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Argument structure licensing and English *have*[1]

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This paper provides a unified syntactic account of the distribution of English *have* in causative constructions (e.g. *John had Mary read a book*) and experiencer constructions (e.g. *John had the student walk out of his classroom*). It is argued that *have* is realized in the context of an APPLICATIVE HEAD (Appl) and an event-introducer v, regardless of the type of v. *Have* is spelled out in the causative when Appl merges under v_{CAUSE}, and in the experiencer construction when Appl merges under v_{BE}. This proposal is extended to *have* in possessive constructions (e.g. *John has a hat/a brother*): *have* is realized in the context of v_{BE} and Appl. The proposed account provides empirical evidence for expanding the distribution of Appl: (i) a causative can take ApplP as a complement, which was absent in Pylkkänen's (2008) typological classification, and (ii) Appl can merge above Voice, contrary to Pylkkänen's analysis in which Appl is argued to always merge below VoiceP, never above. Moreover, the proposed account supports the theoretical claim that argument structure is licensed by functional syntactic structure; in particular, it shows that the relevant functional heads are not aspectual heads, but Appl and v.

1. Introduction

Theories of argument structure try to determine how arguments are projected into the syntax and how they are interpreted in accordance with the syntax (e.g. Hale & Keyser 1993a, 2002; Borer 1994, 2005; Harley 1995; Marantz 1997; Travis 2000; Pylkkänen 2002, 2008; Cuervo 2003). Although the specifics of these theories are not the same, they converge on the idea that

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The following annotations are used in the glosses of non-English examples in this paper: 1, 3 = first, third person; APPL = applicative; ARO = aroist; ASP = aspect; C = common; CAUSE = causative; DAT = dative; ERG = ergative; FV = final vowel; GEDN = gerund; INST = instrument; NOM = nominative; P = preposition; PERF = perfect; PL = plural; PRE = present; PREV = preverb; PST = past; SB = subject; SG = singular; V = verbalizing head v.

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argument structure is determined by functional syntactic structure. Among those theories, two approaches are of particular interest in this paper. The first is an aspectual projection approach. In this approach, an aspectual projection (e.g. AspP) responsible for telicity is viewed as a predicate of an event. As such, it can be mapped onto an event argument represented by an event node (e.g. EP in Borer 2005).[2] The roles of arguments are interpreted by the whole event structure by entailment, not by direct assignment (e.g. Borer 1994, 2005; Ritter & Rosen 1998). The second approach assumes a separation between an argument and an event (e.g. Pylkkänen 2002, 2008; Cuervo 2003; Harley 2007). Under the separation approach, a functional head v that verbalizes a root also corresponds to an event that a verb phrase denotes. An argument is introduced by an argument-introducer, for instance, Voice (Kratzer 1996). Arguments are licensed as participants of the event. In this paper, through the examination of the distribution of English *have*, I argue that the separation approach fares better than the aspectual projection approach to argument structure.[3]

It is well known that English *have* can appear in different contexts denoting different meanings. This paper examines *have* in three contexts: causative, experiencer, and possessive, illustrated in (1).[4]

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[2] It is not the case that an event node is conditioned by an aspectual node that is related to telicity. In other words, whether a predicate is telic or atelic, an event node is present (see Borer 2005 for details).

[3] Another approach is to license arguments by v that can introduce both an argument and an event (e.g. Harley 1995, Folli & Harley 2005). Little v is proposed to vary in its feature makeup (i.e. flavor: v_{CAUSE} or v_{DO}, etc.). It introduces both an argument and an event, and is responsible for the syntax and interpretation of arguments. See footnote 28 below for a discussion of why the flavors-of-v approach fails to capture the distribution of *have*.

[4] *Have* also has locational and auxiliary uses, illustrated in (i) and (ii) below. Regarding the locative *have* construction, it may have a structure similar to the possessive *have* proposed in this paper (see example (7) in Section 3.1 below and Harley 1998 for a similar approach). For example, a location DP may merge in the specifier of (low) Appl and a locatee may merge in the complement position of Appl. However, the locative *have* construction is more complex than the possessive *have* construction, as noted in Ritter & Rosen (1997). For instance, unlike the possessive *have* construction, it usually includes a locational PP, and the complement of P is coreferential with a location DP (i). The locational PP can also be absent, as shown in (iii).

(i) This box$_1$ had books in it$_1$.
(ii) John had read the book.
(iii) John$_1$ had a hat on (him$_1$).

On the other hand, Harley (1998) notes that locational and possessive *have* are syntactically the same construction except for the presence or absence of a PP containing a DP that is coreferential with the subject of *have*, as illustrated in (iv) and (v).

(iv) Calvin$_1$ has a pretty blanket on him$_1$.
(v) Calvin$_1$ has a pretty blanket on the table$_2$.

(Harley 1998: 202)

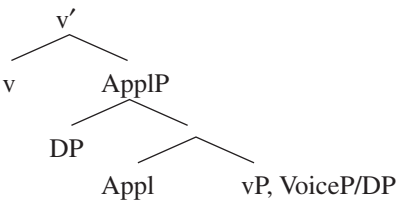
Although it may be possible that the locative *have* construction has the same structure as the possessive *have* construction, as argued in Harley (1998), a locational PP, which is not usually present in the possessive *have* construction, seems to need to be expressed in syntax,

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(1) (a) John had Mary pick up the book. (causative)
(b) John had Mary walk out of his classroom. (experiencer)
(c) John has a hat/a brother. (possessive)

This paper aims to provide a unifying syntactic analysis of *have* in causative and experiencer constructions. It also extends to *have* in possession. I argue that *have* is realized in the context of an APPLICATIVE HEAD (Appl; Pylkkänen 2002, 2008) that introduces a SEMANTICALLY non-core argument, and an event-introducer v, regardless of the type of v, in a structure like that in (2) (see examples (5)–(7) in Section 3.1 below for more details).

(2) *Realization of* have



This paper assumes non-core arguments in semantic respects. That is, non-core arguments bear adjunct type meaning, as they are traditionally related to a preposition (P) (see the discussion in Section 3.1 below) receiving, for example, an instrument or an affectee interpretation. Nevertheless, these non-core arguments are not necessarily optional. In Pylkkänen (2008), these arguments are introduced by Appl, particularly by an applicative morpheme. Once they are introduced, they are not optional anymore. Likewise, a causee or an experiencer in the English *have* construction is not optional, once it is introduced by Appl, as argued in this paper.

Causative *have* is spelled out when Appl merges under v_{CAUSE}, and experiencer *have* when Appl merges under v_{BE}. Possessive *have* is shown to be licensed in the same way via Appl and v_{BE} (see Section 7). In both causative and experiencer constructions, Appl is event-related, taking an event, vP or VoiceP, as a complement, while in possessive constructions, Appl is entity-related, taking an entity, DP, as a complement.[5]

The proposed account shares with the previous approaches to argument structure the insight argument structure is licensed by functional syntactic

as is suggested in Ritter & Rosen (1997). I leave it as an open question whether the analysis proposed in this paper can account for the locational use of *have* along with the auxiliary use of *have*.

[5] Although the Appls are different in that they take different types of complements, English *have* seems insensitive to this difference in Appl for morphological spell-out. The same phenomenon is also found in Georgian: an applicative morpheme marks either an affectee related to an event or an entity (e.g. possessor) related to an entity (e.g. possessee). See the discussion of examples (35) and (36) in Section 5.2 below.

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structure. In particular, it argues that the relevant functional heads are not aspectual heads, but v and Appl. Moreover, the proposed account provides empirical evidence for expanding the distribution of Appl: (i) a causative can take ApplP as a complement (see (5b) in Section 3.1), which was absent in Pylkkänen's (2008) typological classification, and (ii) Appl can merge above Voice (see (6b) in Section 3.1), contrary to Pylkkänen's analysis, in which Appl is argued to always merge below VoiceP, never above.

This paper is organized as follows. Section 2 presents the basic properties of English *have* in the constructions in (1) above. Section 3 is an outline of the analysis. Section 4 discusses previous structural analyses of *have*: *have* as the realization of functional structures that provide event structures (Ritter & Rosen 1997), and *have* as P incorporating into *be* (Harley 1998). It is also shown why these approaches fail to unify *have*. Section 5 outlines the assumptions about applicatives and the event-introducer v. Section 6 details the proposed analysis in causative and experiencer constructions. Section 7 proposes an analysis for *have* in possession. Section 8 presents the consequences of the proposed account. Section 9 is the conclusion.

2. The uses of *have*

This section discusses the basic properties of the *have* constructions illustrated in (1). They are repeated here in (3).

(3) (a) John had Mary pick up the book. (causative)
(b) John had Mary walk out of his classroom. (experiencer)
(c) John has a hat/a brother. (possessive)

As noted in previous studies on *have* (Cowper 1989, Belvin 1996 Ritter & Rosen 1998), *have* has a different meaning in each use. In (3a), its meaning is causative, and the subject of *have* is interpreted as a causer. In (3b), the subject of *have* is interpreted as an experiencer. Lastly, in (3c), the subject is interpreted as a possessor. These different uses of *have* also have different types of complements. For causative and experiencer uses of *have*, *have* takes a verbal complement, as in *Mary pick up the book* in (3a), and *Mary walk out of his classroom* in (3b). In the possessive use, (3c), *have* takes a nominal complement, *a hat/a brother*. In other words, for the first two uses of *have*, *have* takes an event VP complement, but for the possessive use, it takes a DP complement.

Although both the causative and experiencer uses of *have* take the same type of complement, they do not always show the same properties. For example, the experiencer use of *have* usually includes a pronoun (or ethical dative, as in (8c) below) that is coreferential with the subject (Brunson & Cowper 1992; Ritter & Rosen 1993; Belvin 1994; Harley 1995, 1998; Belvin & den Dikken 1997), as in (3b), where the pronoun *his* is coreferential with the subject *John*. By contrast, this is not the case for the causative use of *have*.

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Causative and experiencer *have* constructions show some differences in the types of verbs in the embedded phrases. They both allow either transitive verbs ((3a), (4a)) or unergative verbs ((3b), (4b)). Unaccusatives are not allowed in causative *have* constructions, as is shown in (4c), while they are permitted in experiencer *have* constructions, (4d).

(4) (a) John$_1$ had Mary punch him$_1$ on the nose. (causative)
(b) John had Mary cry/laugh. (causative)
(c) *John had Mary die/arrive. (causative)
(d) John$_1$ had Mary die on him$_1$. (experiencer)

Both constructions can take other types of complements, such as adjective or passive participle phrases), as shown in Harley (1998) and discussed in Section 4.2 below. Other types of complements are noted in footnote 14 below. This paper focuses on bare infinitival complements.

It has been noted in the literature (e.g. Ritter & Rosen 1993, 1997; Harley 1998) that causative *have* is eventive (i.e. agentive) but experiencer and possessive *have* are non-eventive (i.e. stative). It has been argued that the complement of causative *have* is agentive, while the complement of experiencer *have* is stative (Harley 1998), based on several tests for eventiveness (see discussion on this issue in Section 4.2 below). However, it is shown later in this paper (see (21)–(22) in Section 4.2) that the complement of causative *have* is non-agentive, and the complement of experiencer *have* is agentive.

3. An outline of the analysis

I assume a post-syntactic approach to morphology as in DISTRIBUTED MORPHOLOGY (DM) proposed by Halle & Marantz (1993, 1994) and subsequent works. In DM, the syntax consists of a set of rules that generate syntactic structures, which are then subject to further operations in the derivation of Phonological Form (PF) and Logical Form (LF) interface levels. Given this view, the phonological expressions of syntactic terminal nodes are inserted after the syntax builds all the relevant semantic/syntactic feature bundles. In other words, the insertion of the phonological expressions adds phonological information but does not add any syntactic/semantic information. In particular, DM assumes underspecification of morphemes with respect to syntactic/semantic information, which can be illustrated with the syncretism of the Greek VOICE morpheme (Embick 1997, 1998).[6] Embick argues that the occurrence of the Greek voice morpheme in

[6] Instead of the term 'vocabulary item' favored in the DM literature, I use 'morpheme' for ease of explanation.

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the various syntactic contexts – reflexives, passives, and anticausatives – is due to the morpheme being underspecified and thus sensitive to only a certain syntactic environment shared by those syntactic contexts, namely v without an external argument. The point to be stressed is that the morpheme does not carry the semantics of v, but it is sensitive to whether v is in a particular relation with an externally projected argument. In other words, the occurrence of the morpheme depends on the syntax but not the semantics of a relevant head. Like the Greek voice morpheme, *have* in English is sensitive to a particular structure shared by causative and experiencer constructions (i.e. v and ApplP) but not to the semantics of each context (e.g. causative or experiencer semantics). As noted in Section 3.1, the semantic underspecification of English *have* in Cowper (1989) is consistent with underspecification in DM.

3.1 *Unifying* have

Following previous studies (e.g. Cowper 1989; Ritter & Rosen 1993, 1997; Belvin 1996; Harley 1995, 1998), I assume that there is only one *have* in English. In particular, I assume with Cowper (1989) that *have* is underspecified in its semantics, which is in line with the essence of DM discussed above. Cowper (1989) proposed that *have* is thematically underspecified, which allows it to appear in various syntactic configurations, such as those in (5)–(7) below. This paper argues that what unifies *have* is the syntax (i.e. v and Appl), not the semantic context where it appears, which shares the main point of the thematic underspecification approach as well as of the DM approach.

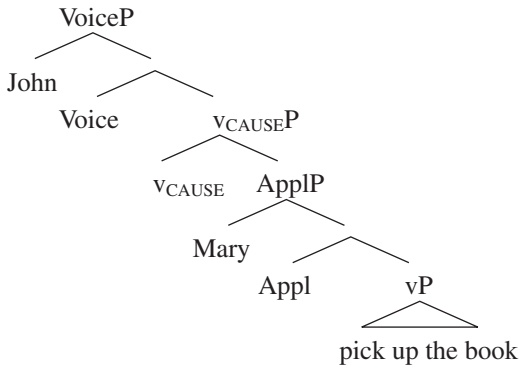
There are similar semantic underspecification approaches in which *have* is a realization of *be* and P, as in Freeze (1992), Kayne (1993), and Harley (1998), or of two functional heads (Ritter & Rosen 1997).[7] I adopt a core idea of these proposals. However, unlike these approaches, I argue that the two (functional) heads that unify *have* is v, an event-introducer, and Appl, an argument-introducer, regardless of the type of v (see (5)–(7)). In causative *have*, v is causative, v_{CAUSE}, but in experiencer and possessive *have*, v is stative, v_{BE}. In these structures, v provides verbal support to Appl resulting in verbal *have* (see Section 5.2 below). It is also shown, through the discussion of the structure of the double object construction (also in Section 5.2), that Appl has to be in a local relation to v in order to be spelled out by *have*.

[7] As argued in Nash (1994), it is not always the case that 'have' is realized as 'be' and P. In Georgian, for example, 'have' in possessive constructions is argued to be the result of Appl and a dummy verbal stem, not 'be'. Georgian experiencer and possessive constructions are detailed in Section 6.2.

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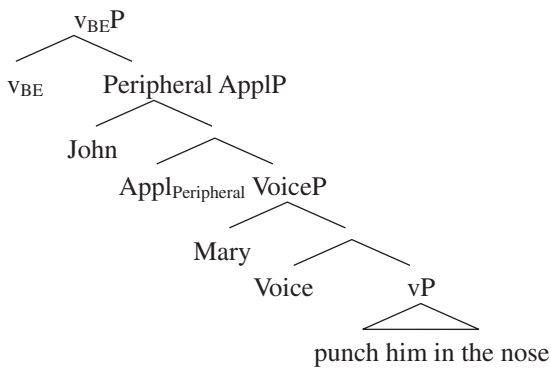
(5) (a) John had Mary pick up the book. (causative)

(b)



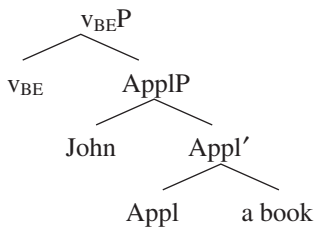
(6) (a) John had Mary punch him in the nose. (experiencer)

(b)



(7) (a) John has a book. (possessive)

(b)



In the vast literature on applicatives (e.g. Marantz 1984, 1993; Baker 1988; Bresnan & Moshi 1993, an applicative morpheme is suggested, either implicitly or explicitly, to be equivalent to a P element. I assume that Appl is semantically similar to P, being relational (Hale & Keyser 1993a, Harley 1995). In fact, this is what is indirectly argued in Pylkkänen (2008). Appl sets up a relation between an entity and an event or between two entities. In the causative (5b), it denotes a relation between a causee, *Mary*, and the event vP. In the experiencer (6b), it denotes a relation between an experiencer,

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John, and the event VoiceP. In the possessive (7b), it denotes a relation between a possessor, *John*, and a possessee, *a book*.

Under the proposed account, the semantic underspecification of *have* can be viewed as follows. The different meanings of the constructions associated with *have* are the workings of the structures where it appears. That is, the various meanings in *have* constructions do not come from *have* itself.

An issue related to the underspecification of the semantics is the general presence of a coreferential item in experiencer *have* constructions, but not in causative *have* constructions. As mentioned previously, in Section 2, it has long been noted in the literature on English *have* that an experiencer subject generally requires in the embedded predicate either a coreferential item, as in (8a), or an ethical dative, as in (8c). However, a coreferential item is not always required (Ritter & Rosen 1993). Even if it is absent, as in (8b), the subject is interpreted as an experiencer, and it is understood that the class is John's.

(8) (a) John_1 had the student walk out of his_1 class. (experiencer)
(b) John_1 had the student walk out of pro_1 class. (experiencer)
(Ritter & Rosen 1997: 315)
(c) Asterix_1 had the Romans capture Obelix on him_1. (experiencer)
(Harley 1998: 200)

Given the proposed structure in (6), a coreferential item can be viewed as contributing to the interpretation of experiencer *have*, but it does not itself derive an experiencer *have*. Moreover, in the causative (5), coreferential items are neither necessary nor required. Thus, the general restriction of a coreferential item in the complement of experiencer *have* does not significantly affect the unifying account of *have* in (5)–(7). Following the previous observation, I assume that experiencer *have* requires a coreferential item, be it overt or covert, and the coreferential item facilitates an experiencer reading. However, I remain agnostic on the issue of whether the coreferential item is syntactically or semantically licensed.[8]

The proposed account fares better than the analysis that views *have* as the realization of two functional heads related to event structure (Ritter & Rosen 1997). The current proposal can unify the causative use of *have* (i.e. causative) and the stative use of *have* (i.e. experiencer). It also provides a more accurate account of the semantic properties of *have* constructions than does Harley (1998), who proposes that the complement of causative *have* is agentive and the complement of experiencer *have* is non-agentive.

[8] Belvin (1994) and McIntyre (2006) argue that the requirement of a coreferential item is semantic or pragmatic. Ritter & Rosen (1997) and Harley (1997), on the other hand, argue that it is syntactic; for example, an experiencer subject requires a coreferential DP (or a referential, [+R], element) that it c-commands.

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4. PREVIOUS UNIFYING SYNTACTIC ANALYSES OF *HAVE*

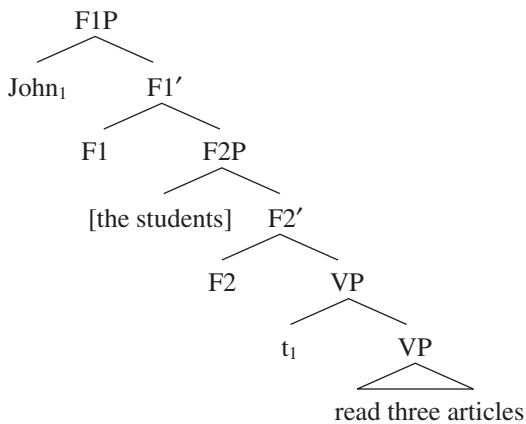
The purpose of this section is to present previous syntactic analyses that unify *have* in the causative and experiencer constructions, and to show why they fail to do so.[9] Furthermore, this section provides a basis for the discussion in the subsequent sections, where it is shown how the current proposal provides a better account than the analyses in this section.

4.1 Have *and event structure*

Ritter & Rosen (1997) provided a unified syntactic analysis of causative and experiencer *have*, illustrated in (9), in which *have* is a realization of two functional heads, F1 and F2. When *have* combines with an eventive VP, as in the causative (9b), the authors argue that *have* receives its interpretation in the event structure (Borer 1994). Event structure is provided by functional heads in which one functional category, F1, identifies an originator of the event, and the second, F2, a lower functional category, measures out (or delimits) an event. An argument in the specifier of F2 is thus an event measure.

(9) (a) John had the students read three articles. (causative)

(b)



In the causative in (9), the subject *John* in the specifier of F1 refers to an originator, and is thus interpreted as a causer. *The students*, which refers to the causee, moves to the specifier of F2, which seems to suggest that it measures out the event.[10] However, as illustrated in (10), it is not always the case that the event in a causative is delimited.

[9] There are other analyses of *have* that are not concerned with unifying *have*; for example, Belvin (1993, 1996), Belvin & den Dikken (1997). I only discuss unifying syntactic approaches.

[10] Ritter & Rosen (1997) did not describe in detail how the causee in causatives measures out an event. However, their tree diagram, in which a causee moves to the specifier of F2P, and their discussion clearly suggest that the causee measures out the event.

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(10) (a) John had Mary drive the car (*in an hour/for an hour). (causative)
(b) John had Mary walk/dance/swim (*in an hour/for an hour). (causative)

One might argue that F2 does not have content in (10). However, this type of argument makes the presence of F2 unnecessary. If F2 does not provide any content or play any role in the structure, it is not clear why it has to be present.

Unlike causative *have* in (11), experiencer *have* in (12) is non-eventive, or stative, as the following two tests demonstrate (Ritter & Rosen 1997): only eventives appear in the progressive and only eventives can occur in pseudo-cleft contexts like 'What happened was ___' (Jackendoff 1983: 170). With causative *have* like that in (11a), the results of these two tests are grammatical (11b–c). With experiencer *have* like that in (12a), on the other hand, both tests result in ungrammatical sentences, (12b–c), suggesting that experiencer *have* is not eventive.

(11) (a) John has the students read three articles. (causative)
(b) John is having the students read three articles.
(c) What happened was that John had the students read three articles.

(12) (a) John had the students walk out of his class. (experiencer)
(b) *John is having the students walk out of his class.
(c) *What happened was that John had the students walk out of his class.

As the experiencer *have* construction is non-eventive, Ritter & Rosen (1997) argue that unlike causatives, experiencer constructions have no event structure.[11] In other words, with experiencer *have*, there is neither an originator role nor an event measure, which leaves the roles of F1 and F2 in experiencer constructions like that in (13) unexplained. Nevertheless, as illustrated in (13b), the embedded subject, *the student*, moves to the specifier of F2P, which suggests that F2P plays a role in this construction. However,

[11] Although there is no event structure in experiencer *have*, Ritter & Rosen (1997) argued that an experiencer interpretation comes from a coreferential item in the embedded predicate, illustrated in (i), based on an approach in Brunson & Cowper (1992).

(i) John$_1$ had Mary walk out of his$_1$ classroom.

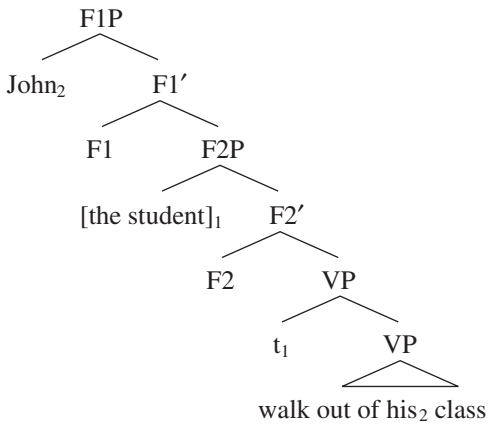
In Brunson & Cowper, it is argued that the variable interpretation of the subject of *have* is the same as a base-generated topic. The interpretation of the subject of *have* and a base-generated topic can be determined by a discourse factor. Alternatively, it can be determined by a coreferential item that provides more specific information about the subject. It seems that Ritter & Rosen based their argument on the second alternative for the interpretation of *have* in an experiencer construction, i.e. by a coreferential item. However, in the end, Ritter & Rosen (1997) argued that a non-eventive relation between the subject and the predicate in (i) is interpreted as experience. It is not clear to me what a coreferential item does for an experiencer interpretation.

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the authors offer no comment on this matter. Thus, it remains unclear how F1 and F2 in causatives such as (9) above are unified with those in experiencer *have* like that in (13a).[12]

(13) (a) John$_2$ had the student walk out of his$_2$ class. (experiencer)

(b)



To summarize, Ritter & Rosen (1997) proposed that *have* in causative and experiencer constructions can be unified in terms of two functional heads, F1 and F2. The analysis claims to unify the two uses, but in fact this is not fully the case. In causatives, F1 and F2 involve event structure and host a DP in their specifiers. In experiencer constructions, it is argued that there is no event structure. Nevertheless, F1 and F2 are present without clear motivation.

4.2 Have *as P*

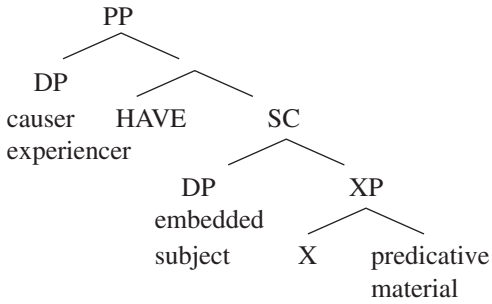
Harley (1998) also provides a unified syntactic approach to causative and experiencer *have*. *Have* in both causative and experiencer constructions shares a small clause (SC) complement and the upper head P, which is notated with HAVE in (14).[13] The embedded subject in each construction merges as a sister of XP under SC.

[12] As Ritter & Rosen (1997) argue that *have* is syntactically unified in both constructions, the semantic content or semantic function of F1 and F2 might not be so important. It might be the case that F1 and F2 in experiencer *have* constructions are types of functional heads different from those in causative *have* constructions. Whatever they might be, it is clear that they cannot be unified with those in causatives. In other words, the functional heads in experiencer and causative *have* are not identical.

[13] Following earlier analyses (e.g. Freeze 1992), Harley (1998) assumes that *have* is realized as a verb, which is a result of P incorporating into *be*. The details of how this works are not shown.

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(14)



(Harley 1998: 197)

In Harley's approach, *have* is a relational element without its own meaning, like a prepositional element in the proposals of *have* as *be* + P (Freeze 1992, Kayne 1993). Along with Cowper (1989) and Ritter & Rosen (1993, 1997), Harley (1998) assumes that in English there is only one *have*, whose semantics is underspecified.

Harley examined causative and experiencer *have* constructions with various types of complements: bare infinitive, progressive or passive participle (ppl), adjective phrase, and preposition phrase, as illustrated in (15)–(16). In her proposed structure (14) above, XP is the position where these various types of complements appear. For instance, with an adjective phrase complement like that in (15d) and (16d), XP is AdjP.

(15) *Causative*
- (a) Asterix had [$_{VP}$ Obelix deliver a menhir to Getafix].
- (b) Asterix had [$_{VP\ (ppl)}$ Obelix running errands for him].
- (c) Asterix had [$_{VP(ppl)}$ Obelix locked in his hut].
- (d) Asterix had [$_{AdjP}$ Obelix red in the face].
- (e) Asterix had [$_{PP}$ Obelix on the leftmost horse].

(16) *Experiencer*
- (a) Asterix$_1$ had [$_{VP}$ Obelix drop a menhir on him$_1$].
- (b) Pinnochio$_1$ has [$_{VP(ppl)}$ Gepetto spilling paint all over him$_1$].
- (c) Pinnochio$_1$ had [$_{VP(ppl)}$ milk spilled all over him$_1$].
- (d) Pinnochio$_1$ has [$_{AdjP}$ Gepetto crazy on him$_1$].
- (e) Pinnochio$_1$ has [$_{PP}$ Gepetto on his$_1$ foot]. (Harley 1998: 199, 213)

Unlike Ritter & Rosen (1997), who argue that the interpretation of *have* comes from an event structure or a coreferential item, Harley (1998) argues that the interpretation of *have* in causative and experiencer constructions depends on the interpretation of a complement in each construction. This argument is based on tests for eventiveness like those described in the previous section, illustrated in (11) and (12) above. As shown in (17) with a bare infinitival complement, the progressive and the pseudocleft tests make only

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the causative reading available. The same result is found with a passive participle complement (see examples in Harley 1998: 211).

(17) (a) Pinnochio is having [Gepetto step on him]. (progressive)
(no experiencer reading, causative OK)
(b) What Pinnochio did was have [Gepetto step on him].
(pseudocleft)
(no experiencer reading, causative OK)
(Harley 1998: 211)

By contrast, with a progressive participle, an adjective phrase, or a PP complement, neither the causative nor the experiencer reading is available. Examples with a progressive participle are shown in (18).

(18) (a) *Pinnochio$_1$ is having [Gepetto stepping on him$_1$]. (progressive)
(b) *What Pinnochio$_1$ did was have [Gepetto stepping on him$_1$].
(pseudocleft)
(Harley 1998: 211)

In sum, with bare infinitival and passive participle complements, the causative reading is possible, but the experiencer reading is not. With other possible complements, both readings are impossible. That is, causative *have* has an eventive interpretation only with bare infinitival and passive participle complements. Causative *have* with other types of complements and experiencer *have* are always stative. According to Harley (1998), this is because bare infinitives and passive participles are the types of complements that may denote events. Given this reasoning, Harley concluded with Belvin (1993) that the interpretation of *have* relies on the eventiveness of its complement.

As mentioned earlier, this paper focuses on the analysis of causative and experiencer uses of *have* with bare infinitival complements, and I discuss here Harley's structures for these constructions.[14] Given the conclusion drawn

[14] The account proposed in (2) above appears to capture the use of *have* with various types of complements. Like the complements with bare infinitival complements in (21)–(22) below, these types of complements also show the same pattern with respect to an agent-oriented adverb in causative and experiencer constructions. The examples in (i) and (ii) show the progressive participle with causative *have* and experiencer *have*, respectively.

(i) John$_1$ had Mary$_2$ running errands for him deliberately$_{1/*2}$.
(ii) John$_1$ had Mary$_2$ stepping on his$_1$ foot deliberately$_{*1/2}$.

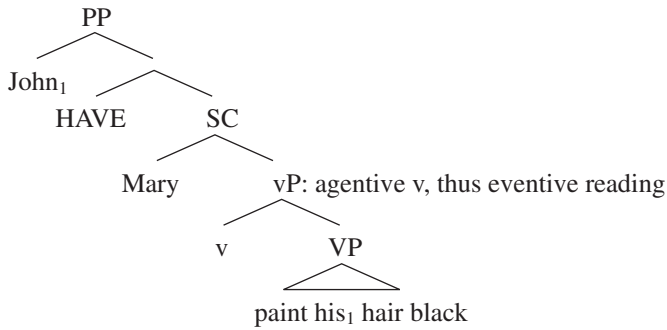
This fact indicates that the embedded subject in causative *have* in (i) is non-agentive, while the embedded subject in experiencer *have* in (ii) is agentive. It seems to be possible that these constructions have similar structures to the structures proposed in (5b) and (6b), respectively. For causative *have*, the difference between (5b) and (i) would be the types of complements of ApplP, like X under SC in Harley's (1998) structure in (14); for instance, for a progressive participle complement, Appl would take a progressive participle phrase. For experiencer *have*, the difference between (6b) and (ii) would be the types of complements of peripheral Appl. Crucially, this approach also captures the presence of *have* with the various types of complements in a unified way. Regardless of the types of complements of Appl or peripheral Appl, both constructions have v and Appl where *have* can be realized.

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above, Harley (1998: 221) proposed the following structures for causative and experiencer *have* constructions:

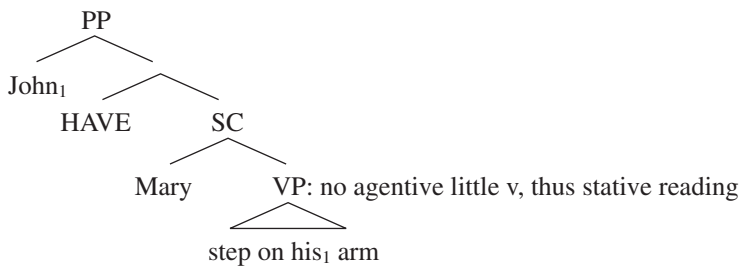
(19) (a) $John_1$ had [Mary paint his_1 hair black]. (causative)

(b)



(20) (a) $John_1$ had [Mary step on his_1 arm]. (experiencer)

(b)



Assuming Travis (1994) and Harley (1995), eventiveness is structurally represented by a little v that merges above VP. Importantly, v introduces an agent in its specifier. Given the conclusion that the interpretation of *have* relies on the interpretation of its complement, Harley (1998) proposed that in causative constructions like that in (19b), the complement phrase is an agentive vP while in experiencer constructions like that in (20b), the complement phrase is a VP without an agentive vP. In causative *have*, (19b), *have* is eventive as its complement is also eventive. In experiencer *have*, (20b), on the other hand, *have* is stative as its complement is stative (i.e. an agentive v is absent).

However, the complement of a causative is not fully agentive, and a complement of an experiencer construction is fully agentive, as is shown in (21) and (22), respectively, in contrast to Harley (1998). Contrary to Harley's prediction, these examples suggest that the interpretation of causative *have* is agentive even though the complement of causative *have* is non-agentive (see (21)). Likewise, the interpretation of experiencer *have* is stative, although experiencer *have* is agentive (see (22)). In Harley's analysis, the contrast

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shown in (21)–(22) remains unexplained.[15] The contrast shown in (21)–(22) is discussed in Section 6.

(21) (a) John$_1$ had Mary$_2$ read the article on purpose $_{1/*2}$. (causative)
(b) John$_1$ had Mary$_2$ pick up a book deliberately$_{1/*2}$. (causative)

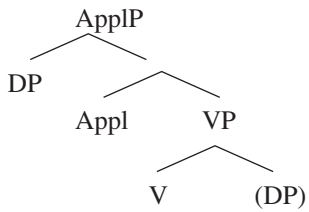
(22) (a) John$_1$ had Mary$_2$ walk out of his class on purpose$_{*1/2}$. (experiencer)
(b) John$_1$ had Mary$_2$ punch him in the nose on purpose$_{*1/2}$. (experiencer)

5.5. Assumptions

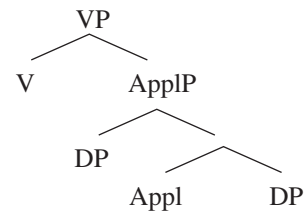
5.1 *The syntax and semantics of applicatives*

Central to the analysis proposed in this paper is the syntax and semantics of applicatives, as outlined in Pylkkänen (2008). Building on the previous studies on Bantu applicatives (Baker 1988, Bresnan & Moshi 1993, Marantz 1993), Pylkkänen (2008) proposed two distinct types of applicatives, high applicatives and low applicatives, according to whether the applicative head relates the DP in its specifier to an event, VP, as in (23a), or to an individual, an object DP, as in (23b).

(23) (a) *High applicative*



(b) *Low applicative*



In both types of applicatives, an applied argument asymmetrically c-commands a direct object, which is a well-known asymmetry across languages (Barss & Lasnik 1986, Marantz 1993). Relevant to this asymmetry is a scope property in which the applied argument scopes over the theme argument but no inverse scope is allowed (e.g. Marantz 1993).

The syntax and semantics of high applicatives is of particular interest to the proposed analysis. As illustrated in (23a), high Appl licenses the applied DP in a position external to VP, in a parallel manner to Voice introducing the external argument in its specifier position. Semantically, the applicative

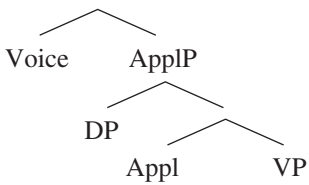
[15] Like in Harley's (1998) proposal, in the current proposed account illustrated in (5)–(6) above, the semantics of *have* is determined in part by the semantics of ApplP complement. Unlike Harley's approach, however, it is not the case that the meaning of *have* is inherited from the meaning of its complement. Rather, the interpretation of *have* results from the workings of an entire structure where *have* appears (see Section 3.1 above). The main reason for the present account being preferred to Harley's is that examples like (21)–(22) are better explained under the present account.

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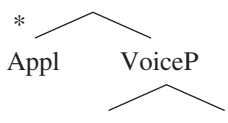
head adds a participant to the event by the rule of Event Identification, as a Voice head does. Within this view, a high applicative denotes a relation between a DP in its specifier and an event (VP), in contrast to a low applicative, (23b), which denotes a transfer of possession relation between two DPs in terms of recipient (e.g. *John* and *some cookies* in *I baked John some cookies*) or source (e.g. *a ring* and *Mary* in *A thief stole a ring from Mary*). In principle, the relation in a high applicative can be maintained without the object DP, as the possibility of high applicatives appearing with unergatives indicates (Pylkkänen 2002, 2008). Given the semantic difference between high and low applicatives, (in)compatibility with static verbs like *hold* and unergatives (e.g. *cry*) is proposed as a test for distinguishing the two types of applicatives. As these verbs do not denote a transfer of possession relation between two DPs, they are compatible only with high applicatives and not with low applicatives. These tests are used later to determine the category of the complements of causative *have*.

Another important syntactic property of high Appl noted by Pylkkänen is that high Appl must merge below Voice, as is shown in (24a), not vice versa, as is shown in (24b). However, I show that (24b) is in fact possible in a natural language, which is evidenced by the experiencer *have* constructions in Section 6.2.[16]

(24) (a)



(b) *



Thus, there are two types of Appl that take an event complement. One is high Appl, which merges below Voice as proposed in Pylkkänen (see (24a)). The other is peripheral Appl in (6) above, which can merge above VoiceP, as proposed in this paper. When no distinction is necessary, high Appl and peripheral Appl are generally referred to as event-related Appl.

5.2 *Event-introducer v*

Following recent work on argument structure (Pylkkänen 2002, 2008; Cuervo 2003; Alexiadou, Anagnostopoulou & Schäfer 2006; Alexiadou & Schäfer 2007; Harley 2007), I assume that Voice (Kratzer 1996) and v are not the same.

[16] The claim that high Appl must merge below Voice (Pylkkänen 2008) may imply that high ApplP must be selected by Voice. However, such an implication may be incorrect, as discussed in Kim (to appear). It is shown there, on the basis of empirical data, that high Appl merges below Voice if there is Voice. For example, in Bantu, high Appl can appear with unaccusative verbs (Simango 2004). That is, high Appl does not have to be selected by Voice. Given this view, Appl in causative *have* (see (5b)) belongs to high Appl, as it still merges below Voice.

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That is, Voice is an external argument-introducer (specifically, an agent-introducer), and v is a verbalizing head that combines with a lexical root (Marantz 1997). Adopting a core idea of event representation following Harley (1995), Cuervo (2003), and Folli & Harley (2005), I further assume that v combines with a root syntactically to build event predicates.[17] In particular, for English *have* constructions, I assume that there are two types of v that correspond to two basic types of events, v_{CAUSE} and v_{BE}. The former, v_{CAUSE}, corresponds to the event type of a cause, and v_{BE} corresponds to the event type of a state. For example, an argument merged in the specifier of a VoiceP that combines with v_{CAUSE} is interpreted as a causer. This precludes Voice combining with v_{BE}, as they are not compatible: an agent cannot be stative.

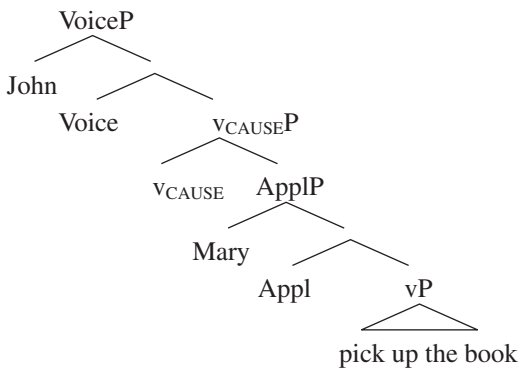
6. Little v and Appl in causative and experiencer constructions

6.1 *Causative have*

I assume that causative *have* takes a verbal complement (Cowper 1989, Ritter & Rosen 1993). More specifically, I assume that there are no inflectional projections in the complement of causative *have*, following Ritter & Rosen (1993).[18] The question is: What type of verbal complement is projected in causative *have*? I argue that non-agentive high ApplP is the complement of causative *have*, as in (25). Little v_{CAUSE} is projected above high ApplP, introducing a causing event to its complement, as the main event of a clause is causative. The structure for causative *have* given in (5b) above is repeated here in (25b) for convenience.

(25) (a) John had Mary pick up the book.

(b)



[17] In Harley (1995) and Folli & Harley (2005), v has an additional function: introducing an external argument.

[18] However, an auxiliary like *be* seems to be possible in the complement of *have*, as shown in (i). I leave this issue for future research.

(i) John had Mary **be** reading when the children arrived.

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Ritter & Rosen (1993) argued that the predicate in the complement of *have* must involve an agent of the action. In other words, the predicate must include a CAUSE function of its own, which is also noted by Harley (1998). This accounts for the ungrammaticality of causative readings with unaccusatives, illustrated in (26).[19]

(26) (a) *Ralph had Sheila/his goldfish die.
(b) *Ralph had Sheila fall down.
(c) *Ralph had the plants grow. (Ritter & Rosen 1993: 526)

Although it is not incorrect to say that a causee is an agent, the causee does not show deliberateness. An agent generally exhibits deliberateness. On the other hand, a causee is not able to act deliberately: it is not a full-fledged agent. In (27b), *Mary*, referring to the causee, cannot be modified by the agent-oriented adverb *deliberately*. In fact, in Givón (1975), it is argued that the predicate in the complement of English causative *have* is active (i.e. a causee must be capable of acting) but not deliberate. Givón further notes that by being embedded under causative *have*, the causee loses its deliberateness. Interestingly, unlike Ritter & Rosen, he attributes the ungrammaticality shown in (26) to the fact that in unaccusatives there is no ACTIVE causee:

(27) (a) Mary picked up a book deliberately.
(b) John_1 had Mary_2 pick up a book deliberately$_{1/*2}$.

I argue that a causee is active in that it can perform the event described by a verb, but that it is not deliberate. In this regard, it is important to note that an agent-introducing head v_{DO} (Folli & Harley 2007) or Voice (Pylkkänen 2008) (see Section 8.1 below) fails to capture this semantic property of a causee (Kim 2011). I argue that the non-agentive property of a causee can be likened to an instrument, following Nilsen (1973). In his study of the instrumental case in English, Nilsen draws a distinction between an agent and an instrument in terms of deliberateness: an agent can act deliberately, but an instrument cannot. In this sense, he notes, an instrument is USED by an agent to PERFORM the action of the verb, as also pointed out in Gruber (1965) and Talmy (1976). Importantly, in this sense of USE, an agent is always acting deliberately. Further, we note that the instrument used by the agent merely PERFORMS the action described by the verb. That is, it does the action non-deliberately. I argue that causatives can be viewed along the same

[19] Unaccusatives in causatives such as (i) become possible when a modifier is added (Belvin 1996), as illustrated in (ii).

(i) ?Lou had the bomb explode.
(ii) Lou had the bomb explode [right when Charlie walked in].

At present, it is not clear to me what role(s) these modifiers play or how they can be represented in the syntax, which I leave for further research.

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lines: a causer deliberately uses a causee as an instrument to initiate the causing event, and a causee performs the action non-deliberately.[20]

I propose that a causee is semantically similar to an instrument and is introduced by high Appl.[21] A causee is not a canonical agent, being non-deliberate. Like an instrument, it carries out the event described by the verb. That is, the complement of causative *have* denotes a relation between a DP (i.e. a causee) and an event, which is exactly what the semantics of event-related Appl denotes (see Section 5.1 above).

Cross-linguistic data on causatives and applicatives support the present claim that a complement of a causative is an instrumental applicative. The homophony between a causative and an instrumental applicative is a well-known phenomenon in Bantu (Marantz 1993, Peterson 2007). For example, in Kinyarwanda, a causative and instrumental high

[20] It is questionable why instrumentals cannot be introduced by ApplP in a simple transitive sentence like that in (i), if ApplP in (25) is instrumental. The ungrammaticality of (i) may be related to the spell-out condition of *have*. As argued in this paper (see Section 7.2 below), *have* is realized when ApplP and v are in local relation. In (i), there is no *have*, and thus (i) may be ungrammatical.

(i) *John cut the knife his steak.

Another related question is what rules out inanimate instrument in English *have* causatives such as (ii). In (ii), unlike in (i), *have* is realized, but the sentence is ungrammatical. It seems that only animate causees are allowed in English *have* causatives, as the contrast between (ii) and (iii) shows.

(ii) *John had$_{\text{CAUSATIVE}}$ the key open the door.
(iii) John had$_{\text{CAUSATIVE}}$ Mary open the door.
(iv) The hammer hit the nail.

The difference between the casuees in (ii) and (iii) seems to rest in that the causee in (ii) is not a performer but the one in (iii) is. As pointed out by Parsons (1990), some instruments, like 'the hammer' in (iv), can be a performer, only if no agency is implied. That is, 'the hammer' in (iv) can be a performer, when it performs the 'hitting' action without the help of an agent. Likewise, a causee in English *have* causatives performs the action described by the verb phrase without the aid of the causer. In this sense, an instrument like 'the key' in (ii) may not be a performer, as it needs to be used by the causer 'John'. It cannot perform the event of 'opening' on its own, unlike the causee 'Mary' in (iii).

[21] It is an interesting question whether a casuee in causative *have* behaves in the same way as a causee in *make*- or *get*- causatives like those in (i) and (ii):

(i) John$_1$ made Mary$_2$ wash the car deliberately$_{1/*2}$.
(ii) John$_1$ got Mary$_2$ to wash the car deliberately$_{1/*2}$.

In these causatives (i) and (ii), the agent-oriented adverb modifies the causer 'John', but not the causee 'Mary'. The causees in *make*- and *get*-casuatives are non-agentive, like a causee in causative *have*. Thus, it might be possible for Appl to introduce the causees in (i) and (ii). However, the syntax of these causatives may not be the same as that of causative *have*. As noted in Ritter & Rosen (1993), the complements of *make*- and *have*-causatives are syntactically different: IP vs. VP. Unlike *have*- or *make*-causatives, the complement of a *get*-causative is a *to*-infinitive, as illustrated in (ii). Moreover, it is unclear whether a causee in *make*- or *get*-causatives can be interpreted as an instrument like a causee in causative *have*. I leave these issues for further research.

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applicative[22] share the morpheme, *-iish-*, as illustrated in (28) (Kimenyi 1976).[23]

(28) *Kinyarwanda*
(a) úmwáálimu a-ra-andik-**iish**-a íbárúwa íkárámu
teacher SB-PRE-write-APPL.INST-ASP letter pen
'The teacher is writing a letter with the pen.'
(b) umugabo á-r-úubak-**iish**-a abanntu inzu
man SB-PRE.build-CAUSE-ASP people house
'The man is making the people build the house.'

Further morphological evidence that supports the Appl analysis for causatives is found in Niuean, a Polynesian language of the Tongic subgroup. In this language, an instrumental high applicative is employed as a tool to extend the argument structure of a causative verb, see (29a) (Gould, Massam & Patchin 2009: 6). Gould et al. (2009) proposed that the causative morpheme *faka-* selects ApplP as a complement, which is headed by an applicative morpheme *aki*. The structure is shown in (29b).

(29) *Niuean*
(a) kua faka-totō aki e ia e kato e
PERF CAUSE-hold APPL.INST ERG.P 3SG ABS.C basket ABS.C
tama haaku
child ISG.GEN
'She made my child hold the basket.'
(b) she **faka** [$_{\text{ApplP}}$ basket [$_{\text{vP}}$ child hold]]

The structure in (29b) is similar to the proposed structure of English *have* causatives (25b). Like v_{CAUSE} in English, the causative morpheme in Niuean *faka-* takes ApplP as a complement. The Niuean case provides clear morphological evidence for the high applicative analysis of causatives, as the applicative morpheme *aki* is visible. Importantly, in both Niuean and Kinyarwanda, a causee is shown to be non-agentive (see Kimenyi 1976 and Gould et al. 2009 for details), similarly to English causees.

Like high Appl, the complement of causative *have* also shows an asymmetric c-commanding relation between two DPs. There is an asymmetric c-commanding relation between a causee and a theme object. The causee has scope over the theme object, not vice versa, as is shown in (30). Two applicative diagnostics (Pylkkänen 2008) support a high Appl complement of a causative. Unergatives and static verbs like *hold*, which are compatible with

[22] The instrumental applicative in Kinyarwanda has high applicative semantics, as it is possible with unergatives (McGinnis & Gerdts 2003, McGinnis 2005).

[23] Similarly to the current proposal, Marantz (1993) proposes that causatives and applicatives may have the same structure, based on the Kinyarwanda pattern in (28).

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high applicatives but not with low applicatives, can appear in the complement of causative *have*, as is shown in (31).

(30) (a) Mary had [each author]$_1$ read his$_1$ book.
(b) *Mary had its$_1$ author read [each book]$_1$.

(31) (a) John had Mary cry/laugh/dance/swim.
(b) John had Mary hold the book.

The applicative analysis of causative *have* can account for the restriction on unaccusative verbs noted previously, see (26) above, which is similar in spirit to the work of Givón (1975) mentioned above. Under the proposed account, causative *have* takes an instrumental Appl complement whose subject is an active participant of the event described by the verb. In (26), however, the active participant of the event that can be interpreted as an instrument is absent.[24] In other words, unaccusatives do not have an instrument participant, which causative *have* requires. As a result, unaccusatives are not possible in a causative *have*.[25,26]

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[24] A relation between an agent and an instrument in causative semantics may be captured in two ways. First, as in English, unaccusatives cannot be embedded by causative *have* due to the lack of an instrument. Alternatively, the relevant factor could be the lack of an agent. For example, in Chinsenga and Chiche unaccusatives are not possible with instrumental applicatives, as is shown in (iii), while instrument applicatives are possible with either transitives, in (i), or unergatives, in (ii) (Simango 1995, 2004):

(i) *Chinsenga*
john a-na-meny-er-a mwana ndodo
John SB-PST-beat-APPL-FV child stick
'John beat the child with a stick.'
(ii) mbusa a-na-yend-er-a ndodo
shepherd SB-PST-walk-APPL.INST-FV stick
'The shepherd walked with a stick.'
(iii) *zovala zi-na-nyow-re-a mame
clothes SB-PST-be.wet-APPL.INST-FV dew
'The clothes got wet with dew.'

Unlike in English, the ungrammaticality of (iii) is due to the absence of an agent that uses an instrument. This fact seems to suggest that in certain causative contexts, both an agent and an instrument are required.

[25] Note that this does not seem to be a general property of causatives. In many languages, unaccusatives can be embedded under causatives, e.g. Korean and Japanese. Furthermore, applicatives do not always seem to be restricted to a certain type of verbs. In some languages, benefactive/malefactive Appl can occur with any types of verbs, e.g. Chinsenga and Chiche (Simango 2004), but not in others, e.g. Hiaki (Harley, Tubino Blanco & Haugen 2009). Hiaki does not allow unaccusatives to occur with benefactive Appl. It is not clear whether there is a difference between benefactive and instrumental applicatives with respect to the type of a verb that they can appear with.

[26] This can also be expressed syntactically. The single argument of an unaccsuative verb must be projected as a sister to the Root. In other words, Appl cannot reintroduce this DP in its specifier. Another related question is how we account for the ungrammaticality of sentences like **John had Paul fall the baby*. It is hard to block such a sentence as Appl introduces an additional argument. A possible solution would be Kratzer-type event identification, but then there would be no distinction between Voice and Appl, as an anonymous *JL* referee

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6.2 *Experiencer* have

The complement of experiencer *have*, like that of causative *have*, is verbal (Cowper 1989; Ritter & Rosen 1993, 1997). However, is this complement non-agentive like that of causatives? I argue that the complement in experiencer *have* is agentive, contrary to Harley (1998), as the following data demonstrate:

(32) (a) John_1 had Mary_2 walk out of his_1 class on purpose$_{*1/2}$.
(b) John_1 had Mary_2 punch him_1 in the nose on purpose$_{*1/2}$.
(c) John_1 had Mary_2 step on his_1 foot on purpose$_{*1/2}$.

The argument *Mary*, which is the subject of the complement of *have*, can be modified by an agent-oriented adverb, but the experiencer 'John' cannot. This suggests that *Mary* is introduced by Voice but *John* is not. Assuming that an argument merged in Voice is agentive (e.g. Hale & Keyser 1993a, Harley 1995, Pylkkänen 2008), and drawing on a cross-linguistic pattern where an affectee is introduced by Appl that takes an event complement (Bantu in Pylkkänen 2002, Spanish in Cuervo 2003, German in McIntyre 2006, Balkan in Rivero 2009, Korean and Japanese in Kim to appear), I argue that an experiencer in English *have* constructions is introduced by an event-related Appl, as is shown in (33b) below. In particular, Appl in (33b) is a PERIPHERAL Appl as it is the highest argument-introducing head. Importantly, note that peripheral Appl is different from high Appl in Pylkkänen in that it can merge above Voice, although both peripehral Appl and high Appl are non-agentive.[27] That is, contra Pylkkänen's claim that event-related Appl must merge below Voice, English provides evidence that an event-related applicative can merge above VoiceP. Thus, the current proposal relaxes the restrictions on the hierarchical relation between Voice and Appl argued in Pylkkänen, and provides evidence for extending the domain of Appl to above Voice.

As the experiencer *have* construction is stative (see (11)–(12) above and Ritter & Rosen 1997, Harley 1998), I argue that v_{BE}, which introduces a

suggests. In fact, non-distinction between Voice and Appl is the result of Pylkkänen's proposal (see Section 5.1). She proposed that Appl introduces an external argument into an event VP in a manner similar to Voice, without mentioning how the two heads differ. Importantly, one of the interesting results of this paper is that Voice and Appl are not the same. Specifically, this paper shows that Voice and Appl are SEMANTICALLY different (see Section 9): Voice introduces an agent but Appl introduces a non-agent argument. Moreover, their syntax may not be the same. Voice and Appl do not merge in the same position; Appl merges either below Voice (24a) or above Voice (6).

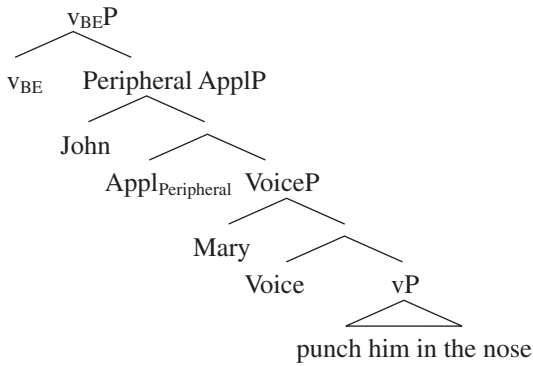
[27] Semantically, peripheral Appl and high Appl are similar in that they introduce non-agentive arguments, regardless of specific (non-agentive) interpretation of an argument. Moreover, like high Appl (Pylkkänen 2008), I assume that peripheral Appl can be of various types, $\text{Appl}_{\text{MALEFECTIVE}}$ or $\text{Appl}_{\text{INSTRUMENT}}$, and a language can select a different type of head. As for experiencer *have*, English would select peripheral $\text{Appl}_{\text{MALEFECTIVE}}$.

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stative event to its complement, is projected above peripheral ApplP, see (33b).[28]

(33) (a) John$_1$ had Mary punch him$_1$ on the nose.

(b)



Unlike causative *have*, experiencer *have* is able to occur with unaccusatives, as in (34), as previously mentioned (brackets are mine).

(34) (a) Ralph had [Sheila/his goldfish die on him].
(b) Ralph had [his daughter fall and break her leg].
(c) Ralph had [the walls crack in the recent earthquake].
(d) Ralph had [a student go crazy on him].

(Ritter & Rosen 1993: 527)

In fact, peripheral Appl (33) denotes a relation between an entity and an event. It can appear with any type of verbal event, either VoiceP, see (32) above, or unaccusative vP, as in (34).[29] I argue that in English, peripheral Appl can take either of the verbal event type.

Morphological evidence provides further support to the peripheral Appl analysis of experiencer *have*. In Georgian, malefactives similar to English

[28] Having presented an analysis of *have* in causative and experiencer constructions, now we can understand why an approach with v alone would not work. Employing v alone, causatives would bear v_{CAUSE}, licensing a causer. Some sort of v that rules out agentivity (e.g. $v_{ACTIONAL}$) would license a causee. In experiencer *have*, on the other hand, v_{BE} would introduce an experiencer, while $v_{CAUSE/AGENTIVE}$ would introduce an embedded subject. Given these make-ups of causative and experiencer *have* constructions, there is no syntactic head that unifies *have* in both constructions. Assuming that *have* is semantically underspecified, the same semantics of the head, v_{CAUSE}, (i.e. causativity) cannot be the factor that unifies *have*. Furthermore, under the little v approach, v_{CAUSE} in causatives is the highest argument-introducing head which is non-local to a root. In contrast, v_{CAUSE} in experiencer constructions is closer to a root than the one in causatives. That is, the locality of the heads is not the same, which renders a unifying approach to *have* difficult.

[29] There can be no verb at all when the complement is resultative (Elizabeth Cowper, p. c.), as in (i) and (ii). I do not pursue this issue here.

(i) We had dinner on the table by 3 p.m.
(ii) She had her arm in a sling.

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experiencers are introduced by an applicative morpheme (McGinnis 1997, 1998):

(35) *Georgian*
dedeb-s nino da-ečr-a-t
mothers-DAT Nino-NOM PREV-APPL + V-cut-ARO-PL
'The mothers had Nino wounded on them.'

In (35), *e* results from the merger of an applicative morpheme *a* and an unaccusative verbal morpheme *i* (McGinnis 1998). What is important for the present discussion is the fact that a malefactive in Georgian, similar to an experiencer in English, is the last element introduced to the clause, and it is introduced by (peripheral) Appl. Also note that in Georgian, as in English, unaccusative vP is a possible complement of peripheral Appl.[30] A pattern of an applicative morpheme in Georgian also provides some insight into one of the roles of v in English *have*. According to Nash (1994), an applicative morpheme in Georgian needs a verbal base; for example, in a possessive construction, an applicative morpheme appears prefixed to dummy verb stem, *-kv-*:

(36) *Georgian*
bavšvs cigni a-kv-s
child.DAT book.NOM APPL-stem-3SG
'The child has a book.'

(Nash 1994: 166)

I argue that like Appl in Georgian, Appl in English experiencer *have* and causative *have* constructions needs verbal support, and v provides verbal support to Appl to yield a verbal *have* (see the discussion in footnote 34 below).[31]

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[30] However, in Georgian, malefactives are only possible with unaccusatives (McGinnis 1998). In other words, Georgian does not allow malefactives with transitives, unlike English, see (33) above. In this respect, Georgian malefactives are similar to Romance malefactive constructions (see e.g. Cuervo 2003 for Spanish).

[31] In Georgian, Appl merges above a verbal base (Nash 1994), not below, as argued for English in this paper. In this regard, the English possessive structure such as that in (43) (and experiencer construction in (33)) is not possible in Georgian, as (low) Appl merges below v. Moreover, regarding experiencer constructions, English and Georgian differ as to whether an additional verbal (as well as event) head v is present above Appl. In English, v_{BE} is projected above peripheral Appl, but in Georgian it may not be. This may be due to the fact that in English there are two verbs in such constructions, requiring two verbal heads. However, these differences between the two languages do not necessarily weaken the parallel between English and Georgian drawn in this paper. What this fact about Georgian suggests for English experiencer *have* constructions is that malefactives can be introduced by an applicative morpheme, and Appl in English *have* constructions may need verbal support, as in Georgian. The configuration where Appl merges above v is not impossible in English as argued in Pylkkänen (2008): it is valid syntactically, although it may not be semantically. I leave the issues of Appl merging either above or below v for future research.

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7. APPL IN POSSESSIVE *HAVE* AND DOUBLE OBJECT CONSTRUCTIONS

The goal of this section is to show the possibility for the extension of the proposed account to possessive *have* by reinterpreting Harley's (1995), correlation between possessive and double object constructions under an applicative theory (Pylkkänen 2008).

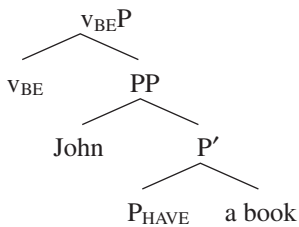
As we recall from the discussion in the previous section, an interesting parallel between Georgian and English emerges. In both languages, possessive and malefactive constructions involve Appl. Another interesting aspect of both languages is that double object constructions in both languages involve Appl, as discussed below.

7.1 *Structural correlation between possessive* have *and double object constructions*

Harley (1995) proposed that P_{HAVE} is present in the English possessive *have* constructions such as that in (37) below, based on the proposal that the verbal *have* is derived from *be* plus a prepositional element marked on the possessor (e.g. Freeze 1992, Kayne 1993). P_{HAVE} is a prepositional element, not a verbal element, and it is relational, indicating a certain relation between two things (see Section 4.2 above). In (37), it indicates a relation between two entities, a possessor and a possessee.

(37) (a) John has a book.

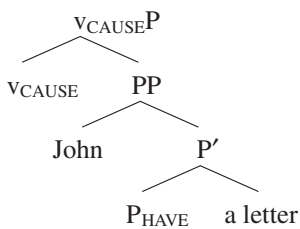
(b)



In particular, P_{HAVE} in (37) involves a configuration where a possessor c-commands a possessee. An interesting aspect of the P_{HAVE} proposal in possessive constructions is that P_{HAVE} is also present in double object constructions, such as (38). Unlike the possessive construction (37), the double object construction (38) has v_{CAUSE}.

(38) (a) I wrote John a letter.

(b)



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Harley (1995: 116) argues for a structural correlation between a possessive construction and a double object construction in terms of P_{HAVE}, as follows:

> If a language lacks the P_{HAVE}, in which the possessor c-commands the possessee, and if double object *give* is correctly represented in the syntax as CAUSE X P_{HAVE} Y, then languages that lack P_{HAVE} should lack double object *give*.

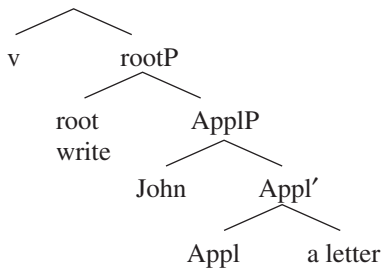
In other words, the double object construction and the possessive construction share the structural element P_{HAVE}. Harley showed that the correlation holds across languages either negatively or positively (see Harley 1995 for details). For example, in English and Georgian, both possessive constructions and double object *give* type constructions are available and both constructions share P_{HAVE}. The details of these two languages are presented in the following section (but in terms of Appl, not in terms of P_{HAVE}).

7.2 *Reinterpreting the correlation in terms of Appl*

Assuming the applicative theory in Pylkkänen (2008), I argue that P_{HAVE} in Harley can be represented by Appl. Pylkkänen argues that English double object constructions involve a low applicative structure, such as (39b). It has been shown that, contrary to Harley, a causative approach to the double object construction is inappropriate, as double object constructions like those in (40) do not entail a resultant state, unlike causatives like those in (41).

(39) (a) I wrote John a letter

(b)



(40) *Double object construction*
- (a) I threw John the ball but he didn't catch it.
- (b) I sent Bill the letter but he never got it.
- (c) I wrote Sue a letter but she never got it.

(41) *Causative*
- (a) #I flew the kite over the field but it didn't fly.
- (b) #I broke the vase but it didn't break.
- (c) #I cooked the meat but it didn't cook.

(Pylkkänen 2002:20)

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It is argued that in the English double object construction, the indirect object is the INTENDED recipient of a direct object. This intended recipient relation is represented by a low Appl in (39). I assume that the low Appl analysis of the double object construction is correct. If so, the correlation argued for in Harley can be restated in terms of Appl: a double object and possessive construction share the same element, namely (low) Appl. This can be confirmed by data from Georgian, one of the languages that Harley provides as evidence for the correlation. In this language, both the possessive and double object construction are expressed by an applicative morpheme on the verb:

(42) *Georgian*

(a) bavšvs cigni a-kv-s
child.DAT book.NOM APPL-stem-3SG
'The child has a book.'

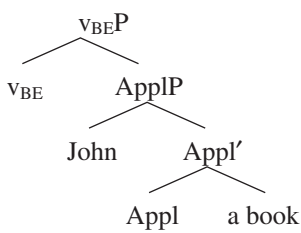
(Nash 1994: 166)

(b) nino-m gela-s tav-is deida a-nax-a sarKeSi.
Nino-ERG Gela-DAT self-GEN aunt.NOM APPL-show-AOR mirror.in
'Nino showed Gelai his aunt in the mirror.'

(adapted from McGinnis 1995: 12)

In (42a), the possessor, *bavšvs* 'child (dat)' is introduced by an applicative morpheme, and in (42b), the indirect object *gia* 'Gia (dat)' is introduced by an applicative morpheme as well. Given the morphological evidence from Georgian, and assuming that Harley's correlation is correct, I argue that the English possessive construction also has low Appl, such as in (43). Specifically, *have* is a realization of two functional heads, v and Appl, where v provides a verbal support to Appl, as with causative and experiencer *have*. With possessive constructions, an event is stative, v_{BE}.

(43)



Notably, the structure for the double object construction in English further refines the proposed v and Appl approach. The prediction of this approach is that *have* would appear if v and Appl were present. The double object construction in (42b) involves v and Appl; however, it is NOT realized by *have*. I argue that this is due to the fact that the relation between v and Appl in (42b) is non-local, in contrast to the possessive structure in (43) (or causative (25b) or experiencer structure (33b)). That is, in (39b), a root intervenes

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between v and Appl, and v provides a verbal support for the root, not for Appl.[32]

In sum, a reinterpretation of Harley's correlation in terms of Appl provides a unifying analysis for possessive *have* and other *have* constructions discussed in this paper.[33] Furthermore, v and Appl need to be in a local relation in order for *have* to be realized. It should be noted here that the spell-out condition of *have* proposed in this section is specific to English, and it remains to be seen whether it holds for other languages.[34]

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[32] The proposed account raises the question of how to block *have* in *get* possessive constructions such as (i):

(i) John got a letter.

Harley (2004) argues that possessive *get* consists of v_{BECOME} and P_{HAVE}. The current proposal, which argues for Appl instead of P_{HAVE}, *have*, not *get*, is expected to be realized in (i). The difference between *get* and *have* is that *get* always denotes an event, but *have* can denote either an event or a state (Cowper 1989). I assume that *get* is always specified for its event type, be it v_{BECOME} or v_{GO}, as in Cuervo (2003). I suggest that the more specified *get* takes precedence over less specified *have*, and is morphologically realized in those specified contexts. In other constructions, the underspecified *have* is realized.

[33] The current proposal in terms of Appl appears to account for languages that show a positive correlation, as demonstrated by the Georgian and English examples. This raises the question of how the current proposal captures languages that show the correlation negatively. For example, Irish is shown by Harley (1995) to be a P_{HAVE}-less language and thus lacks a double object *give* type construction. In Irish, a VSO language, a possessee precedes a possessor in the possessive construction, illustrated in (i), which seems to indicate that with Irish Appl a possessor does not c-command a possessee.

(i) *Irish*
Tá peann ag Máire.
BE pen at Mary
'Mary has a pen.' (Harley 1995: 115)

Interestingly, Irish lacks a *give* type double object construction, as shown in (ii)–(iv). In (ii), the goal DP *to Binkley* appears after the accusative-marked DP *dandelion*. As (iii) shows, it cannot precede the accusative-marked DP. Thus, there seems to be no Appl where a goal DP c-commands a theme DP. Moreover, as (iv) shows, the goal DP cannot appear without a preposition, unlike a goal DP introduced by Appl that is marked with accusative case as in English or dative case as in Georgian.

(ii) Thug Míleó caisearbhán do Bhinclí W.
gave Milo dandelion to Binkley
'Milo gave a dandelion to Binkley.'
(iii) *Thug Míleó do Binclí caisearbhán.
gave Milo to Binkely dandelion
'Milo gave to Binkley a dandelion'
(iv) *Thug Míleó caisearbhán Bhinclí/*Thúg Míleó Bhinclí caisearbhán.
gave Milo dandelion Binkley gave Milo Binkley dandelion
'Milo gave Binkley a dandelion.'

Although further research is needed as to whether the proposed account can capture the cross-linguistic correlation more widely, an updated version of Harley's (1995) correlation in terms of Appl may capture such cross-linguistic correlation.

[34] The spell-out condition raises the issue of whether the condition applies in all types of Appls in English. In other words, do all Appls in English require v as verbal support? Although drawing a complete picture is beyond the scope of this paper, it seems that it may not be the case. For example, v in a double object construction (e.g. (38)) does not seem to

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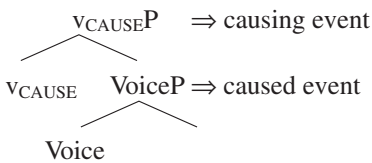
8. Consequences

8.1 *Expanding the distribution of Appl*

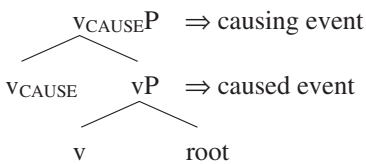
The current proposal that *have* is inserted into causative constructions when v and Appl are present posits that English *have* causatives take high ApplP structure as complement. If the present proposal is correct, it provides supporting evidence for expanding the typology of the complement selection of causatives in Pylkkänen (2002, 2008): high ApplP is a complement that causatives can select, in addition to VoiceP.

Pylkkänen (2002, 2008) proposes that the size of the complement of the causative head, v_{CAUSE}, can vary: there are phase-selecting causatives that select a constituent that has an external argument (e.g. VoiceP), as in (44a), and there are verb-selecting causatives that select vP without an external argument, as in (44b).

(44) (a) *Phase-selecting causative*



(b) *Verb-selecting causative*



The causative head v_{CAUSE} in (44) introduces a causing event to its complement. In (44a), it selects a VoiceP complement, which introduces an external argument, and is thus called a phase-selecting causative, adopting Chomsky's (2000, 2001) term 'phase', as used by McGinnis (2001a, b). In (44b), on the other hand, v_{CAUSE} selects vP headed by a verbalizing head v; thus, it is called a verb-selecting causative. For Pylkkänen, v is merely a verbalizing head (as well as an event-introducer), and is assumed not to introduce an (external) argument, which this paper also assumes (see Section 5.2 above).

provide a verbal support to Appl, although Appl in (38) in the end might combine with v. As noted in the text, the locality relation between v and Appl is specific to the spell-out of *have*, not to Appl.

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	Phase	Verb	High applicative (English)
A. Is agent-oriented modification of a caused event possible (due to the presence of VoiceP)?	Yes	No	No
B. Is high applicative morphology between root and v_{CAUSE} possible?	Yes	No	Yes

Table 1
The correlation of complement selection in causatives
(adapted from Table 9 in Pylkkänen 2002: 96)

In phase-selecting causatives, Voice introduces a volitional agentive causee. For example, consider the Luganda example in (45). The embedded phrase in which the causee 'Katonga' is a subject can be modified by an agent-oriented adverb, which suggests that it is introduced by Voice. Thus, Luganda causatives are argued to be phase-selecting causatives.

(45) *Luganda*
Omusomesa ya-wandi-s-a katonga ne
teacher 3SG.PAST-write-CAUSE-FV Katonga with
obu nyikivu
the dedication
'The teacher made [Katonga write with dedication].'
(Pylkkänen 2002:109)

In verb-selecting causatives, on the other hand, the embedded phrase cannot be modified by an agent-oriented adverb, which suggests that there is no VoiceP in the complements of verb-selecting causatives, as proposed in (44b). That is, a causee in a verb-selecting causative is non-agentive, in contrast to causees in phase-selecting causatives.

Based on the interaction between causatives and agentivity discussed above, Pylkkänen argued that phase- and verb-selecting causatives are different with respect to how the following two properties correlate (set out in Table 1): (i) whether an agent-oriented adverb can modify a caused event, property A, and (ii) whether v_{CAUSE} can embed a high applicative, property B, as is illustrated in Table 1.

Pylkkänen argues that there is a correlation between properties A and B. Causativization can embed a high applicative, property B in table 1, if agent modification of the caused event is possible, property A, and vice versa. Importantly, according to Pylkkänen, satisfying A indicates that the complement in causatives include VoiceP. Given this, she further argues that

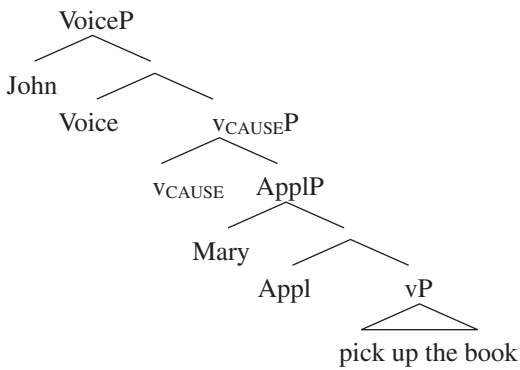
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causativization can embed a high applicative (B) if it can embed VoiceP (A), and vice versa. In phase-selecting causatives, high applicative morphology between the root and v_{CAUSE} is possible (B) if agent-oriented modification of the caused event is possible (A), and vice versa. In contrast, in verb-selecting causatives, the correlation holds negatively in both directions: B is not possible if A is not possible, and A is not possible if B is not possible.

However, the evidence for the structure for causatives proposed in (5), repeated as (46) below, shows that this correlation does not hold in English, which is also indicated in Table 1: English *have* causatives embed a high applicative, property B, without embedding VoiceP, Property A. That is, causatives in English are not phase-selecting causatives; nevertheless, they can embed a high applicative, contrary to Pylkkänen's claim.

(46) (a) John had Mary pick up the book.

(b)



We also note that English *have* causatives do not belong to the class of verb-selecting causatives. Although English causatives do not allow agent-oriented modification of a caused event (property A in Table 1) like a verb-selecting causative, v_{CAUSE} can embed a high applicative as a complement (property B in Table 1), unlike a verb-selecting causative. I argue that the complement of English causative *have* is neither phase- nor verb-selecting, but applicative-selecting. A causative *have* construction in English takes ApplP as a complement. English causative *have* constitutes empirical evidence for a new type of a complement selection, expanding the distribution of Appl to causatives.[35]

8.2 *Argument-structure licensing by functional heads*

Syntactic theories of argument structure suggest that argument structure is licensed by functional syntactic structure (Hale & Keyser 1993a, 2002; Borer

[35] Applicative-selecting causatives are found not only in English but also in Korean (Kim to appear) and Niuean (Gould et al. 2009). Kinyarwanda causatives like the one in (28b) may also belong to this group.

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1994, 2005; Harley 1995; Marantz 1997; Ritter & Rosen 1998; Travis 2000; Pylkkänen 2002, 2008; Cuervo 2003; Folli & Harley 2007, although the specifics of functional structure are not the same in all of these works. Aspectual projection approaches argue that functional structure that is interpreted as event structure determines the syntax and the interpretation of arguments (e.g. Borer 1994, 2005; Ritter & Rosen 1997, 1998). In such an approach, for example, an aspectual projection (e.g. Asp) responsible for telic interpretation of the event is projected in the syntax. The particular role of an argument as an agent or non-agent is an entailment of the entire event structure.

However, as shown in this paper, the syntax of English *have* constructions cannot be determined by an aspectual projection: the event involved in causatives is neither always telic nor always atelic. In addition, according to the aspectual head theory, experiencer *have* does not bear any event structure, which makes a unified approach difficult. I argue that with English *have*, v and Appl are the syntactic elements at the core of argument structure and not Asp. This does not mean that the aspectual projection approaches to argument structure are entirely incorrect, but it does show that argument-licensing functional structure is not always aspectual. The conjunction of an event-introducer v and an argument-introducer Appl can also play a role in argument licensing. The present account supports the theoretical claim that v and Appl can play a role in argument structure as shown in Pylkkänen (2008) and in Cuervo (2003), and also that argument structure is licensed by functional syntactic structure.

9. Conclusion

This paper has argued, through the examination of the distribution of English *have*, that argument structure can be licensed by functional structure, as proposed in many syntactic approaches to argument structure. In particular, this paper argues that the relevant functional heads are an event-introducer v and an argument-introducer Appl, rather than aspectual projections. Moreover, it expands the domain of applicatives: Appl can be a complement in causatives, which was lacking in Pylkkänen's (2002, 2008) typological classification, and it can merge above Voice, contrary to Pylkkänen (2002, 2008).

One of the general conclusions that can be drawn from this study is that Appl is an argument-introducing head DISTINCT from Voice, which is also argued in Kim (2011, to appear). Although both Appl and Voice introduce an external argument to vP, in contrast to Voice, Appl allows non-agentive arguments to merge in its specifier. That is, agentivity is specified for Voice, but it is not specified for Appl. Appl has been frequently argued to introduce various types of arguments since the work of Pylkkänen (2002, 2008). An interesting property of these arguments is that they are all non-agentive.

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For instance, unintentional causers are found in Spanish (Cuervo 2003), and affectees in German (McFadden 2004). This supports the conclusion drawn in this paper. Although further research on this issue is needed to reach a firm conclusion, it is clear that the semantic distinction between the two heads is important to the domain of argument structure.

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