boat* → active; *The boat sank* → unaccusative). When a regularly transitive verb is combined with a phi-defective  $v$  it acts as an unaccusative, incapable of assigning Accusative case or introducing an external argument. When a preposition combines with a phi-defective  $p$ , it will also be “unaccusative”, incapable of assigning case or Merging a Figure.

Levinson’s analysis of Germanic possession can be re-analyzed using this understanding of the properties of  $p$ . By this account, languages like Icelandic and English could be understood as having phi-incomplete, defective  $p$  (in English sentential contexts, ‘Sam has an avocado’ and Icelandic *hafa/eiga* constructions) as well as a phi-complete, non-defective  $p$  into which P would raise (in Icelandic *vera mið* constructions and in English DP-internal contexts, e.g., ‘ $[_{DP}$  The cute boy with the avocado] bought an expensive camera’). However, a consequence of this analysis is that P-to- $p$ -to-V movement can no longer be universally disallowed, as  $p$  is always present within the derivation.

The addition of phi-defective  $p$  to Levinson’s derivation, however, does not solve the problem of *be* introducing an external argument. For that reason, I revise Levinson’s structure (originally an adaptation of Kayne 1993) for English. I propose that all possessive structures parallel her structure for Icelandic possessive sentences (42), in terms of categorical elements. The modified Levinsonian structure is given below (45). Note that, as  $[P+p]$  to *be* incorporation is no longer blocked, it is now possible for the complex head  $P+p+be$  to Spell-Out as *have*.

(45) ‘John has glasses.’



In Icelandic *vera með* constructions,  $p+P$  movement to *be* (‘vera’) is blocked by external factors, as it is in all languages that express possession with *be+P*<sup>8</sup>. Icelandic *have* constructions, which use the verb *hafa* or *eiga* have the same structure as the example given for English (45).

Such an account, where the relationship between the possessor and the possessee is mediated completely through an extended prepositional phrase, resolves the problem of having *be* introduce an external argument. As I show in 2.4, such an account also allows us to syntactically differentiate between the lexical, auxiliary and modal variants of *have* by alternating the features present on the argument-introducing head  $p$ . This account allows us reduce the differences between variants of *have* to a question of the features present on the functional head  $p$ .

## 2.4 Variants of *have*

This section argues that the distinctions between variants of *have* can be explained using the Split  $pP/PP$  Hypothesis originally proposed by Svenonius (1994, 2003). The syntactic distinction between possessive, auxiliary and modal forms of *have* comes not from categorical differences in structure or in the lexical content of the preposition, but in the features of the functional head  $p$  obligatorily present in the derivation. Lexical *have* requires a  $p$  that is phi-complete and non-defective, i.e., a  $p$  that can introduce an external argument and assign case to its internal argument. In many ways, this  $p$  is analogous to the  $v$  found in regular transitive verbs, which can also introduce an external argument and assign case to its internal argument. Auxiliary *have* requires a  $p$  that is phi-incomplete and defective. This  $p$  is roughly analogous to the  $v$  found in unaccusative verbs, which appears completely defective in that they cannot introduce an external argument or assign case to an internal object. Modal *have*—which shows some behaviors particular to possessive *have* and others particular to auxiliary *have*—is slightly more complex. Eventually, I argue that modal *have* is essentially an existential possessive construction, composed of *be* and a  $p$  that is neither entirely phi-complete nor entirely phi-defective. To extend the parallel between transitivity alternations of  $p$  and  $v$ , I will analogize the  $p$  present in modal *have* to the  $v$  present in passive verbs, where the  $v$  found in passive verbs is understood as being phi-incomplete and defective in its ability to introduce an external argument or assign case to an internal argument, but is still semantically active enough to ascribe a theta-role to and accept modification by an agentive *by*-phrase.

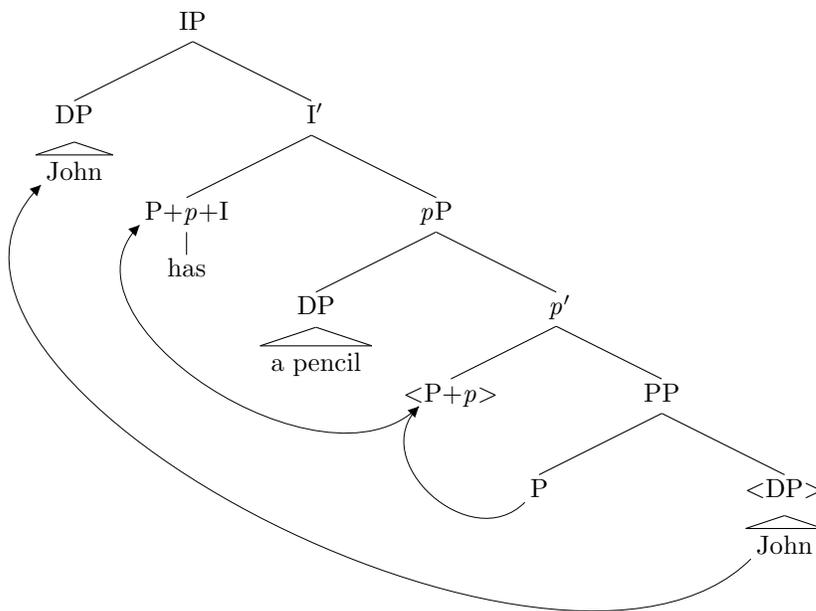
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<sup>8</sup>It is not known what causes or blocks the incorporation of *be* and  $P$  to form *have* in B-languages. An analysis of the parameters that determine whether a language expresses possession (and to a lesser degree, the perfect and obligation) with either *have* or *be+P* is a topic for further research, but I believe those parameters are not related to the argument structure of prepositions.

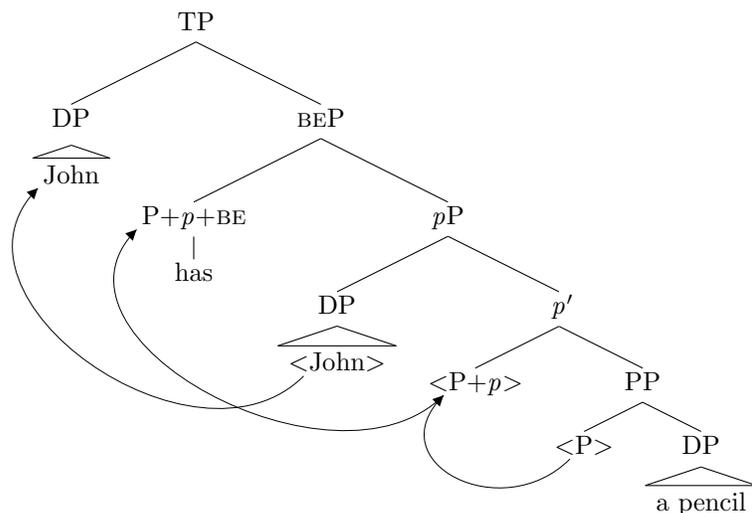
### 2.4.1 Possessive *have*

Section 2.2 detailed the many proposals for the decomposition of *have* given in the literature, both in terms of syntactic structures and distinguishing the preposition(s) that incorporate(s) into *be*. The current proposal—that the distinction between lexical, auxiliary and modal *have* lies in features of *p*—is appealing in that it is not dependent on the assumption that one particular preposition, P, incorporates into *be* to form *have*, or even on the use of a particular possessive structure. As all prepositions have *pP* layers (defective or otherwise), which preposition incorporates into *be* does not pose a challenge to the theory. Additionally, such an account is compatible with the three structures summarized in 2.2., as can be seen below. The following examples repeat the structures given in 2.2, revised to include a *pP* layer. The structures are given for an H-language (such as English), though they are perfectly compatible with B-languages as well (cf. (30) and (32)).

- (46) Revised Freeze Structure (cf. (30))  
 John has a pencil.



- (47) Revised Kayne Structure (cf. (32))  
John has a pencil



The movement required in each revised structure is not much different from the movement required in the original structures, (30) and (32). In the revised Freeze structure (30), the surface subject is still derived from the complement of the lexical preposition P. In the revised Kayne structure, the surface subject is still derived from the specifier of the prepositional phrase, although in the revised structure the possessor Merges in Spec,pP instead of Spec,ArgP. This follows from the deletion of ArgP in (47). The ArgP layer present in Kayne (1993) has been replaced with a pP layer, which serves as (47)'s argument-introducing head. The largest difference between the revised and original structures is that, in (30) and (47), there is a three-part incorporation that leads to the formation of *have*: first P incorporates to p, and then the complex head p+P incorporates to *be*.

This proposal is also compatible with the structures proposed by Boneh and Sichel (2010). The biggest difference between the Kayne and Freeze structures is the initial position of the possessor. Bonet and Sichel posit that the possessor can Merge in Spec,PP (my Spec,pP) or as the complement to P depending on the type of possession being expressed. Their structures therefore pose no additional challenges to the analysis presented here, and will not be re-presented in this section.

For simplicity, for the remainder of this thesis I will present my arguments in terms of only one syntactic structure. The structure I use will be that shown in (47), the revised structure from Kayne (1993). At least within English, there are tests to suggest this is the correct structure. One such test (for English) is extraction from within a prepositional phrase. While English allows extraction from a prepositional phrase, the Subject Condition disallows extraction from a subject/specifier position.

An extraction test (Moro 1997) helps discern which structure—Freeze or Kayne—is best to use throughout this thesis. In (48), extraction from the apparent subject, 'the students of the linguistics department',

would suggest that this DP initially Merges as the complement of P. This would mean that the possessor originally Merges as the complement to P, as in Freeze (1992). Possible extraction from the apparent object, ‘descriptions of Georgian’, would suggest that the possessor ‘the students of the linguistics department’ Merges as the specifier to the extended prepositional phrase while the possessee ‘descriptions of Georgian’ Merges as the complement to P, as in Kayne (1993).

- (48) a. [The students of the linguistics department] have [descriptions of Georgian]  
 b. \*[Which department]<sub>i</sub> do the students of t<sub>i</sub> have descriptions of Georgian?  
 c. [Which language]<sub>i</sub> do the students of the linguistics department have descriptions of t<sub>i</sub>?

That extraction is only possible from the possessee PP suggests that the the possessor Merges in a specifier position and the possessee Merges in a complement position, as in Kayne (1993). As Boneh and Sichel (2010) suggest that possessive structures can vary depending on the type of possession expressed, at least two more extraction tests are needed before choosing Kayne (1993) as a basis for the representation of the underlying structure of possession in English. Boneh and Sichel claim that structural variation corresponds to difference between existential/locative possession (49), inalienable possession/part-whole relations (50), and alienable possession ((48), above).

- (49) Existential/Locative possession  
 a. [The roof of the building] has [three packs of shingles] (on it).  
 b. \*What<sub>i</sub> does the roof of t<sub>i</sub> have three packs of shingles (on it)?  
 c. What<sub>i</sub> does the roof of the building have three pack of t<sub>i</sub> (on it)?

- (50) Inalienable possession  
 a. [The student of linguistics] has [three cousins of Polish heritage].  
 b. \*[What]<sub>i</sub> does the student of t<sub>i</sub> have three cousins of Polish heritage?  
 c. ?[Which heritage] does the student of linguistics have three cousins of t<sub>i</sub>?

The above data show that, in English, neither existential/locative, inalienable/part-whole nor alienable possession allow for extraction from a possessor DP. This suggests that, in English at least, a structure similar to Kayne (1993)—where the possessor is Merged as the specifier of *p* and the possessee is Merged as the complement to P—is the correct possessive structure. This may or may not be true of other languages. As my analysis is not dependent on the use of a particular possessive structure, simply the inclusion of a *pP* layer in the derivation, such a cross-linguistic account is beyond the scope of this thesis<sup>9</sup>.

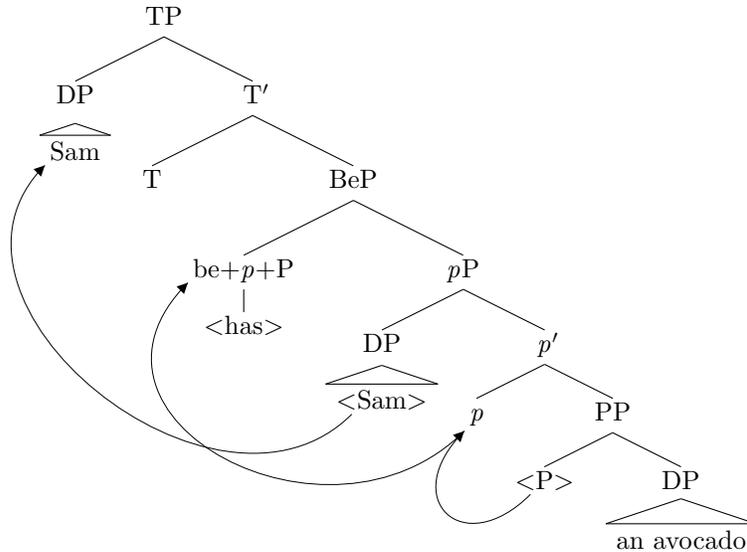
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<sup>9</sup>Boneh and Sichel (2010) propose three structures used to express possession in Palestinian Arabic. It’s important to note, however, that they do not propose three possessive structures cross-linguistically, i.e., their proposal is limited to Palestinian Arabic. Instead, they propose that possession is not a linguistic primitive, i.e., that there are no syntactic structures limited exclusively to possession. Possession is expressed through Applicative, Determiner and Relator Phrases, which have a variety of other uses in Palestinian Arabic.

Their account, then, does not expressly limit the number of structures that express possession to three, cross-linguistically. It’s possible that languages other than Palestinian Arabic could use distinct structures to express varying types of possession, resulting in a much greater number of “possessive structures” across all the world’s languages. However, such an increase in the number of possessive structures should not affect my analysis, for the reasons stated above.

The structure for possessive *have*, then, is that given in (47), the revised Kaynian structure, presented again in (87).

(51) Sam has an avocado.



The derivation in (87) contains a phi-complete and non-defective *p*, which introduces the possessor (external argument) *Sam* and assigns case to the possessee (internal argument) *an avocado*. The relationship between the possessor and the possessee is mediated completely though the extended PP. The possessor *Sam* raises to Spec,TP for case and [EPP] while the possessee *an avocado* remains in situ. Lexical P first raises to functional *p*. The newly complex functional head *p+P* then raises to *be*, forming a complex head *be+p+P* which spells out as the accusative-case-assigning *have*.

### 2.4.2 Auxiliary *have*

Sections 1.1 and 1.2 showed that, at least across Romance and Germanic, the use of *have* as an auxiliary verb is not uncommon. This pattern is not specific to those language families. Outside of Romance and Germanic, an auxiliary *have* is found in (at least) Slavic (52) and Basque (53) (cf. (16)) and Chinese (54).

(52) Slavic (Jung 2008:32)

a. To aúto **mõ** rozjachoné kùrã.  
 this car **has** run-over hen  
 ‘This car has run over the hen.’ (Kashubian)

b. Ja **imam** skinato mojata kosula.  
 Her.CL.ACC **have**.1SG torn my-the shirt  
 ‘I have torn my shirt.’ (Macedonian)

- c. **Mám** ùlohu napsanou.  
**have.1SG** task written  
 ‘I have written my task.’ (Czech)
- d. **Mam** juz wszystkie ciasta upieczone.  
**have.1SG** already all cakes baked  
 ‘I have already baked all the cakes.’ (Polish)

(53) Jon-ek barre egi-n **du**.  
 Jon-ERG laugh.ABS do-PERF have  
 ‘Jon has laughed.’ (Basque, Arregi 2004:4)

(54) Zhangsan mei **you** kanjian Lisi.  
 Zhangsan NEG **have.AUX** see Lisi.  
 ‘Zhangsan has not seen Lisi.’ (Chinese, Jung 2008:33)

Due to the overt auxiliary alternations seen in (11)-(12), auxiliary *have*, like possessive *have* has been argued to be composed of *be*+P (Kayne 1993). This analysis of auxiliary *have* accounts for the auxiliary alternations previously discussed, but also predicts that some languages will express the semantics of the perfect through an overt, unincorporated *be*+P. And, indeed, there are a number of languages (and language families) (55)-(60) that overtly use both *be*+P to express the perfect.

- (55) Celtic
- a. **Tha** mi air litir a sgríobhadh  
**be.PRS 1SG on** letter TRAN write  
 ‘I have written a letter.’ (Scottish Gaelic, Bjorkman 2011:131)
- b. **Tá** sé déanta a-gam  
**be.PRS it.NOM do.INF at-me**  
 ‘I have done it.’ (Irish, Jung 2008:34)

Estonian, another B-language, also shows a perfect auxiliary system using *be* and oblique case marking that looks identical to the possessive construction.

- (56) Estonian (Bjorkman 2011:131)
- a. Mu-**l on** uus auto  
 I-ADES be.3SG new car  
 ‘I have a new car.’ (possessive)
- b. Mu-**l on** auto pes-tud  
 I-ADES be.3SG car wash-PTCP  
 ‘I have washed the car.’ (perfect)

Similar examples are found in North Russian.

- (57) North Russian (Jung 2008:34)
- a. **U** menja (**est'**) kniga  
**at** me.GEN (**be**) book.NOM  
 ‘I have a book.’ (possession)

- b. **U** nas takoj **byl** bolšoj tramplin sdelano  
 at us.GEN such be.PST big springboard.NOM made  
 ‘We had made such a big springboard (trampoline).’ (perfect)

Additionally, Seržant (2011) notes that a variety of other “Circum-Baltic” languages display a construction parallel to the “possessive perfect” found in North Russian, Celtic and Estonian. In Latvian (58), Votic (59) and Karelian (60), the perfect is expressed by a construction identical to the possessive, through the use of *be*+P or *be* and oblique case marking.

- (58) **Vinam** viss jau **bija** izteik-t-s  
**him**.DAT all.NOM already **be**.PST say-PTCP-NOM  
 ‘He had already said everything (he had to say).’ (Latvian, Seržant 2011:4)

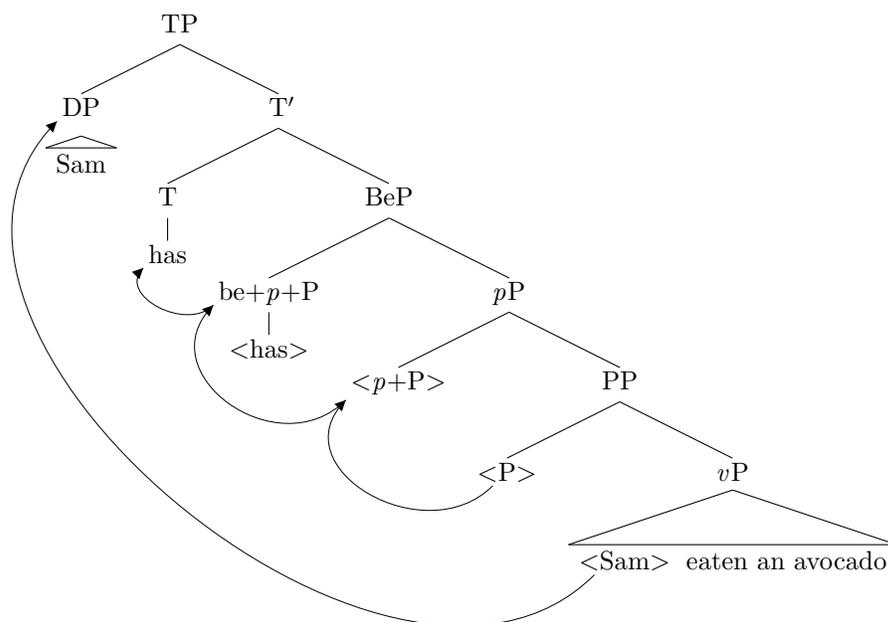
- (59) **Silla on** vetet-tu babuskalt uva tsirja kasa  
**you**.ADES **be**.PRS take-PTCP from your grandmother good.letter  
 ‘You have taken a good letter along from your grandmother.’ (Votic, Ariste 1968:29)

- (60) **Meil on** puut jo varusset-tu  
**we**.ADES **be**.PRS firewood already prepare-PTCP  
 ‘We have prepared the firewood.  
 Lit: ‘In ours, the firewood is prepared.’ (Karelian Seržant 2011:4)

The question, then, is how to distinguish possessive from auxiliary *have*, if both variants are composed of the same elements. Recall that the external argument in possessive *have* was introduced by the *p* of the prepositional phrase. Recall, also, that *p* can be “intransitive” (“unaccusative”) in the same way available to *v* when it comes to the question of “particles” or “defective prepositions”.

I propose that the categorical structure of auxiliary *have* is identical to that proposed for lexical *have* in (87). The difference lies in the features present on *p*. While the *p* in lexical *have* is phi-complete and non-defective, the *p* present in auxiliary *have* is phi-incomplete and phi-defective, meaning that it cannot introduce an external argument or assign case to an internal argument. The complete structure for auxiliary *have* is given in (61).

(61) Sam has eaten his avocado.



As with possessive *have*, P raises to *p*, forming a complex head that then raises to *be*, Spelling-Out as *have*. Unlike possessive *have*, this *p* is phi-defective and so does not have the ability to assign case or Merge an external argument. Because *p* is completely phi-defective, it lacks the ability to assign a theta-role. This defectiveness is passed onto the complex head *be+p+P* (‘have’), causing the head to Spell-Out as a verb that cannot assign case or Merge an external argument. The head *p* present in the derivation of auxiliary *have* is roughly parallel to an unaccusative *v* in terms of its defectiveness. The derived subject *Sam*, is Merged in the Spec of the verb *eat*. *Sam* then raises to subject position in Spec,TP to satisfy the [EPP] feature present on T. The relationship between *Sam* and *his avocado* is external to the extended PP, and is instead mediated by the *vP/VP*, which is itself the internal argument (Ground) of P. While it might initially seem unusual to suggest that a PP selects for a VP as its complement, overt examples of such are not uncommon (62).

- (62) a. I’m thinking [PP about [VP going to New Orleans. ] ]  
 b. She has a great love [PP of [VP riding bikes. ] ]  
 c. Almost everyone notices his affinity [PP for [VP giving impromptu speeches. ] ]

Another argument for a *pP/PP* taking a *vP/VP* complement comes from Kayne (2000, 2001, 2003) and Collins (2003, 2005), who propose that “dummy” prepositions, i.e., prepositions that have no lexical content and are composed entirely of uninterpretable phi-features, cannot select for a DP complement. I believe the preposition present in auxiliary *have* classifies as a dummy preposition; it appears to lack any lexical or locative interpretation, and, while it lacks uninterpretable **phi**-features, I do not believe it lacks uninterpretable **features** entirely. The preposition could, for example, contain a perfect feature. The presence of a perfect feature, and the *pP/PP*’s inability to take a DP as its complement, might be enough to explain

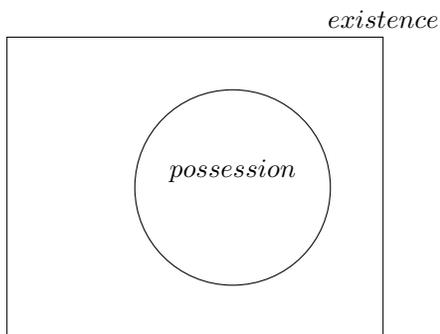
why a participial obligatory follows auxiliary *have* in English while a gerund is ungrammatical—if a gerund, which contains the affix *-ing* that is associated with the imperfect is said to be incompatible with the perfect feature on *p*.

Kayne (p.c.) points out that the question of how and why a possessive verb could be used to express the perfect in so many languages still remains. The semantics of possessive and perfect constructions have been connected in the literature by Lavine (1999), Migdalski (2007), and Jung (2007, 2011). Lindström and Tragel (2010) propose that the possessive and perfect constructions are diachronically related, with the perfect having developed from the use of the possessive construction with an attributive participle. By such an account, the Estonian in (56) (translated as ‘*I have washed my car.*’) would have developed from something such as ‘*I have a washed car.*’ While this originally was only possible with transitive verbs, it has since been extended to intransitive predicates. Bjorkman (2011) notes that a similar diachronic analysis has been proposed for the use of *have* to express the perfect in Romance and Germanic.

Kayne (p.c.) proposes that a diachronic analysis is not necessary to answer these questions. Instead, he suggests that the perfect can synchronically be understood as a possessive construction, with ‘*John has been to Paris three times*’ roughly equivalent to ‘*John has three trips to Paris (to his name)*’. Jung (2008) proposes a similar solution, claiming that (at least in North Russian (57)) perfect, obligational and even ergative constructions can be understood as extensions of the possessive construction (and cannot be understood as unrelated syntactic phenomena that happen to utilize a structure with a similar appearance to the possessive). Jung’s proposal is similar to mine in her argument that the differences between possessive, perfect and obligational constructions in North Russian are due to the case assigning properties—which I would interpret as the phi-completeness—of the preposition (in Jung’s case *u*, ‘at’). Another central idea in Jung’s proposal is that possession is a special type of existence, as schematized below (63).

(63) Possession and existence

(Jung 2008:29)



An alternative analysis relies on the idea that the perfect aspect is in some way inherently prepositional (cf. Bjorkman 2011). Such a proposal has the benefit of elegantly explaining the parallel between prepositions, which describe the spacial relationships between individuals, to aspectual heads, which describe the temporal relationships between events. This proposal ties into Svenonius’s (2003) analysis of the difference between verbs and prepositions. After describing the similarities between verbs and prepositions in terms of argument structure (cf. (41)), Svenonius suggests that the key difference between verbs and prepositions may lie in a verb’s ability to combine with tense, an ability that prepositions apparently lack. If this proposal is taken seriously, it could be that the only way for a preposition to relate events to one another may be through combining with an inherently verbal element, such as *be*, that can itself combine with tense.

A full analysis of the semantic and diachronic relationship between lexical, auxiliary and modal *have* (as well as possessive, perfect and obligational *be*) is beyond the scope of this thesis. However such accounts do support the syntactic unification of these variants of *have*. They also serve to suggest that the use of a single verb for such a diverse range of seemingly unrelated functions may not be as surprising as it initially appeared.

### 2.4.3 Modal *have*

Bhatt (1998) proposes that modal *have*, like possessive and auxiliary *have*, is underlyingly composed of *be*+P. Bhatt’s analysis is based on evidence from Hindi, as well as other South Asian languages, that overtly use a *be*+P combination to convey obligation (64)-(67).

(64) Hindi

- a. Ram-**ko** seb **hai**  
 Ram-DAT fruit **be**.PRS  
 ‘Ram has an apple.’
- b. Ram-**ko** seb khaa-naa **hai**  
 Ram-DAT fruit.NOM eat-GER **be**.PRS  
 ‘Ram has to eat an apple.’

(65) Bengali

- a. Ram-**er** ek-ta boi **aachhe**  
 Ram-GEN one-CL book **be**.PRS  
 ‘Ram has a book.’
- b. Ram-**er** Dilli je-te **ho-be**  
 Ram-GEN Delhi jo-INF **be**-FUT  
 ‘Ram has to go to Delhi.’

- (66) Gujarati
- a. Ram-**ne** tav **che**  
 Ram-DAT fever **be**.PRS  
 ‘Ram has a fever.’
- b. **mahne** mara bhaine thoda paysa apvana **che**  
**me**.DAT my brother.DAT a.little money give **be**.PRS  
 ‘I have to give some money to my brother.’ (Cardona 1965:109)

- (67) Sindhi
- a. huna **khe** ba puta **ahin**  
 he DAT two sons **be**.PRS  
 ‘He has two sons.’
- b. mu **khe** ketrai kam karana **ahin**  
 I DAT some things do.GER **be**.PRS  
 ‘I have to do a number of things.’

Dutch also shows a modal construction composed overtly of *be*+P.

- (68) het **is aan** jou om dat te doen  
 it **is to** you COMP that to do  
 ‘You have to do that.’ (Jung 2008:34)

Without suggesting a difference between the syntactic structures of possessive and auxiliary *have*, Bhatt proposes that modal *have* must share a structure with lexical *have* based on evidence from English and German. Recall from 1.1 that lexical and modal *have* both share the same English behavior with regard to do-support and negation<sup>10</sup>.

- (69) Possessive *have*
- a. Does Marie have your Star Wars apron?  
 b. \*Has Marie your Star Wars apron?  
 c. Marie doesn’t have your Star Wars apron.  
 d. \*Marie hasn’t your Star Wars apron.
- (70) Modal *have*
- a. Does Marie have to lend Jeremy her Star Wars apron?  
 b. \*Has Marie to lend Jeremy her Star Wars apron?  
 c. Marie doesn’t have to lend Jeremy her Star Wars apron.  
 d. \*Marie hasn’t to lend Jeremy her Star Wars apron.
- (71) Auxiliary *have*
- a. \*Does Marie has lent Jeremy her Star Wars apron?  
 b. Has Marie lent Jeremy her Star Wars apron?  
 c. \*Marie doesn’t has lent Jeremy her Star Wars apron.  
 d. Marie hasn’t lent Jeremy her Star Wars apron.

<sup>10</sup>The examples from Bhatt show obligational and possessive constructions formed with *be* and oblique case marking, not *be* and an overt preposition. As mentioned in the discussion of Freeze (1992), I will assume these examples result from the presence of a covert, oblique-case-assigning preposition in the derivation, or that the oblique case markings are themselves actually adpositions.

In German, the data come from auxiliary selection. German auxiliary selection, as shown in 1.1, requires an auxiliary alternation between *have* and *be*, depending on whether the underlying predicate is unergative/transitive (*have*) or unaccusative (*be*). However, neither German possessive nor modal *have* can alternate with forms of *be*, even when the underlying predicate is unaccusative and so requires *be* as its auxiliary (Bhatt 1998:12).

- (72) a. Der Hans **ist**/**\*hat** rechtzeitig in Wien angekommen.  
 the Hans is/\*has in.time in Vienna arrived  
 ‘Hans has arrived in Vienna in time.’ (auxiliary selection)
- b. Der Hans **\*ist**/**hat** rechtzeitig in Wien anzukommen.  
 the Hans \*is/has in.time in Vienna to.arrive  
 ‘Hans has to arrive in Vienna in time.’ (aux. selection disallowed)

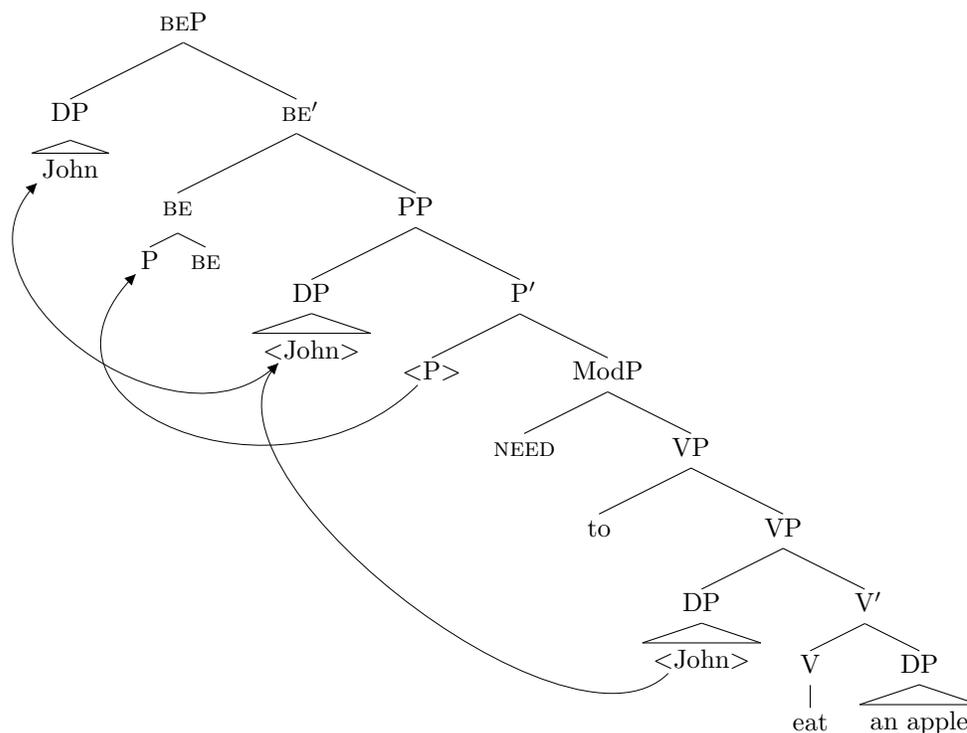
Additionally, Spanish, which shows a surface distinction between lexical *have* (‘tener’) and auxiliary *have* (‘haber’) overtly uses *tener*, the lexical *have*, in modal *have* constructions. This was shown in 1.1, presented again as (73) below (though recall the Catalan also presented in 1.1).

- (73) Spanish
- a. Tengo un libro.  
 have.1SG a book  
 ‘I have a book.’
- b. Tengo que probar esas papas fritas.  
 have.1SG COMP try.INF those potatoes fried  
 ‘I have to try those French fries.’
- c. Elvis ha salido del edificio.  
 Elvis has.AUX left of.the building  
 ‘Elvis has left the building.’

Bhatt (1998) notes that in constructions like (64)-(67) there is no overt modal to express the obligation semantically encoded in the sentence. To account for this, he proposes that the modality of *have* and *be* must be due to the presence of a silent modal element within the derivation. Kayne (2009) makes a similar claim, proposing that the covert modal contained in the derivation is a silent, nominal *NEED*. Such a claim is particularly compelling given Harves and Kayne’s (2012) proposal that *need* is always inherently nominal and receives its verbal properties through incorporation into a silent *HAVE* (cf. 4 for an analysis of the structure of *need*). Bhatt’s proposed structure for modal *have* is given below, with the unmarked modal element replaced by Kayne’s nominal *NEED*.

(74) John has to eat an apple.

(Bhatt 1998:16)



In Bhatt's analysis, *to* is treated as an auxiliary verb (cf. Zwicky and Pullum inter alia). Bhatt explains the movement in (74) in terms of Kayne (1993). *John* Merges in the Specifier of *eat* and has to move higher in the structure to receive Case. *John* can move as high as Spec,DP without violating Shortest Move, as there are no intervening Specifier positions between Spec,VP and Spec,DP. However, after moving to Spec,DP, *John*, in a language like English, cannot receive the Nominative Case required and is obligated to move higher still. As Spec,DP is an A-bar position (Szabolsci 1982, Kayne 1993), further movement is prohibited. To save this movement, P raises to incorporate to *be*. This incorporation changes Spec,DP to an A-position, allowing the necessary Case movement of *John*. Following Kayne (1993), the complex head P+*be* is spelled out as *have*. As Bhatt does not label (or discuss the properties of) the silent modal he proposes in the derivation of obligational *have*, he does not state how the presence of a modal NEED would effect the structure in (74).

The structure in (74)—which I will eventually adopt a variation of—is helpful in that it allows us to rephrase sentences containing modal *have*. In the examples given below (75), the TP dominated by modal *have* (*t<sub>Marie</sub> to return her new keyboard.*) can be intuitively understood as something possessed by the subject *Marie*. That modal *have* can be understood as a possessing an obligation or necessity dates as far back at Gaaf (1931) and has more recently been suggested by Kayne (2009).

- (75) a. Marie has to return her new keyboard.  
 b. Marie has [NEED to return her new keyboard. ]  
 c. Marie possesses the need to return her new keyboard.

However, note that, adopting the structure of (74), *Marie* would be a derived subject. While (75) is an intuitive way to interpret modal *have*, I do not believe it is entirely accurate. Recall that, according to (74), the relationship between *Marie* and NEED is not mediated through the extended PP, as occurs in possessive *have* (cf. (87)). Instead, *Marie* is a component of the obligation that is expressed by the NP itself. The paraphrases in (75) suggest that modal *have* is a possessive construction in a manner roughly parallel to that of possessive *have*. However, I believe modal *have* can be more accurately understood as an existential possessive construction. Therefore, I argue a more accurate paraphrase of (75) is given below (76).

- (76) There exists a need for Marie to return her new keyboard.

Recall from (74) that Bhatt's P projects a Specifier. Given the structure in (74), understood in terms of the Split *pP/PP* Hypothesis, Spec,PP is not an argument-introducing position, and it is not a case-assigning position (Kayne 1993). In that respect, Bhatt's Spec,PP in modal *have* shares a number of properties with my proposed Spec,*pP* position in auxiliary *have*, which I argue is not an argument-introducing or case-assigning position (cf. 2.4.2). This is surprising given data in (69)-(72), which show that modal and possessive *have* share a variety of behaviors. However, such data is not completely conclusive. Recall that Catalan, like Spanish, overtly shows a distinct possessive and auxiliary *have* (1.1). The Catalan modal *have*, re-glossed in (77), overtly makes use of the auxiliary *have*.

- (77) Catalan (Bhatt 1998:12)
- a. En Joan **té** dos germans.  
 DET John **has** two brothers  
 'John has two brothers.' (possessive)
- b. En Joan **ha** d'anar a Girona.  
 DET Joan **has.AUX** of-go.INF to Girona  
 'Joan **has** to go to Girona.' (modal)
- c. Ell **ha** marxat.  
 he **has.AUX** left  
 'He has left.' (auxiliary)

Spanish also has an alternative modal *have* construction that makes overt use of an impersonal form of auxiliary *have*.

- (78) No **hay** que llorar.  
 NEG **have.3SG** that cry.INF  
 'One doesn't have to cry.'

Additionally, in English, modal *have* shows the behavior of a raising verb (79), suggesting that it cannot introduce an external argument. Recall that auxiliary *have* is also a raising verb. The raising behavior of modal *have* is unlike the behavior of possessive *have*, since, even though possessive *have* contains a derived subject, the relationship between the possessor and the possessee is still mediated through a transitive *pP/PP*.

- (79) Modal *have* raising tests
- a. The cat has to be let out of the bag if we want to win this election. (Idiom test)
  - b. There has to be someone in the garden. (Expletive *there* test)
  - c. It has to rain today. (Expletive *it* test)
- (80) Possessive *have* raising tests
- a. \*The cat has a bag to be let out of if we want to win this election. (with idiomatic reading)
  - b. \*There have/has an avocado.
  - c. \*It has an avocado. (with expletive reading)

Modal *have*, then, appears to show some of the properties of both possessive and auxiliary *have*. If modal *have* is to be understood as a complex verb formed from (at least) the incorporation of *be+P*, as proposed by Bhatt (1998), the properties of the incorporating preposition must be closely examined. This preposition must have features that are similar to the features present on the preposition in both possessive and auxiliary *have*, but it cannot be identical with either.

I propose that the preposition present in modal *have* is related to the preposition in possessive and auxiliary *have* in the following ways. I believe it is like possessive *have*'s *pP* in that it can project a specifier position, but like auxiliary *have* in that it cannot introduce an argument. Attempting to insert an external argument in the Spec,PP of Bhatt's structure (74) (Spec,*pP* by my analysis), results in ungrammaticality.

- (81) a. John has to eat an apple.  
 b. \*John has Mary to eat an apple<sup>11</sup>. (with modal reading)

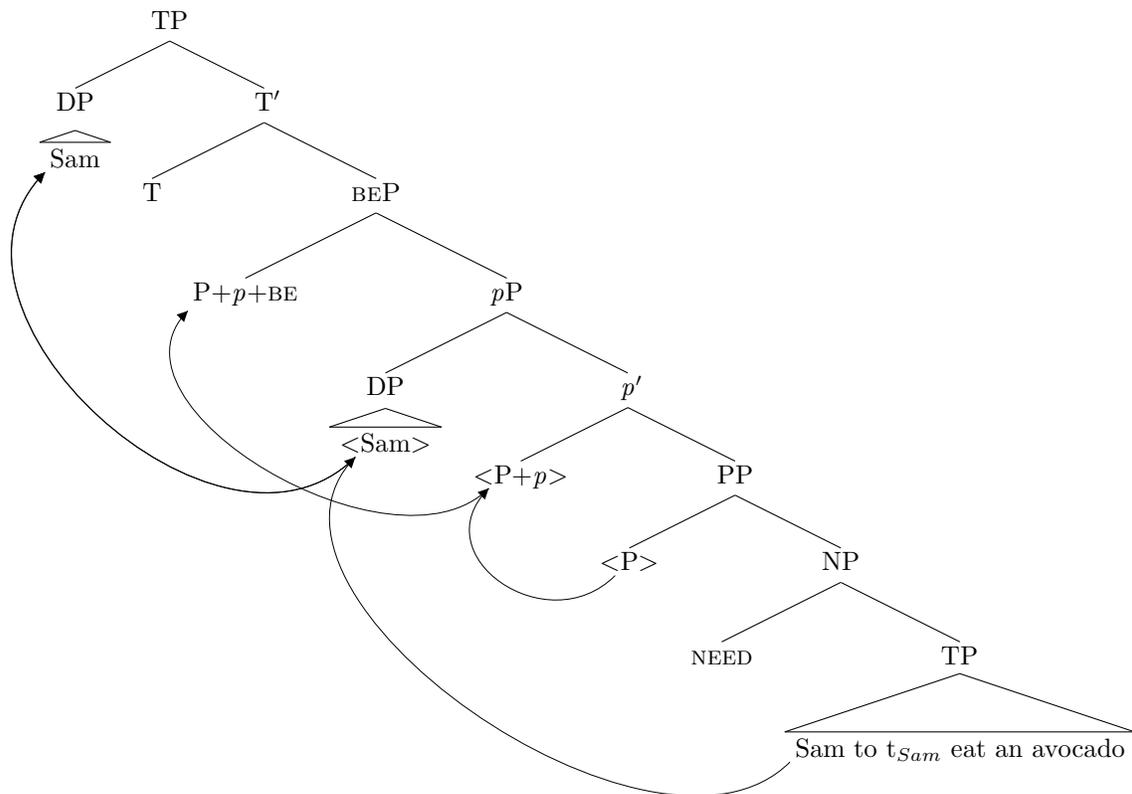
I propose then, that, although modal *have* can be understood as a type of (existential) possessive construction, it does not utilize exactly the same *p* as possessive *have*. Instead, the *p* of modal *have* is neither entirely phi-complete (as in possessive *have*) nor entirely phi-defective (as in auxiliary *have*). This *p* must have a subset of the features present on the head *p* found in possessive *have*, as it is phi-complete enough to project a specifier position which must be filled by an internally Merged NP/DP. But it is phi-defective enough to be incapable of assigning Case or a theta-role to that same NP/DP. The preposition present in the derivation of modal *have* takes a NP headed by nominal *NEED*, which gives modal force to the derivaton, as its complement. The DP of the embedded TP, *Sam* raises cyclically to satisfy the [EPP] feature of *p*, but later moves to the higher Spec,TP, both to satisfy the [EPP] feature of the higher T, and because Spec,*pP* is

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<sup>11</sup>cf. Causative *have*, 'John had Mary eat an apple (for a snack).'

not a case assigning position.

(82) Sam has to eat an avocado.



In (82), the derived subject *Sam* Merges within the lower TP (itself part of the NP headed by *NEED*) and moves through Spec,*pP* (cf. Bhatt 1998) to satisfy the [EPP] feature present on *p*. *Sam* then continues on to Spec,TP to receive case and satisfy the [EPP] feature present on T. Nominal *NEED*, which provides modal force to the derivation, Merges as the head of the NP and remains in-situ. The NP ‘*NEED for Sam to eat an avocado*’ does not receive Case from the defective *p*. I believe this NP is analogous to a predicative NP, and so does not require Case. The N-head *NEED*, itself, is an unlicensed NP, in that it does have any determiner, D, or other functional element to license it. The silence of *NEED* therefore, is not due to Case properties, but to its status as an unlicensed NP<sup>12</sup>. For a similar reason, it is the licensed DP *Sam* that raises to Spec,*pP* to satisfy the [EPP] feature of *p*. The [EPP] feature of *p* must be satisfied by an argument with a D feature,

<sup>12</sup>I believe what conditions the choice between an overt *NEED* in possessive *have* constructions, ‘*I have a pressing need to go to the store*’, and a covert *NEED* in modal *have* constructions, ‘*I have to go to the store*’, depends on whether *have* selects for an NP or DP complement. *NEED* is a bare NP that, essentially, functions as a modifier to the lower TP and cannot be modified itself or take a determiner (a-c). Overt *need* is embedded in an DP that requires a determiner. In my grammar, overt *need* also requires modification (d-e)

- a. I have to go to the store.
- b. \*I have a/the/that to go to the store.
- c. \*I have an overwhelming to go to the store.
- d. I have a pressing need to go the store.
- e. #I have need to go to the store

making the NP ‘NEED *for Sam to eat an avocado*’ an ineligible argument for that particular task<sup>13</sup>.

Like in possessive and auxiliary *have*, P raises and incorporates to *p* in order to form a complex head, *p+P*, that subsequently raises and incorporates to *be*, Spelling Out as the complex verb, *have*.

This analysis shows that modal *have*, though it can be understood as a type of possessive construction, is not necessarily “built off of” the structure of either possessive or auxiliary *have*, as proposed in Bhatt (1998). This fits with the proposals of Kayne (p.c.), Lavine (1999), Migdalski (2007) Jung (2008, 2011) and Lindström and Trigel (2010), who suggest that the perfective use of auxiliary *have* may also be related to a possessive construction.

The derivation in (82) correctly predicts that modal *have* is a raising verb, consistent with the data in (79). It also correctly predicts the “existential semantics” previously discussed. The relationship between the surface subject and the obligation is distinct from a possessive relationship, in that the surface subject is itself part of the obligation. The surface subject, then, is only *affected* by the obligation, it is not necessarily a possessor. This is consistent with modal *have* occurring in sentences that lack an argument capable of experiencing an obligation, as in (83), where *the chairs* are only affected by the obligation; they themselves do not possess it (cf. Bhatt 1998).

(83) There have to be 50 chairs in the garden before the party starts at 9.

Such an analysis is also helpful in explaining the relationship between modal *have* and other English modals. Modal *have* expresses (roughly) the same modal semantics as the English modal *must*, however modal *have* and *must* behave differently, (in terms of both syntax and semantics) in the context of negation. Syntactically, modal *have* follows negation while “true modals” such as *must* precede it.

(84) a. We shouldn’t talk about politics on such a pleasant night.  
b. We mustn’t talk about politics on such a pleasant night.  
c. We don’t have NEED to talk about politics on such a pleasant night.

In the “true modal” examples in (84), only the predicate is negated. The modal force of the sentence is still present. However, in (84-c), the modal *have* example, the modality of the sentence is negated. The examples in (84) can be paraphrased below.

(85) a. We are supposed to not discuss politics on such a pleasant night.  
b. We are obligated not to talk about politics on such a pleasant night.  
c. We are not obligated to talk about politics on such a pleasant night (but we can if we’d like to).

These facts follow from the structure in (82). In (82), NEED, the element that gives modal force to the derivation, remains lower than the negation. Because scope is assigned via c-command and the negative

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<sup>13</sup>An alternative analysis would be that, contra to Bruzio’s Generalization, the NP ‘NEED *Sam to eat an avocado*’ does receive Case from *p*, but remains silent because it is unlicensed. The exact predictions of each proposal are left for further research.

element *c*-commands *NEED*, the modality of modal *have* is negated. However, in (84)a-b, the modal verb *should/must* *c*-commands *NEG*, and so scopes above negation. As a result, the modality of (84)a-b is maintained and the predicate is negated.

## 2.5 Summary

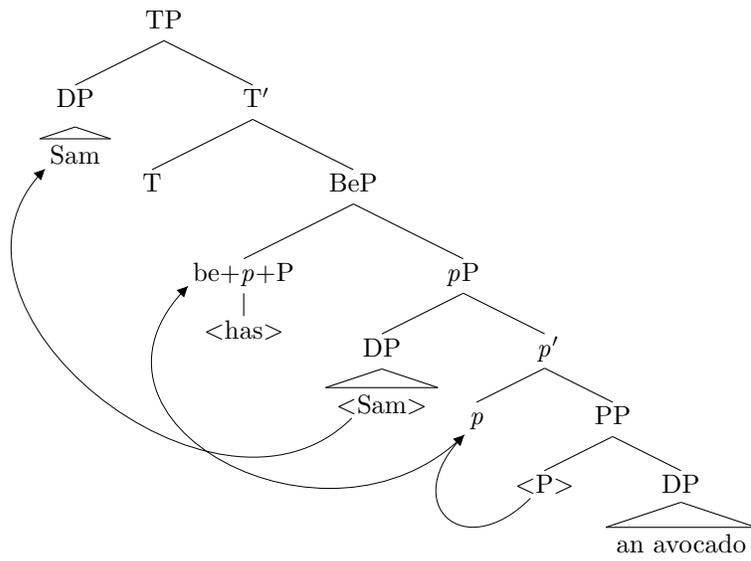
This chapter has argued that all possessive, auxiliary and modal variants of *have* can be understood as complex verb formed from the incorporation of *be+p+P*. The differences between lexical, auxiliary and modal *have* can be reduced to variation on the features of *p*, the functional element which allows the verb *have* to assign Accusative case to its Ground and Merge its Figure. Possessive *have* is formed using a phi-complete, non-defective *p*, roughly analogous to the *v* found in regular transitive verbs. Auxiliary *have* is formed using a phi-incomplete, defective variant of *p*, roughly parallel to the *v* found in unaccusative verbs. Modal *have* is formed using a *p* that is neither phi-complete nor completely phi-defective. The *p* of modal *have* (roughly analogous to the *v* present in passive verbs, in that it cannot Merge an external argument but is still semantically active enough to be modified by an agentive *by*-phrase) has at least an [EPP] feature that requires an argument to pass through its specifier via Internal Merge. Though modal *have* cannot assign a theta-role to the surface subject, it still provides an “affected” reading. A chart summarizing the properties of each variant of *have* is given in (86).

(86) Summary of variants

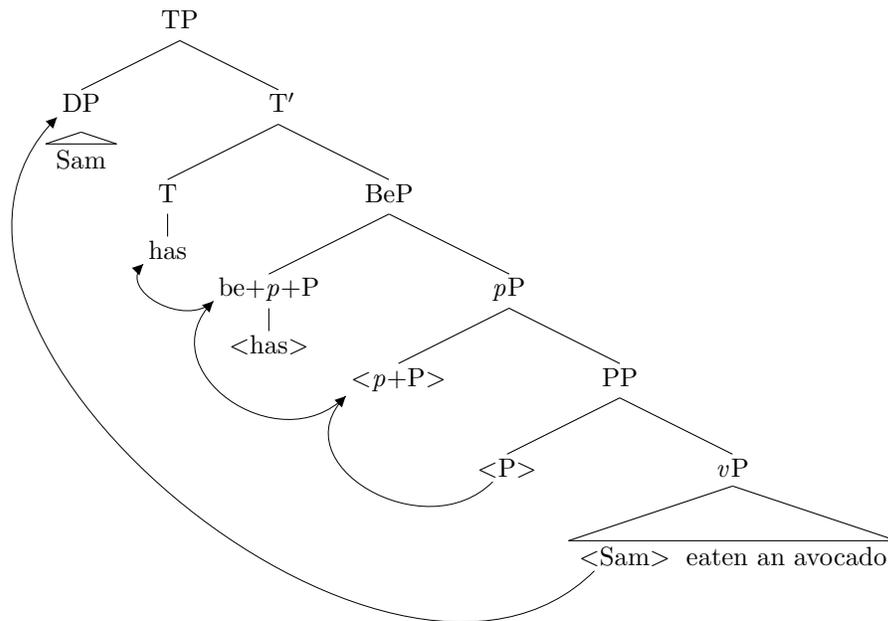
Variant	<i>p</i> analogous to:	phi-complete	[EPP] feature
possessive	active <i>v</i>	yes	yes
auxiliary	unaccusative <i>v</i>	no	no
modal	passive <i>v</i>	no	yes

I have chosen to represent these structures using a derivation modified from Kayne (1993), based on extraction facts from three types of possessive constructions in English. However, as the distinctions between possessive, auxiliary and modal *have* reduce to a question of differences in features, not in differences in the architecture of the derivation, this proposal is compatible with languages that may express possession through different derivations. My derivations for each variant of *have* are given below.

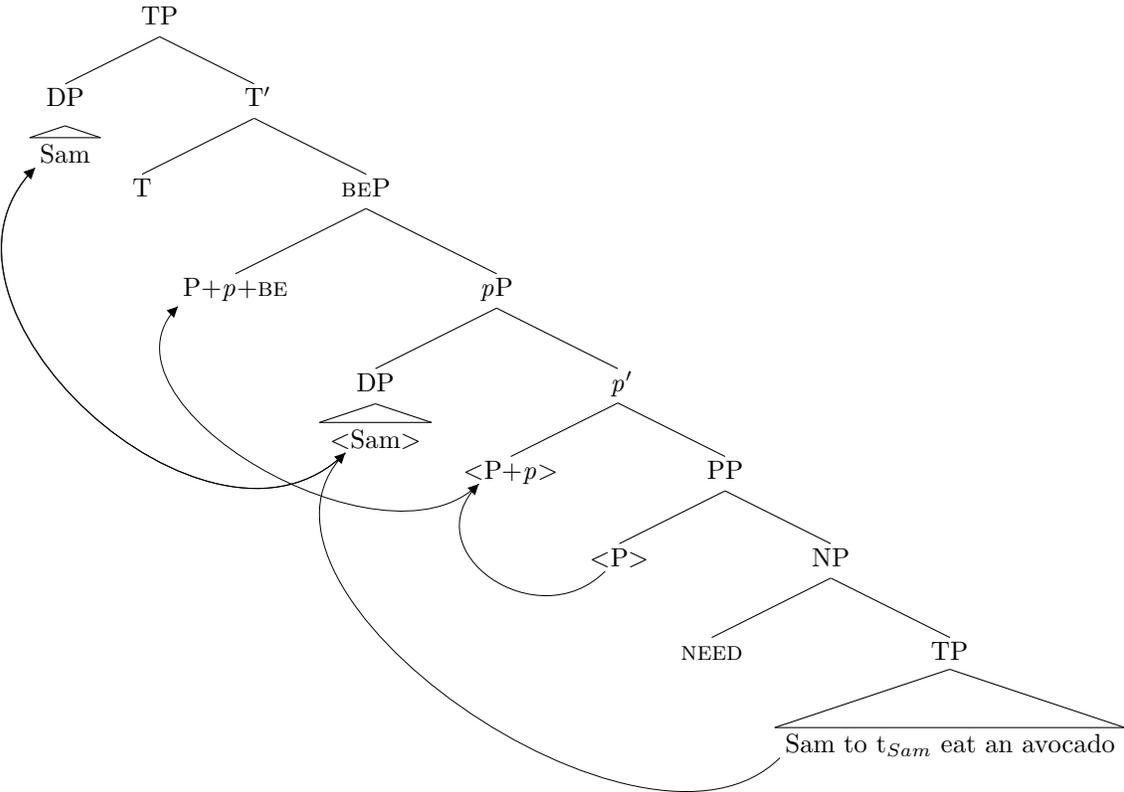
(87) Sam has an avocado.



(88) Auxiliary *have* — They have eaten the avocado (cf. (61))



(89) Modal *have* — Sam has to eat an avocado (cf. (82))





relationship between the arguments of the clause is external to the use of the verb (either *want* or *have*), with the verb adding only temporal/aspectual semantics to the clause. In the case of *have*, the auxiliary adds perfect(ive) semantics, while auxiliary *want* adds future tense semantics to the clause. The use of *want* as a future auxiliary is not available in English, but is available in Romanian, among other languages.

- (2) a. *They* have gone to **the store**. (auxiliary *have*)  
 b. *Ei vor merge la magazin.*  
 they want.3PL go.INF the store  
 ‘They will go to the store.’<sup>1</sup> (Romanian, auxiliary *want*)

Finally, the modal use of *want* mirrors the modal use of *have* discussed in 2.4.3. In the case of modal *want*, the verb *want* does not directly mediate the relationship between the arguments of the clause, but contributes a modal semantics that “affects” the wanter/experiencer, and situates the relative necessity of their actions in terms of other possible worlds. The parallels between modal *have* and *want* are given in (3). While modal *want* is not available in Standard English, it is available in some Non-Standard dialects, including the English spoken in Pittsburgh and Ohio, and some dialects of British English.

- (3) a. John has to wash his car. (modal *have*)  
 b. The car wants washed (by John)  
 ‘John should wash his car.’  
 ‘\*John wants to wash his car.’

Much like the distribution of possessive, auxiliary and modal *have*, the distinction between transitive, auxiliary and modal variants of *want* is not limited to English. Transitive *want*, the most common variant of the verb, is found in many languages other than English, including Spanish and Chinese (4).

- a. Quiero una palta  
 want.1SG an avocado  
 ‘I want an avocado.’ (Spanish)  
 b. Wendy yào yí liàng xīn chē  
 Wendy want one CL new car  
 ‘Wendy wants a new car.’ (Chinese<sup>2</sup>)

Auxiliary *want*, where *want* adds the semantics of the future to the derivation (and does not express any desire or require a sentient experiencer) is found in Yiddish, Swedish, Ojibwe and Old Macedonian (4).

- (4) a. John vil koif-en a naijer hemd  
 John want buy-INF a new shirt  
 ‘John will buy a new shirt.’ (Yiddish<sup>3</sup>)

<sup>1</sup>Thanks to Ileana Grama for help with the Romanian.

<sup>2</sup>Thanks to Wendy Xu for help with the Chinese.

<sup>3</sup>Thanks to Miriam Brillman for help with Yiddish.

- b. Anna vill ha en ny bil.  
Anna want.3SG have.INF a new car  
'Anna will have a new car<sup>4</sup>.' (Swedish, Harves 2008:7)
- c. xoščet počiti moj brat.  
want.3SG die.INF my brother  
'My brother will die.' (Old Macedonian, Tomič 2003:534)
- d. ni-wii-nii-midaa.  
I-want-2PL-dance.INF  
'You all will dance.' (Ojibwe<sup>5</sup>)

Finally, modal *want* is available in languages like Albanian and various non-standard Italian dialects, such as Calabrian, Sardinian, and Salentino (5).

- (5) a. Tutti figghjoli vonnu amati.  
All children.3PL want.3PL loved.PTCP  
'All children should be loved.' (Calabrian, Remberger 2006:1)
- b. Cussa dzente keret tmita.  
This people.3SG want.3SG feared.PTCP  
'This people must be feared.' (Sardinian, Jones 1993:125)
- c. (pro) Uliano cunsulate.  
(pro) want.3PL comforted.PTCP  
'They had to be comforted.' (Salentino, Salvioni 1912:379)

In the remainder of this chapter, I argue, based on proposals such as Hale and Keyser (1993) and Baker (2003), as well as overt evidence from languages like Irish, that *want* is structurally complex. Specifically, I will propose that parallels between the variants of *have* and *want* can be explained by the fact that *want*, like *have*, is not a lexical primitive. I will show that the underlying structure of *want* is, in part, parasitic on a possessive structure (though not necessarily parasitic on the verb *have*). Very informally, if “*having* a book” can be expanded to ‘*being with/at/near/of* a book,’ then ‘*wanting* a book’ can be expanded as (at least) ‘*being in want of* a book.’

## 3.2 Modality

Unlike *have*, *want* is an inherently modal verb. This means that whenever *want* is present in a clause, it will contribute modal force to the derivation. For the purposes of this thesis, *modal force* will be defined as the ability of a verb to allow a single proposition to be compared against a set of similar propositions in distinct possible worlds.

<sup>4</sup>In both the Swedish and Yiddish examples the verb *want* is ambiguous between the auxiliary and transitive variant.

<sup>5</sup>Thanks to my informant, who wishes to remain anonymous, for help with Ojibwe.

What modal force *want* contributes to the derivation, i.e., how *want* situates a particular sentence with reference to possible worlds, is not always consistent, either within a language or cross-linguistically. This ambiguity has led to questions regarding *want*'s *inherent* modal force. Remember (2006, 2010), for instance, claims that *want* is inherently a modal of necessity, based primarily on data from dialects of Italian, where *want* can convey the same deontic or epistemic modality as verbs such as *should*, *must* or (modal) *have* (cf. (5)).

Remberger (2006) uses the existence of constructions like those in (5) to argue that the necessity reading of *want* is somehow more basic than the bouletic reading of *want*, despite the fact that *want*'s necessity reading is less cross-linguistically common than its bouletic reading, and can only occur in a limited number of syntactic configurations, such as when *want* functions as a passive auxiliary, as shown in (5) and the Non-Standard English example given in (3).

This thesis rejects Remberger's (2006) claim that *want* is inherently a modal of necessity and argues instead that *want* is essentially a modal of possibility. *Want* cannot be considered an inherent modal of necessity simply because it frequently does not express necessity, and instead functions as either a bouletic modal or a modal of possibility. Cross-linguistically (including the languages cited by Remberger in support of the proposal that *want* expresses necessity), *want* can be used to express multiple modal forces. The contexts where *want* functions as a modal of necessity are marked and cross-linguistically less productive than *want*'s bouletic or possibility uses. Additionally, in every language where *want* can function as a modal of necessity, it can also serve as a bouletic modal that is completely compatible with negated necessity.

(6) Non-necessary *want*

a. I want to leave early, but I don't need to.

b. Voglio una macchina nuova, ma non ne ho (certamente) bisogno.  
 want.1SG a car new, but not NEG have (certainly) need  
 'I want a new car but I certainly don't need one.'

(Italian<sup>6</sup>)

I argue instead that *want* is inherently a modal of possibility. This fits with Von Stechow's (2006) definition of (English) *want* as a bouletic modal, as bouletic modality can be defined as a subset of possibility. More precisely, bouletic modality expresses the subset of possibilities that are desired by the experiencer.<sup>7</sup> In the case of *want*, I propose that the verb occurs as a modal of possibility or a bouletic modal as a result of syntactic structure. As bouletic modals require an experiencer (to do the desiring), *want* can only function as a bouletic modal when the verb is phi-complete enough to assign an experiencer theta-role to one of its

<sup>6</sup>Thanks to Katie Wallace and Stephanie Harves for help with Italian.

<sup>7</sup>By the same approach, it could be argued that necessity is a subset of possibility, expressing the possibilities which are required. However, requiring does not equal desiring, and so *want*'s status as a bouletic modal does not *ipso facto* grant it status as a modal of necessity. If necessity and bouletic modality are understood as subsets of possibility that can, but are not required to, overlap, we can begin to understand why *want* can occasionally appear as both a bouletic modal and a modal of necessity.

arguments. When *want* lacks such a theta-role (or the ability to assign such a theta-role), *want* surfaces as a modal of possibility.

Evidence supporting this proposal comes from languages that exhibit “auxiliary *want*”, the variant of *want* that is syncretic with the future auxiliary, and which contributes only future semantics—which, itself, is another flavor of modality, which I term “possibility”—to the derivation, as shown in (4). In addition to Yiddish, Swedish, Old Macedonian and Ojibwe, these languages include Ancient Greek, Romanian, Norwegian and many other Balkan languages, including Serbian, Croatian and Bulgarian. Diachronically, a similar claim may be made for English, as well, given that the English future auxiliary *will* is often argued to be a grammaticalized variant of the verb *want* (Campbell 1998, among others). This follows straightforwardly from the analysis presented here, where these instances of the future auxiliary are presented as forms of *want* that have lost their ability to assign an experiencer theta-role. Additional examples of *want* functioning as both a bouletic modal verb and the future auxiliary are given for Romanian (7) and Serbo-Croatian (8).

- (7) a. Ei **vor** sa mearga la magazin.  
 they want.3PL COMP go.PL the store  
 ‘They want to go to the store.’ (Romanian<sup>8</sup>)
- b. Ei **vor** merge la magazin  
 they want.3PL go.INF the store.  
 ‘They will go to the store.’
- (8) a. Petar **će** da dode sutra.  
 Petar **will.3SG** COMP.SBJV come.3PL tomorrow  
 ‘Peter will come tomorrow. (Serbo-Croatian, Tomič 2003:520)
- b. Petar **hoće** da dode sutra.  
 Petar **want.3SG** COMP.SBJV come.3PL tomorrow  
 ‘Peter wants to come tomorrow. (SC, Tomič 2003:520)

(8) shows a pattern where *want* and the future auxiliary, translated as *will* are not syncretic, but appear morphologically related. In the case of Serbo-Croatian, *will* appears a phonologically reduced form of the verb *want*. This pattern holds across all person number paradigms in Serbo-Croatian, as shown in the table in (9). In (9), the morphology present in *want* but not in *will* is given in (paranthesis). Similar patterns are found in other dialects of Serbian, such as South-East Serbian, as well as other Balkan languages, such as Bulgarian.

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<sup>8</sup>Thanks to Ileana Grama for help with Romanian.

(9) Serbo-Croatian paradigm

(adapted from Tomič 2003:520)

	SG	PL
1	(ho)ću	(ho)ćemo
2	(ho)ćeš	(ho)ćete
3	(ho)će	(ho)će

As analyzed by Tomič (2003), these morphological patterns support the analysis of *want* and the future auxiliary *as*, at least, diachronically related. Tomič traces the development of *want* into a future auxiliary in Serbian, Croatian, Bulgarian, Macedonian (including Old Bulgarian and Old Macedonian), Modern Greek, Tosk Albanian, Aromanian and Romanian. She shows that, in all these languages, a future auxiliary *will* historically developed from the verb *want*. This supports the idea that *want* and the future auxiliary are closely related, and that as *want* undergoes specific syntactic and semantics changes, particularly with regard to its ability to assign a theta-role, its modal force is altered.

### 3.3 The structure of *want*

#### 3.3.1 Intensionality

When *want* appears as a transitive verb, it acts as an **intensional transitive**. Intensional transitives are a special sub-class of transitive verbs that exhibit special properties distinct from those of other transitive verbs (sometimes referred to as extensional transitives). Intensional transitives can be defined as verbs that (Frege 1993):

- (10) a. Fail to preserve truth by the substitution of a co-referring term (11).  
b. Do not induce falsity when they introduce a non-denoting object (12).

Concrete examples of the above definition are given in (11)-(12).

- (11) a. Sam wants Superman.  
b. Sam wants Clark Kent.  
c. Sam met Superman.  
d. Sam met Clark Kent.

In (11), the truth conditions between (11-a) and (11-b) are distinct, while the truth conditions of (11-c) and (11-d) are consistent. If *Sam* were present in a situation where nuclear bombs were exploding in the San Andreas fault, causing California to sink into the Pacific Ocean, he could very well want Superman *without* wanting Clark Kent. However, if Sam met Clark Kent at a reporter's conference, he *necessarily* met Superman, regardless of whether or not he was aware of it.

- (12) a. Marie wants a unicorn.  
 b. Marie owns a unicorn.

In (12), (12-a) is felicitous while (12-b) is semantically problematic in this world. Regardless of whether or not unicorns are real, Marie is free to *want* one. However, the statement that Mary *owns* a unicorn (12-b) cannot be true in any situation where unicorns do not exist.

The uniqueness of intensional transitives extends beyond semantics. McCawley (1974), Karttunen (1976), Ross (1976), Larson, den Dikken, and Ludlow (1995) and Harley (2004) have noted that *want* often shows syntactic behavior distinct from other transitive verbs. For example, multiple temporal adverbs can be present in a sentence with *want*, but multiple temporal adverbs cannot be present with regular transitive verbs, like *review* (13).

- (13) a. Bill wants your apartment until June. (McCawley 1974:85)  
 b. Yesterday Bill wanted your apartment until June.  
 c. Bill reviewed the article yesterday.  
 d. \*Yesterday Bill reviewed the article tomorrow.

This suggests that the sentences with *want* are not mono-clausal. To account for this, it has been proposed that *want* does not take a DP as its complement. Instead, it takes (at least) a TP complement, containing a null subject PRO and a silent verb TO HAVE (LDL 1995). The existence of a silent HAVE as the complement of *want* is supported by a variety of empirical facts, including paraphrases (14), ellipsis (15), (16), and binding theory (17).

In (14), all the sentences can be paraphrased as bi-clausal constructions using a matrix verb *want* and an embedded verb *have* without any shift in semantics.

- (14) a. I want a new car.  
 b. I want to have a new car.  
 c. I want a boyfriend.  
 d. I want to have a boyfriend.  
 e. Yesterday I wanted your apartment until June.  
 f. Yesterday, I wanted to have your apartment until June.

In the following ellipsis examples (15), the elided gap appears to contain more than simply the verb *want*. What is reconstructed in the VP ellipsis site is a VP containing the verb *have* (LDL 1995:62). Such a reconstruction would not be possible unless *have* were originally present (albeit covertly so) in the derivation.

- (15) a. 1: Do you want another sausage?  
 2: I can't [<sub>VP</sub>  $\emptyset$ ]. I'm on a diet.  
 b. 1: Do you want to have another sausage?  
 2: I can't have another sausage. I'm on a diet.

Furthermore, there are comparative VP ellipsis examples that additionally suggest that a silent HAVE is always present in the derivation as the complement to the verb *want*.

- (16) a. Jonathan wants to have more toys than Benjamin (has).  
b. Jonathan wants more toys than Benjamin (has). (LDL 1995:62)

Finally, propositional anaphora do not agree in phi-features with the apparent DP object of *want*, but instead appear to agree with a clausal complement. In (17-b), a propositional anaphor with plural phi-features is disallowed, while in (17-c) a propositional anaphor with feminine phi-features is disallowed.

- (17) a. Joe wants a horse, but his mother wont allow it.  
b. Joe wants some horses, but his mother wont allow it/\*them.  
c. Joe wants a wife, but his mother wont allow it/\*her. (LDL 1995:63)

Additionally, Delogu, Vespignani, and Sanford (2010) and Delogu and Pykkänen (2011) show behavioral evidence supporting the conclusion that the structures of intensional transitives are comparably complex. Delogu and Pykkänen (2011) show that there is increased brain activity in the left anterior temporal lobe during the processing of sentences containing intensional predicates such as *want*, compared to the processing of extensional transitives. Delogu, Vespignani, and Sanford (2010) show, via eye-tracker evidence, that sentences with intensional transitives and a direct object take longer to process than sentences with extensional transitives and a direct object. Both increased processing time and increased neurological activity correlate with the processing of more complex linguistic structures, suggesting that the structure of *want* is more complex than it initially appears.

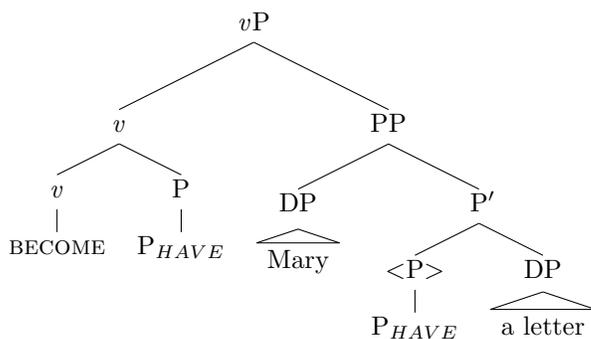
Harley (2004) suggests that the complex structure of intensional transitives like *want* may not be uniform, based on contrasts like (18), where the verb *have* is not the most natural paraphrase for sentences with *want*.

- (18) a. John wants a kiss.  
b. #John wants to have a kiss.  
c. John wants to get a kiss.  
d. John wants to be given a kiss. (Harley 2004:261)

Harley claims that these contrasts suggest that the complement of *want* is not inherently *have*. Instead, in certain contexts (e.g., inchoative interpretations), the complement to intensional verbs like *want* can be interpreted as a covert GET or BE GIVEN. Harley proposes that the complement to *want* is only a preposition P<sub>HAVE</sub>, which is used in the formation of all *have*, *get* and *give*. This follows from proposals that *get* and *give*, like *have*, are complex verbs, formed from the raising of P<sub>HAVE</sub> into a light verb. Harley's proposal does not suggest that *have* is not composed of *be*+P. Instead, she states that P<sub>HAVE</sub> is sufficient as the complement of *want* to account for the behavior seen in (14)-(17). Harley's proposed structures for the verb *get* (19) and the structure of the complement of *want* (20) are given below.

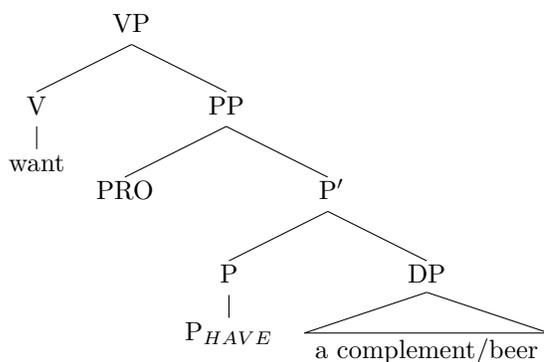
(19) Mary got a letter.

(Harley 2004:262)



(20) ... want a complement/beer

(Harley 2004:265)



Harley's analysis is beneficial in that it accounts for a contrast noted in Harves (2008), namely that a language can possess a productive transitive verb *want* while lacking a productive transitive verb *have*, suggesting that there is no incorporated verb *have*, covert or otherwise, present in the derivation. An example of this contrast is given with Russian (21).

(21) a. Ivan        **xočet**        novuju mašinu.  
 Ivan.NOM **wants**.3SG new    car.ACC  
 'Ivan wants a new car.

(Russian, Harves 2008:18)

b. **U** menja    **budet**        novaja mašina.  
**at** me.GEN **be**.3SG.FUT new    car.NOM  
 'I will have a new car.

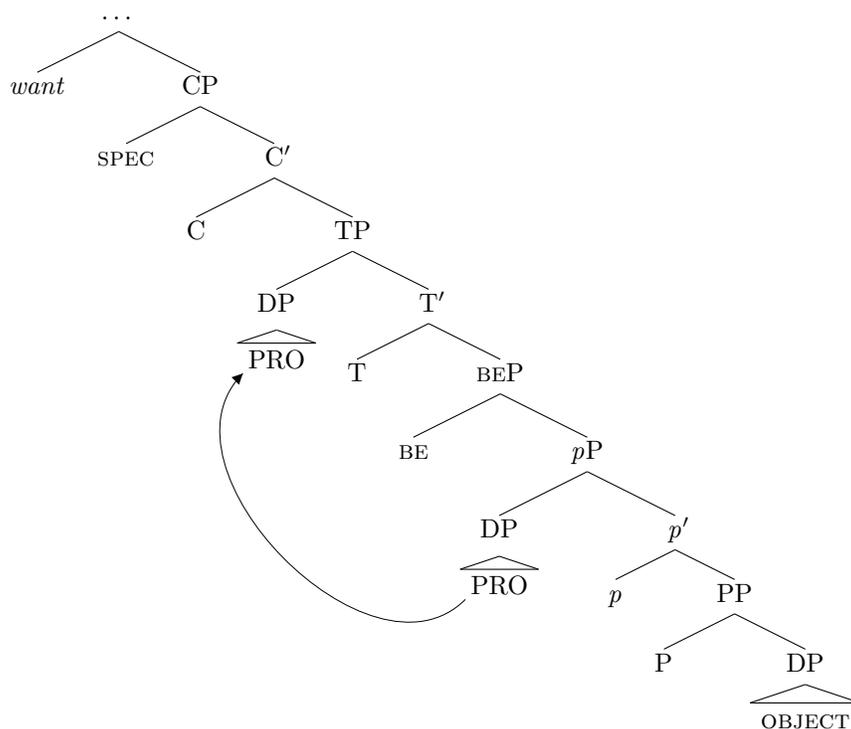
However, Harley's analysis is also problematic in other ways. Marušič and Žaucer (2006) note that, for multiple temporal adverbs to be allowed, there must be an element that can combine with tense present in the structure of *want*'s complement. Svenonius (2003) claims that a preposition is incapable of combining with tense and therefore cannot support a temporal adverb. Such analyses suggest the presence of a full TP or CP layer as the complement of *want*, not simply a preposition.

Harves (2008) proposes, then, that the complement of *want* is neither a full transitive verb *have* nor a bare preposition, but an unincorporated possessive structure, composed of *be* and a preposition, as found in B-languages. These types of clauses are capable of combining with tense and hosting adverbs.

- (22) Včera ja xotel vašu kvartiru do ijunja.  
 yesterday I wanted your apartment until June  
 ‘Yesterday I wanted your apartment until June.’<sup>9</sup>

Following Harves (2008), I argue that the structure of transitive *want*’s complement can be represented as in (23). Note that the possessive structure in (23) is almost identical to the structure proposed in Chapter 2 for possessive *have*, the key difference being that the structure in (23) lacks the *be* to *p*+P incorporation found in transitive *have*. Note also that in (23) *want* is a control verb.

- (23) Complement of *want*



### 3.3.2 Decomposition

Recall from Chapter 2 that this analysis of the three variants of *have* reduced to the assumption that *have* is not a lexical primitive, meaning that it can be decomposed. Such decomposition allowed us to classify the different variants of *have*, essentially, as argument structure alternations. By altering the features of the

<sup>9</sup>Stephanie Harves, p.c.

argument introducing head  $p$ , it was possible to differentiate the relationships between the arguments in the sentences with possessive, auxiliary and modal *have*. This section will look at whether or not it is possible to understand *want* as a decompositional verb, i.e., a verb that is not a lexical primitive.

All verbs, to some level, are decompositional, composed of a lexical  $V$  and functional  $v$ , which parallels  $p$  in its ability to assign case and introduce arguments. One possible method of differentiating variants of *want* as differences in argument structure is to alter the phi-features of  $v$ . As discussed briefly in Chapter 2, variations on the features of  $v$  are canonically accepted as producing multiple variants of many lexical verbs, such as *sink* (24) and *read* (25).

- |      |    |                                   |                       |
|------|----|-----------------------------------|-----------------------|
| (24) | a. | Jim sank the boat.                | (transitive)          |
|      | b. | The boat sank easily (*by Jim).   | (unaccusative/middle) |
|      | c. | The boat was sunk (by Jim)        | (passive)             |
| (25) | a. | Inna read the book.               | (transitive)          |
|      | b. | This book reads easily (*by Inna) | (unaccusative/middle) |
|      | c. | The book was read (by Inna)       | (passive)             |

Similar argument structure alternations are available for many other transitive verbs. A large number of verbs (e.g., *peel, cook, deform, wakes/wakes up, shatter, scratch, crumble, write, install, glide, float, spray, load, clean, dirties, spreads, wipes down, tear, steam, (dis)connects, configures*, etc) show active/middle voice alternations, and almost all transitive verbs are grammatical in the passive. However, *want* poses an exception to this standard. As discussed in Section 3.1, *want* is distinct from verbs like *cook* in that it never directly takes a DP complement, and so the relationship between *want* and its arguments is necessarily different from the relationship between many other transitive verbs and their arguments. This is supported by the fact that *want* is ungrammatical in anything but its active form, i.e., *want* has neither an unaccusative/middle or transitive variant<sup>10</sup> (26).

- |      |    |  |                       |
|------|----|--|-----------------------|
| (26) | a. | Neil wanted figgy pudding.             | (transitive)          |
|      | b. | *Figgy pudding wants easily (by Neil). | (unaccusative/middle) |
|      | c. | *Figgy pudding was wanted (by Neil).   | (passive)             |

In addition to *want*'s ungrammaticality in both the middle and passive voice, evidence from languages with auxiliary *want*, e.g., Romanian, suggest that *want* does not obligatorily introduce an external argument into the derivation. This is supported by English data, such as the combination of *want* and “weather verbs” such as *rain*, where *want* very clearly does not introduce a non-clausal argument into the derivation (27).

- (27) CONTEXT: It is a very cloudy, humid day, but no rain has fallen  
‘It really **wants** to rain (out there)<sup>11</sup>.’

<sup>10</sup>Recall, however, that *want* can itself serve as a passive auxiliary, as in some dialects of Non-Standard English.

<sup>11</sup>Example taken from my own English, though a Google search for “wants to rain” yields roughly a quarter million search

In light of such evidence, it stands to question the assumption that *want* has an internal structure identical to lexical verbs such as *cook* or *read*. Further insight regarding the internal structure of *want* can be gleaned from investigating larger classes of verbs which claim *want* as a member. For example, *want* belongs to the class of stative verbs. Stative verbs, most simply, are verbs of cognition, relation or perception which describe states (which last) while other verbs, sometimes referred to as *dynamic verbs* describe actions (which happen). The distinction is not purely semantic; there are syntactic distinctions between stative and dynamic verbs, as well. Stative verbs, for instance, cannot occur in the progressive aspect, while dynamic verbs can (28)<sup>12</sup>.

- (28) a. I fear thunderstorms in general. (fear = stative verb)  
 b. #I'm fearing thunderstorms in general. (fear = stative verb)  
 c. I read books. (read = dynamic verb)  
 d. I'm reading books. (read = dynamic verb)

These semantic and syntactic differences are not coincidental. Cuervo (2004) proposes that stative verbs are distinct from other types of verbs because they are built from different pieces. Cuervo proposes three distinct variants of *v*, *v<sub>be</sub>*, *v<sub>go</sub>* and *v<sub>do</sub>*, with *v<sub>be</sub>* being specifically reserved for stative verbs. I will adopt Cuervo's (2004) proposal, but represent the verb *v<sub>be</sub>* as *be*, as in my representation of *have* (cf. Chapter 2). Hale and Keyser (1993) also propose that stative verbs have a syntax that is distinct from other verbs in that they are like denominal transitive verbs in their formation.

Though Hale and Keyser's (1993) account of the decomposition of certain transitive verbs was originally proposed to take place inside the lexicon, their approach is still compatible with a theory of grammar that has eliminated a "lexical pre-syntax." Instead of assuming that the "assembling" of complex verbs takes place in the lexicon, their approach has since been translated to the current theory, which assumes that complex verbs are assembled in the syntax proper (Harley 2001, Cuervo 2003, Kayne 2009). Hale and Keyser's (1993) account of verb composition shows that many of the verbs that may have previously been considered lexical verbs are, in fact, decompositional. This approach is most obviously seen in the case of denominal unergative verbs, which Hale and Keyser (1993) argue cannot take an NP/DP object precisely because that object was present at first Merge and has now incorporated into the verb itself. Hale and Keyser's structure for a denominal intransitive is shown below with *laugh* (29).

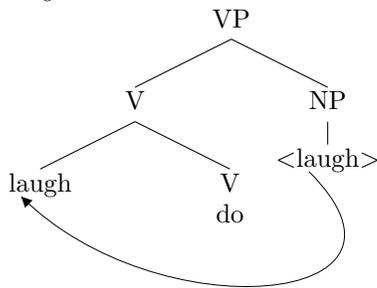
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results, including a book entitled "Some Days it Feels Like it Wants to Rain."

<sup>12</sup>except in marked contexts

(29) *laugh*

(adapted from Hale and Keyser 1993:55)



Additional support for Hale and Keyser’s proposal of unergative intransitives comes from languages like Basque, where unergative verbs are formed with a nominal complement and a light verb *make* or *do*.

(30) Basque unergative verbs

a. Jone-k korri egin du.  
Jon-ERG run do AUX  
‘Jon ran.’

(Artxibo 2006:25)

b. Jone-k lan egiten du.  
Jon-ERG work do AUX  
‘Jon works.’

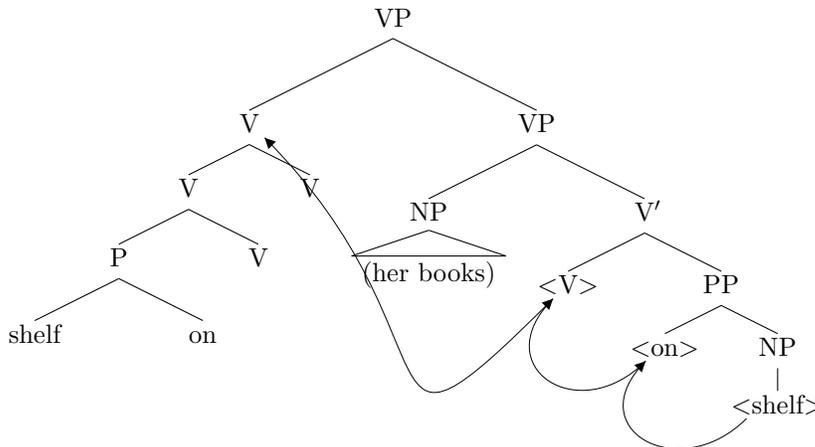
c. Mikele-k salto egin du.  
Mikel-ERG jump do AUX  
‘Mikel jumped.’

(Artxibo 2006:32)

Additionally, Hale and Keyser propose that verbs like *shelve* and *saddle* are also formed via incorporation, this time with both a nominal and a preposition.

(31) *shelve*

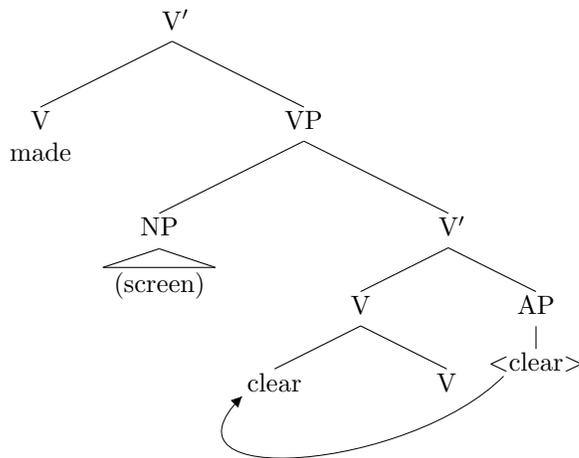
(Hale and Keyser 1993:58)



Finally, Hale and Keyser proposal that some verbs, including stative verbs, have a decomposition similar to denominal verbs like *sing* and *shelve*. However, these verbs involve the incorporation of an adjective, not a nominal, into the higher verb. The example that Hale and Keyser give in their paper of this type of verb is *clear*, as in the sentence ‘*The cook cleared the screen.*’

(32) *clear*

(Hale and Keyser 1993:63)



Pylkkänen (2000) has also proposed that, at least in Finnish, some stative verbs are decomposable. Baker (2003) also proposes that stative verbs can be decomposed into separate verbal and adjectival elements. To support this, Baker (2003) shows the similarities between many stative verbs and deadjectival predicates.

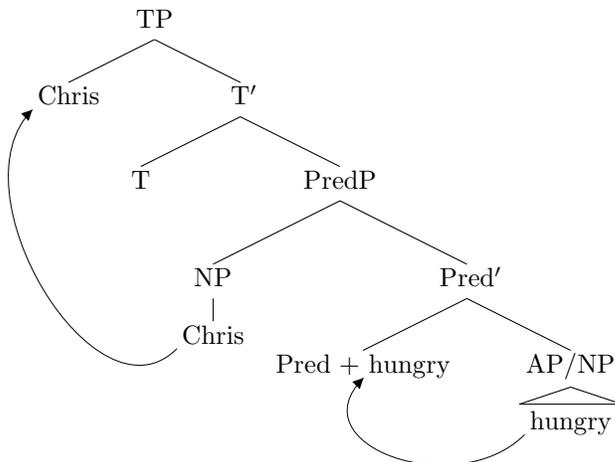
- (33) a. Mary is hungry.  
b. Mary hungers.

- (34) a. Sam likes spinach.  
b. Sam is fond of spinach.

Baker argues that these stative verbs are decomposable into a deadjectival or nominal element and a functional head, Pred(icate). His structure is summarized in (35).

(35) Chris is hungry.

(Baker 2003:35)



In (35), according to Baker, *Chris* is the subject of the verbal element (i.e., the Pred-head and the incorporated element, in this case *hunger*), but not of the AP/NP itself. Given the position of Pred in Baker's derivation, it makes sense to extend the notion to what I have chosen to label BEP.

Finally, various languages overtly suggest that *want* is not a lexical primitive, and can instead be decomposed into distinct parts. This pattern is particularly dominant within Celtic. Irish, for example, has a construction where *want* is overtly expressed with *be* and an adjective, mirroring the structure for stative verbs proposed by Hale and Keyser (1993) (36).

- (36) Irish
- a. ba mhaith le John gluaistèan nua.  
 COP.COND good with John car new  
 ‘John wants a new car.’
- b. Ba mhaith liom an abairt a scriobh.  
 COP.COND good with the sentence.ACC TRAN write  
 ‘I want to write the sentence.’ (Borsley and Roberts 1996:228)

Welsh has a *be (on)+nominal* construction used to express *want* (37). This construction is also found in other Welsh psych verbs, such as *thirst* (38). The Welsh construction for *want* also parallels the construction for *need* (39).

- (37) Mae arnaf i eisiau mynd adref.  
 be.PRS.3SG on I want.N go.INF home  
 ‘I want to go home.’ (Welsh, Borsley, Tallerman and Willis 2007:64)

- (38) Mae syched arna i.  
 be.PRS.3SG thirst on me  
 ‘I am thirsty.’ (Welsh, BTW 2007:64)

- (39) Mae angen dwy bunt arnaf i.  
 be.PRS.3SG need two pound on me  
 ‘I need two pounds.’ (Welsh, BTW 2007:64)

Both Breton (40) and French (41) have a construction where *wanting* is expressed with a possessive structure, as in Welsh (37) and Irish (36)

- (40) C’hoant en deus Yann da vont da Baris  
 desire.N 3SG.M have Yann to go to Paris  
 ‘Yann wants to go to Paris.’ (Breton, Borsley and Roberts 1996:39)

- (41) J’ai envie de manger du chocolat.  
 I-have desire to eat.INF of-the chocolate  
 ‘I want to eat chocolate.’ (French)

Additionally, Biblical English shows a *want* construction that overtly makes use of *be+P* and a nominal *want* (42), (43).

- (42) The Lord is my shepherd, I shall not **be in want**. (Psalm 23:1, New International Version)

- (43) I learned the secret both to be filled and to be hungry, both to abound and to **be in want**.  
(Philippians 4:12, Young’s Literary Translation)

This construction is also found in literary English, as in the following (44) from *Pride & Prejudice*.

- (44) It is a truth universally acknowledged, that a single man in possession of a good fortune, must **be in want** of a wife. (Austen, 1813:3)

Noonan (1993) argues that the use of *be in* ADJECTIVE/NOUN constructions in Celtic can be traced back to the fact that these languages lack a transitive verb *have*. According to Noonan (1993), stative verbs such as *fear*, *respect*, *love* or *want* are can be understood as complex structures, containing both a predicative verbalizing element, such as *be*, a preposition, and deadjectival or nominal element. In a language like English, which shows a productive transitive *have*, these elements incorporate, yielding a transitive, stative verb. In a language like Irish, which lacks a transitive verb *have*, no such incorporation can occur. Examples of Irish stative verbs, which overtly show an extended *be+P* structure, are given below in (45).

- (45) a. Tá gacilge ag Fliodhais.  
is Irish at Fliodhais  
'Fliodhas knows Irish.' (Noonan 1993:355)
- b. Tá eagla roimh an bpúca ag Ailill.  
is fear before the Puca at Ailill  
'Ailill fears the Puca.' (Noonan 1993:355)
- c. Tá meas ar Meadhbh ag Ailill.  
is respect on Meadhbh at Ailill  
'Ailill respects Meadhbh.' (Noonan 1993:355)

Noonan’s analysis can be extended to *have*, a stative verb (cf. (36) and (37)). This suggests that the internal structure of *want* may be even more complex than proposed in Larson, den Dikken and Ludlow (1995). Recall that LDL claim that *want* can be understood as taking a silent HAVE as its complement. However, Noonan’s analysis suggests that *want* may itself be preceded by a possessive structure. In languages like Celtic, this structure will be overt. In languages like English, this structure will be covert, due to the effect of incorporation. The idea that *want* is preceded by a possessive structure is further supported by languages like French (41) and Breton (40), which show an overt verbal *have* preceding a bouletic nominal or adjective (often translated as either *desire* or *want*). Thus, we can paraphrase *want* as below:

- (46) a. Sam wants an avocado.  
b. [TP Sam HAS [NP want.N [CP TO HAVE an avocado. ] ] ]  
c. [TP Sam BE P<sub>for</sub> want.N [CP BE P<sub>with</sub> an avocado. ] ] ]

The structure in (46-b) makes the serious assumption that the *be+P* structure in *want* is equivalent to the *be+P* structure found in *have*. At first glance, this appears to be a logical assumption. After all, some

languages (Welsh, Irish, French, Breton, certain archaic or literary dialects of English) show *want* appearing overtly with a possessive *have* or *be+P* constructions. In that light, it makes sense to posit that verbal *want* is parasitic on the standard possessive structure. However, further cross-linguistic considerations cast that conclusion in doubt.

The claim that a possessive *have* structure (whether incorporated or left overtly as *be+P*) is required for the formation of *want* fails to explain how a transitive *want* can overtly appear in B-languages like Russian and Bengali. If *want* is inherently nominal, it would be incapable of displaying verbal morphology unless some sort of “verbalizing” measure were to take place in the derivation; for example, *want* incorporating into *be+P*. As shows in (47), *want* displays the full inflectional paradigm in Russian, a B-language that makes productive use of transitive *want*.

(47) Russian ‘want’ — *xotet*’

PRS	1	2	3
SG	xochu	xochesh’	xochet
PL	xotim	xotite	xotjat

However, there is no direct evidence that the *be+P* structures found in *have* and the derivation of *want* are identical. In fact, there is evidence to suggest that the specific preposition present in *want* constructions may have properties distinct from the prepositions found in all *have* constructions. Recall from Chapter 2 that *have* can, potentially, be formed from the incorporation of any preposition, P (*to*, *with*, *at*, *in*, etc) into *be*. However, I propose that this is not the case for *want*. Particularly, I believe that *want* must be formed from the incorporation of *be* and a **modal preposition**.

Racy (2008:124) notes that “some expressions containing only a preposition can express a modal quality.” These prepositions are called modal prepositions, and they are similar to modal verbs in that they locate propositions with respect to possible worlds. Also like modal verbs, modal prepositions can convey different levels of modality. English displays (at least) two modal prepositions, the obligational *on* (48) and the intensional *for* (49).

- (48) Modal *on* (obligational)
- a. The next round is *on* you, Eleanor.
  - b. I’m a little nervous because the whole presentation is *on* Katie.
  - c. It’s all *on* my shoulders.

- (49) Modal *for* (intensional)
- a. I bought toys *for* my great-great-grandchildren.
  - b. Kate bought food *for* a unicorn.
  - c. Natalia got a boyfriend *for* Sarah.

Racy (2008:124) also notes that a deontic use of the preposition *on* is also found in languages other than English, such as Arabic (50) and Irish (51).

- (50) Hajdi flej-k  
 this on-you  
 ‘This is on you (your responsibility).’ (Arabic)

- (51) Ta orm an obair a deanamh  
 is on.me the work TRAN do  
 ‘I must do the work.’ (Irish)

Racy claims that the modality present in *on* is a result of pragmatics and metaphor (not semantics), due to the failure of sentences such as those in (48) to conform to the Gricean Maxims, particularly the Maxim of Quality (“do not say false things”). In essence, the listener hears an utterance such as those in (48), understands that they are not literally true, and begins to “search for other meanings of *on* which would be more appropriate given the situation. Since the most salient quality of *on* is of physical contact between two things with one supporting or bearing the other, the speaker will attribute this meaning to *on* (125).”

Unlike *on*, *for* does not convey modality via pragmatics. Instead, the modality of *for* is encoded directly in the syntax/semantics. This can be seen in the following contrast, first noted by Kayne (1975).

- (52) a. I got toys for my great-great-grandchildren.  
 b. #I got my great-great-grandchildren toys.

Mascarenhas (2010) argues that (52-b) is infelicitous because, unlike (52-a), (52-b) presupposes the existence of my great-great-grandchildren, which is a presupposition failure “under certain assumptions about my age (Mascarenhas 2010:9).” This presupposition failure arises because the preposition *for*, in (52-a), “creates an intensional context that blocks any existence presuppositions of its complement (Mascarenhas 2010:9).” More informally, “*I got my great-great-grandchildren toys*” presupposes that I have great-great-grandchildren; “*I got toys for my great-great-grandchildren*” does not (I could just be planning, unnecessarily, for the future). This contrast holds for all the examples seen in (49).

- (53) a. Kate bought food for a unicorn.  
 b. Kate bought a unicorn food.

In (53-a), Kate is committing to believing in unicorns, the speaker is not. In (53-b), however, both Kate and the speaker are committed to sharing in the delusion that unicorns exist (Mascarenhas 2010:9).

- (54) a. Natalia got a boyfriend for Sarah.  
 b. Natalia got Sarah a boyfriend.

In (54-a), Sarah is not necessarily the possessor of a boyfriend. In (54-b), Sarah is necessarily the possessor of a boyfriend (particularly the boyfriend gotten by Natalia), as shown by the following entailment tests.

- (55) a. Natalia got a boyfriend for Sarah, but Sarah didn't like the guy so she didn't even give him a chance. She remains single.  
 b. #Natalia got Sarah a boyfriend, but Sarah didn't like the guy so she didn't even give him a chance. She remains single. (adapted from Mascarenhas 2010:11)

Given the modality of *want*, I propose that the preposition present in the derivation of *want* is modal *for*. This is supported by examples from Germanic, that overtly express a nominal *want* following a modal preposition *for*.

- (56) a. *For want* of a better venue, we had to host the party at Kyle's apartment.  
 b. They lost the war, though not *for want* of trying. (English)

- (57) Vir wil van 'n boek ...  
 for want of DET book ...  
 'For want of a book ... ' (Afrikaans<sup>13</sup>)

- (58) Bij gebrek aan revolutie ...  
 For want of revolution ...  
 'For want of a revolution ... ' (Dutch<sup>14</sup>)

The use of modal *for* is not limited to English. Spanish (59) and Russian (60) each show a preposition, translatable to “for,” that blocks existence presuppositions and can create an intensional context.

- (59) a. Juan le compró una casa a su hijo primogénito.  
 Juan CL bought a house to his son first  
 Juan bought his first son a house.  
 ⇒ John must have a son. (Beavers and Nishida 2009, Spanish)

- b. Juan compró una casa **para** su hijo primogénito.  
 Juan bought a house **for** his son first.  
 Juan bought a house for his first son.  
 ⇒ John may or may not have a son.

- (60) a. Ja kupila svoim vnukam igrushki.  
 I bought self.DAT grandchildren.DAT toys.ACC  
 'I bought my grandchildren toys.'  
 ⇒ I must have grandchildren. (Russian<sup>15</sup>)

<sup>13</sup>This example comes from Google, not a native speaker.

<sup>14</sup>Thanks to Coppe van Urk for help with Dutch.

<sup>15</sup>Thanks to Inna Livitz for help with Russian.

- b. Ja kupila igrushki dlja svoikh vnukov  
 I bought toys.ACC for self.ACC grandchildren.ACC  
 ‘I bought toys for my grandchildren.’  
 ⇒ I may or may not have grandchildren.

The requirement that verbal *want* is formed through the incorporation of a nominal *want* with *be+for* explains why transitive *want* may be found in languages that lack a productive, transitive *have*. The requirement that *for* be the preposition present in the derivation of *want* removes the dependency of *want* on *have*. That a language blocks the incorporation of its possessive preposition (e.g., *u*, ‘at,’ in Russian) into *be* does not *ipso facto* guarantee that a language must also prevent *for* from incorporating into *be*, particularly if *for* does not usually function as a possessive preposition. A revised paraphrase of the underlying derivation of *want* is given in (61).

(61) [TP Sam BE for [NP want.N TO BE P<sub>with</sub> [DP AN AVOCADO. ] ] ]

### 3.4 Variants of *want*

In Section 3.3, this thesis discussed evidence suggesting that *want* is not a lexical primitive, and instead that *want* is better understood as an inherently nominal element that is flanked by two **be+P+p** structures, with each of those structures having slightly different properties. While in some languages, this *be+p+P* combination may incorporate to form the possessive verb *have*, this structure, unlike *have*, is not lenient in which preposition it allows for. Specifically, while *have* can be formed by a large number of prepositions (*at*, *on*, *in*, *with*, etc), the *be+P* structure present in the derivation of *want* must necessarily use the modal preposition *for*.

The use of incorporation structures, and in particular the functional head *p*, for purposes of argument-introduction and case assignment immediately draws a parallel between *want* and *have*. This section will show the full extent of these parallels. Particularly, it will show how a manipulation of the phi-features of *p* can explain the presence of a transitive, auxiliary and modal variant of *want* cross-linguistically.

#### 3.4.1 Transitive *want*

Most of the previous discussion of *want*, both in this thesis and within the literature in general, is devoted to questions of the structure of **transitive** *want*. As discussed in Section 3, transitive *want* can be understood as a structurally complex verb, composed of a (de)nominal *want* with *be for* preceding it and a possessive structure (either an unincorporated *be+P* or a transitive verb formed from the incorporation of *be+P*) following it. I remain agnostic as to whether or not *be+P* incorporation is necessary in the lower possessive

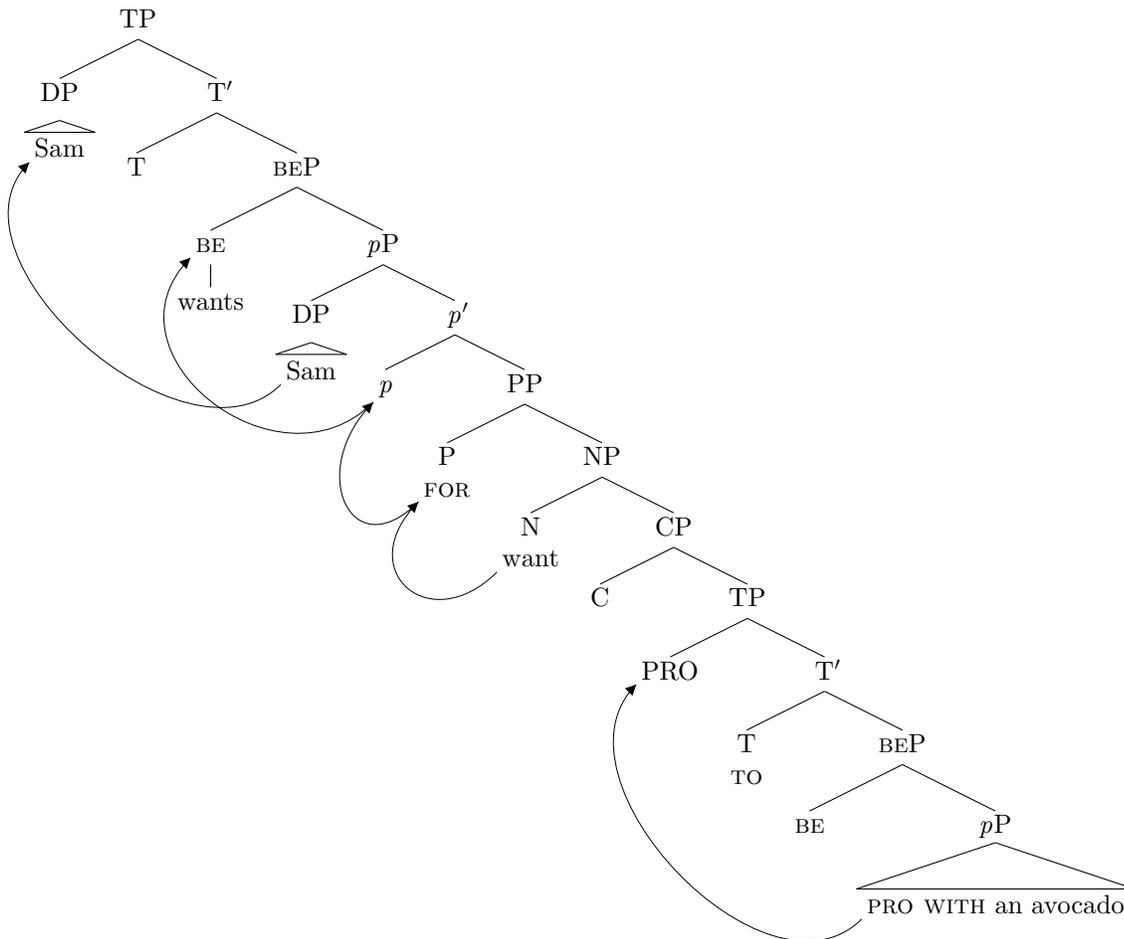
structure. As the lower possessive structure does not incorporate into the nominal *want*, it is not immediately clear that such a choice is relevant to the question at hand. A chart summarizing the differences between the *be+p+P* structures on either side of *want* is given below (62).

(62) Prepositions

	higher structure	lower structure
incorporates to <i>be</i>	obligatorily	unclear
possible preposition(s)	<i>for</i>	<i>on, at, in, with, for, of, near, etc</i>
inherently modal	yes (intensional)	no

In the higher *be+P* structure, *be for*, incorporation of *be+for* is necessary. This is because such incorporation, of *want* to *p+P* to *be* is obligatory if *want* is to be licensed as a transitive verb. Were *want* unable to incorporate into this structure, it would not be able to, for instance, display regular verbal morphology. The proposed derivation for transitive *want* is given in (63). Though the example is given for English, an H-language, I have not shown the lower possessive structure as exhibiting *be+P* incorporation.

(63) Sam wants an avocado.  
 $\Rightarrow$  Sam IS FOR want.N TO BE WITH an avocado.



This structure is supported by the overt structures *is for want...* structures found in Germanic. (64) shows an example from English.

(64) It is for want of greater cultural awareness that people go traveling<sup>16</sup>.

In the derivation given in (63), like in the derivation given for possessive *have*, the argument structure of the verb is parasitic on the argument structure of the preposition, as determined by the properties of the argument-introducing head *p*. Here, *p* is phi-complete and non-defective, introducing the experiencer *Sam* into the derivation. The NP [*want* TO BE WITH *an avocado*] is the complement to the PP. The nominal *want* takes a CP complement with a null subject PRO as its complement. *Want*, a bare, unlicensed NP, is licensed by its incorporation first into P, then into *p* and finally into *be*. The resulting complex head, *want+P+p+be* spells out as the verbal *want*.

The experiencer subject *Sam* receives its case from T, when it moves into the higher Spec,TP and satisfies the EPP. The object *an avocado* receives accusative case via syntactic restructuring, in the sense of Burzio (1986), Baker (1988) and Larson, Den Dikken and Ludlow (1995). Broadly speaking, restructuring is the notion that some matrix predicates, in particular predicates of volition, can somehow combine with their embedded predicate, so that a biclausal sentence may exhibit monoclausal behavior. This allows, in some biclausal sentences, for embedded complements to behave as though they were members of the matrix clause.

Cross-linguistically, there is reason to classify *want* as a restructuring verb, at least in certain languages. Burzio demonstrates this using clitic-climbing facts from Italian. In regular (non-restructuring) biclausal Italian sentences, clitics can only appear after the embedded verb, and cannot appear in the matrix clause (65). However, in the case of restructuring verbs, these restrictions don't apply, and a clitic is free to move into the matrix clause (66).

- (65) a. Mario odia [PRO leggere lo ]  
 Mario hates PRO read.INF it  
 'Mario hates to read it.' (Italian)
- b. \*Mario lo odia [PRO leggere t ].  
 Mario it hates PRO read.INF t  
 'Mario hates to read it.'

Italian is not the only language to suggest that *want* is a restructuring verb. German (Wurmbrand 2003) and Catalan (Picallo 1990) also show similar behavior (though different, language-specific restructuring tests are required to see those effects). Additionally, the proposals that *want* can be classified as a restructuring verb even in languages without such clear-cut diagnostics is not novel. LDL (1995) assert that "the restructuring operation observed with Italian volitional verbs is also operative in the wider class of English

<sup>16</sup>cf. <http://www.emersoncentral.com/selfreliance.htm>

volitional verbs identified as intensional transitives (73).”

Varying accounts for restructuring exist. One “persistent intuition” claims that restructuring phrases exhibit a form of “clause-union,” allowing a bi-clausal sentence to behave and, to a native speaker, perhaps even initially appear, monoclausal (LDL 1995, Aissen and Perlmutter 1983, Rizzi 1978). Another intuition states that the matrix and embedded predicates may be syntactically merged, through incorporation or otherwise, to form a complex predicate, in the case of (65) *want-to-read*. This incorporation, then, allows the complement of the embedded verb to become, syntactically, the complement of the matrix verb, as well (LDL 1995).

Regardless of which restructuring account is adopted, the upshot is that, syntactically, the complement of the embedded verb can still serve as a Goal for the matrix verb, regardless of the embedded verb’s intervention between the matrix verb and the complement. As a result, the object of a sentence containing *want* (*an avocado* in (89)), does not need to receive its accusative case from the lower possessive *be+P* construction, which may or may not incorporate into the accusative-case assigning *have*. Instead, the object can be assigned accusative case from *want* itself. *Want* receives its ability to assign accusative case through its incorporation to the complex, transitive verb *be+for*.

This analysis seems to suggest that *want* can only assign accusative case to an object in a language where the preposition *for* assigns accusative case to its object. German is an example of a language that fits this description. In (66), both German *for* and *want* each assign accusative case to their objects.

- (66) a. Er hat das **für** seine Tochter getan.  
he.NOM has that **for** his daughter.ACC done  
‘He did that for his daughter.’
- b. Ich will ein Buch.  
I.NOM want a book.ACC  
‘I want a book.’

Russian, on the other hand, initially seems to be something a counter-example to this claim. In Russian, *for* assigns genitive, not accusative, case to its object, as in (67).

- (67) Ona delaet vsjo **dlja** Inny.  
she.NOM does everything.ACC **for** Inna.GEN  
‘She does everything for Inna.’

However, Russian *want* is capable of assigning either genitive or accusative case to its object, depending on the definiteness and specificity of the object. In (68-a), genitive is ungrammatical, given that the object is concrete, definite and has an existence presupposition associated with it. However, in (68-b) the genitive is grammatical, as Inna does not want a specific type of blood; but whatever blood best suits her mission of

revenge (Stephanie Harves, p.c.).

- (68) a. Inna xochet ètu knigu /\*ètoj knigi.  
Inna.NOM wants that book.ACC /\*that book.GEN  
'Inna wants that book.'
- b. Inna xochet krovi.  
Inna.NOM wants blood.GEN  
'Inna wants blood.' (i.e., Inna wants revenge.)

The exact mechanism that allows Russian *want*, 'xochet,' to display this case alternation, and how this alternation relates to the specific properties of Russian *for*, 'dlja,' is left for future research.

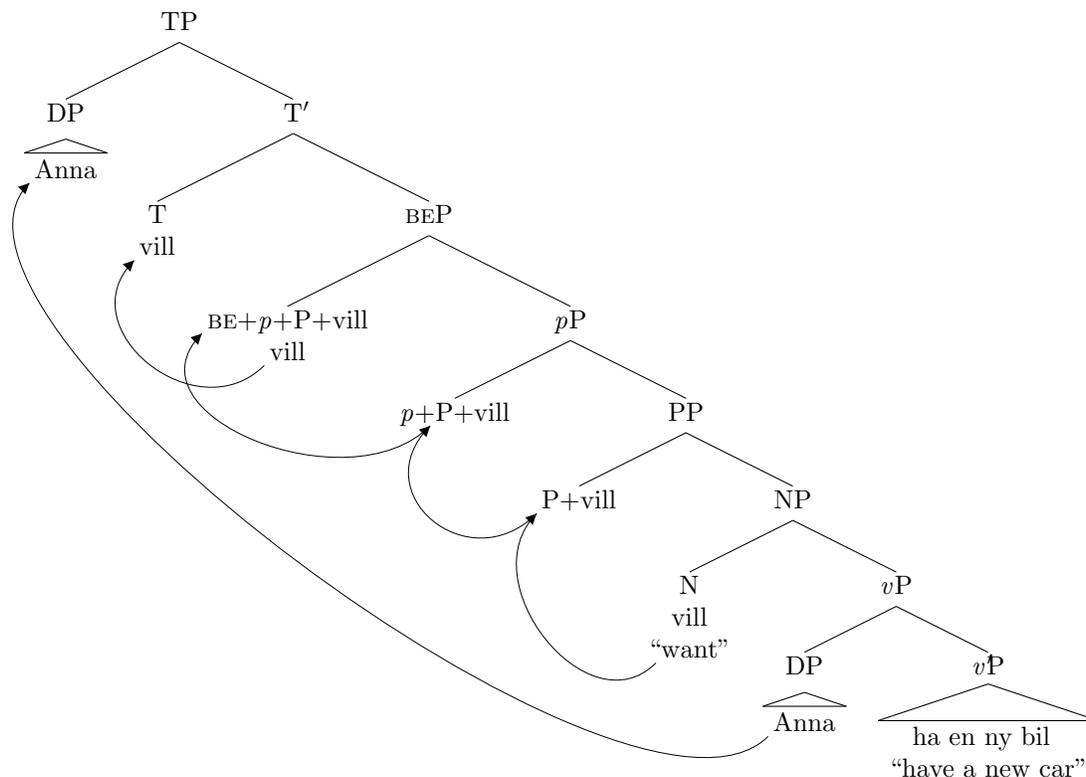
### 3.4.2 Auxiliary *want*

This section deals with auxiliary *want*, the variant of *want* that, like auxiliary *have*, contributes only temporal/aspectual semantics to the derivation. Like transitive *want*, auxiliary *want* cannot take directly take a DP complement. Unlike transitive *want*, an overt VP must intervene between auxiliary *want* and the NP/DP object in order for the clause to be grammatical with the correct semantics. An example is given from Swedish (69), READING B is the relevant reading for this section, though the sentence in (69)-a is ambiguous.

- (69) a. Anna vill ha en ny bil.  
Anna want.3SG have.INF a new car  
READING A: 'Anna wants (to have) a new car.'  
READING B: 'Anna will have a new car.' (Swedish, Harves 2008:7)
- b. \*Anna vill en ny bil.  
Anna want.3SG a new car

The derivation for (69)-a is given in (70), with the interpretation of READING B. For simplicity *ha*, "have," in the embedded clause is represented as a *vP*/VP structure, abstracting away from *have*'s decomposition into *be+P+p*.

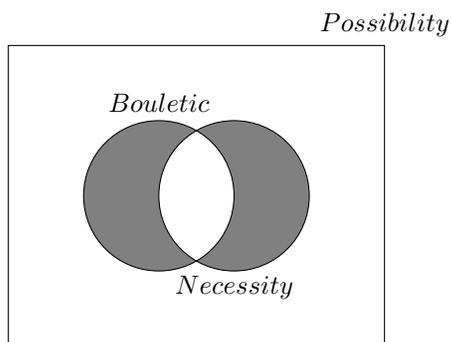
- (70) Anna vill ha en ny bil.  
 Anna want.3SG have.INF a new car  
 ‘Anna will have a new car.’



In (70), the subject, *Anna*, Merges as an argument of the embedded *vP*/*VP* *ha en ny bil*, “have a new car.” The structure above the *VP*, which contains *vill*, “want” contains a *p*-head that is phi-incomplete and defective, and so it is incapable of introducing an external argument in the derivation. As a result, *Anna* can move from *Spec,vP* to *Spec,TP* without moving over any other argument position. Because the entire *vP*/*VP* *ha en ny bil*, “have a new car” Merges as the complement to *vill*, “want,” there is no question about how case is assigned in (70)—case on *ny bil*, “new car” is assigned by the transitive verb *ha*, “have”, that takes the *DP* as its complement. *Anna* receives nominative case after it moves to *Spec,TP*.

Initially, it may appear as though there is a tension between *vill* and its English counterpart, *will*, in that *will* is considered a modal, not auxiliary, verb. Recall from the discussion in Chapter 1 that all variants of *want*, including its use as a future auxiliary, can be classified as modal verbs, assuming modal verbs are defined as those verbs that allow for propositions to be compared across possible worlds. While the transitive, “auxiliary” and modal variants of *want* all convey different slightly different modalities, the relationship between them is closely related. Here I repeat the Venn diagram from Chapter 1 that details the modal relationship between variants of *want*.

(71) Modality of *want*



*Want* should be understood as inherently a modal of possibility. When *want* has the ability to assign a theta-role to an argument, it is interpreted as a bouletic modal. Bouletic modality must also be understood as a particularly type of possibility—namely, what is possible given the desires of an individual. This means that *want* should be able to occur at any point within the universe of “possibility,” represented in (71) as the square containing all possibility, necessity and bouletic modality. When *want* can assign a theta-role to an argument, it must convey a more specific flavor of possibility, i.e., bouletic modality. Phi-complete *want* can also fall in the intersection of necessity and bouletic modality. This is a result of certain language- and context-specific situations. In the following two sentences, *want* may have a slightly different position in the above diagram.

- (72) a. I really **want** to have that incredibly painful, but ultimately life-saving surgery.  
⇒ It is likely that I both want (bouletic) and require (necessity) this surgery; causing, *want* falls in the intersection of bouletic modality and necessity.
- b. Even though I’m on a diet, I really **want** an ice-cream cone.  
⇒ It is entirely possible to divorce my desire (bouletic) for an ice-cream cone from my need for one, particularly given the requirements of my diet (that I abstain from ice-cream); causing *want* to fall in the bouletic circle, at the exclusion of necessity.

When *want* cannot assign a theta-role to an argument, but can semantically “affect” an argument, it cannot contribute bouletic semantics to a clause (because it can not pick out an individual to experience a desire). In these cases, the cases of modal *want*, *want* functions as a modal of necessity, at the exclusion of bouletic modality.

To summarize, in all its forms, *want* functions as a modal of possibility. When *want* is entirely phi-defective, as in auxiliary *want*, it functions as a modal of pure possibility, expressing only the semantics of the future auxiliary *will*, which situates an event in terms of possible worlds. When *want* has a theta-role to assign to an argument, as in transitive *want*, it functions as a bouletic modal (with bouletic modality being a subset of possibility), conveying what an individual believes to be possible, given their desires. Because of

the nature of *wanting* and *needing*, transitive *want* can also fall in the intersection of necessity and bouletic modality, as in (72-a). When *want* cannot assign a theta-role to an experiencer, and therefore cannot pick out an individual to desire a situation, but can still semantically affect an argument, as in modal *want*, it functions as a modal of necessity, at the exclusion of bouletic modality.

### 3.4.3 Modal *want*

This section deals with modal *want*, a variant of *want* that falls somewhere “in between” the transitive and auxiliary variants of *want* previously discussed. Modal *want* which appears in some varieties of Non-Standard English, among other languages, is a variety of *want* in which the verb contributes modal semantics to the derivation but does not contribute a theta-role to the subject, nor does it necessarily require an experiencer subject, as in the case of transitive *want*.

Modal *want*, which is often but not always associated with non-active morphology, is so hard to define precisely because it appears to have more than one function. In addition, the modality of modal *want* is not necessarily consistent. Below, (73) lists a number of examples of modal *want*, repeated from Chapter 1.

(73) Modal *want*

- a. Ram-ko seb khaa-naa **caah**-iye thaa  
 Ram-DAT fruit eat-GER **want**-NACT be.PST  
 ‘Ram should have eaten the apple.’ (Hindi, Bhatt 19981:10)
- b. Albinot-it i **duhet** që të niset herët  
 Albinot-DAT DEF **want**.3SG.NACT COMP SBJV leave early  
 ‘Albinot must leave early.’ (Albanian)
- c. This house **wants** painted by (its) owner.  
 ‘This house should be painted by its owner.’  
 ‘\*Its owner wants to paint this house.’ (Non-Standard English, Tenny 1998:6)
- d. anak itu **mau/ingin** di-cium oleh ibu  
 child that **want** pass-kiss by mother  
 ‘The mother wants to kiss the child.’ (Polinsky and Potsdam 2008:2)

Other examples of modal *want* come from Italian (both Standard and Non-Standard). In Standard Italian, modal *want* is an impersonal form of the verb that can only occur with an existential subject and with 3SG morphology. In Sardinian, there are two forms of the verb *want*, each of which has a modal variant (74).

- (74) a. Custa macchina chere lavata.  
 This car want.3SG wash.PTCP.SG  
 ‘This car needs to be washed.’ (Sardinian)
- b. Deu bollu agiudau po fai is iscalas.  
 I want.1SG help.PTCP for do.INF the steps  
 ‘I need help to climb the steps.’ (Remberger 2010)

Calabrian (75) and Neapolitan (76) also show forms of modal *want* that are associated with the (impersonal) passive.

(75) Tutti i figghjoli vonnu amati.  
 All the children.NOM want.3PL love.PTCP  
 ‘All the children must be loved.’ (Calabrian, Remberger 2006)

(76) Vo esse mannata chella lettera.  
 want.3SG be.INF send.PTCP this letter.NOM  
 ‘This letter must be sent.’ (Neapolitan, Remberger 2006)

Similar uses of *want* are found in Salentino, Friulian, Southern Italian, and Venetian, though for reasons of space, these examples are not given.

As mentioned in Chapter 1, *want* in Indonesian (and a variety of related Austronesian languages, including Javanese, Tagalog, Malagasy, *Tukang Besi*, Tongan and Samoan) has a particular semantics when it functions as a passive auxiliary. When *want* is followed by an active VP complement, the sentence is unambiguous and looks like an ordinary control construction (77).

(77) Anak itu mau/ingin men-cium ibu  
 child that want ACT-kiss mother  
 ‘The child wants to kiss the mother.’ (Polinsky and Potsdam 2008:1, Indonesian)

However, when the VP complement of *want* is passivized, the sentence becomes ambiguous. One reading corresponds to the expected passive reading of (77). The other does not.

(78) Anak itu mau/ingin di-cium oleh ibu  
 child that want PASS by mother  
 READING A: ‘The child wants to be kissed by the mother.’  
 READING B: ‘The mother wants to kiss the child.’ (PP 2008:1)

In the unexpected reading of (78) (READING B), the alignment of the arguments with their predicates is “crossed.” The apparent experiencer subject (*ibu*, “mother”) of *mau/ingin*, “want,” shows up inside the embedded clause as the apparent argument of the verb *cium*, “kiss.” The apparent theme (*anak itu*, “the child”), of the embedded verb (*cium*) shows up as the surface argument of *mau/ingin*, “want.” Such a semantic alignment is not found in Indo-European passives.

In their discussion of the semantics of this construction, Polinsky and Potsdam (2008) never explicitly label the Indonesian variant of *want* as a modal verb. Instead, they claim that this form of *want* is analogous to a **thematically dependent adverb**, in the sense of Wyner (1998). However, this “adverbial” *want* appears to serve a decidedly modal function, as is apparent in the following semantic conclusion, drawn from Polinsky and Potsdam’s paper:

*Want* is a one-place predicate that takes as its single argument a proposition (Heim 1992, Pustejovsky 1995, among many others), which we call the Goal. This Goal coincides with the desired state of affairs. This argument structure is consistent with [a] raising syntax of *want* [...]; the proposition is realized as the VP complement [...]. The semantics of *want* then explicitly picks out the volitional participant in this proposition and identifies it as the experiencer of wanting. *Want* does this without actually taking this DP as its argument (Polinsky and Potsdam 2008:1636).

Informally, this semantic account of *want* appears to present a parallel to the syntactic and semantic account of modal *have* given in Section 2.4.3, where modal *have* is not directly related to any of the semantically active arguments in the clause, but rather selects an (unlicensed) NP as its complement and lends its modality to one of the arguments present within the complement. According to this analysis, modal *want*, like modal *have*, also lacks a theta-role to directly assign to any argument of the clause. Another key feature that distinguishes modal *want* from transitive *want*—and which appears to align modal *want* with modal *have*—is that modal *want*, like auxiliary *want*, does not require a sentient experiencer as its subject, arguably because it takes a clause, not an individual, as its complement.

Despite this semantic distance between the experiencer of the desire and the theta-role assignment properties of *want*, modal *want* does appear to be allowed to place selectional restrictions on the argument of the *by*-phrase. This is true of both Indonesian modal *want* and a parallel construction found in Non-Standard dialects of English, where *want* can also occur as a passive auxiliary (although Non-Standard English *want* cannot contribute the “crossed” semantics). The Indonesian facts are presented in (79).

- (79) a. kota ini di-hancurkan oleh api  
           this town PASS-destroy by fire  
           ‘This town was destroyed by fire.’
- b. #kota ini mau/ingin di-hancurkan oleh api  
           town this want PASS-destroy by fire  
           #‘Fire wants to destroy this town.’

In Non-Standard English, a similar semantic restriction is found, though the modality is slightly distinct. Specifically, the Non-Standard construction is a true passive construction, in that the *by*-phrase is optional. When the *by*-phrase is absent from the derivation, the non-sentient argument is the one that is “affected” by the modality of *want*. Examples of the Non-Standard English semantic restrictions are given in (80).

- (80) a. The car wants washed by John.  
           ‘John should wash his/the car.’
- b. \*The clothes want washed by washing machine  
           ‘\*A washing machine should wash the clothes.’ // ‘\*The clothes should be washed by a machine.’

- c. \*This town wants destroyed by fire.  
 ‘\*A fire should destroy this town.’

In the following examples, (81)-(82), the *by*-phrase is removed from the syntax, resulting in a “modal shift.” The possible world semantics enforced upon the non-sentient object appear to not have a direct equivalent in Standard-English, and my informants have agreed that this modality can be expressed by the English modal *should* or the slightly more inelegant *It is better that...*

- (81) This car wants washed.  
 ‘This car should be washed.’  
 ‘It’s better that this car be washed.’
- (82) These clothes want washed.  
 ‘These clothes should be washed.’  
 ‘It’s better that these clothes be washed.’

In this way, modal *want* does resemble thematically depend adverbs, in that it tends to be “drawn to” sentient arguments over non-sentient arguments, even if the sentient argument is located in a more syntactically peripheral position (83). However, *willing* cannot modify a peripheral experiencer if there is another experiencer in a “closer” syntactic position (84).

- (83) The interview was willingly cancelled by Barbara.  
 ⇒ *willingly* affects the semantic argument in the derivation, regardless of its “peripheral” position in an optional *by*-phrase.
- (84) Madonna was willingly interviewed by Barbara.  
 ⇒ *willingly* cannot be understood as modifying *Barbara*.

Recall from the beginning of this chapter that modal *want*, while it is frequently associated with an absence of the active voice, does not necessarily need to occur with a passive complement. Modal *want* often occurs with only non-active morphology, as in Hindi and Albanian, repeated below.

- (85) a. Ram-ko seb khaa-naa **caah**-iye thaa  
 Ram-DAT fruit eat-GER **want**-NACT be.PST  
 ‘Ram should have eaten the apple.’ (Hindi, Bhatt 1998:10)
- b. Albinot-it i **duhet** që të niset herët  
 Albinot-DAT DEF **want**.3SG.NACT COMP SBJV leave early  
 ‘Albinot must leave early.’ (Albanian)

When modal *want* occurs with the addition of non-active morphology, it is subject to the same selectional restrictions as when modal *want* occurs with a passive participial complement: *want* must select for a sentient experiencer to semantically affect, and so derivations without an experiencer subject are infelicitous.

Modal *want* expresses something along the lines of *should* or an impersonal preference, paraphrasable



In (86), the derived subject *Albinot-it i* first Moves to Spec,*pP* and then higher to Spec,TP. This movement allows the DP to satisfy the EPP feature of *p*. Through satisfying this EPP feature, *Albinot-it i* is allowed to be semantically “affected” by the bouletic/possibility reading of modal *want*, ‘duhet’. In (86), modal *want* takes as its complement a subjunctive proposition, in this case *që të Albinot-it i nisët herët*, ‘would Albinot to leave early’, and assigns a theta-role to the proposition as a whole, but not to any individual arguments within the proposition (i.e., *Albinot-it i*). The verb *want* situates this proposition within the possible worlds that coincide with “the (impersonally) desired state of affairs.”

*Albinot-it i* is allowed to raise from inside this proposition because, although it is a full CP, it is a subjunctive (i.e., defective) CP, out of which movement is allowed (Gelderen 2004). *Albinot-it i* receives its dative case from the non-active morpheme *-et* (Cathcart, 2010). The non-active morphology itself is realized on *duhet*, ‘want,’ as a matter of marking the phi-incompleteness of the argument introducing head *p*, much as it is used to mark the phi-incompleteness of the argument introducing head *v* in other contexts in Albanian.

The exact workings of modal *want*’s preference and ability to seek out a sentient argument to semantically “affect” it, as well as modal *want* preference for appearing in verbal constructions that are markedly non-active, are left for future research. However, the answers to these questions are most likely related to the nature of bouletic modality, the specific properties of thematically dependent adverbs, such as *willingly* and *reluctantly*, whose behavior modal *want* appears to mimic, and the phi-defective nature of modal *want*’s functional head *p*.

### 3.5 Summary

This chapter has argued that the transitive, auxiliary and modal variants of *want* are all derivationally related, composed of a (de)nominal *want*, a modal preposition *for*, which itself has an argument introducing head *p*, and a light verb *be*. The differences between the variants of *want* stem from argument-structure alternations of the argument-introducing head *p*. Transitive *want* occurs when *p* is phi-complete and non-defective and can Externally Merge a DP figure in its specifier. Auxiliary *want* occurs when *p* is phi-incomplete and phi-defective, and cannot introduce or host a figure. Modal *want* results when *p* is neither entirely phi-complete nor entirely phi-defective. Note that this argument structure distribution is identical to that found in the variants of *have*.

The basic modality of *want* itself comes from a combination of two sources. The intensional semantics of *want* comes from the modal preposition *for*. The relationship between verbal *want* and the bouletic modality (i.e., something “better” or “preferred”) comes from the nominal (or possibly deadjectival) element that is itself incorporated into *be* and the extended prepositional phrase, an element along the lines of *desire* or *good*

(as suggested by overt paraphrases in French and Irish, respectively).

This contrasts with modal *have*, where the modality comes not from the preposition but from the presence of a nominal NEED. This nominal NEED is absent from the derivation of modal *want*, as well as the derivations of both possessive and auxiliary *have*. A chart summarizing the properties of each variants of *want* is given in (87). A comparison that shows the similarities and differences between variants of *have* is given alongside in (88).

(87) Variants of *want*

Variant	<i>p</i> analogous to:	introduces an argument	semantically “affects” an argument
transitive	active <i>v</i>	yes	yes
auxiliary	unaccusative <i>v</i>	no	no
modal	passive <i>v</i>	no	yes

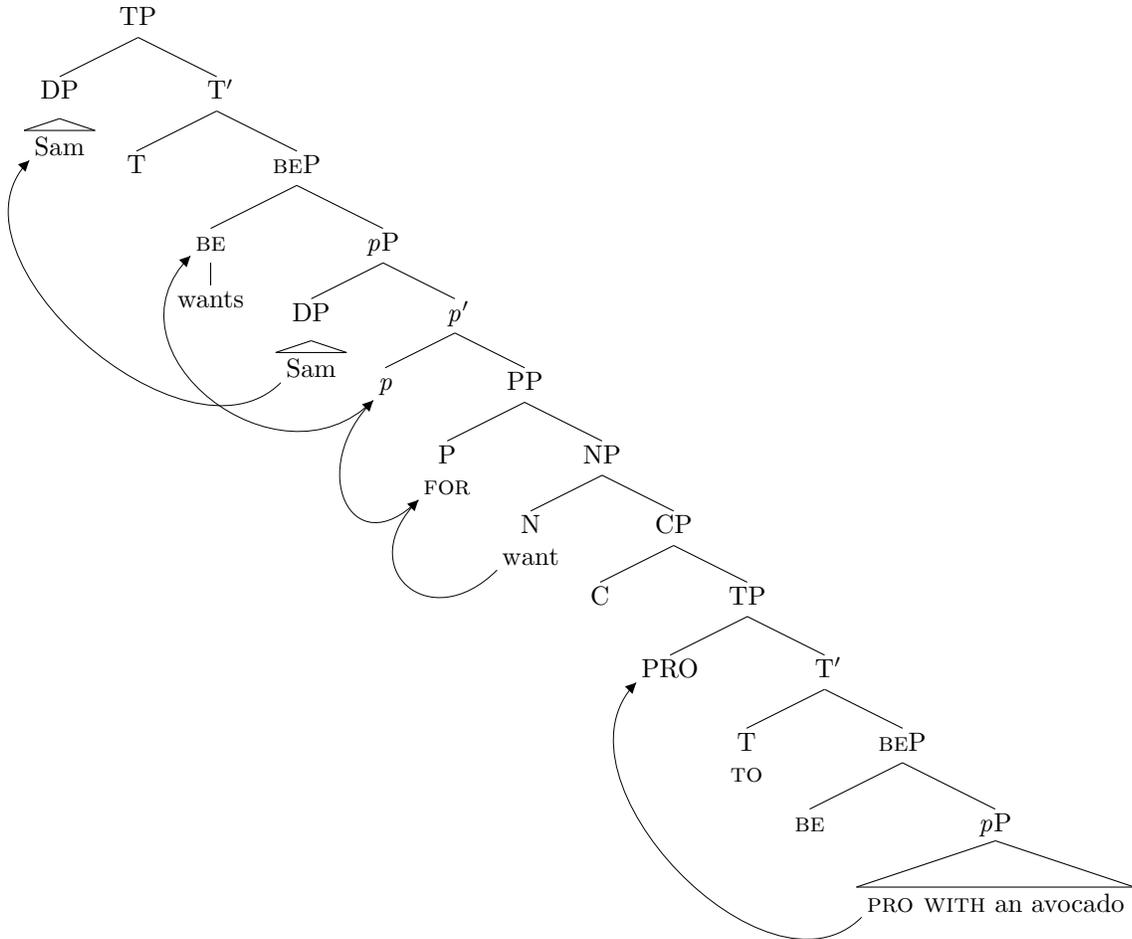
(88) Variants of *have*

Variant	<i>p</i> analogous to:	introduces an argument	semantically “affects” an argument
possessive	active <i>v</i>	yes	yes
auxiliary	unaccusative <i>v</i>	no	no
modal	passive <i>v</i>	no	yes

Derivations for each variant of *want*, are repeated from this chapter below.

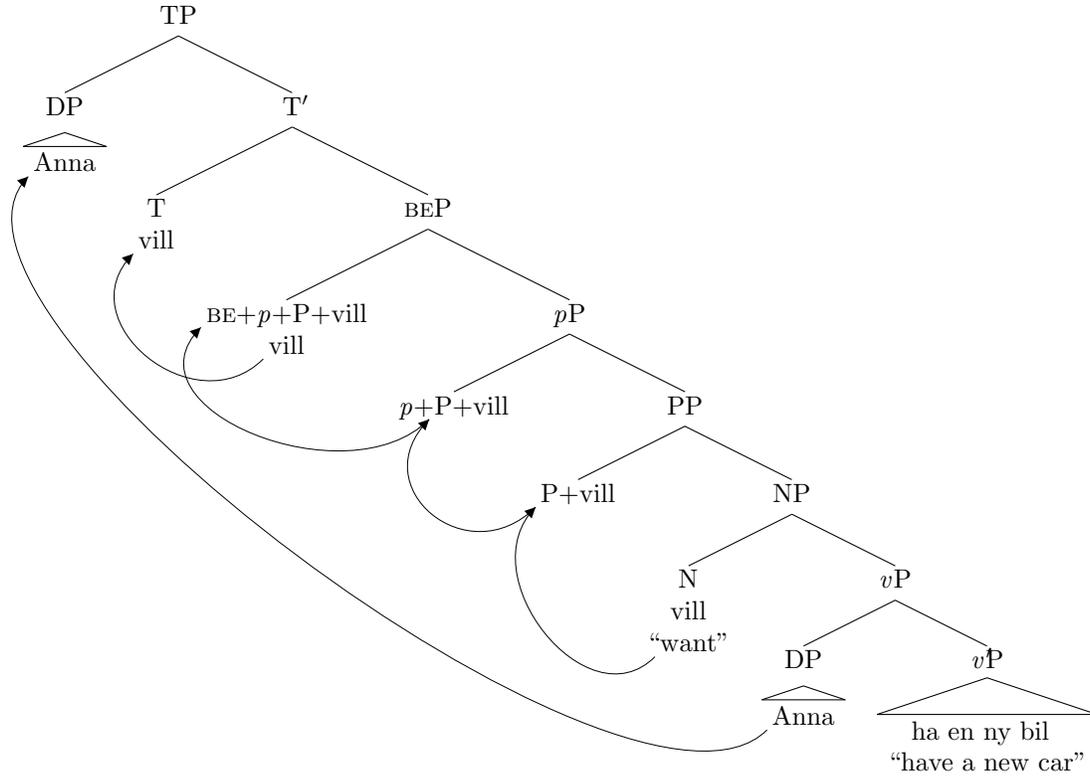
Transitive *want*:

- (89) Sam wants an avocado.  
 $\Rightarrow$  Sam IS FOR want.N OF BEING WITH an avocado.



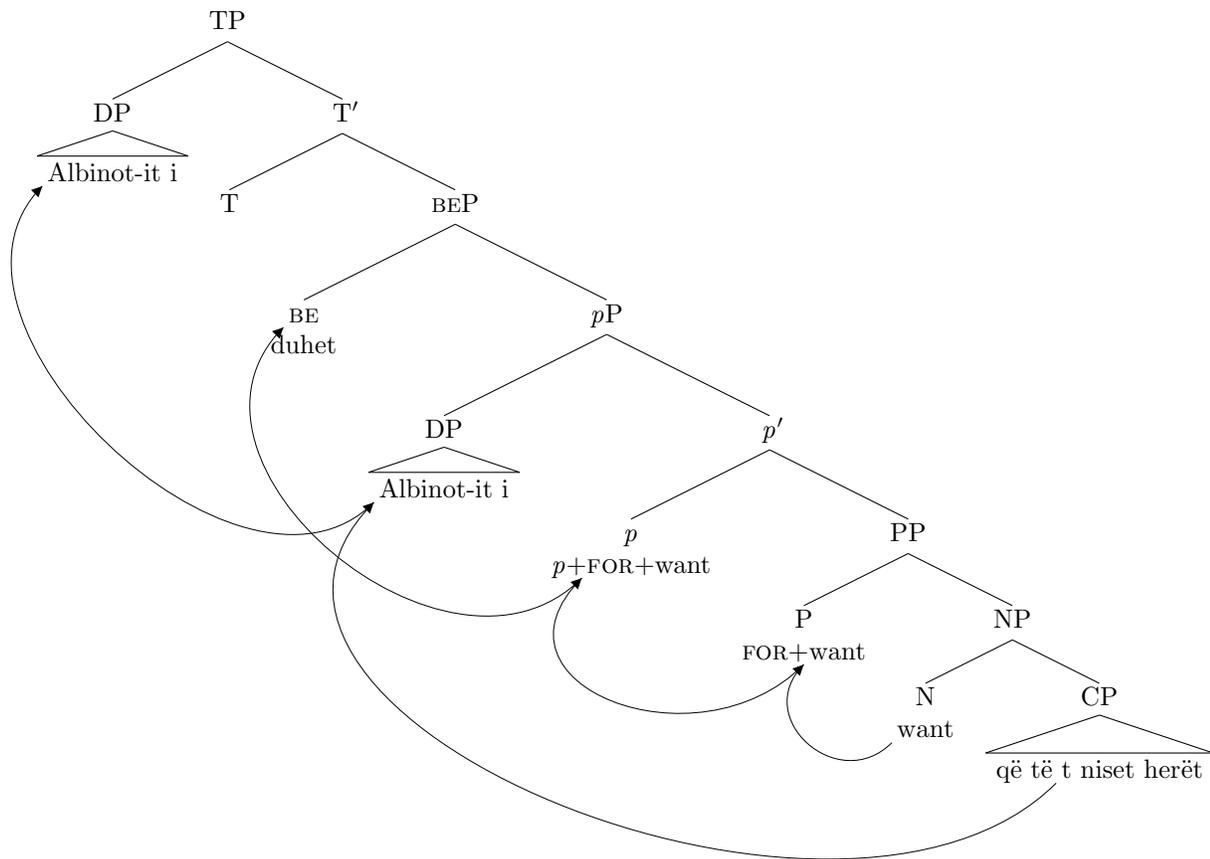
Auxiliary *want*:

- (90) Anna vill ha en ny bil.  
 Anna want.3SG have.INF a new car  
 'Anna will have a new car.'



(91) Albinot-it i **duhet** që të niset herët  
 Albinot-DAT DEF **want**.3SG.NACT COMP SBJV leave early  
 ‘Albinot must leave early.’

(Albanian)



# Chapter 4

## Need

### 4.1 The *have-need* connection

Recent analyses of the internal structure of *need* (Harves 2008, Harves and Kayne 2012) propose that a transitive verb *need* is parasitic on the existence of a transitive verb *have*. This theory was inspired by Isačenko (1974:75), who posed the following question: “Could it be sheer coincidence that those Slavic languages which have become H-languages...have some modal verbs which are unknown to Russian, a B-language?”

In the spirit of Isačenko, Harves and Kayne (2012) propose that there is, indeed, a direct connection between the presence of *need* and the presence of *have* in a given language. Harves and Kayne’s (2012) proposal considers the distribution of roughly 60 languages, and predicts that all languages will follow the presented pattern: that no language that lacks a productive transitive verb *have* will display a productive transitive verb *need*. These data suggest a non-trivial connection between the verbs *have* and *need*. The basic results of Harves and Kayne’s (2012) cross-linguistic study are given in (1). Note that the chart in (1) has four possible combinations: (i) H-languages without a transitive verb *need*, (ii) H-languages with a transitive verb *need*, (iii) B-languages without a transitive verb *need* and (iv) B-languages with a transitive verb *need*. Note that option (iv), B-languages with a transitive verb *need*, is unattested in the data.

(1) Distribution of *need* in H- and B-languages

(Harves and Kayne 2012:9)

	H-languages	B-Languages
with transitive <i>need</i>	Czech, Slovak, Polish, Slovenian, Serbian (dialects) Belorussian, English, German, Yiddish, Luxembourgish, Dutch, Swedish, Norwegian, Icelandic, Spanish, Catalan, Basque, Paraguayan Guaraní, Purépecha (Tarascan), Mapudungun	* * *
without transitive <i>need</i>	Bulgarian, Serbian (Standard), Lithuanian, French, Italian, Portuguese, Romanian, Farsi, Armenian, Albanian, Latin, Ancient Greek	Russian, Latvian, Sakha, Bhojpuri, Bengali, Hindi, Marathi, Irish, Welsh, Scots Gaelic, Georgian, Hungarian, Turkish, Korean, Peruvian Quechua (Cuzco, Cajamarca, Huallaga), Bolivian Quechua, Yucatec Maya, Tamil, Mohawk, Amharic

The table in (1) also suggests that the relationship between *have* and *need* is not symmetrical. While lacking a transitive verb *have* is enough to prevent a language from displaying transitive *need*, the reverse is not true; many languages that lack *need* still display a transitive *have* (cf., French, Italian, Serbian, Albanian, etc). Examples from each of the attested combinations shown in (1) are shown in (2), (3), and (4).

(2) *Have* languages with transitive *need*

- a. **Mají** nové auto.  
**have.3PL** new car.ACC  
‘They have a new car.’ (Czech, Harves & Kayne 2012:6)
- b. Tvoje děti tě **potřebují**.  
your children.NOM you.ACC **need.3PL**  
‘Your children need you.’ (Czech, H&K 2012:7)
- c. Cristina **tiene** un auto nuevo.  
Cristina **has.3SG** a car new  
‘Cristina has a new car.’ (Spanish)
- d. Cristina **necesita** un auto nuevo  
Cristina **need.3SG** a car new.  
‘Cristina needs a new car.’ (Spanish)

The above examples (2), taken from Czech and Spanish, show two H-languages that each possess a productive transitive verb *need*, where *need*’s subject takes NOM and its object takes ACC. Below is from French and Albanian, two H-languages that lack a transitive verb *need*. These languages show the intransitivity of Harves and Kayne’s generalization. In these languages, *be* and P can incorporate, while *have* (*be*+P) and *need* cannot. The reasons behind this are currently unknown.

(3) *Have* languages without transitive *need*

- a. J'ai une voiture.  
I-have.1SG a car  
'I have a car.' (French, H&K 2012:7)
- b. J'ai besoin d'une voiture  
I-have.1SG need of-a car  
I need a car. (French, H&K 2012:8)
- c. Une kam një laps.  
I have.1SG.PRS a pencil  
'I have a pencil.' (Albanian, H&K 2012:8)
- d. Më nevojitet laps-i.  
me.DAT need.3SG pencil.NOM-DEF  
I need the pencil. (Albanian, H&K 2012:8)

Below are examples from Hungarian and Russian, two B-languages that lack a transitive verb *need*. The Russian and Hungarian constructions are distinct from each other, but, most importantly, neither shows a single verb *need* that assigns a NOM-ACC case alignment to its arguments.

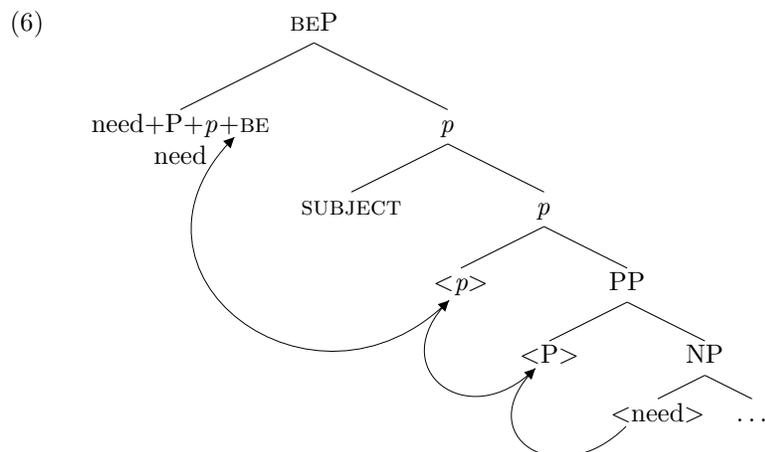
(4) *Be* languages without transitive *need*

- a. Mari-nak van-nak kalap-ja-i.  
Mari-DAT be-3PL hat-POSS.3SG-PL(-NOM)  
'Mari has hats.' (Hungarian, H&K 2012:4)
- b. Mari-nak szükség-e van kalap-ok-ra.  
Mari-DAT need-POSS.3SG is hat-PL-onto  
'Mari needs hats.' (Hungarian, H&K 2012:5)
- c. Mari-nak kalap-ok kell-enek.  
Mari-DAT hat-PL need-3PL  
Mari needs hats. (Hungarian, H&K 2012:5)
- d. U menja budet novaja kniga.  
at me.GEN be.FUT new book.NOM  
'I will have a new book.' (Russian, H&K 2012:3)
- e. Mne nužna èta kniga.  
me.DAT necessary.FEM that book.NOM.FEM  
'I need that book.' (Russian, H&K 2012:4)
- f. Rebenok nuždaetsja v vašej pomošči / \*vašu pomošč.  
child.NOM need in your help.PREP / \*your help.ACC  
'The child needs your help.' (Russian, H&K 2012:4)

The data in (1)-(4) have led Harves and Kayne to propose that that *have* and *need* are derivationally related. Specifically, *need* is a nominal element that receives its verbal properties through incorporation into a silent verb HAVE. The structure of transitive *need* is presented in (5).



The structure in (5) can be decomposed further, with *have* expressed as *be* plus an extended *pP*/PP, as given in (6). This is consistent with how *have* has been previously expressed in this thesis.



The claim that transitive *need* is parasitic on transitive *have* brings to mind the proposed analysis of modal *have*, where the modality of the clause stemmed from the presence of an unlicensed nominal *need* in the derivation. The claim that *need* is parasitic on *have* also suggests that we will find multiple variants of *need* cross-linguistically, where each variant of *need* is parasitic upon a particular structure for *have*. In the following section, I will show that this is, indeed, the case.

## 4.2 Variants of *need*

Discussion goes here.

### 4.2.1 Transitive *need*

In light of the evidence given in Larson, den Dikken and Ludlow (1995, cf. Chapter 3), it might seem unintuitive to propose that the following minimal pairs have distinct underlying structures:

- (7) a. Sam needs an avocado.  
 b. Sam needs to have an avocado.

However, there is evidence, particularly from English and Russian, suggesting that, at least as far as argument structure is concerned, (7-a) and (7-b) are distinct. Specifically, this evidence suggests that while (7-b)—*need*

followed by (at least) a verbal complement—is a raising verb, (7-a)—*need* followed by what looks like a DP complement—is a control verb. For the duration of this chapter, the variant of *need* present in (7-a) will be referred to as “transitive *need*,” while the variant of *need* seen in (7-b) will be referred to as “modal” need.

The first, and perhaps most trivial, indication that the variants of *need* seen in (7-a) and (7-b) are distinct comes from regular raising/control verb tests in English. Transitive *need* is simply incompatible with traditional raising/control tests in English. Because it does not embed a verbal complement, it cannot be used in either idiom or expletive tests. It cannot be passivized, and so it is impossible to compare the truth conditions of sentences that use an active and passive variant of transitive *need*. However, these incompatibilities do not necessarily suggest that transitive *need* is mono-clausal, particularly *need*’s ability to function in the presence of conflicting temporal modifiers (8) (cf. Section 3.2 and 3.3).

(8) Yesterday, John wanted your apartment until June.

Stronger evidence for a syntactic distinction between transitive and modal *need* comes from semantics. In Russian and English, transitive and modal *need* have difference effects with regard to scope. In Russian, “transitive<sup>1</sup>,” *need* can only be interpreted with narrow scope in the presence of the indefinite pronoun *someone*, while modal *need* is ambiguous between wide and narrow scope in the presence of the indefinite pronoun *someone*<sup>2</sup>.

Russian can express *someone* in two ways, either by the *wh*-word “who” plus the particle *-to* or the *wh*-word “who” plus the particle *-nibud’*. When *-to* is used with modal *need*, either a specific or non-specific interpretation of *someone* is possible (9). However, only the specific reading is available when *-to* is used with transitive *need* (i.e., a lexical element meaning *need* followed by what looks like a DP complement) (10).

(9) Komu-to nužno byt’ doma v 4 časa.  
 someone.DAT necessary be.INF home by 4 hours  
 ‘Someone needs to be home by 4 o’clock.’  
 ⇒ [ someone > need ; need > someone ] (ambiguous scope reading)

(10) Komu-to nužna èta kniga.  
 someone.DAT necessary.FEM.SG that book.NOM.FEM.SG  
 ‘Someone needs that book.’  
 ⇒ [ someone > need ; \*need > someone ] (unambiguous scope reading)

That the narrow scope reading is available in (9) suggests that (9) is a raising structure, with *komu-to*, “someone,” Merging lower in the derivation and later raises. That this reading is not available in (10)

<sup>1</sup>Recall that Russian is a B-language, and so lacks a productive transitive verb *need*. However, Russian does show a parallel distinction with an adjectival form *nužno*, which can take either an overt VP or apparently DP complement.

<sup>2</sup>Thanks to Stephanie Harves for drawing my attention to the Russian facts. The following discussion is a very close, direct paraphrase of the notes she shared with me.

suggests that (10) is not a raising structure.

A consistent effect is seen when *someone* is expressed with the particle *-nibud'*. This particle allows only a narrow-scope interpretation between *need* and *someone*. This structure is only possible if *need* takes a clausal complement (11). When *need* takes a DP complement in combination with *komu-nibud'*, the sentence is completely ungrammatical (12).

- (11) Komu-nibud' nužno byt' doma v 4 časa.  
 someone.DAT necessary be.INF home at 4 hours  
 'Someone needs to be home at 4 o'clock.'  
 ⇒ [ \*someone > need ; need > someone ] (unambiguous scope reading)
- (12) \*Komu-nibud' nužna èta kniga  
 someone.DAT necessary.FEM.SG that book.NOM.FEM.SG  
 INTENDED: 'Someone needs that book.'

Again, the difference in semantic interpretation suggests that (12) and (11) have distinct underlying structures, despite the surface similarities. Specifically, this suggests that the subject of *nužna* (e.g., *someone*) in Russian does not Merge in a position lower than *nužna*. It suggests, instead, that this is actually a control predicate, with the surface subject controlling a silent PRO + HAVE/GET/BE GIVEN in the sense of Larson, den Dikken, Ludlow (1995).

A similar distinction is found in English with regard to the scopal interaction of verbal *need* and the indefinite *someone*. Though it is not morphologically marked, as in Russian, it is distinctly more difficult (if possible at all) to interpret *someone* non-specifically in the context of transitive *need* (13).

- (13) a. Someone needs this book  
 ⇒ [ someone > need ; \*need > someone ] (transitive *need*)
- b. Some needs to read this book  
 ⇒ [ someone > need ; need > someone ] (modal *need*)

Finally, Rubenstein (2009a,b) shows that there are semantic differences, in English, between transitive and modal *need*. Specifically, the modal force of transitive *need* is more limited than the modal force of modal *need*, in that transitive *need* “can express only a proper subset of root modalities,” while modal *need* appears open to the full spectrum of root interpretations (Rubenstein 2009b).

There are many *flavors* of root modality, including “external-deontic” and “internal-teleological” modal interpretations. Broadly speaking, “external-deontic” modality relates to the requirements mandated by individuals or organizations in positions of power (e.g., churches, legal systems, parents, etc.) while “internal-teleological” modality relates to an individual’s decides to navigate specific circumstances in order to achieve a goal (Rubenstein, 2009a:3). While these interpretations often overlap, they can be contextually distinguished.

Two contexts that distinguish “external-deontic” and “internal-teleological” modalities are given in (14).

- (14) Modal flavors (Rubenstein 2009a:3)
- a. According to coaches’ instructions, gymnasts need to keep a low-carb diet. (External-deontic)
  - b. In order to combat fatigue, athletes need to eat carb-rich foods. (Internal-teleological)

As is clear in (14), modal *need* can convey either external-deontic or internal-teleological modality. However, Rubenstein proposes that transitive *need* is not this flexible. Particularly, she proposes that transitive *need* is more equipped to convey internal-teleological modality. Specifically, Rubenstein gives a variety of contexts showing that transitive *need* is limited to an internal-teleological interpretation. An example of a syntactic and semantic context showing Rubenstein’s generalization is given below. According to Rubenstein, these facts also hold in Modern Hebrew, Hindi, Urdu, and Czech.

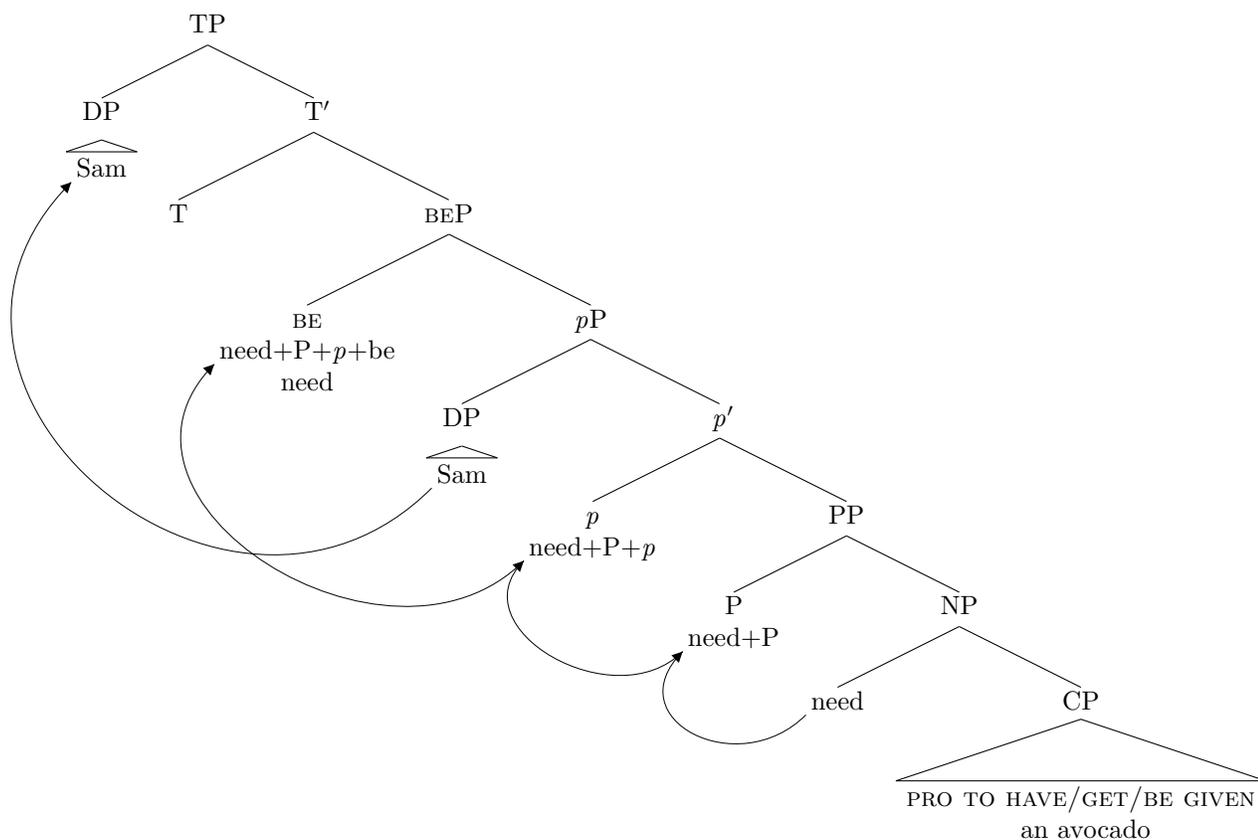
Consider the two sentences in (15) in the context of a drinking game, where the loser of the a round is required to chug a cup. Now suppose that Sam has been losing many rounds and consequently drinking quite a bit, and that he just lost another round. According to the rules of the game, Sam must deontically drink another cup. But his condition is such that he is not able, physically, to take in any more liquids. In this situation, *Sam needs to drink another cup* – with *need* as a modal auxiliary – is felicitous. But *Sam needs another cup* – where *need* is more of a lexical verb – is infelicitous. (Rubenstein 2009a:4)

- (15) a. Sam needs to drink another cup (External-deontic possible)
- b. Sam needs another cup. (Internal-teleological only)

I argue that the Rubenstein facts can themselves be reduced to an issue of raising vs. control. Specifically, the reason that modal *need* can express either an external-deontic or internal-teleological modal reduces to whether or not *need* can assign a theta-role to the experiencer subject. Because *Sam* is assigned a theta-role by *need* in this construction, a control syntax is suggested. This means that *Sam* must be Merged directly in the Spec of *p*. Thus, the relationship between *Sam*, the experiencer “needer” and the “needed” proposition (*PRO TO HAVE an avocado*) is mediated directly by the extended prepositional phrase.

Given this evidence, I propose that transitive *need* is a control predicate (cf. Section 4.2.3 for discussion of modal *need*). The structure of transitive *need* can be represented as follows (16).

(16) Sam needs an avocado.



(16) reflects my proposal that transitive *need* is parasitic on possessive *have*. That means that transitive *need*, like transitive *have* contains an extended *pP*/*PP* with a phi-complete and non-defective argument introducing head *p*. Supported by the evidence from Harves, Rubenstein, and the incompatibility of transitive *need* with English raising tests, this variant of *need* is a control verb. Specifically, it controls the silent PRO of the embedded complement, which obligatorily contains a covert HAVE/GET/BE GIVEN, in the sense of Harley (2005) and LDL (1995).

Like in modal *have*, the PP takes as its complement an nominal (*need*), which itself has (at least) a CP structure embedded beneath. Like in modal *have*, the head of this nominal is an unlicensed NP, *need*. When the structures of modal *have* and transitive *need* are compared, it becomes clear that this unlicensed *need* has two options. It can remain unlicensed, and therefore covert, as in the case of modal *have*. Or it can incorporate, and therefore be licensed by incorporation, as in the case of transitive (and, as Sections 4.2.2 and 4.2.3 will later show, auxiliary and modal variants of) *need*. The internal structure of the verb *need* (abstracting away from its arguments), is that of Harves and Kayne (2012), a nominal *need* that has incorporated into a productive verb *have*, itself represented as *be+p+P*.

## 4.2.2 Auxiliary *need*

The previous section argued that there is both a syntactic and semantic distinction between the following sentences, which, at first glance, seem nearly identical.

- (17) a. Sam doesn't need an avocado.  
b. Sam doesn't need to have an avocado.

Such an analysis immediately raises questions about the relationship of (17-a) and (17-b) and a third variant of *need*, which I will call “auxiliary” *need*, as in (18).

- (18) Sam needn't have an avocado.

Intuitively, the “modal” variant of *need* seen in (17-b) seems to align most closely with the “auxiliary” *need* given in (18). One reason for this alignment is syntactic. Recall that the transitive *need* in (17-a) behaves a control verb, while the *needs* in (17-b) and (18) both show the behavior of raising verbs. This can be shown through expletive, idiom, and passivization tests, and is consistent with the scope fact found when either modal or auxiliary *need* is used in the presence of the indefinite *someone*.

Both auxiliary and modal *need* are possible in the context of *weather*-verbs (19), and are possible with an expletive subject *there* (20).

- (19) *weather*-verbs  
a. For ski conditions to be good, it **doesn't need** to snow every day. (modal *need*)  
b. For ski conditions to be good, it **needn't** snow every day. (auxiliary *need*)
- (20) Expletive *there*  
a. There **don't need** to be 50 chairs in the garden tonight. (modal *need*)  
b. There **needn't** be 50 chairs in the garden tonight. (auxiliary *need*)

In minimal pairs where either auxiliary or modal *need* embed an active and then a passive variant of the same clause, the truth conditions do not change between sentences, as is shown for modal *need* in (21) and auxiliary *need* in (22).

- (21) modal *need*  
a. The doctor doesn't need to examine every patient.  
b. Every patient doesn't need to be examined by the doctor.  
⇒ no change in truth conditions between (a) and (b)
- (22) auxiliary *need*  
a. The doctor needn't examine every patient.  
b. Every patient needn't be examined by the doctor.  
⇒ no change in truth conditions between (a) and (b).

Finally, both auxiliary and modal *need* can provide either a wide or narrow scope reading when paired with the indefinite *someone*. Both (23) and (24) are ambiguous between a specific and non-specific reading of *someone*.

- (23) Someone **doesn't need** to be home when Eve gets back from school. (modal *need*)  
 $\implies$  [ someone > need ; need > someone ]
- (24) Someone **needn't** be home when Eve gets back from school. (auxiliary *need*)  
 $\implies$  [ someone > need ; need > someone ]

Despite these syntactic similarities, there are some semantic differences between modal and auxiliary *need*. Specifically, while modal *need* can be ambiguous between an external-deontic and an internal-teleological interpretation, auxiliary *need* can only express an external-deontic modality.

- (25) a. John doesn't need to be loved. (internal)  
 $\implies$  John, himself, consciously does not experience the need to be loved. (internal)  
 $\implies$  The situation does not call for John to be loved. (external)
- b. John needn't be loved. (\*internal)  
 $\implies$  \*John, himself, consciously does not experience the need to be loved. (\*internal)  
 $\implies$  The situation does not call for John to be loved. (external)

This semantic effect is the same with a variety of passivized predicates (e.g., *validated*, *appreciated*, *respected*, *admired*). In the *doesn't need* example, the sentence expresses an evaluation of John's self-esteem or self-awareness. In the *needn't* example, John's own self-awareness is not encoded in the semantics. Though not a minimal pair, this reading is additionally emphasized when the negation is removed from the sentence containing modal *need*.

- (26) a. John needs to be loved. (internal)  
 $\implies$  John, himself, consciously experiences the need to be loved. (internal)  
 $\implies$  The situation calls for John to be loved. (external)
- b. John needn't be loved. (\*internal)  
 $\implies$  \*John, himself, consciously does not experience the need to be loved. (\*internal)  
 $\implies$  The situation does not call for John to be loved. (external)

A similar effect is found in Rubenstein contexts. While modal *need* appears to be ambiguous between both an external-deontic interpretation and an internal-teleological interpretation in Rubenstein contexts, this flexibility does not appear to be afforded to auxiliary *need*. Consider the following context, and the statements given from both Sam's (internal-teleological) perspective (27), and the (external-teleological) perspective of his fellow players (28). While modal *need* is compatible with both interpretations, auxiliary *need* is only felicitous with an external-deontic reading.

CONTEXT: Sam is playing a drinking game, where the loser must chug a cup of gin. Sam has been losing frequently, and knows that if he drinks one more cup he will be sick. Unfortunately, Sam just lost another round; however, his fellow players (who are themselves quite drunk) did not notice that Sam lost. In fact, they think he won, and, according to the rules, should not drink another cup.

- (27) Sam's perspective (internal-teleological)  
 a. I do not need to drink another cup.  
 b. \*I need not drink another cup.
- (28) Fellow drinker's perspectives (external-deontic)  
 a. He does not need to drink another cup.  
 b. He needn't drink another cup.

Anna Szabolsci (p.c.) points my attention to another situation where modal and auxiliary *need* are not interchangeable. Imagine the context of a parent talking about their single child. This parent has frequently been accused of being selfish for having only one child, and therefore denying their offspring the opportunity to learn to share and cooperate as well as children who have siblings. Responding defensively to these attacks, the parent says the following:

- (29) My child doesn't need to have another sibling!
- (30) My child needn't have another sibling!

Assuming we interpret these utterances with respect to the child's belief system, (29) is ambiguous between two readings. The parent can either be speaking from their (an external-deontic) perspective or from their child's (internal-teleological) perspective. The former is compatible with the parent's belief that the child can grow up to be respectable even if she lacks a sibling. The latter is an expression of the child's own belief that she can grow up respectable even if she lacks a sibling.

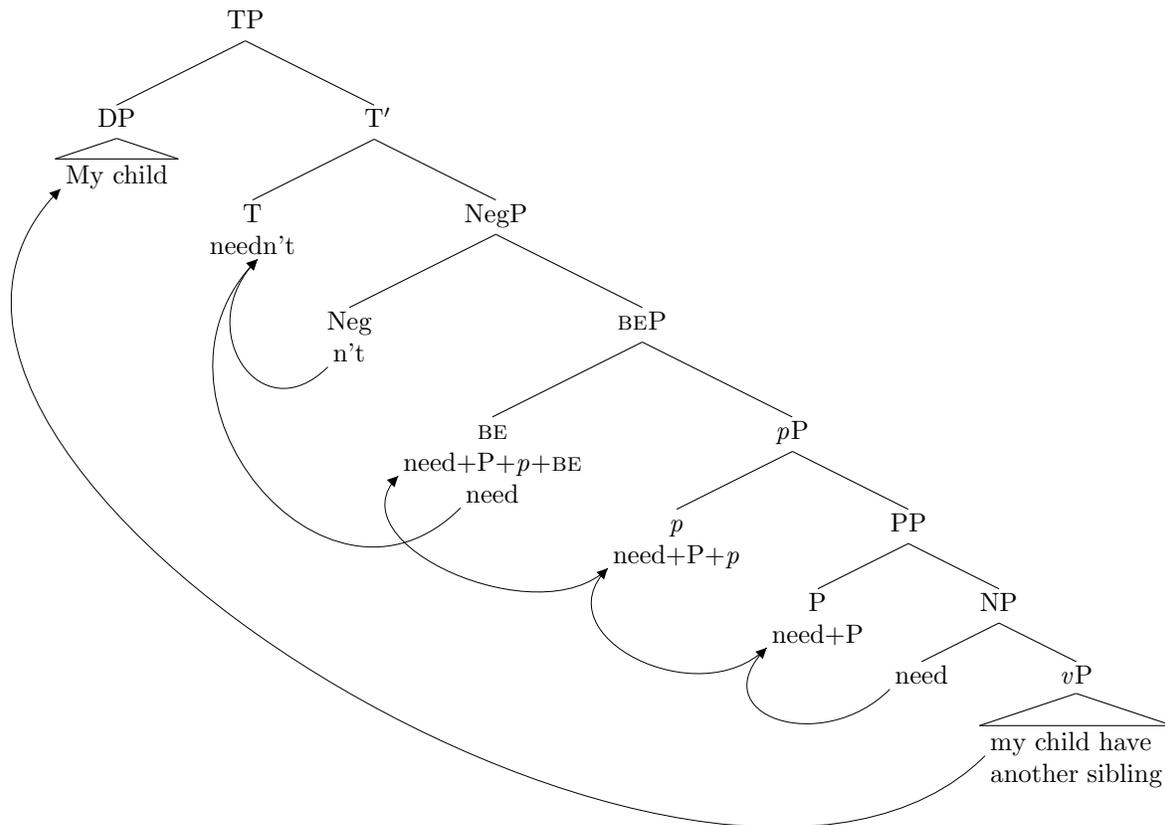
Unlike (29), (30) is unambiguous. In saying (30), the parent can only be expressing their belief that it is possible for a child to grow up well without having a sibling. Relative to the child's own understanding, the parent cannot express that the child herself thinks she can grow up well while lacking a sibling. Note that (29) does not express anything about how the child perceives the situation; the statement is incapable of providing any child-internal interpretation.

The difference between modal *need* and auxiliary *need*, then, can also be understood in terms of the interactions of the verbs with both external-deontic and internal-teleological modality. While modal *need* is compatible with both external-deontic and internal-teleological modality, auxiliary *want* appears to be

restricted to an external-deontic interpretation, and is infelicitous with an internal-teleological interpretation (whenever external-deontic and internal-teleological modalities can be clearly separated).

I argue that auxiliary *need*'s inability to express internal-teleological modality is parallel to auxiliary *want*'s inability to express bouletic modality. Internal-teleological modality, much like bouletic modality, requires a sentient experiencer capable of evaluating the situation at hand, and understanding how to navigate it in order to achieve a desired or required goal. When the experiencer argument is severed from the derivation, so is *need*'s ability to express internal-teleological modality. In that light, I propose that auxiliary *need* is the result of a nominal *need* combining with an auxiliary *have*, i.e., a *have* that is completely incapable of introducing an experiencer argument in the derivation (and, thus, incapable of assigning a theta-role to an experiencer argument). The proposed structure for auxiliary *need* is given in (31) below:

(31) My child needn't have another sibling!



Like in auxiliary *have*, the structure for auxiliary *need* as shown in (31) claims that the preposition present in the derivation is phi-incomplete and phi-defective, and so cannot project a Specifier in which to host a Figure. As a result, neither *my child* or *another sibling* are arguments of the verb *need*, itself, but, rather, arguments of the embedded verb *have*. *My child* raises directly from Spec,vP to Spec,TP, where it received nominative case and satisfies the EPP feature present on the head T. The object, *another sibling* receives its

accusative case from the verb *have*, which is itself the head of the *vP* that the NP headed by *need* takes as a complement. Like in transitive *need*, the NP head, (nominal) *need* is only licensed via incorporation into the verb *have*.

### 4.2.3 Modal *need*

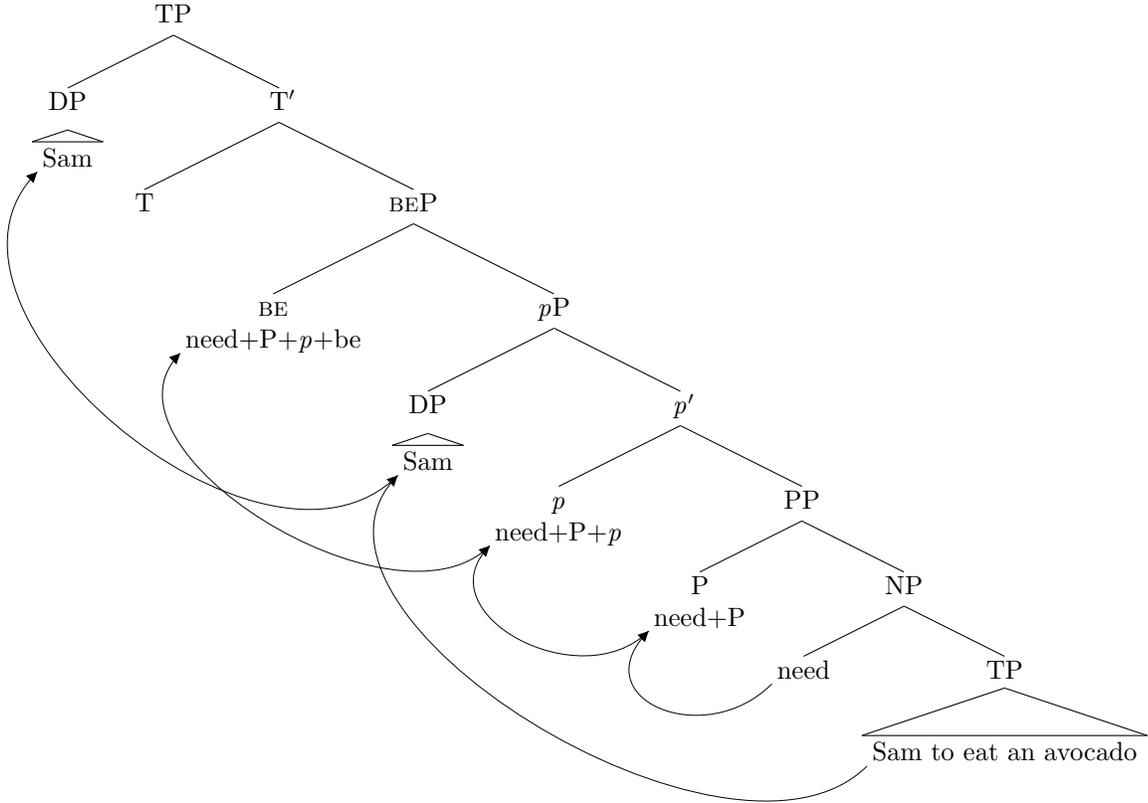
The previous subsections have detailed the semantic relationship between transitive, auxiliary and modal forms of the verb *need*. Specifically, this thesis has proposed that the semantic difference between these three forms lies in whether there are limitations on whether each verb can express internal-teleological modality (e.g., auxiliary *need*, which is infelicitous in internal-teleological contexts) or external-deontic modality (e.g., transitive *need*, which is infelicitous with external-deontic modality) or can be ambiguous between the two readings (e.g., modal *have*).

I have argued that internal-teleological modality, like bouletic modality, can be understood in terms of argument structure. Specifically, that transitive *need* is able to express internal-teleological modality because transitive *need* is a control predicate, which directly mediates the relationship between the experiencer subject and the Goal proposition. This mediation also involves theta-role assignment. Likewise, auxiliary *need* is incapable of expressing internal-teleological modality because it is incapable of introducing an argument or assigning an experiencer theta-role. It is a raising predicate in the truest sense, and so the verb *need* never enters in a direct structural relationship with a possible experiencer. Instead, the verb *need* is only ever in relationship with the Goal proposition. This relationship requires it to express external-deontic modality.

The modal variant of *need*, defined as the variant of *need* that takes a clausal complement, initially appears to be slightly more complicated, in that it can express either internal-teleological or external-deontic modality. If the analysis of both transitive and auxiliary variants of *need* is correct, then the only structure that predicts the correct semantics for modal *need* is one in which the verb *need* is in both a direct **and** an indirect relationship with the experiencer subject.

This notion of an argument’s simultaneously “direct and indirect” relationship to a predicate is consistent with the idea that an argument-introducing head can be “neither entirely phi-complete nor entirely phi-defective,” as described in Sections 2.4.3 and 3.4.3 for the accounts of both modal *have* and *want*. For this reason, I propose that the structure of modal *need* can be understood as represented below:

(32) Sam needs to eat an avocado.



In (32), the relationship between the experiencer subject, *Sam*, and *need* is both direct and indirect. It is indirect in that *Sam* originally Merges within the embedded TP, as part of the Goal proposition selected as a the complement of *need*. However, *Sam* is directly related to *need* in that it Moves through the Specifier of *p* on its way to Spec,TP—the same place where the experiencer subject is introduced in transitive *need*. Because modal *need* is, essentially, in two distinct relationships with the experiencer subject *Sam*, modal *need* can be semantically ambiguous between expressing an internal-teleological and an external-deontic modal force.

### 4.3 Summary

In this section, I have shown that my previous analysis of *have* is consistent with Harves and Kayne’s (2012) recent analysis of the syntactic structure of *need*. Specifically, I have suggested that alternations between a transitive, auxiliary and modal form of *need* can be reduced to dependencies on different variants of *have* (i.e., transitive, auxiliary, and modal).

This section has also shown that, although closely related, all three variants of *need* are distinct in their semantics. This distinction relates to the argument structure of each variant of the verb *need*, as shown in a variant’s (in)ability to assign a theta-role to an experiencer subject. The relationship between the

argument introducing head and the arguments of *need* determines whether the variant can express either internal-teleological or external-deontic modality, or a variant's ability to be ambiguous between the two. A chart summarizing each verb's modal properties is given in (33).

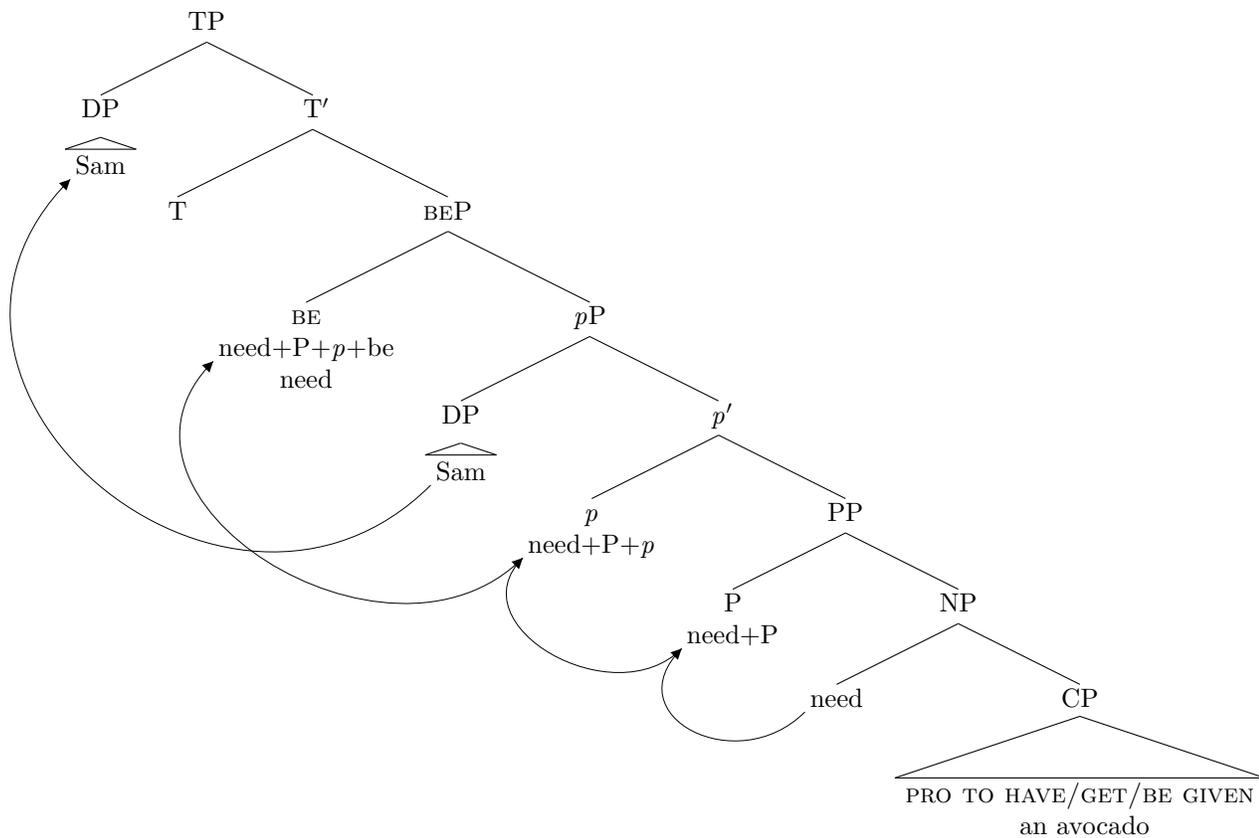
(33) Modality of *need*

	internal-teleological	external-deontic
transitive	yes	no
auxiliary	no	yes
modal	yes	yes

The structures given for each variant of *need* are listed below.

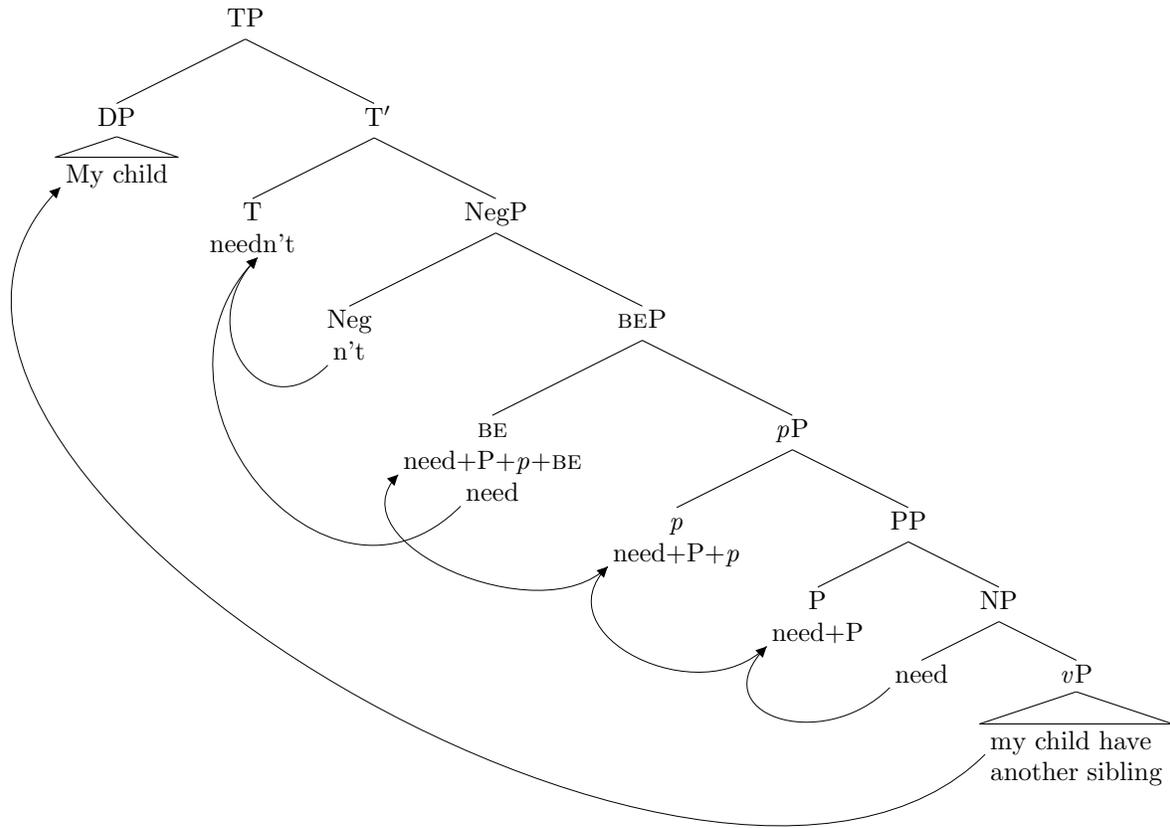
(34) Sam needs an avocado.

(transitive)



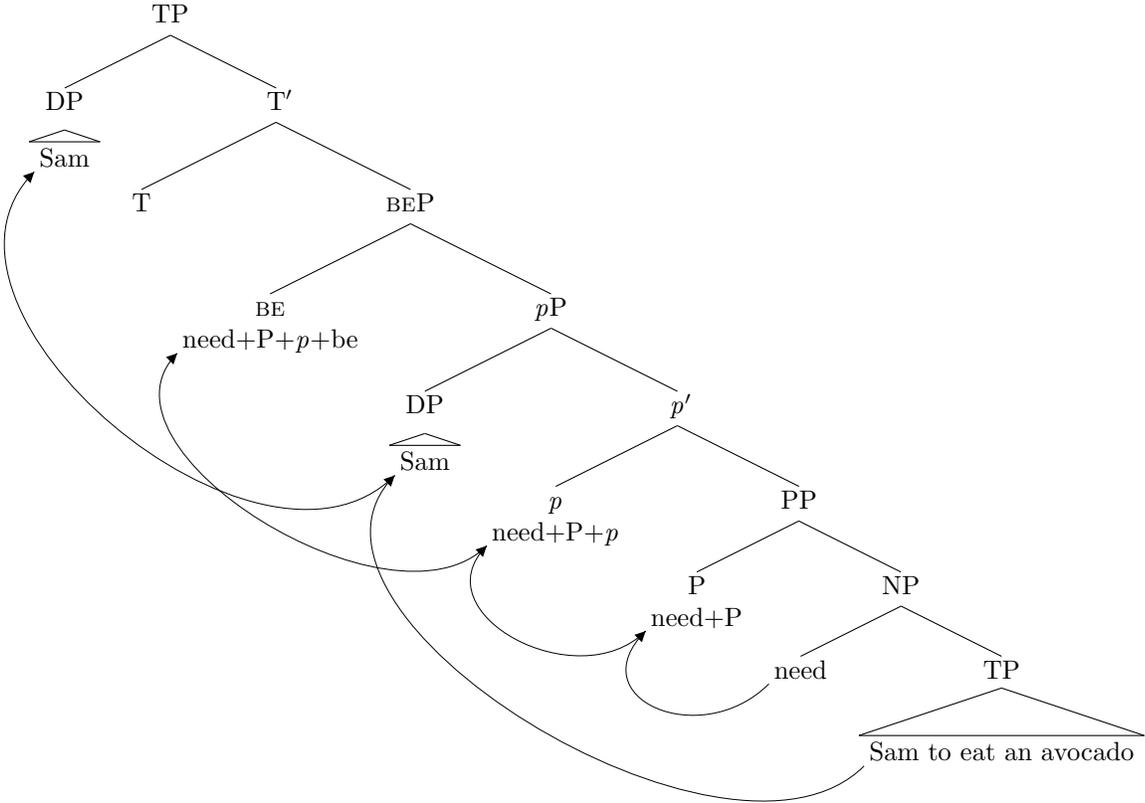
(35) My child needn't have another sibling!

(auxiliary)



(36) Sam needs to eat an avocado.

(modal)



# Chapter 5

## Conclusions

All else stripped away, this thesis makes three theoretical proposals:

1. Lexical/auxiliary/modal alternations of at least three verbs, *have*, *want* and *need*, are reducible to argument-structure alternations of a functional head *p*.
2. At least some subsets of modality (bouletic, internal-teleological) are closely tied to argument structure, and altering the argument structure of a verb can directly effect the possible world semantics a verb is able to express.
3. A functional, argument-introducing head is capable of being “neither entirely phi-complete nor entirely phi-defective,” in that it can project a specifier that can Internally, but not Externally, Merge an argument. Moving an argument through this position has direct semantic consequences.

The functional head *p* is assumed to closely parallel the functional head *v*. The head *v* has been assumed to have (at least) three “variants,” each containing a different subset of phi-features that determines how it can relate to the arguments of a clause. These forms are summarized below in (1).

(1) Properties of *v*

	phi-completeness	semantic effect
transitive	entirely phi-complete and non-defective	can introduce an external argument
unaccusative/ middle	entirely phi-defective and incomplete	cannot introduce an external argument
passive	neither entirely phi-complete nor entirely phi-defective	cannot introduce an external argument, but still semantically “active” enough to assign a theta-role to an agent in a <i>by</i> -phrase

Like *v*, the argument introducing head *p* can come in (at least) three variants, with each variant of *p*—at least in terms of argument structure and its semantic implications—corresponding to a variant of *v*. The phi-feature and semantic descriptions of these variants of *p* are given in (2).

(2) Properties of *p*

	phi-completeness	semantic effect
transitive	entirely phi-complete and non-defective	can introduce an external argument
auxiliary	entirely phi-defective and incomplete	cannot introduce an external argument
modal	neither entirely phi-complete nor entirely phi-defective	cannot introduce an external argument, but still semantically “active” enough to enter into a relationship with the subject of the utterance

I have represented the ability of the “modal” variant of *p* to enter into a semantic relationship with an argument that it does not introduce as an EPP feature on what is an otherwise defective functional head. For the purposes of this thesis, this EPP feature is largely a descriptive tool, and I remain agnostic about how or why this feature might be present, particularly given that there is no EPP feature present on any variant of *v*. However, I do propose that the ability of the modal variants of these verbs to “semantically affect” the surface subjects of their clause does reduce to movement, even if that movement is not motivated by the EPP.

This proposed relationship between lexical, auxiliary and modal alternations of a single verb is supported by the fact that all verbs *need*, *want*, and *have* are decompositional to (at least) *be* plus an extended prepositional phrase, itself consisting of *p*+P. Even more promising is the fact that all transitive variants of *need*, *want* and *have* have utilized the transitive variant of *p*, while all auxiliary variants of *need*, *want*. and *have* utilize the auxiliary variant of *p*, while all modal variants of *need*, *want*, and *have* utilize the modal variant of *p*.

Some open questions still remain regarding the structure and derivations of verbs that show lexical/auxiliary/modal alternations. First, *have*, *want*, and *need* are not the only verbs, cross-linguistically, that show such an alternation. In some South Asian languages, such as Sherpa and Nepali, verbs such as *fall* and *feel* also have a lexical/auxiliary alternation. Example of these alternations from Nepali are given below in (3)-(4).

(3) *parcha*, “fall”

- a. ahja pahni par-cha  
today rain fall.3SG  
'It's raining today.' (lexical)
- b. tyahah hidnu-parcha  
there walk.INF-fall  
'One must walk there.' (modal/auxiliary)

- (4) *lahgcha*, “feel”
- a. ma-lai bhok lah-g-yo  
 I-ACC hunger feel-PST  
 ‘I’m hungry.’  
 lit: ‘Me feel hunger.’ (lexical)
- b. aimai-haru nahc-na lah-g-cha  
 woman-PL dance.GER feel-3SG  
 “Women like to dance.” (auxiliary)

It remains to be seen if any languages overtly expresses either *fall* or *like* as a complex predicate, composed of at least *be*, or some other light verb, and a preposition. While I do not know of any languages that make use of such a structure, such an expression is not semantically inconceivable.

Additionally, (at least) *have* shows more than just the possessive, auxiliary and modal variants discussed in this thesis. In English, *have* shows both a causative and experiencer variant (which have the same argument structure), as demonstrated in (5).

- (5) a. Peter **had** Andy run a mile. (causative)  
 b. Kim **had** the baby throw up on her. (experiencer)

Cross-linguistically, *have* also shows another variant in some existential constructions, called existential *have*. This variant of *have* is found in at least French, Albanian, and Brazilian Portuguese. An example from French is given below in (6).

- (6) Il y a un camarade d’usine que m’ramène ...  
 it there has a friend from-factory that me-bring.back ...  
 ‘There’s a friend from the factory who drives me back...’ Givòn 2001:258

How to represent and understand these variants of *have*, and whether or not these variants can be accounted for using the system given in this thesis, is a question which I leave for future research.

This thesis has also raised the following terminological questions: What is a modal verb, what is an auxiliary verb, and how do we differentiate the two? The Introduction of this thesis reviewed the current literature, and stated that there were two ways of defining both “modal” and “auxiliary” verbs. For English, it suggested that lexical, auxiliary and modal verbs could be defined morphologically or syntactically. However, when cross-linguistic data was considered, this morphological analysis was no longer available. A morphological distinction between modal and auxiliary verbs was further complicated by the fact that some languages, like Spanish, do not seem to morphologically differentiate their modals from their lexical verbs.

A semantic definition for modal verbs was similarly unhelpful. Defining modal verbs as those verbs that have the ability to situate a proposition in relation to other possible worlds did not clearly distinguish modal

from auxiliary verbs. In the case of English *need*, this definition failed to predict whether a verb was lexical, auxiliary or modal, as all three English variants of *need* have the ability to situate a proposition in relation to other possible worlds, often in overlapping ways. Additionally, such a proposal may also over-generate, as it positions verbs such as *think*, *believe*, and *know* within the class of modal verbs, given their abilities to place an individual's knowledge-state in relation to other possible knowledge-states, thus possible worlds.

To this end, this thesis has taken the (undoubtedly oversimplified) approach of differentiating lexical, auxiliary and modal verbs from each other in terms of argument structure. Lexical/transitive verbs are those which directly mediate the relationship between between the participants—in the case of *have*, *want*, and *need*, the experiencer subject and the object—in the sentence. Auxiliary verbs are those which have a direct relationship with only an event or proposition and are immediately dominated by some tense head, T. A modal verb is one that is directly related to both the proposition and the an argument. For the purposes of this thesis, the terms “lexical,” “auxiliary,” and “modal” verbs are largely descriptive, and serve mainly to show a parallelism between the internal structures of the variants of *have*, *want* and *need*. Whether these definitions can be expanded and formalized in a non-trivial way is a question left to future research.

## Chapter 6

# References

- Aissen, J., Perlmutter, D.M., 1983. Clause reduction in Spanish. In: Perlmutter, D.M. (Ed.), *Studies in Relational Grammar*. 1. The University of Chicago Press, Chicago, pp. 360–403.
- Ariste, Paul. 1968. *A Grammar of the Votic Language*. University of Indiana Press.
- Arregi, Karlos. 2004. *The have/be alternation in Basque*. Ms. University of Illinois at Urbana Champaign.
- Austen. *Pride and Prejudice*. London. 1813.
- Baker, M. 1988. *Incorporation: A theory of grammatical function changing*. Chicago, IL:University of Chicago Press.
- Baker, M. 2003. *Lexical Categories: Verbs, Nouns, and Adjectives*. Cambridge University Press.
- Bhatt, Rajesh. (1998). *Obligation and Possession*. In H. Harley (ed.), *Papers from the UPenn/MIT roundtable on argument structure and aspect*. MITWPL 32, pp. 21-40.
- Beavers, John and Chiyo Nishida. (2010). *The Spanish Dative Alternation Revisited*. In Sonia Colina, Antxon Olarrea, and Ana Carvalho (eds.), *Romance Linguistics 2009: Selected Papers from the 39th Linguistic Symposium of Romance Languages*. Amsterdam: John Benjamins.
- Becker, Misha. 1997 *Acquiring a Grammar with Covert Head Incorporation: The Case of Have as a Complex Verb*. MA Thesis. UCLA.
- Benveniste E. 1966. *Problmes de linguistique gnrale*. Paris: Gallimard.
- Błaszczak, Joanna. 2007. *Existential/Locative/Possessive Sentences Revisited. Evidence from Polish (Slavic)*. Paper presented at Workshop on Argument Structure and Syntactic Relations, University of Basque Country, Vitoria-Gasteiz, May 23-25, 2007.
- Borer, Hagit. 1984. *Parametric Syntax: Case Studies in Semitic and Romance Languages*, *Studies in Generative Grammar*, Vol.13. Dordrecht: Foris.
- Boneh, N. and Sichel, I. 2010. *Deconstructing possession*. *NLLT* 28(1):1-40

- Borsely and Roberts. 1996. *The Syntax of the Celtic Languages: A comparative perspective*. Cambridge University Press.
- Borsley, Tallerman and Willis. 2007. *The Syntax of Welsh*. Cambridge University Press.
- Burzio, Luigi. 1986. *Italian syntax: a government-binding approach*. Dordrecht: Reidel.
- Bjorkman, Bronwin. 2011. *BE-ing Default*. PhD Dissertation. MIT.
- Cardona, George. 1965. *A Gujarati Reference Grammar*. University of Pennsylvania Press.
- Campbell, Lyle. 1998. *Historical Linguistics: An introduction*. MIT Press.
- Cathcart, M. 2010. *A New Grammatical Category: Impulsatives*. Penn Linguistics Colloquium. Handout.
- Cinque, G., 2004. Restructuring and functional structure. In: Belletti, A. (Ed.), *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3. Oxford University Press, New York, pp. 132-191.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Ken Hale: *A Life in Language*, ed. Michael Kenstowicz. Cambridge, MA: MIT Press.
- Collins, C. 2003c. *The distribution of particles in quotative inversion*. Ms., Cornell University, Ithaca, N.
- Collins, Chris. 2005. *A Smuggling Approach to the Passive in English*. *Syntax* 8 (2): 81-120.
- Cuervo, M. 2003. *Datives at Large*. PhD Dissertation. MIT.
- Dikken, M. D. (1995). *Particles: on the Syntax of Verb-Particle, Triadic, and Causative Constructions*. New York: Oxford University Press.
- Delogu and Pylkkänen. 2011. *MEG Evidence for Covert Syntax in Intensional Transitives*. Poster.
- Delogu, Vespignani, & Sanford (2010). *Effects of intensionality on sentence and discourse processing: Evidence from eye-movements*. *Journal of Memory and Language*, 62(4): 352-359.
- Dum ett. 1993. *Frege: Philosophy of language*. John Benjamins.
- Freeze, R. 1992. "Existentials and other locatives". *Language* 68:553-9
- Gaaf, W. 1931. *Boen habban connected with an inflected infinitive*. *English Studies* 13:176-188.
- Gelderen. 2004. *Grammaticalization as Economy*. John Benjamins.
- Givón T. 1997. *Grammatical Relations: A functionalist perspective*. John Benjamins.
- Hale, K. and S. J. Keyser (1993). *On argument structure and the lexical expression of syntactic relations*. In *The View from Building 20: Essays in Honor of Sylvain Bromberger*. Hale, K. and Keyser, S. (eds.) Cambridge, MA: MIT Press, 53-109.
- Harley, H. (2002). *Possession and the double object construction*. *Yearbook of Linguistic Variation* 2:29-68

- Harley, H. (2004). Wanting, Having, and Getting: A Note on Fodor and Lepore 1998. *Linguistic Inquiry* 35: 255–267.
- Harves, S. 2008 The Syntax of Intensional *want* and *need*: Whats HAVE got to do with it?
- Harves, S. and Kayne R., 2012. “Having Need and Needing Have”. To appear in *LI*, Volume 43:1.
- Jung, Hakyung. 2007. Internally Conditioned Language Change: The Development of the North Russian *no/to* Perfect. *Russian Linguistics* 31(2): 137156.
- Jung, H. 2008. The grammar of have in a have-less language: Possession, perfect, and ergativity in North Russian. PhD dissertation. Harvard University.
- Jung, H. 2011. The Syntax of the Be-possessive: Parametric Variation and Surface Diversities. John Benjamins.
- Karttunen, L. (1976). Discourse referents. In J. McCawley (ed.), *Syntax and Semantics 7: Notes from the Linguistic Underground*. New York: Academic Press, pp. 363–385.
- Kayne, R. 1993. Toward a modular theory of auxiliary selection. *Studia Linguistica* 47:3-31
- Kayne, R. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press
- Kayne, R. 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, R. 2001. *Prepositions as Probes*. Ms., New York University, New York.
- Kayne, R. 2003. Some notes on comparative syntax, with special reference to English and French. Ms., New York University, New York
- Kayne, R. 2009. *NEED and light verbs*. Handout. Università di Siena. January 9.
- Larson, R., M. den Dikken, and P. Ludlow. (1997). Intensional transitive verbs and abstractclausal complementation. Ms.
- Lavine, J. 1999: Subject properties and ergativity in North Russian and Lithuanian. In *Formal Approaches to Slavic Linguistics 7*, ed. Katarzyna Dziwirek, Herbert Coats, and Cynthia Vakareliyska. Ann Arbor: Michigan Slavic Publications, 307-328
- Levinson, Lisa. 2011. Possessive WITH in Germanic: HAVE and the Role of P. *Syntax*. Volume 14. Issue 4. 355-393.
- Lindström, Liina, and Iona Tragel. 2010. The possessive perfect construction in Estonian. *Folia Linguistica* 44:371400.
- McCawley, J. (1974). On identifying the remains of deceased clauses. *Language Research* 9: 73–85.
- Marusic and Zaucer. 2006. On the intensional FEEL-LIKE construction in Slovenian: A case of a phonologically null verb. *NLLT* 24: 1093-1159.
- Mascarenhas, S. 2010. Cause to *have* vs. *having-for*: the syntax of double-object *get*. Manuscript. NYU.
- Migdalski, K. 2007. On the Grammaticalization of the have-perfect in Slavic. W: Compton, R., M. Gol?dzinowska, and U. Savchenko (red.), *Formal Approaches to Slavic Linguistics: The Toronto Meet-*

- ing, 2006. Ann Arbor, MI: Michigan Slavic Publications, 228-244.
- Moro, A. 1997. The raising of predicates. Cambridge University Press New York.
- Noonan, M. (1993). Statives, Perfectives, and Accusivity: The Importance of being HAVE. In Proceedings of the Eleventh West Coast Conference on Formal Linguistics, J. Mean (ed.), CSLI, pp. 354-370.
- Racy, 2008. Towards a unified treatment of modality. Dissertation. University of Arizona.
- Picallo, M.C., 1990. Modal verbs in Catalan. *Natural Language and Linguistic Theory* 8, 285-312.
- Polinsky, M and Potsdam E. 2008. The syntax and semantics of wanting in Indonesian. *Lingua* 118(10), 1617-1639
- Pylkkänen, L. On Stativity and Causation. In *Events as Grammatical Objects* pgs 417-44. Tenny, C. and Pustejovsky, J. CSLI Publications. Stanford, CA.
- Remberger, Eva. 2006. Syntax and Semantics of the deontic WANT-passive in Italo-Romance. In: Torgrim Solstad & Benjamin Lyngfelt (eds.): *Demoting the Agent*. Amsterdam: Benjamins, 249-274.
- Remberger, Eva. 2010. "The evidential shift of WANT." In: Tyler Peterson, Uli Sauerland (eds.): *Evidence from Evidentials*. Vancouver/Canada: UBC Working Papers in Linguistics 25, 161-182.
- Rizzi, L. (1982). A restructuring rule. In *Issues in Italian syntax*, Dordrecht: Foris, pp. 1-76.
- Ross, J. (1976). To Have Have and not to Have Have. In M. Jazayery, E. Polom, and W. Winter (eds.), *Linguistic and Literary Studies in Honor of Archibald Hill*. Lisse, Holland: Peter de Ridder, pp. 263-270.
- Sato, Y, 2010. The Crossed-Control Construction and the syntactic role of passive morphology in Standard Indonesian. Ms. National University of Singapore. Available online: <http://ling.auf.net/lingbuzz/1177>
- Seržant, I. 2011. To so-called possessive perfect in North Russian and the Circum-Baltic area: a diachronic and areal approach. Ms. University of Bergen. [http://org.uib.no/iecastp/ilja/perfect\\_REVISED.pdf](http://org.uib.no/iecastp/ilja/perfect_REVISED.pdf)
- Šimik, R. 2010. Modal existential *wh*-constructions. PhD Dissertation. University of Groningen.
- Svenonius, Peter. 1994. *Dependent Nexus: Subordinate Predication Structures in English and the Scandinavian Languages*. PhD thesis, University of California at Santa Cruz
- Svenonius, Peter. 2003. Limits on P: lling in holes vs. falling in holes. *Nordlyd*. Proceedings of the 19th Scandinavian Conference of Linguistics 31:431-445.
- Svenonius, Peter. 2004. Adpositions, Particles, and the Arguments they Introduce. *Argument Structure*, edited by Eric Reuland, Tanmoy Bhattacharya, and Giorgos Spathas, 71-110. John Benjamins, Amsterdam.
- Szabolcsi, Anna. 1983. The possessor that ran away from home. *The Linguistic Review* 3:89-102.
- Szabolcsi, A. 1982 "Model theoretic semantics for performatives." *Hungarian Contributions to General Linguistics*, ed. by Kiefer. John Benjamins. 515-536.
- Tenny, C. 1998. Psych verbs and verbal passives in Pittsburghese. *Linguistics* 36: 591-597.
- Tomič, O. 2003. The syntax of the Balkan Slavic Future tenses. *Lingua* 114, 4. 517-542.

Tortora, C., 2005, "The Prepositions Preposition in Italian: Evidence for Boundedness of Space," in R. Gess & E. Rubin (eds.), *Theoretical and Experimental Approaches to Romance Linguistics*, pp. 307-327. Amsterdam: John Benjamins.

von Stechow, P. 2006. Modality and language. In Donald M. Borchert (ed.), *Encyclopedia of philosophy* – second edition. Detroit: MacMillan Reference USA. online: <http://mit.edu/fintel/fintel-2006-modality.pdf>

Wurbrand, S., 2003. *Infinitives: Restructuring and Clause Structure*. Mouton de Gruyter, Berlin.

Wurbrand, S. 2004. Two types of restructuring: Lexical vs. functional. *Lingua* 114.8: 991-1014

Wyner, A.Z., 1998. Subject-oriented adverbs are thematically dependent. In: Rothstein, S. (Ed.), *Events and Grammar*. Kluwer, Dordrecht, pp. 333–348.