

Possession and the double object construction

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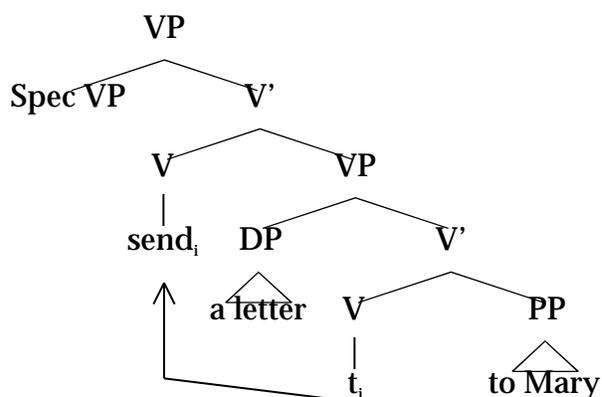
Abstract

This paper argues that double-object verbs decompose into two heads, an external-argument-selecting CAUSE predicate (v_{CAUSE}) and a prepositional element, P_{HAVE} . Two primary types of argument are presented. First, a consideration of the well-known Oerhle's generalization effects in English motivate such a decomposition, in combination with a consideration of idioms in ditransitive structures. These facts mitigate strongly against a Transform approach to the dative alternation, like that of Larson 1988, and point towards an Alternative Projection approach, similar in many respects to that of Pesetsky 1995. Second, the P_{HAVE} prepositional element is identified with the prepositional component of verbal *have*, treated in the literature by Benveniste 1966; Freeze 1992; Kayne 1993; Guéron 1995. Languages without P_{HAVE} do not allow possessors to c-command possessees, and show no evidence of a double-object construction, in which Goals c-command Themes. On the current account, these two facts receive the same explanation: P_{HAVE} does not form part of the inventory of morphosyntactic primitives of these languages.

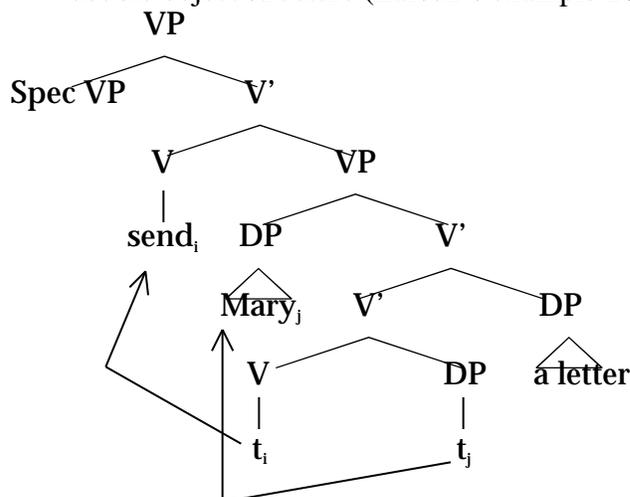
1. Introduction

The locus classicus for syntactic treatments of the double object alternation in English is Larson 1988. Larson treats the well-known syntactic asymmetries of the dative alternation by positing a hierarchical structure for the VP, involving two VP-shells. In his analysis, the Theme is generated as the specifier of the lower VP, and the Goal (plus the preposition *to*) as its complement ((1)a). The dative shift alternation results when a passive-like operation applies to this lower VP, moving the Goal to the specifier position and generating the Theme in an adjunct position, analogous to the position of the by-phrase in a passive ((1)b). For Larson, then *give a book to John* is basic and *give John a book* is derived by a purely syntactic operation. I will term this general approach the 'transform' hypothesis.

- (1) Larson 1988: 'Transform' approach
 a. double complement (Larson's example 13)



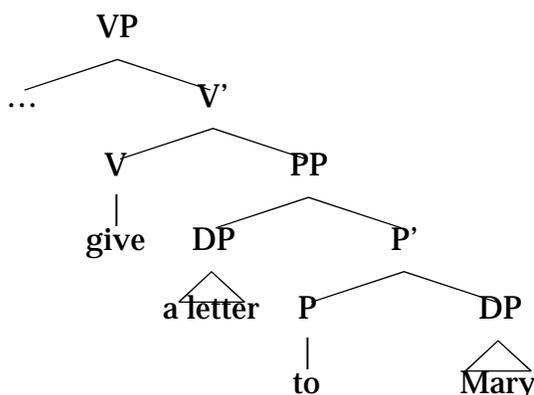
- b. double object structure (Larson's example 26)



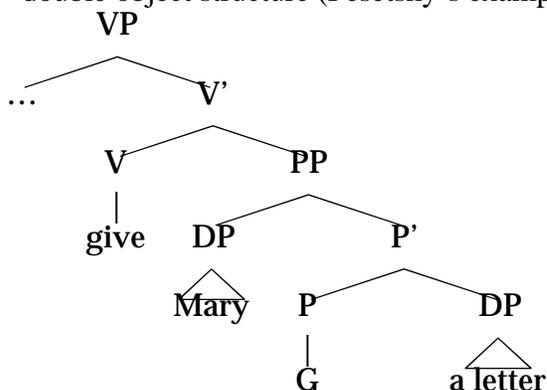
Pesetsky 1995 makes an important change to the analysis. While preserving the hierarchical structure that allows Larson to capture the syntactic asymmetries, he eschews the idea that the double object structure is a transform of the double complement structure. Rather than adopt VP shells, on Pesetsky's analysis the complement of the V projected by *give* is a prepositional phrase in both cases. In the double complement structure, the PP is headed by *to* with the Theme in its specifier and the Goal in its complement ((2)a), and in the double object structure, the PP is headed by a null preposition, G, which takes the Theme in its complement and the Goal in its specifier ((2)b). This null preposition must raise by head-movement and affix to the V *give*. Essentially, then,

the two structures involve the selection of different prepositional complements by *give*, and one is not a transform of the other.¹ This approach is termed by Larson 1990 “Alternative Projection”.

- (2) Pesetsky 1995: ‘Alternative Projection’ approach
 a. double complement structure (Pesetsky’s example 456)



- b. double object structure (Pesetsky’s example 511)



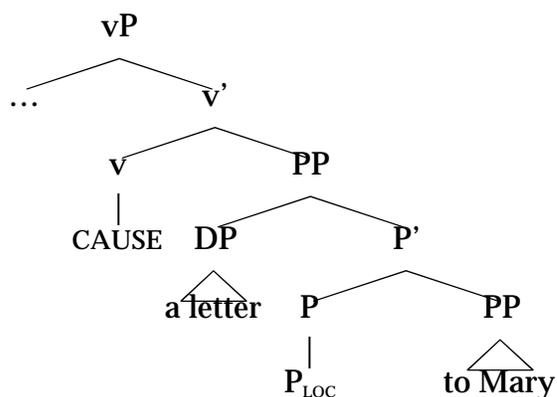
In this paper, I argue for a modified version of Pesetsky’s approach, identifying his null preposition G with the preposition which in many recent analyses has been identified as encoding possession (Freeze 1992; Kayne 1993; Guéron 1995 and earlier, Benveniste 1966 make such proposals). Their claim is that the verb *have* consists of the verb *be* plus a prepositional element, which in some languages incorporates into *be* (giving *have*) and in some does not. I will call this preposition P_{HAVE} . In addition, I argue that *to* does not head the PP complement to V in the double

¹I am oversimplifying Pesetsky’s treatment here somewhat. He does, in the end, propose different base-generated structures involving selection of G or *to* by *give* (p. 223), but G is also initially present in the *to* structure, below *to*, and subsequently deleting. This permits him to account for the superset-subset relation he observes in the semantics of the Goals of the two structures, and explains the lack of a similar restriction on their Themes. For more discussion of these points, in particular arguments against the existence of a superset-subset relation, see section 3.2.

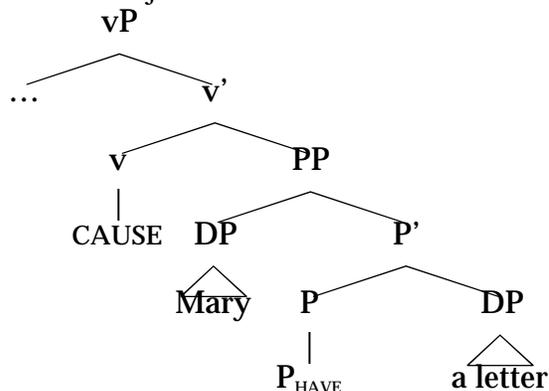
complement structure, but rather that a corresponding abstract locative preposition, P_{LOC} does. The upper V head, associated in most recent Minimalist work (e.g. Chomsky 1995) with the projection of the external Agent argument, is identified as a predicate meaning ‘cause’. This breakdown of the lexical semantics of double-object constructions in the syntax economically explains many puzzles: the hierarchical structure, the well-known possession restriction on the double object construction, and a cross-linguistic generalization correlating the availability of *have* in a language with the availability of a double object construction in that language. The approach has much in common with what Pesetsky terms “Small Clause Theories” of double object constructions, made notably by Guéron 1986 and Hoekstra 1988.

The final structures which will be proposed here are illustrated below:

- (3) Alternative Projection: P_{HAVE} , P_{LOC}
 a. double complement structure



- b. double object structure



In adopting such an approach, the need for linking rules to lexical semantic structures noted for the transform hypothesis in Gropen, Pinker et al. 1989 is eliminated, but another type of problem is introduced, that of deriving the final form of the verb from the combination of the primitive morphosyntactic predicates posited here. The solution to this problem clearly resides in the adoption of a non-Lexicalist architecture (see, e.g. McCawley 1968), and it is suggested that a framework like that of Distributed Morphology (Halle and Marantz 1993; Halle and Marantz 1994) makes the correct division between non-linguistic and linguistic knowledge that enables the solution to work.

The article is structured as follows. In section 2 I review many of the well-known arguments that the theta-roles involved in the double object and double complement structures are not identical, and draw attention to internal inconsistencies in Larson's appeal to the Uniformity of Theta Assignment Hypothesis (Baker 1988) to motivate the Transform hypothesis. In section 3 I detail the ways in which the Alternative Projection hypothesis is able to account for these problems and still maintain the hierarchical structure which the binding facts motivate. I also contrast the present analysis with Pesetsky's, introducing the notion of prepositional HAVE. In section 4 I lay out the cross-linguistic argument that the availability of prepositional HAVE correlates with the availability of a Goal-Theme hierarchical relation. In section 5 I discuss the theoretical framework such an approach necessitates and in section 6 I discuss some possible extensions and predictions with respect to psychological state predicates. Conclusions are in section 7.

2. Different structure, different meaning

Larson's analysis involves an appeal to a version of the Uniformity of Theta Assignment Hypothesis of Baker 1988, according to which identical thematic relations are mapped onto identical syntactic positions across structures. Since the thematic relations assigned in the double complement and the double object structure are the same, he reasons, one structure must be 'basic' and conform to UTAH, and the other must be base-generated as a UTAH-conforming structure and the surface hierarchical order derived via movement of the arguments. In his treatment, the double

complement structure conforms to UTAH and no movement of the arguments is involved. (As Larson notes, the reverse could also be true and UTAH would still be satisfied. He cites several analyses which derive the double complement form from a more basic double object form, including Bowers 1981; Johns 1984; Dryer 1987 and Aoun and Li 1989).

Let's be more precise about the version of UTAH espoused by Larson. He articulates it most clearly in Larson 1990:

- (4) *Relativized UTAH*
 Identical thematic relationships are represented by identical relative hierarchical relations between items at D-Structure.

In combination with the thematic hierarchy Larson adopts, AGENT>THEME>GOAL>OBLIQUE, this entails that if the theta role of argument 1 is higher on the hierarchy than the theta role of argument 2, argument 1 must c-command argument 2 at D-structure. In the case at hand, an examination of Larson's structures in ((1)a, b) will confirm that at D-structure, the Theme c-commands the Goal in both cases. Note that this does not entail that, e.g., Themes must always be projected in the same position at D-structure: in ((1)a), the Theme is in the specifier of the lower VP, while in (1)b, it is an adjunct. However, the relative syntactic positions of the arguments is consistent with the theta-hierarchy, and that is what is required to satisfy Larson's UTAH. By the end of the derivation, however, in the double object case, the Goal will have moved into an S-structure position where it c-commands the theme, which permits a structural account of the binding asymmetries of Barss and Lasnik 1986².

² Interestingly, it seems that Larson has to adopt a derivational account of the position of the by-phrase in a passive construction as well. At D-structure, according to standard analyses, the agent by-phrase is right-adjoined to VP. This is consistent with Larson's Relativized UTAH, as it will from there (assuming c-command out of PP) c-command the object at D-structure. However, as can be seen in examples (a-c) below, according to Larson's binding tests, the agent by-phrase is c-commanded by an unmoved Goal argument at S-structure, and may not c-command it. Larson should be forced to a Lowering analysis of the by-phrase.

- a) A book was given to every boy by his mother.
 a') *A book was given to her son by every mother.
 b) The answers were shown to no student by any teacher.
 b') *The answers were shown to any student by no teacher.
 c) A book was given to each boy by the other.
 d) *A book was given to the other by each boy.

I will assume that a structural account of these asymmetries is desirable, as Larson articulates well in both Larson 1988 and Larson 1990, and is further endorsed by Pesetsky 1995. The aspect of the analysis we wish to call into question is the derivational treatment of the double-complement/double-object relationship, and the next subsections will be devoted to undermining the idea that the thematic relationships involved in each are identical, and demonstrating that the assertion that one construction is derived from the other makes a false prediction in a core area.

2.1. *Oehrle's generalization*

In fact, the template for the basic argument can be taken from Larson himself, in his discussion (Larson 1990) of a problematic example raised by Jackendoff. Jackendoff 1990, in his example (54), points out that examples like (5) pose a problem for a derivational approach, since the appearance and disappearance of particular prepositions in particular verb classes is difficult to treat in such an approach.

- (5) a. John blamed the accident on Max.
b. John blamed Max for the accident.

Larson's counterproposal is that in fact, this type of alternation is not due to the application of his Dative-Shift operation, but rather, the two orders represent the base-generation of two different structures. In order for this to be true on Larson's analysis, the theta-roles borne by *the accident* and *Max* must be different in ((5)a) and ((5)b). He points to the existence of an animacy constraint on the direct object in ((5)b) that does not hold of the object of *on* in ((5)a). His examples and judgements which illustrate this contrast are given in ((6)³:

- (6) a. John blamed his bad luck on the weather.
b. ??John blamed the weather for his bad luck.

Since the direct object in ((5)b) and ((6)b) must be animate, says Larson, it does not bear the same thematic relation as the object of *on* in (5)a). Hence, UTAH does not force these arguments to be

³ In fact, in the opinion of many English speakers I have consulted, this judgement is considerably less robust than most of the Oehrle's generalization judgements we will see below.

base-generated in the same relative hierarchy, and they in fact have different D-structure representations (what Larson terms Alternative Projection).

The problem for Larson is that an essentially identical contrast holds in the double object/double complement structures which on his analysis crucially *do* involve the same thematic relations. This well-known contrast, noted by at least Green 1974 and Oehrle 1976, is illustrated in (7):

- (7)
- a. The editor sent the article to Sue.
 - b. The editor sent the article to Philadelphia.
 - c. The editor sent Sue the article.
 - d. ??The editor sent Philadelphia the article.

The only grammatical reading which is available in (7)d is one in which *Philadelphia* is a stand-in for an organization or group of people; in a sense, where *Philadelphia* is animate.

This distinction has been largely attributed to a semantic criterion which applies to the double object but not the double complement structure. As described in Gropen, Pinker et al. 1989 “the referent of the first object [of a double object construction] must be the prospective possessor of the referent of the second object.” Because possessors must be animate, only animate referents may occur in the first DP position in the double object construction. In the double complement construction, it seems that the object of *to* is thematically a location, not necessarily a possessor, and a correspondingly wider range of arguments may appear there.

Jackendoff 1990 makes a similar observation. He points out that verbs which on Larson’s analysis undergo the Dative Shift operation may take a much broader range of Goal arguments in the double complement than in the double object construction. His examples are illustrated in (8), along with their shifted counterparts:

- (8)
- a. Susan sent Harry to Max/down the hall/to his room/away.
 - b. Susan sent Max/*the hall/*his room/*away Harry.
 - c. Susan kicked the ball to Max/down the hall/out the window/upward.
 - d. Susan kicked Max/*the hall/*upward/*the window the ball.

The ‘possessor’ account of the double object construction explains a wide range of contrasts. Larson 1988, fn. 44, citing Oehrle 1976, notes that there is a contrast in the implicatures of (9)a) and (9)b):

- (9) a. John taught the students French
 b. John taught French to the students

In (9)a), there is a much stronger implication that the students actually learned some French. If in the double object construction, *the students* receive a Possessor role, while in the double complement version, they receive only a Location role, this contrast makes sense.

Similarly, in the same footnote, Larson mentions a contrast noted by Kayne 1975, illustrated in (10):

- (10) a. I knitted this sweater for our baby.
 b. I knitted our baby this sweater.

Kayne noted that in the *for*-benefactive in (10)a), the female speaker may currently not have a child, but simply be pregnant or planning to be. In (10)b), however, there is a strong implication that the baby exists. Again, if *the baby* must bear a Possessor role in (10)b) by virtue of appearing in the double object construction, it must be animate (i.e. alive) and hence exist.

Following Larson’s own argument for the *blame* verbs, we may conclude that the direct object of the double object construction and the object of *to* in the double complement construction do **not** bear the same theta relations, and hence that the former is not derived from the latter. Rather, it must be the case that there are simply alternative projections available, due to the alternative theta-grids available to the shifting verbs.

2.2. *Idiom chunks and the Transform hypothesis*

Some of Larson’s initial evidence for an articulated VP-shell structure comes from the fact that a verb may form a “discontinuous idiom” with its outer arguments. He notes the existence of idioms of the following sort, where italics indicate the idiomatically interpreted constituents:

- (11) a. Lasorda *sent* his starting pitcher *to the showers*.
 (“Lasorda took his starting pitcher out of the game”)
 b. Mary *took* Felix *to task*.
 (“Mary upbraided Felix”).
 c. Felix *threw* Oscar *to the wolves*.
 (“Felix sacrificed Oscar.”)
 d. Max *carries* such behavior *to extremes*.
 (“Max goes to the limits with such behavior.”)

The possibility of such idioms is predicted by his structure in (11)a), where the verb (e.g. *send*) forms a constituent with the indirect object *to the showers* at D-structure, to the exclusion of the direct object.

Larson seems to overlook a likely prediction of his analysis with respect to these examples. In the formative transformational literature, idiom chunks are a test for movement. In fact, it is exactly this aspect of the analysis of idiom that allows Larson to draw the conclusion that *send* has moved from its base position, next to *to the showers* in (11)a), into a derived position to the left of *his starting pitcher*. Some classic examples of idiom chunks and the transformations which move them around are seen in (12):

- (12) Idioms:
 a. John let the cat out of the bag.
 b. The experimenter stacked the deck against his hypothesis.
 Passive:
 c. The cat was let out of the bag.
 d. The deck was stacked against the hypothesis.
 Raising:
 e. The cat seems to have been let out of the bag.
 f. The deck seems to be stacked against the hypothesis.
 *Control
 g. *The cat wants to have been let out of the bag.

Larson’s analysis, recall, entails that the double object structure is derived “via a passive-like operation” from the double complement structure. If this is so, we would expect at least some double complement idioms to freely shift (as is possible with Passive (12)c,d)), retaining their idiomatic interpretation in the double object structure. None of Larson’s idioms, nor any others we know of, permit such shifting:

- (13) a. *Lasorda sent the showers his starting pitcher.
 b. *Mary took task Felix.
 c. *Felix threw the wolves Oscar.
 d. *Max carries extremes things

Even when the idiomatic object of *to* is animate, and thus can potentially satisfy the Possessor role, it may not shift:

- (14) a. I sent the salesman to the devil.
 b. *I sent the devil the salesman.

From this evidence, it seems reasonable to conclude that since so-called “Dative Shift” fails a basic test for (passive-like) movement, it is not movement. (For further arguments from idioms, in particular, for discussion of double object idioms, see sections 3.2—3.4 below).

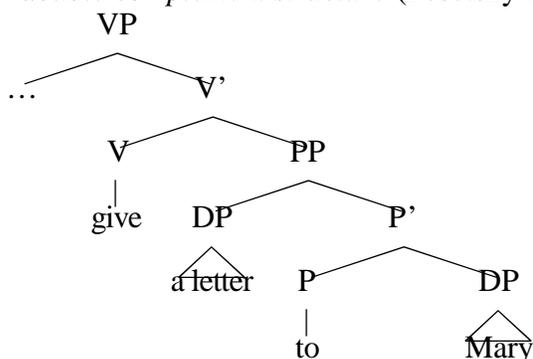
Taken together, the Possessor relation which is apparently present in the double object structure but not in the double complement structure, and the unshiftability of the V-PP idioms indicate that a Transform approach to the double object alternation is untenable, particularly if initially motivated by UTAH-like considerations. In the next section, I lay out the Alternative Projection hypothesis more thoroughly, and show how it can cope with the interpretive facts just discussed.

3. Alternative Projection: *G* vs. CAUSE + P_{HAVE}.

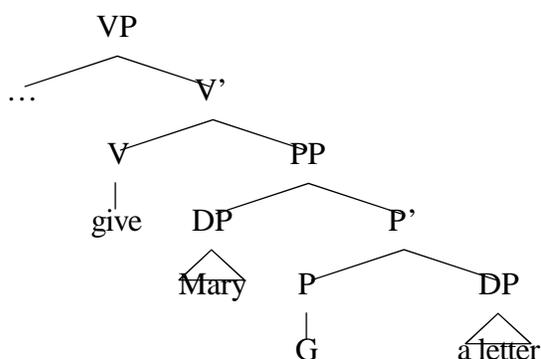
Let us reexamine the structures for double complement and double object sentences proposed by Pesetsky 1995, repeated below as example (15):

(15) Pesetsky 1995's structures:

a) *double complement structure* (Pesetsky's example 456)



b) *double object structure* (Pesetsky's example 511)



Pesetsky is able to capture the attractive c-command effects of the hierarchical structure proposed by Larson (“rightward is downward”) without proposing that one of the two structures is derived from the other⁴. On his account, *give* indirectly \dagger -selects the object of either the preposition *to* or the preposition *G*, and directly \dagger -selects the DP in the specifier of the preposition.⁵ “Indirect” \dagger -selection is accomplished by the selection of a PP whose P head selects the appropriate theta-role. That is, because “to” selects Goal, the selection of a PP headed by *to*

⁴ See Phillips 1996, for a parsing-based account of how/why the “rightward is downward” clause structure arises.

⁵ Pesetsky points out (p. 189) that on his treatment the relationship between the V head and its directly theta-selected argument in the specifier of PP is possible only because there is no intervening argument category which is c-commanded by V and which itself c-commands (imagine, for instance, the specifier of a second PP2 occurring as the sister of the first P1: that specifier might be selected by P1, but it could not be selected by V, because the specifier of PP1 would intervene). In this respect, Pesetsky notes, his version of theta-selection attractively resembles Relativized Minimality-type restrictions on movement, which depend crucially on there being no intervening argument of the appropriate category. On the current treatment, this notion will turn out to be irrelevant for the selection of the arguments of alternating verbs, but it is still probably necessary to describe the selection of arguments lower down in Pesetsky-style PP cascades.

satisfies the need of *give* to itself select a Goal. The same process also applies when *give* selects a PP headed by *G*, which selects a Theme †-role.

3.1. *The semantics of to*

For Pesetsky, the interpretive differences we have seen in section 2 above result from differences in the semantics of the two prepositions. In particular, he suggests (p. 141) that the difference between a directly theta-selected Goal (in the double object construction) and an indirectly theta-selected Goal (in the double complement construction) lies in the semantics of the overt preposition *to*. He is not explicit about the precise nature of *to*'s contribution; however, proposals of this type which account exactly for the examples which Pesetsky adduces do exist.

Pesetsky says (p. 141) that ‘the semantics of *to*-objects seem to be a superset of the semantics of directly selected Goals.’ That is, in the canonical examples which differentiate between the double object and double complement structures (*send a book to London*/**send London a book*), anything that is a legitimate Goal in the double object construction is also legitimate in the double complement construction, as a Goal selected by *to*. If *to* contributes a Jackendoff-style PATH to the semantics of the sentence, for instance, then we can attribute the superset-subset relation that Pesetsky claims exists between double-complement Goals and double-object Goals to the selection of both Goals and PATH endpoints by *to*. *Give* in the double object construction, without *to*, may only directly select ‘true’ Goals as arguments. When *give*'s Goal theta-selection is satisfied by a PP headed by *to*, the object of *to* may be anything which *to* allows. Since *to* selects endpoints to PATHs as well as ‘true’ Goals, the superset-subset relation springs into existence.

The present analysis adopts Pesetsky's central insight that the semantic distinctions we've observed between the two structures are caused by differences in the semantic contributions made by the two different P heads in the two structures. However, I claim that each head makes its own particular semantic contribution to the final interpretation. In particular, *G* is P_{HAVE} and the argument

occurring in its specifier is a Possessor. Clearly, incorporating P_{HAVE} into the theory, directly encoding a possession relation between the Goal and the Theme, will allow an account of all the contrasts we've just observed. Below, we argue that the differences in interpretation which are present in the two constructions cannot all be blamed on the semantics of *to*.

3.2. *Nonalternating double object constructions*

If the arguments selected by *to* are a superset of the Goals selected directly by *give*, then one might expect that any double-object structure should be able to alternate with a double-complement structure, although the reverse might not be true. (This is certainly the case in the *send a book to London* case which we've already seen.) However, there are examples which are legitimate in the double-object construction but not in the double-complement construction:

- (16) a. Mary gave John a kick.
 b. *Mary gave a kick to John.
 c. Bill threw Mary a glance.
 d. *Bill threw a glance to Mary.

Similarly, the original Oehrle's generalization facts occur in the double-object construction but not the double complement construction (examples taken from Pesetsky):

- (17) a. The war years gave Mailer a book
 b. *The war years gave a book to Mailer
 c. The absence of competition guaranteed Scorsese the prize money.
 d. *The absence of competition guaranteed the prize money to Scorsese.

In the same way, (18)a) can express the notion that Mary was merely impregnated by John, while (18)b) seems to entail that there is an existing child who was physically transferred:

- (18) a. John gave Mary a child.
 b. John gave a child to Mary.

If the null preposition *G* is in fact P_{HAVE} and contributes a possession relation to the semantics, this type of fact is expected: these examples of non-alternation involve cases where possession is necessary component of the relation between the Goal and the Theme arguments. On

the other hand, if *to* can express all the same Goal relations as *give* alone, plus some, the lack of alternation here is puzzling.

Admittedly, these facts can receive an explanation on a theory where *to* alone contributes extra information, as long as it *necessarily* contributes it. Let us assume that *to* does contribute a PATH-type meaning (it could be notated P_{PATH}), and, in fact, necessarily contributes this meaning. Then the contrasts in (16)-(18) can be explained as instances where the Theme in fact *cannot* move along a PATH, either because it is an abstract entity (as in (16)), or the ‘giving’ itself is abstract, not physical, and thus cannot have a PATH (as in (17) and (18))⁶.

The beginnings of a real distinction between the P_{HAVE} theory and *G* can be seen in the example in (9), repeated here as (19).

- (19) a. John taught the students French
b. John taught French to the students

As noted above, the implication that the students actually learned some French is much stronger in (19)a) than in (19)b). Pesetsky’s account, robust as it is, provides no explanation for this observation. On the P_{HAVE} story, however, the observation is expected: (19)a) involves a possession relation in the form of P_{HAVE} while (19)b) does not. In the next section, we return to the question of idioms, and show that Pesetsky’s approach falls somewhat short in this regard. In order to preserve a principled treatment of discontinuous idioms, a second abstract preposition, P_{LOC} is introduced in

⁶ It is worth noting, following Pesetsky, that the semantic contribution of *to* does explain a puzzling restriction, noted by Pinker 1989, on the availability of double object constructions with verbs of causation of motion. Consider the contrasts below (from Pesetsky’s examples (370-1)):

- i) Mary threw John the book/Mary threw the book to John
ii) Mary flung Sue the package/Mary flung the package to Sue
iii) *Mary pulled Sue the trunk/Mary pulled the trunk to Sue.
iv) *Mary pushed John the boulder/Mary pushed the boulder to John.

The verbs which are inadmissible in the double object structure are those where the causer of the motion must continuously impart force to the Theme to maintain the motion — essentially, the causer must *accompany* the Theme on its trajectory to the Goal. This entails that there must be a path along which the causer and the Theme travel, and it must receive realization as a PATH element introduced by the semantics of *to*; hence the double object form is illegitimate, as it does not contain any representation of PATH. See Pesetsky 1995 for further discussion.

Martha McGinnis (p.c.) notes that this restriction applies to the conceptual representation of the event, not to the individual lexemes involved, since as long as the act of, for example, *pushing*, can be conceived of as initiated momentarily by the causer resulting in unaccompanied motion of the Theme, the verb *push* can occur in the double object frame:

- v) Martha pushed John the folder/*the boulder.

the double complement structure, and the existence idioms which are only good in the double object structure (with P_{HAVE}) is demonstrated.

3.3. *Idioms revisited and the Alternative Projection approach*

In section 2.2, it was argued that one of the reasons to eschew a Transform approach to the dative alternation was that idioms in double complement constructions do not alternate — they don't have double object forms. On the other hand, although the hierarchical relations among arguments remains the same on Larson's and Pesetsky's approach, one of the attractive features of Larson's approach to idioms is not carried over in Pesetsky's treatment. Consider the bracketed structures which represent the initial double complement projections of each theory in (20):

- (20) a. Larson:
 [_{VP} The coach [_{V'} V_{empty} [_{VP} Mary [_{V'} sent [_{PP} to the showers]]]]]]]
 b. Pesetsky:
 [_{VP} The coach [_{V'} sent [_{PP} Mary [_{P'} to [_{DP} the showers]]]]]]]

In Pesetsky's approach, the verb *send* and the PP *to the showers* never form a constituent which does not contain the Theme argument. One of Larson's initial motivations for the VP-shell type theory was that idioms like *send X to the showers* were discontinuous. In order to receive an idiomatic interpretation, Larson argued, the verb and the PP must form a constituent at some level of structure, an attractive and constrained theory of idiom licensing. In fact, it makes the strong prediction that in the double complement construction, no Verb-Theme idioms should exist; more on that below.

It is less clear how idiom formation may be constrained in Pesetsky's approach. In the structure in (20)b), the verb's sister is the entire PP [Mary to the showers]. Admittedly, the verb satisfies two theta-selection requirements at once in this structure: it directly selects *Mary*, in the specifier of the PP, and selects the PP headed by *to*, which satisfies its need to select a Goal. It is ultimately *to* which selects the DP *the showers*, which gives the construction its idiomatic force.

Pesetsky could stipulate that idiomatic force could be specified for *send* when its mediated theta-selection of Goal ends up being of the DP *the showers*. However, on such a theory, it would be equally easy to specify verb-Theme idioms in this structure; presumably, anything the verb selected for could be idiomatically interpreted to the exclusion of anything else. Such a theory is considerably laxer than Larson's.

It might be the case that such a theory is necessary, however. Consider the idioms in (21), from Larson's example (11):

- (21) a. Max *gave his all* to linguistics.
 b. Alice *gives hell* to anyone who uses her training wheels.
 c. Oscar will *give the boot* to any employee that shows up late.
 d. The Count *gives the creeps* to everyone.
 e. Phyllis should *show her cards* to other group participants.

These, if they are true idioms, would be counterexamples to Larson's strong claims that a) the verb must form a constituent with the element that gives it its idiomatic interpretation and b) that the double object form is derived from the double complement form, as nowhere in his derivation does the verb form a constituent with the Theme alone. Larson argues that they are not true idioms, pointing to examples like those below:

- (22) a. Linguistics gets [my all]
 b. I caught/got [hell] from Alice
 c. Peter got [the boot]
 d. Geez, you get [the creeps] just looking at him.

Because these DPs receive their idiomatic interpretation even when the verb *give* is not present, Larson argues, they are not idioms in combination with the verb, but rather independent, idiomatically interpreted opaque DPs.

If what Larson says about example (22) is correct, the existence of idioms like those in (21) cannot be taken as evidence for a Pesetsky-style theory, since they are not instances of the verb forming an idiom with the Theme. Following Richards 1999, we argue below, that Larson's account of (21) and (22) is not correct, but also that the approach necessitated by Pesetsky's structure is unnecessarily unconstrained. In order to maintain Larson's attractively restrictive theory of idioms-

as-constituents, we will introduce a counterpart to P_{HAVE} , P_{LOC} , corresponding to Larson's lower VP-shell in the double complement structure.

3.4. *Idioms as constituents and P_{LOC}*

What are the predictions of the present account as we have so far presented it? If P_{HAVE} is a separate predicate which raises to v_{CAUSE} to ultimately be spelled out as a double-object verb, then there ought to be idioms in the double object construction where the Theme forms an idiom with P_{HAVE} , on either Larson's or Pesetsky's approach. Consider the structure for double object forms in (23):

(23) [_{VP} Agent [_{V'} CAUSE [_{PP} Goal [_{P'} P_{HAVE} [_{DP} Theme]]]]]]

P_{HAVE} will form a constituent with the Theme, and obviously will also select it. There definitely ought to be P_{HAVE} +Theme idioms. Fortunately for P_{HAVE} , there are examples of double object-structure idioms in which the verb discontinuously composes with the Theme:

- (24) a. His advisor really gave John a kick in the pants.
 b. *His advisor really gave a kick in the pants to John.
 c. Susan gave Bill a piece of her mind.
 d. ??Susan gave a piece of her mind to Bill.
 e. Nancy showed Ronald the error of his ways.
 f. ??Nancy showed the error of his ways to Ronald.

For these, then, we can maintain a Larson-style idioms-as-constituents approach. How can we do the same for Larson's original examples of double-complement idioms? If they are true idioms, they should have the structure illustrated in (25):

(25) [_{vP} Agent [_{v'} CAUSE [_{PP} Theme [_{P'} P_{LOC} [_{PP} to Goal]]]]]]

If this is the correct structure, with an abstract locative preposition taking the place of Larson's lower V head, Larson's account of compositionality and idiom formation can be maintained. In an example like *The coach sent Mary to the showers*, P_{LOC} will form a constituent

with the Goal PP⁷, and the idiomatic force is established at the level of the P' constituent. The failure of such idioms to shift, of course, is explained because the preposition which is present in double complement constructions is absent in double object constructions.

It seems odd, however, that examples of idioms with P_{LOC} should be so seemingly much more abundant than examples with P_{HAVE}. We wish to claim, however, that this is only an apparent phenomenon. Let us reconsider Larson's examples of verb-Theme idioms from example (21) above.

Interestingly, Larson presents them all as double-complement constructions, despite the fact that they are felicitous in the double-object structure:

- (26)
- a. Max gave linguistics his all.
 - b. Alice gives everyone hell.
 - c. Oscar will give John the boot.
 - d. The Count gives everyone the creeps.
 - e. Phyllis should show everyone her cards.

In fact, the examples in (26) are much more natural than the double-complement examples given by Larson in (21). If these are in fact examples of true idioms, on the Alternative Projection approach we would not expect them to shift at all. In fact, there are examples which do not, as we saw in (24) above.

On the present account, we suggest that the examples in (26) are in fact true idioms, with P_{HAVE} combining with its DP complement to produce the idiom. Larson's examples of these idioms in double complement constructions in (21) are suspicious in that the object of *to* in most cases is remarkably prosodically heavy. As these DPs become lighter, the double complement version of the idiom gets considerably worse, often as bad as the double complement examples in (24) above:

- (27)
- a. ?*Max gave his all to it.
 - b. ??Alice gave hell to him.
 - c. ??Oscar gave the boot to Susan

⁷ The apparent "doubling" of prepositions, P_{LOC} + *to*, is necessary to maintain the account of idiomaticity presented here: if P_{LOC} does not exist, *sent* will never be in a local relation with *to the showers* and no structurally local definition of idiomaticity will be possible. The proposal is consistent with the behavior of *to* in combination with other, overt prepositions, however; consider pairs such as *on/onto* and *in/into*. *To*, as discussed earlier, contributes the notion of PATH to the preposition with which it combines (contrast *Mary fired a bullet in the building/into the building*); it is possible that it never occurs alone, but is always attached to a covert locative P, presumably P_{LOC}.

- d. ??*The Count gave the creeps to Joe.

Larson's examples are engineered to sound acceptable in the double complement structure with extremely heavy Goal arguments. In fact, these are P_{HAVE} idioms.⁸

How, then, can we account for the carryover of their idiomatic status in the examples with the verb *get* in (22), cited by Larson as evidence that these are not true idioms? In fact, as shown by Richards 1999, this very acceptability constitutes support for the $P_{HAVE}+$ Theme idiom proposal here. Consider the versions with *get* again, repeated below as (28):

- (28) a. Linguistics gets [my all]
 b. I caught/got [hell] from Alice
 c. Peter got [the boot]
 d. Geez, you get [the creeps] just looking at him.

Larson asserts that this demonstrates the independence of the DP from the verb *give*, and hence that any idiomatic force resides in the DP alone, not the verb+DP combination. As Richards points out, if Larson is correct we should see these DPs appearing freely anywhere more pedestrian DPs might be licensed, much as idiomatic DPs like *the Big Apple*, *red tape* or *bubbly* are free to occur wherever *New York*, *administrative difficulties* or *champagne* might show up. This is not the case, however — sentences like *The boot upset Peter* are not interpretable on an idiomatic reading.

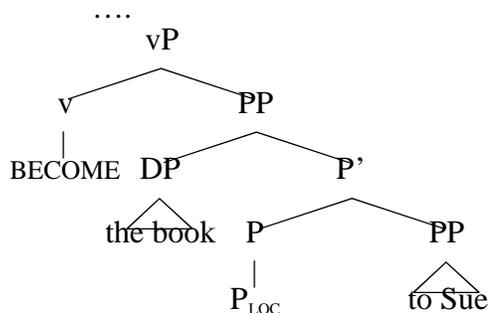
The answer to the problem comes from an observation of Pesetsky's (p. 124), concerning the semantics of *get*. He notes that *get* is subject to the same restrictions on argument ordering that double object/double complement verbs are. Consider the sentences in (29) (Pesetsky's (341)):

- (29) a. The book got to Sue.
 b. Sue got the book.
 c. The book got to France.
 d. *France got the book.

⁸ As Richards points out (p.c.), the argument presented here that Larson's original double complement versions of these idioms as listed in (21) are instances of Heavy NP Shift imply quite a peculiar notion of the whole Heavy NP Shift process — for instance, that the switch to a double complement structure (which on the theory here is crucially a strongly thematic, projection-type process) can occur late in the derivation on the PF side, when an NP is found to contain a lot of phonological material after Spell-Out. Clearly, the issue requires considerably more investigation before an internally consistent story will be available.

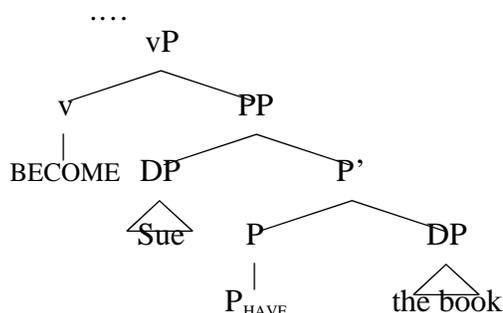
As Pesetsky notes, as long as *get*'s surface subject is analyzed as an underlying object, such that its structure is that illustrated in (30), then *get* is simply an unaccusative version of *give*, with both the double object and double complement possibilities. No agent is generated in SpecvP, and hence the nearest DP argument to SpecTP will move (via Attract) to satisfy the EPP in SpecTP⁹:

- (30) a. double complement structure
The book_i got t_i to Sue.



- b. double object structure

Sue_i got t_i the book.



Since *get* cannot passivize, this unaccusative analysis makes sense:

- (31) a. *Sue was got to by the book.
b. *The book was got by Sue.

Along the lines of Richards 1999, then, the structure for *get* when the Theme is its direct object and *to* is not present, is as in (30b). P_{HAVE} will raise to the v_{BECOME} head and be realized as *get*. However, any idiom which comprises the P' headed by P_{HAVE} will be perfectly legitimate in this structure, and hence Larson's examples in (28) are not counterexamples to the present account. In fact, the

⁹ Cf. McGinnis 1998 on locality and A-movement.

poorness of the examples in (32) can be taken to show that Larson's double complement versions of these idioms are only good because of their prosodic structure, since when the vP contains only one DP at Spell-out, the *to*-Location version is clearly ungrammatical:

- (32) a. *His all got to linguistics.
 b. *Hell got to me.
 c. *The boot got to Peter.
 d. *The creeps gets to you just looking at him.

We thus end up with a restrictive theory of discontinuous idioms in these constructions, much like Larson's, according to which the verb plus its direct object (Theme on double complement structure, Goal on double object structure) never form a constituent by themselves, and are hence not expected to form idioms. On closer examination, Larson's putative examples of such idioms were shown to be prosodically manipulated cases of well-behaved idioms. See Richards 1999 for further discussion.

3.5. *Summary*

Thus far, we have seen purely English-internal lexical semantic evidence for a distinction between the double object and double complement structures, and have motivated an Alternative Projection account of these structures on that basis. In order to capture these distinctions, we've replaced Larson's lower VP shells with P_{LOC} (in the double complement structure) and P_{HAVE} (in the double object structure), in a fashion similar to Pesetsky's proposal. On the basis of the evidence from idioms, however, we need to distinguish P_{LOC} from *to*, which is a departure from Pesetsky's approach; further, we maintain that the contribution of the v head is either one of the change-of-state predicates CAUSE or BECOME, and that the verb's basic interpretation is determined by combining these predicates with the semantic content of the P head. In the next section, we move to more purely syntactic considerations, and consider the existence and function of these prepositions cross-linguistically. We return to the question of lexical decomposition in section 5.

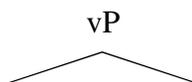
4. Prepositional HAVE cross-linguistically

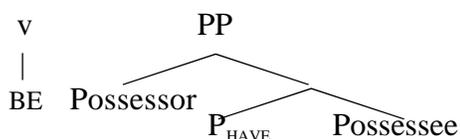
As we have seen, the current analysis suggests that on the double object use, the complement to vP is a PP headed by an abstract P denoting the relation HAVE, while on the double complement use, the complement to vP is headed by an abstract P denoting the LOC relation. In this section, we examine the relationships between the actual verb expressing possession and the availability of a double-object type structure. If simple possession is expressed by the same P_{HAVE} as we have posited for the double object construction, we should expect to see a correlation between the existence of double object structures and possession structures in a given language.

Now, of course, there is nothing new about thinking about HAVE as a preposition, rather than a verb. As first noticed by Benveniste 1966, many languages represent the possessive as BE plus some spatial or locative preposition. Among others, Guéron 1995, Freeze 1992 and Kayne 1993 have proposed to encode this decomposition as part of UG. The claim is, essentially, that all languages represent *have* underlyingly as BE+Prep, and that languages with verbal *have* simply incorporate the P into the BE verb to produce *have*.

The works just cited make a typologically two-way distinction, between those languages that express possession with verbal *have*, combining the preposition with the copula, and those that express possession without such combination, realizing the preposition and a copula separately. I propose to argue here that in fact this typology is inadequate, and that a third type of language exists which does not possess the preposition necessary to express the HAVE relation, that is, they lack P_{HAVE} . These languages represent possession with what is essentially a locative structure, using P_{LOC} rather than P_{HAVE} . The predication is that such languages will not have double object-type structures, in which the Goal c-commands the Theme. The proposed structures for possessive and locative structures, along with the corresponding double object/double complement structures, are illustrated in (34):

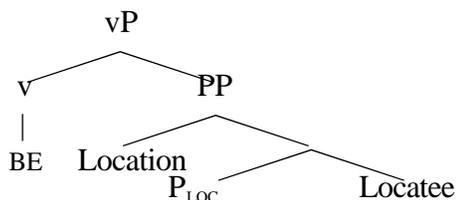
(33) a. Possession (in English)





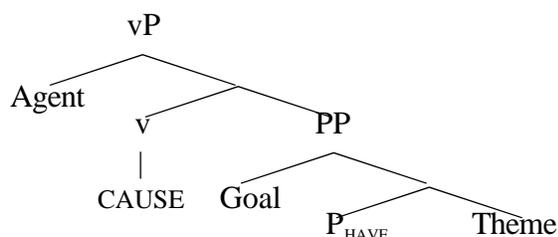
'Mary has a book.'

b. Location



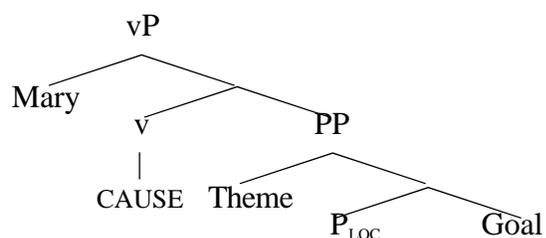
'Mary is in the garden.'

c. Double object *give*



'Mary gave John a book.'

d. Double complement *give*



'Mary gave a book to John'.

The essential structural feature we use to test whether or not a language has P_{HAVE} is that which has distinguished the double object from the double complement structures for Larson. That is, if a language has P_{HAVE} , the possessor in the specifier c-commands the possessee in the complement. More precisely, the tail of any chain involving the possessor will c-command the tail of any chain involving the possessee. If P_{HAVE} is not present in a given language, it will use P_{LOC} to

express possession, and possessions will then always c-command possessives. Irish and Diné (Navajo) are languages of this type, lacking P_{HAVE} , while Japanese, Hindi, Hebrew, and others, despite not conflating P_{HAVE} with BE, do use P_{HAVE} , as of course do languages with verbal *have*. We show that if the possessor c-commands the possessee in HAVE constructions, it also may do so in constructions with double object-type verbs like *give*, even in languages like French which do not obviously have a morphological double-object construction.

4.1. *The decomposition of verbal have*

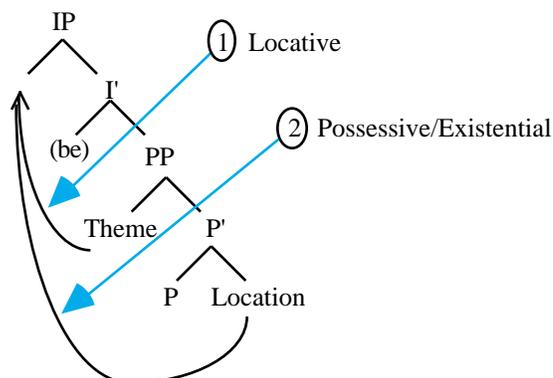
Let us first consider one of the original HAVE-as-preposition proposals, Freeze 1992. Take Freeze's Hindi examples, in (35). Freeze's aim is to unite locatives, existentials and possessives in a single paradigm. He notes that for Hindi, and for many languages that express possession using a copula with a prepositional element rather than a verbal *have*, the expression of locatives (35)a is remarkably similar to the expression of existentials (35)b), with the difference that the location and locatee arguments are reversed. Possessives (35)c) in these languages look like existentials, with the location/possessor c-commanding the locatee — essentially, he views possessives as being existentials with a human location.

(34) HAVE as a preposition: Freeze 1992

- a. Locative maNiN hindustaan-meNeN thaa
 I India-in BE.SG.MSC.PST
 Theme Location V
 “I was in India”
- b. Existential kamree-meNeN aadmii hai
 room-in man BE.3SG.MSC.PRES
 Location ThemeV
 “In the room is a man”
 (‘There is a man in the room’)
- c. Possessive larkee-kee paas kattaa hai
 Boy-OBL-GEN near dog BE.3SG.MSC.PRES
 Location(Possessor) Theme V
 “The boy has a dog. (Lit, “Near the boy is a dog”).

Freeze proposes that the underlying structure in all three cases is the same, with the Theme (locatee) c-commanding the Location/Possessor. The difference between the location and existential/possession interpretations, on his analysis, results from differences in the derivation to Spell-Out, illustrated in (36). In locatives, the highest, Theme argument raises to subject position, while in existentials or possessives, the lower location/possessor element raises to subject position, skipping the intervening Theme.

(35) Freeze 1992: same structure, different derivations:



He suggests that the choice between the two derivations is motivated by the well-known Definiteness Effect, as it is manifested in existentials: the thing asserted to be existing (the Theme), cross-linguistically, must be indefinite. Indefinites must remain within the scope of the existential operator, and hence within in the VP, according to a treatment like that of, for example, Diesing 1991, and Freeze hence argues that the only argument that can raise out of the PP in existentials is the location argument. Freeze does not address the theoretical apparatus necessary to allow Minimality-violating movement of this type, driven by the definiteness of an intervening DP, but presumably indefinite DPs would lack some feature relevant to the Attract operation of, e.g., Chomsky 1995, hence they would not compete for checking privileges with the lower DP.

This approach to distinguishing between the two constructions has two drawbacks. Firstly, it raises questions about Freeze's unification of the existential and possessive constructions, as it is

trivially obvious in many languages of this type that in possessives there is no definiteness restrictions on the Theme argument¹⁰. This can be seen for Japanese and Hindi in (37):

- (36) a. Hindi:
 us-laRkee-kee paas mera kutta hai
 That-boy-G near my dog is
 That boy has my dog.
- b. Japanese
 John-ga/ni zibun-no uti-ga aru
 John-N/D self-gen house-N exist
 “John has his house”

The second problem arises in languages which show *no* variation in argument order between locatives, existentials, and possessives, such as Scots Gaelic (from Freeze) or Irish (which we will consider in detail below). It looks as if the derivation in these languages is always the same, with the Theme raising no matter whether the meaning is locative, possessive or existential¹¹. Freeze proposes that these languages simply do not exhibit the semantic restriction on syntactic partition imposed by the definiteness effect.

While recognizing the fruitfulness of the decomposition approach, here we will pursue an alternative version that allows a non-stipulative approach to the lack of variation in word order in this type of language.

The alternative presented here is that locative and possessive constructions in languages like Hindi are derived from different underlying structures, with different prepositions, where the highest argument becomes the subject exactly as can be seen in the locative and possessive structures proposed for English in (34)a) and (34)b) above. In Hindi, however, P_{HAVE} does not incorporate into the verb BE in the possessive structure, resulting in the appearance of the copula in the surface form. In English, P_{HAVE} does incorporate, giving the verb *have*. The difference between Hindi and English type languages on the one hand, where the possessor/location becomes the subject, and languages like Scots Gaelic on the other hand, in which the possessee becomes the

¹⁰At the same time, there are some languages of this type where definiteness does seem to play a role in argument order in possessives, in for example Hungarian Szabolcsi 1994. I will refrain from treating these languages here, although it seems possible to me that definiteness restrictions on Topics in such languages may be responsible.

subject, is that the latter *lack* P_{HAVE} entirely. Separate arguments from psych predicates for Irish as a HAVEless language have been presented by Noonan 1993; see the discussion of psych predicates in section 6 below.

If there are languages which lack P_{HAVE} entirely, they should then also lack the double object structure in verbs like *give*. That is, they should never generate a structure in which the Possessor or Goal c-commands the Theme. On the other hand, languages like Hindi which contain P_{HAVE} should, in principle, allow the Possessor or Goal to c-command the Theme, even if the P_{HAVE} is not incorporated in the surface form. In the next two sections, we examine examples of each type of language.

4.2. HAVE-not languages

Let's first consider Irish, which behaves for the purposes of Freeze's distinctions like Scots Gaelic, as you can see in (37) below; the locative, existential and possessive all involve the same ordering of theme and location arguments. In present terms, Irish does not have P_{HAVE} , which permits the location to c-command the theme in possession structures. Note that the c-command relations that are suggested by linear order are confirmed by binding phenomena; quantified possessors cannot bind pronouns in their possessives (37)d) (recall that Irish basic word order is VSO):

(37) a. Locative

Tá an mhin sa phota.
BE the (oat)meal in.the pot
 “The oatmeal is in the pot.”
V ThemeLocation

b. Existential

Tá min sa phota
BE oatmeal in.the pot
 “There is oatmeal in the pot”

¹¹ McCloskey 1996 demonstrates for Modern Irish that the subject position is derived, not base-generated, so a no-movement approach to the Irish/Scots Gaelic data is not tenable.

V ThemeLocation

c. Possessive

Tá an peann ag Máire
BE the pen at Mary
 “Mary has the pen”
V ThemeLocation

d. Possessor cannot c-command possessee:

*Tá aḡ pheann-fhéin ag chuileḡ bhuachaill
 Is his pen-self at every boy
 "Every boy has his pen"

Now, if Irish doesn't have P_{HAVE} , then its triadic verbs should always express Goal arguments as objects of prepositions, never allowing them to function as some kind of direct object, as in English double object constructions. This you can see in (38)c). Further, and more germane to the point, the Goal argument should never be in a position to c-command the theme in Irish, which you can see is the case for binding phenomena in (38)d).

(38) *Double object constructions in Irish:

a. Thug Míleó caisearbhán do Bhinclí
 Gave Milo dandelion to Binkley
 “Milo gave a dandelion to Binkley”

b. *Thug Míleó do Bhinclí caisearbhán
 Gave Milo to Binkley a dandelion
 “Milo gave to Binkley a dandelion”

c. *Thug Míleó caisearbhán Bhinclí
 Gave Milo dandelion Binkley

*Thúḡ Míleó Bhinclí caisearbhán
 Gave Milo Binkley dandelion
 “Milo gave Binkley a dandelion”

d. Goal cannot c-command Theme.

*Thug Míleó aḡ pheann-fhéin do chuileḡ bhuachaill
 Gave Milo his pen-self to every boy
 Milo gave every boy his pen.

To summarize the Irish case: Irish lacks P_{HAVE} , using only P_{LOC} . Possession is expressed as a locative. Further, since the agentive verb *give* decomposes into a CAUSE morpheme plus a P_{LOC} morpheme, and has no available CAUSE+ P_{HAVE} variant, there is nothing resembling a double object construction in Irish, where the Goal argument c-commands the Theme argument.

Another language where the possessor c-commanding the possessee correlates with the lack of double object construction is Diné (Navajo). Rather than binding evidence, a language-internal inversion marker is the c-command test used here. Again, the data are clear: in possession sentences, a possessor does not c-command a possessee, and similarly, in triadic argument structures, Goals may not c-command Themes.

An instance of a typical possession sentence is seen in (39) below:

- (39) Diné possessive:
 Diné -ívív' b-ee hólóv
 man horse he-with exists
 “The man has a horse” (Lit. “The man, a horse is with him”).

In Diné, unmarked word order is SOV, which might seem to suggest that the possessor is the subject of (39). There is a wrinkle in the possessive construction in (10), however. The realization of the pronoun “he” in the oblique PP as *b-* indicates that *inversion* has taken place - that is, that the possessor-possessee ordering is derived, by (topicalizing) movement of the possessor over the possessee, rather than base-generation. Inversion in this construction is usual, forced by the animacy hierarchy of Diné: when an object outranks a subject on the hierarchy, (which it usually will, as possessors tend to outrank possessee) it must be fronted to sentence-initial position (Hale 1973). This is why the *man* DP precedes the *horse* DP. Crucially, the marker *y-*, which would indicate that the observed order is base-generated, can never appear in the possessive construction, no matter what the order of the arguments (40):

- (40) a. *Diné -ívív' y-ee hólóv
 man horse he-with exists
 “The man has a horse.”
 b. *-ívív' shi-zhé'é y-ee hólóv
 *horse my father he-withexists
 “My father has a horse.”

If (40)a) were grammatical, it would indicate that possessor-possessee was a possible base-generated order, and hence that the possessor could c-command the possessee. The mandatory use of the *b-ee* construction indicates that the possessor object has moved over the possessee subject,

that is, that inversion has taken place. Hence, the base configuration of possession structures in Diné is the same as that in Irish.

Now, let's consider a construction with a triadic verb. The goal object, as seen in (41) appears in a prepositional phrase headed by a preposition corresponding to "to", as in the English double complement construction. Note that the PP in which the Goal argument marker *yi-* appears must always be linearly ordered after the theme. The theme, in direct object position, is marked on the verb with the *yi-* affix.

- (41) Shizhé'é sitsilí tᵀ÷óóᵀ yi-ch÷iv÷ hada-y-ííᵀ-déél
 My father my little brother rope him-to down-it-PERF-TR-handle
 My father tossed the rope to my little brother

(Inversion is optional here, as both the subject and the Goal are animate. When *my little brother* is inverted to the front of the clause, as in (42), the *b-*morpheme appears in the prepositional phrase.

- (42) Sitsilí shizhé'é tᵀ÷óóᵀ bi-ch÷iv÷ hada-y-ííᵀ-déél
 My little brother my father rope him-to down-it-PERF-TR-handle
 My father tossed the rope to my little brother)

A construction where the Goal behaves as a direct object of the verb is impossible — that is, where the agreement marker for the Goal argument shows up on the verb, like object agreement, rather than in a prepositional phrase as above (43):

- (43) *Shizhé'é sitsilí tᵀ÷óóᵀ hada-yi-y-ííᵀ-déél
 My father my little brother rope down-him-it-PERF-TR-handle
 My father tossed my little brother the rope.

In recent work, Jelinek 1999 also argues that Diné lacks “Dative Movement”; she notes that all oblique arguments in Diné are marked with postpositions, and when these postpositional phrases are on occasion phonologically incorporated into the verb word, they remain distinct from (and outside) the incorporated subject and object pronouns. For our purposes, the lack of the double object construction in the language in combination with the possessee-possessor order of argument base-generation demonstrates that Diné behaves as if no P_{HAVE} is available in the language.

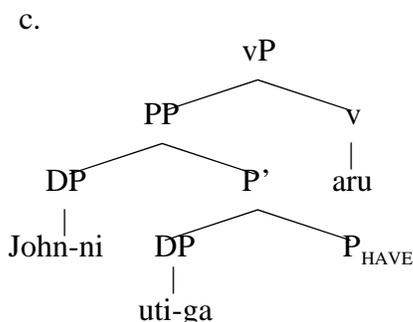
4.3. *HAVE languages*

Let us move on to the more familiar languages which contain P_{HAVE} languages. There are two aspects of P_{HAVE} languages that require investigation on this account. First, languages that apparently have no verbal P_{HAVE} form but do have a double object form must be shown to in fact contain the preposition P_{HAVE} , in our terms. In such languages, in copular expressions of possession, the (often quirky-case-marked or PP) possessor c-commands the possessee. Second, we must demonstrate the existence of a double-object like construction in languages where the case-marking or word order don't obviously suggest such a construction. As should be clear by now, the presence of a “double object” construction in a language is shown by demonstrating that the Goal can c-command the Theme, or, with caution, by demonstrating other direct object-like morphosyntactic properties.

English is of course our paradigm case, where the assumption that an alternation in word order represents a different syntactic configuration is borne out by changes in case-marking and binding possibilities between the Goal and the Theme object, as well as by the fact that, depending on whether the passive is formed from the double object or double complement construction, either the Goal or the Theme can become the subject of the passive. This familiar data is repeated in (44)—(46) below:

- (44) C-command in possessives:
 a. Every girl_i has her_i test paper.
 b. *Its_i owner now has every dog_i.
- (45) C-command in double object constructions:
 a. Susan sent every owner_i his_i dog.
 b. *Susan sent its_i owner every dog_i.
- (46) Movement to subject position in passive:
 a. Every owner was sent his dog.
 b. *Every dog was sent its owner.
 c. Every dog was sent to its owner.
 d. *To its owner was sent every dog.

4.3.1. A *HAVE* language without verbal *have*: Japanese



The subject's case is properly analyzed as quirky, assigned to it by the P_{HAVE} . The nominative object, despite its overt case, is in object position and receives structural case. See Harley 1995; Schütze 1996; Ura 1996 for extensive discussion of mechanisms of case assignment in such instances.

Having shown that in Japanese, unlike Irish, the possessor c-commands the possessee, we can now move on to show that Japanese has both a double object and a double complement construction. Consider a clause whose verb is the typical double-object verb *give*, illustrated in (49). Both Goal-Theme and Theme-Goal orders are possible, with no obvious change in the observed morphological marking.

- (49) a. Bugs-ga Daffy-ni piza-o age-ta
 Bugs-NOM Daffy-DAT pizza-ACC give-PAST
 “Bugs gave Daffy a pizza.”
- b. Bugs-ga piza-o Daffy-ni age-ta
 Bugs-NOM pizza-ACC Daffy-DAT give-PAST
 “Bugs gave a pizza to Daffy.”

Here, of course, we need to demonstrate that one order is not generated by scrambling from the other order. Japanese is well-known as a scrambling language, and the two orders indicated in (49)a) and (49)b) could conceivably be derived via scrambling of one argument across the other, rather than by base-generation in P_{HAVE} and P_{LOC} variations.

Miyagawa 1997 argues that in fact, scrambling is not employed to generate the two distinct orders illustrated above, and that each order is independently base-generated, as the present account predicts. Here we will consider just one of his arguments in support.

We can show that the two orders are not equivalent by closely examining the nature of the *ni*-marker in each case. The *ni*-marker (labeled DAT in the examples) is ambiguous between a preposition and a case-marker (argued extensively in Sadakane and Koizumi 1995). If it can be shown that in one order, the *ni*-marker is a case-marker and in the other order it is a preposition, we have evidence that the two orders are not scrambled variants containing the same basic elements, but rather are structurally distinct at base-generation.

Numeral quantifiers associated with a *ni*-marked argument can appear “floated” to the right of their argument only when the *ni*-marker is a case-marker. A numeral quantifier to the right of a prepositional *ni*, on the other hand, downgrades the grammaticality of a sentence significantly. In the double object case (50)a), where the dative argument precedes the accusative argument, floating of the quantifier is legitimate, suggesting that the *ni* in this case is a case-marker. In the double complement case, (50)b), on the other hand, where the accusative argument precedes the dative argument, floating of the quantifier produces a marginal sentence, indicating that the *ni* is a preposition.

- (50) a. Bugs-ga tomodati-ni 2-ri piza-o age-ta
 Bugs-NOM friends-DAT 2-CL pizza-ACC give-PAST
 “Bugs gave two friends pizza.”
- b. ???Bugs-ga piza-o tomodati-ni 2-ri age-ta
 Bugs-NOM pizza-ACC friends-Prep 2-CL give-PAST
 “Bugs gave pizza to two friends”

Now, this is in accordance with the predictions of the current account. Note that the word-order facts correlate with the English double-object construction word-order facts: when the Goal argument is introduced by a preposition, the Theme precedes the Goal, as in the English double complement construction. When the Goal argument is introduced by a case-marker, the Goal precedes the Theme, as in the double object construction. Any analysis proposing to derive the above ordering alternations using optional scrambling cannot account for the difference in the status of *ni* between the two. Thus, we can conclude that Japanese is a language with P_{HAVE} , and hence has a double object construction, supporting our correlation.

Interestingly, some evidence from Japanese idioms is available which indicates the non-equivalence of the two orders as well, on a par with the evidence introduced for English in sections 2.2 and 3.3 above. McGinnis 1998, notes the following contrast:

- (51) a. Taroo-ga hi-ni abura-o sosoida.
 Taroo-NOM fire-DAT oil-ACC poured
 “Taroo made things worse”
 (Lit. “Taroo poured oil on the fire.”)
- b. #Taroo-ga abura-o hi-ni sosoida.
 Taroo-NOM oil-ACC fire-DAT poured
 “Taroo made things worse.”

The idiomatic reading of the phrase, “pour oil on the fire” meaning roughly “make the situation worse,” is only available in the DAT-ACC ordering, not in the ACC-DAT ordering, in much the same way that “give someone a piece of your mind” doesn’t receive the idiomatic reading in the double complement ordering. While a scrambling account could no doubt provide an explanation of this contrast, some extra mechanism would be needed to explain the loss of idiomatic interpretation on the scrambled order. On the current account, however, this result follows naturally: different base-generated prepositions and hence different lexical semantic content are present in the two orders, and the idiomatic reading is specified for only one of the prepositions.

4.3.2. A HAVE language without verbal *have*: Yaqui

Another case of a language with both a double object construction and a possessor-possessee structure in the possessive construction, yet lacking an explicit verbal form like *have* is Yaqui, an Uto-Aztecan language. There are strong morphosyntactic and semantic indicators that its situation is like that of English.

Jelinek 1997 argues that possession in Yaqui is expressed not by incorporating the HAVE preposition into the verb, but rather by incorporating the entire possessed N head into the empty verbal position. A typical possessive sentence and (a simplified version of) the structure she assigns to it is illustrated in (52):

- (52) a. ‘aapo livrom-ek

- he book-PERF
 “He has a book” (Lit: “He is booked”)
 b. $[_{IP} [_{DP} \text{'aapo}] [_{I'} [_{VP} [_{DP} t_i] [_{V} \text{livrom}_i]]] [_{I} \text{-ek}]]$

Yaqui is also a right-headed language. In (52)b), the possessee DP, which starts out in argument position as complement to V (in our terms, as complement to the P_{HAVE} head), incorporates into V, and receives the perfective marking *-ek* in Infl. This “bahuvrihi” possessive construction, notes Jelinek, is analogous to the English construction in (53) (only available for inalienably possessed things in English):

- (53) a. He is long-haired/brown-eyed/warm-hearted.
 b. She is talented/gifted/conceited.

The incorporation account receives support from facts like those in (54), where the moved noun leaves in its base position a definite determiner and adjective, both marked with accusative case.

- (54) ‘aapo $[_{DP}$ ‘uka siali-k $t_i]$ kar_i-ek
 he Det.ACC green-ACC t_i house_i-PERF
 “He has that green house”

Since incorporation, like all head-movement, must proceed stepwise upward in the tree, we can conclude that the possessee is in the complement position, and that Yaqui is a language with a possessor subject and a possessee object in possession constructions, and hence uses P_{HAVE} . In the current analysis, the essential structure of the sentence in (54) is indicated in (55):

- (55)
-

The head N incorporates into P_{HAVE} and then the whole complex incorporates into the null copula.

Now, to turn to the double object/double complement construction, Jelinek 1999 demonstrates the existence of both types of construction in Yaqui. Yaqui has ditransitives whose internal arguments are marked with accusative and dative case, but it also allows a small class of

verbs to mark their internal arguments with two accusative cases. These two verb classes are illustrated in (56):

- (56) a. 'aapo Huan-tau 'uka vachi-ta maka-k
 he John-DAT Det.ACC corn-ACC give-PERF
 "He gave the corn to John"
- b. 'aapo Huan-ta 'uka vachi-ta miika-k
 he John-ACC Det.ACC corn-ACC give(food)-PERF
 "He gave John the corn."

What is particularly significant for our purposes is that when a verb selects two accusative-marked internal arguments, the Goal argument must be animate, and Jelinek notes that their Goal arguments must be interpreted as "strongly affected". Verbs which have double accusative marking include "teach", "borrow", and "take". She points out that this distinction between ACC/ACC and ACC/DAT verbs is strongly similar to the interpretive differences between double complement and double object verbs which were discussed extensively in sections 2 and 3. In our terms, the ACC/ACC verbs are those which contain P_{HAVE} , while the ACC/DAT verbs contain P_{LOC} , and the difference in semantic interpretation results from the different semantic contribution made by these two heads.

One final note on Yaqui: Yaqui is one of the languages which contains overt affixes that can realize the CAUSE head which projects the vP.¹² One double object verb, meaning "show" is made up of such an overt affix plus the verb 'see', and is exemplified in (57)a). (When this verb occurs with an ACC/DAT array, it means 'send', rather than 'show', as exemplified in (57)b) below.)

- (57) a. 'aapo 'uka kava'i-ta ho'ara-ta vit-tua-k
 he Det.ACC horse-ACC house-ACC see-CAUSE-PERF
 "He showed the horse the house."
- b. 'aapo 'uka kava'i-ta ho'ara-u vit-tua-k
 he Det.ACC horse-ACC house-DAT see-CAUSE-PERF
 "He sent the horse to the house."

Yaqui, then, is well-behaved according to our prediction: possessors c-command possessees and Goals, when marked ACC, must be animate and affected, while DAT marked Goals show no such

¹² For discussion of similar morphosyntactic evidence for such heads in Japanese, see Harley 1995.

restriction. The correlation of the morphosyntactic case marking with the semantic interpretation, as in English, is evidence that both the double object and double complement structures are licensed in the language.

4.3.3. HAVE languages without apparent double object constructions: Romance

We have seen that morphological indicators are not necessarily the best clues available about the locus of base-generation of Goal and Theme arguments, as the Japanese evidence shows. It is worth considering, however, data from languages that trivially have P_{HAVE} , as they clearly have a verbal "have" form, but do not obviously have a double-object construction which is morphologically marked as such. Many Romance languages are of this type.

Consider first the case of Italian. The Goal object in Italian must always be marked with the prepositional marker *a*, suggesting perhaps that there is no double object construction in Italian. This is confirmed by the necessary word order of Theme followed by Goal. However, despite this apparent uniformity of status of the Goal argument, binding of the two objects is possible in either direction, as shown in Giorgi and Longobardi 1991. This is seen in example (58) below. In (58)a), the Theme can bind into the Goal, and in (58)b) the Goal can bind into the Theme. Note especially the contrast that these facts present with the Irish data, where the word order and case-marking facts are the same, but the binding facts are different.

- (58) a. Una lunga terapia psicoanalitica ha restituito Maria_i a se stessa_j
 "A long psychoanalytic therapy restored Maria to herself"
 b. Una lunga terapia psicoanalitica ha restituito se stessa_i a Maria_j
 "A long psychoanalytic therapy restored herself to Maria".

Similar data can be seen for French in (59) below.

- (59) a. Marie a donné son_i crayon à chaque_i garçon.
 "Mary gave every boy his pencil."¹
 b. Jean a introduit chaque_i institutrice à ses_i élèves.
 "Jean introduced every teacher to her students."

Miller 1992 has argued that the French *à* is in fact a case-marking element, rather than a true preposition, using evidence from conjunction and other constructions. Certainly, the binding

evidence leads us to conclude that at some level of representation, the Goal argument may c-command the Theme argument in these languages. If this is the case, we can maintain the hypothesis that the presence of P_{HAVE} in these languages results in the presence of a double-object-like construction.

4.4. Summary

In this section, we have provided evidence suggesting that the absence or presence of P_{HAVE} in a language correlates with the absence or presence of a ditransitive construction in which the Goal may c-command the Theme, that is, of a double object construction. Irish and Diné were given as examples of languages where P_{HAVE} is absent. In these languages, in simple expressions of possession, possessives c-command possessors, and in ditransitive constructions Themes always c-command Goals. English, Japanese and Yaqui were given as instances of languages where the presence of P_{HAVE} correlates with the existence of a double object construction. In Japanese P_{HAVE} does not incorporate with the *v* head, resulting in a copular expression of possession; nonetheless, the possessor c-commands the possessee. Japanese Goals and Themes may occur in either order; when the Goal appears in second position, however, its *ni*-marker, normally thought to be simple dative case, can be shown to be prepositional in nature. The different orders therefore represent different base-generated argument structures, one with P_{HAVE} and one with P_{LOC} . In Yaqui, the head noun in the possessee DP in a possessive construction incorporates into P_{HAVE} and thence into the *v* head; this incorporation demonstrates that it is in a position lower than the possessor DP, which may not incorporate. Yaqui also shows both double object and double complement constructions, where the Goal is marked ACC in the former and DAT in the later, with a concomitant semantic reflex in the form of an “affectedness” requirement in the double object construction. Finally, we addressed the question of Romance languages in which the possessor c-commands the possessee (and which have a verbal *have*), but do not overtly permit a morphosyntactically marked double object construction. However, the binding evidence between Goals and Themes in ditransitives in French and Italian indicates that some c-command relation can exist in which Goals are structurally

higher than Themes. This contrasts strongly with the Irish case, and suggests that the current account can be maintained for such languages, despite their surface morphosyntactic indicators.

5. Late Lexical Insertion

At this point, we have arrived at a theory of double object/double complement alternations which accounts for the observed semantic differences between the two constructions in English, and makes interesting predictions about the existence of such alternations cross-linguistically. We have identified two prepositional elements, P_{HAVE} and P_{LOC} which each project structures containing a Theme argument and another which has variously been termed a Goal, Possessor or Location argument. P_{HAVE} contains the Location argument in its specifier and the Theme is its complement, and P_{LOC} places the Theme in its specifier and the Location in its complement.

Since these two different structures are interpreted differently, differences in meaning arise when the double complement and double object version of the same verb are contrastive, giving rise to effects like Oehrle's generalization. Further, we have shown that some languages lack the P_{HAVE} structure entirely, always projecting possessors/goals/locations in the complement position. In such languages, of course, possession interpretations as well as location interpretations are associated with the P_{LOC} structure.

These prepositions raise and adjoin to the v head which selects them, whether it is v_{BE} or v_{CAUSE} ; in that position, the complex head is spelled out as the final verb form. This entails a non-lexicalist view of syntactic atoms, and a Late Insertion approach to phonological realization.

A recent, well-articulated framework espousing Late Insertion which is compatible with Minimalist assumptions is that of Distributed Morphology, outlined in Halle and Marantz 1993, Halle and Marantz 1994, and Harley and Noyer 1999. Useful discussion of the type of problem we are presently concerned with can be found in Marantz 1997; Harley and Noyer 1998.

Distributed Morphology is so called because it separates the functions of the Lexicon into several autonomous submodules, each of which interacts with a different portion of the Y-model. The primitives which serve as input to the syntax and are manipulated by it are not fully-formed

phonological words, but morphosyntactic features and other primitive building blocks (such as P_{HAVE} and P_{LOC} , as well as the various flavors of v) which the syntax Merges and Moves, constrained as usual by feature checking. The terminal nodes created by these building blocks are spelled out in the mapping to PF with phonological information. Unlike Lexicalist versions of the Y-model, however, Spell-out does not consist only of morphophonological readjustments (changing /haus+/z/ to /hauz\z/, for example) but rather first inserts phonological material, choosing between alternative realizations of any given node with compatible features.

In particular, choices within structural classes of nouns or verbs are free and determined by Encyclopedic knowledge (for instance, the knowledge that “cats” are felines, four-legged, catch and eat small animals, are playful, etc.). The choice between insertion of items like /kæt/ *cat* and /dɒg/ *dog* into otherwise equivalent terminal nodes is made at this point, for instance, as is the choice between insertion of *spray* and *load*, or *red* and *ecru*. The phonological form is termed a Vocabulary Item, and it is listed with a set of possible environments for insertion, essentially similar to the familiar notion of a subcategorization frame.

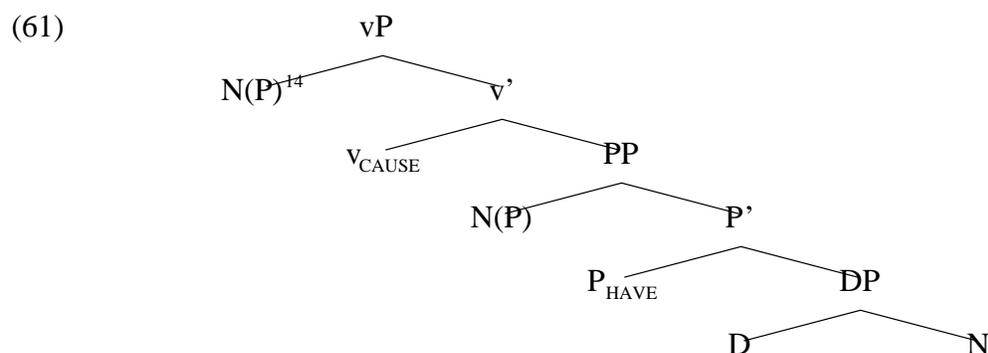
Consider the case of double-object/double-complement alternating verbs. This will be a class of verbs which has two sets of possible environments for insertion: at P_{HAVE} immediately c-commanded by v_{CAUSE} , or at P_{LOC} immediately c-commanded by v_{CAUSE} . These verbs must be associated with Encyclopedic knowledge which entails that their meaning is compatible with the basic semantic contribution made by the primitives CAUSE and HAVE or CAUSE and LOC; certain verbs will be so compatible and certain verbs will not (cf. the discussion of accompanied-motion verbs in fn. 6). The Encyclopedia is the locus for what Pinker 1989 terms *narrow-range* conditions on the double object alternation. One could think of the narrow-range conditions (Latinate vs. Germanic root, instantaneous causation of ballistic motion, etc.) as diagnostics applied by the speaker to determine a new Vocabulary Item’s possible insertion environments. Pinker’s *broad-range* conditions, for instance the requirement that alternating verbs must involve causation of a change of possession, are those which are enforced by a particular Vocabulary Item’s listed

insertion environments: anything inserted at P_{HAVE} in the environment of CAUSE, for instance, must involve the change-of-possession property.

For completeness, let us examine a possible derivation of a double-object verb phrase, abstracting away from many details. An array is selected from the inventory of morphosyntactic primitives, perhaps like that illustrated in (60)¹³:

(60) $[V_{CAUSE}], [D], [N], [N], [N], [P_{HAVE}]$.

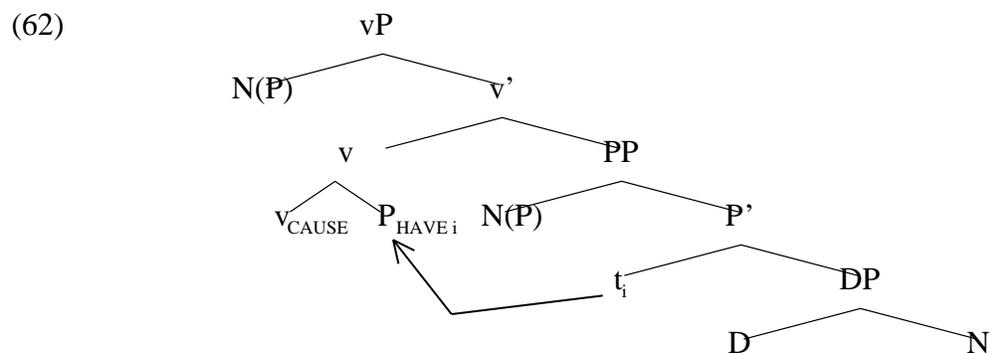
Merge operates as usual, forming binary phrase-markers (again, abstracting away from many details); it produces a structure like that in (61):



The syntax will continue to operate, of course, constructing the Infl complex and merging it with the illustrated structure and moving arguments for feature checking as appropriate; the only other move which I will illustrate here is the raising of P_{HAVE} to adjoin to v_{CAUSE} :

¹³ Here we are abstracting away from a number of important features of the framework. Obviously any array that has a chance of converging will include features for tense, agreement, aspect and so on; further, the inclusion of categorial labels here is misleading; work in DM holds that the basic lexical item is an acategorial Root which acquires its status as an N or V by virtue of being c-commanded by the appropriate functional heads (v, D, e.g.). The distinction is not important for the current purpose. See Marantz 1997; Harley and Noyer 1998 for more complete discussion.

¹⁴ Recall that under the assumptions of the Minimalist program as outlined in Chomsky 1995, Bare Phrase Structure entails that items in the array do not project unless they are Merged; an item may then have the property of being both a head and a maximal projection at the same time, which analysis we are here assigning to proper names.



Omitting the movements of the arguments, then, this structure is submitted to PF for Spell-out. At this point, any Vocabulary Items whose environmental licensing requirements which are compatible with the given structure may be inserted at the terminal nodes. Let us say *the* is inserted at [D], *creeps* is inserted at the lowest [N], *Mary* is inserted at the middle [N], *give* is inserted at P_{HAVE_i} , v_{CAUSE} is realized as \emptyset^{15} , and the upper [N] is realized as *Bill*. This results in the overt form, *Bill gives Mary the creeps*. *Give* and *the creeps* are listed as an idiom in the Encyclopedia when they occur together in this structure (as sisters under P'), so that is the assigned interpretation. This structure could just as easily have been realized as *John sent Susan a letter* or *Giovanni kicked Isabella the ball*, of course; as long as the Vocabulary Items have the appropriate licensing requirements, any may be inserted into any terminal node.

5.1. Against Lexical Correspondence Rules

In an analysis like that of Gropen, Pinker et al. 1989; Pinker 1989, the two alternating structures of double object/double complement verbs are linked by a rule which maps a given lexical entry (e.g. for *give*) onto the two different projection structures providing it meets the appropriate semantic and morphological criteria (hence termed *criterion-governed productivity*). On the current proposal, as in that of Pesetsky 1995, no such linking rule need be posited. Pesetsky states the case very succinctly:

...What for the criterion-governed productivity theory...is a fact about the acquisition of a rule that alters argument structure is for the proposed theory acquisition of the semantics of †-roles directly selected and selected by *G* and *to* [in the current proposal, P_{HAVE} and P_{LOC}]. This difference takes the phenomena studied by Pinker out of the arena of rule acquisition and places them squarely in the arena of lexical semantics.

Essentially, if the child has acquired the correct semantics for a given verb, s/he will be able to deduce what frames it is compatible with, knowing the semantic contributions of P_{HAVE} and P_{LOC}. Pesetsky (p. 139) notes the existence of alternating examples sensitive to the same types of criteria as the double object/double complement alternations whose different variants involve two distinct overt pronouns. His examples for verbs of instantaneous causation of ballistic motion and verbs of accompanied motion (see fn. 6 above) are repeated below:

- (63) a. Mary threw the book at John.
 b. *Mary pulled the trunk at Sue.
 c. Mary flung the package at Sue.
 d. *Mary pushed the boulder at John.
 e. Mary kicked the ball at John.
 f. *John dragged the sack at Bill.

Here, *at* selects an approximate Goal, and its occurrence with verbs of causation of motion are subject to the same restrictions (in terms of type of motion described) that verbs of motion show with respect to the double object/double complement construction. Arguing from these and other examples, Pesetsky places the burden of making this type of distinction on the fine-grained distinctions between different prepositions, thus supporting the approach to double objects which involves positing a null preposition. The reader is referred to Pesetsky for detailed discussion of various verb classes and their compatibility with different prepositions. We will leave this point with one further quote from Pesetsky which captures the attractive economy of this type of approach:

¹⁵ The CAUSE affix is usually realized as the null affix \emptyset in English, although not always; consider *-ify*, *-ize* and *en-* in words like *liquefy*, *rubberize*, and *embitter*. Languages like Japanese have a much more robust system of so-called 'lexical' causative affixes.

“If a verb accepts both...*to* and *G*, this is simply because its meaning (and phonology) is compatible with both choices, not because of a rule that alters its lexical behavior.” Rules can stipulate any change; the current proposal entails that observed alternations must be consistent with known properties of verbal semantics.

5.2. *The CFC and rightward binding problems: Pesetsky 1995*

Before leaving the more general discussion, we should address Pesetsky’s arguments against verbal decomposition of the type we adopt here. On Pesetsky’s treatment, *give* is indeed a lexical item in its own right, which selects either his (null) preposition *G* or *to* as its complement. On the treatment here, the *v* head is projected by CAUSE, whose semantic contribution is well understood, and *give* is the spell-out of the lower P head. This must be the case in order for the argument from idioms to work (since the P head is what is local to its complement in expressions like *send X to the showers* or *give Y the creeps*). Further, as Pesetsky notes, particular verbs vary in the optionality of their internal arguments (*The teacher assigned the students the homework/The teacher assigned the homework/*The teacher assigned the students*), and these variations can only be expressed in a decompositional system if the licensing environments for insertion include the internal arguments.

Pesetsky notes two problems with the decompositional approach. The first has to do with the notion of a *Complete Functional Complex*. Essentially, if *give* decomposes into CAUSE plus some other predicate, P_{HAVE} or P_{LOC}, the predicative status of the lower P head could create problems with respect to binding theory. The middle argument in SpecP, be it Theme (on the double complement structure) or Goal (on the double object structure) is an argument of the P, not (as in Pesetsky’s theory) of the upper V head. To take an example, the embedded PP [John P_{HAVE} a book] in *Mary gave John a book* is a saturated predicative structure, essentially a small clause, and should constitute a Complete Functional Complex for the purposes of binding theory. He points to examples like (64) below to demonstrate the general opacity of small clauses for anaphor binding:

(64) a. *Sue_i considered Bill angry at herself_i.

- b. *The boys_i made the girls fond of each other_i.

Further, complements to causative predicates show similar effects:

- (65) a. *Sue_i made the rocks land on herself_i.
 b. *The boys_i made the girls think about each other_i.

Since the small clause is a CFC (or, in the theory of Reinhart and Reuland 1993, a reflexive-marked predicate) the subject of a double object construction should not be able to bind into the lower clause, contrary to fact:

- (66) a. Sue_i showed Bill to herself_i.
 b. The boys_i sent the letters to each other_i's relatives.

As Pesetsky notes, however, it is easy enough to establish a convention to sidestep this problem. A crucial difference between the small clause cases in (64) and the ditransitive verbs in (66) is that in the former case the lower, bound argument is not selected by a predicate that has a special relationship with the predicate which selects the antecedent: *consider* and *angry* in (64)a), for example, are completely separate predicates, separately spelled out. In the present analysis of the double object construction, CAUSE and P_{HAVE} are indeed separate predicates, but P_{HAVE} is never spelled out in an environment which does not contain a v head — that is, its context of insertion demands a c-commanding v head, and its featural requirements force it to raise and adjoin to that v head. In (64)a), on the other hand, *angry* may occur completely independently of the matrix predicate *consider*.

Based on this observation, we could, for instance, define a CFC post-syntactically, as including all the arguments of a head, which may be formed of multiple predicates which have been head-moved to form a single head. The correct results for binding theory would follow, at least in the present instance. Evidently a full investigation of the proper definition of a CFC is beyond the scope of the present investigation, but it is perhaps worth noting that the facts noted for English above can be very different in other languages, and often the difference seems to be intimately bound up with the conflation of predicates into a single head. For example, in a causative-affix language like Japanese, the complement to a causative predicate is *not* an opaque binding domain, contra the observations in (65) above:

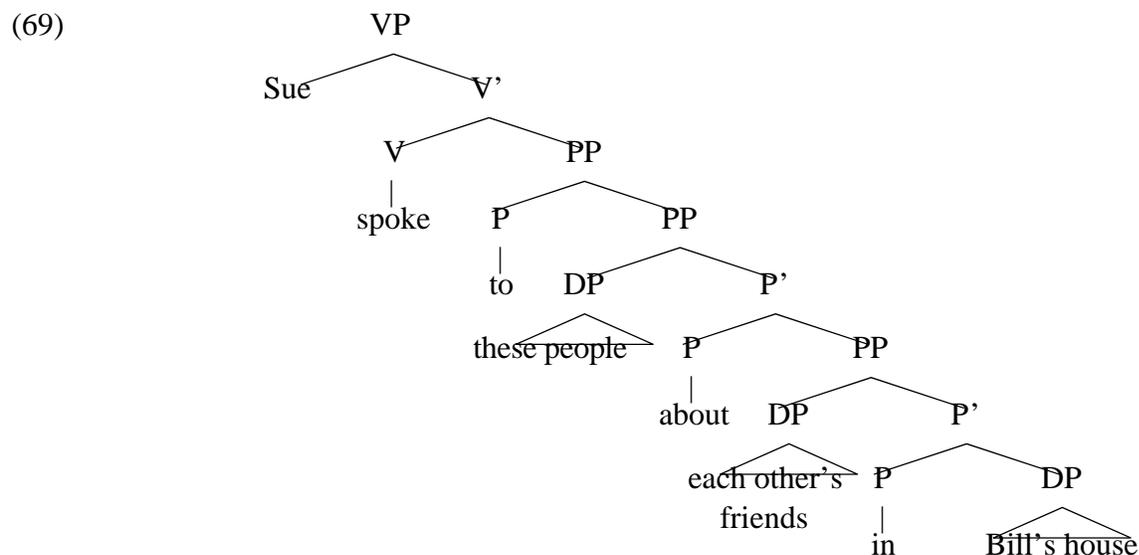
- (67) Calvin_i-wa Hobbes-o zibun_i-no kuruma-de paatii-e ik-ase-ta
 Calvin-TOP Hobbes-DAT self-GEN car-by party-to go-CAUSE-PAST
 “Calvin_i made Hobbes go to the party in self_i’s car.”

If the head-movement makes a difference to the definition of CFC, as seems to be indicated by the Japanese facts, such a difference should be expected in English as well, making the necessary revision considerably less stipulative and more attractive.

Pesetsky’s second objection to the decomposition approach has to do with the robustness of the “rightward is downward” c-command facts that motivated the Larsonian shell analysis in the first place. In particular, the shell structures (as noted by Larson) are motivated for any sequence of PPs, be they arguments or adjuncts. All of Larson’s tests apply equally well to these structures as to the double object/double complement structures; a few examples from Pesetsky are given below:

- (68) a. *Coordination*
 Mary bought [a book on Friday] and [a record on Thursday]
 b. *Anaphor Binding*
 Sue spoke to these people_i about each other_i’s friends in Bill’s house.
 c. *Pronouns as bound variables*
 Sue spoke to each employee_i about his_i paycheck.
 d. *Negative Polarity*
 Sue spoke to no linguist about any conference.

These facts motivate a sequence of cascading PP shells, each of whose internal arguments appears in the specifier of the next lower shell, in order to capture the c-command facts. Pesetsky’s structure for, e.g. (68)b) is given in (69) below:



Note, for instance, that *each other's friends*, while selected by the P *about*, appears in the specifier of the PP headed by *in*, which itself selects *Bill's house*. Were we to add another PP to the structure, e.g. *on Friday*, the same considerations would motivate placing the *Bill's house* DP in the specifier of that lower PP. Yet, clearly, these DPs in specifier positions are not arguments of the P whose specifier they occupy, but rather of the P immediately c-commanding them. If we are to extend this logic to the P_{HAVE} and P_{LOC} prepositions of the ditransitive verbs, the intermediate arguments should be arguments not of the P head, as we have claimed, but rather of the v_{CAUSE} which c-commands them.

While it is certainly true that there are no plausible semantic sub-components which are formed by lower adjunct PPs in example (69), however, it is *not* true that plausible semantic sub-components do not exist in the ditransitive construction, as we have been at pains to point out. While the cascade structure is motivated for any number of PPs, the fact that additional arguments Attach Right does not invalidate the arguments in favor of the existence of the two Ps, complete with their small-clause semantics, which we have here introduced. In fact, the cascade structure and the ways in which it behaves with respect to syntactic tests has been convincingly argued to be the result of parsing considerations, by Phillips 1996. The structure proposed here is consistent with these tests, and initially motivated by them, but the arguments for lexical decomposition of *give* into v+P are logically independent of the question of what happens when additional PPs are added.

6. Extension: psych-verbs and having experiences

We now turn to another class of constructions which exhibit indicators which suggest that they make use of the proposed primitive relation P_{HAVE} : psychological state predicates. The first clue that such a relation may be involved comes from languages like French, which commonly use the verb *have* to express psychological states, illustrated in (70):

- (70) a. Tintin a faim
Tintin has hunger
“Tintin is hungry”, “Tintin hungers.”
- b. Tintin a peur (de q.q.ch.)
Tintin has fear (of sthg...)
“Tintin fears ..”, “Tintin is afraid of..”

Even in English, such use of *have* is possible, although relatively uncommon:

- (71) a. Calvin has a deep-rooted fear of the dark.
b. Susan has a great love for thickly frosted cake.
c. Bill has at best an incomplete grasp of the issues.

As a final indicator, recall that in Japanese possessives (47) the subject may be marked with exceptional (quirky) dative case, while the object receives nominative case. In many (though not all) cases, Japanese psychological state verbs also exhibit this DAT-NOM case-marking pattern. An example is given in (72)¹⁶

- (72) a. Yamada-sensei-ni sono gakusei-ga o-wakari-ni-nar-ana-katta
Yamada-Prof-DAT that student-NOM understand-HON-NEG-PAST
“Professor Yamada didn’t understand that student.”

While it doesn’t always correlate with unusual case-marking in possessives, the phenomenon of quirky dative on the subject of psychological predicates, and agreement-triggering, apparently structural nominative on the object of such predicates, is far from uncommon. Below are examples from Icelandic and Kannada:

- (73) a. Kannada

¹⁶Subject honorification agreeing with the Dative argument in this example demonstrates its subjecthood.

So'manige a'nu tumba ishta
 Soma-DAT self-NOM much liking
 "Soma is very fond of himself"

- b. Icelandic
 morgum stúdentum líka i tetta namskei ekki
 many students-DAT liked this course-NOM not
 "Many students didn't like this course"

As shown, the dative argument in (73)a) can antecede a subject-oriented reflexive in the nominative argument; for further discussion of subjecthood in such cases in Kannada, see Sridhar 1979. The subjecthood of Icelandic quirky subjects is well-understood; see Zaenen, Maling et al. 1985, Harley 1995, and Schütze 1996, among many others, for copious discussion.

If this cluster of facts is not coincidental, one expects that some property of psychological predicates is related to the realization of the possessive—that is, that psychological predicates in at least some languages involve P_{HAVE} . Essentially, the idea is that psychological states are expressions of possession: the experiencer possesses the psychological state (fear, hunger, understanding).¹⁷ If this is the case, we should expect that languages without P_{HAVE} might realize their psychological predicates in a markedly different way; in particular, we might expect that the experiencer of the state would not be the subject.

6.1. Possessing psychological states: P_{HAVE} -not languages

Noonan 1993 proposes an account for the structures of psychological states in Irish using essentially this insight: Irish has no predicate *have*. For Noonan, *have* is a verb in its own right, whose subject is an external argument, rather than a combination of a light verb BE plus a prepositional element; however, the insight is essentially the same. Consider the expression of psychological states in the examples from Noonan below (recall again that the basic word order of Irish is VSO):

¹⁷ Indeed, the subject of verbal *have* may range over (at least) notional Possessors, Locations and Experiencers:

- i) John has a car.
- ii) The car has a dent on it.
- iii) John had his car dented by a careless driver.

For a fully articulated theory unifying these roles, see Belvin 1996.

- (74) a. Tá gaeilge ag Fliodhais
BE Irish at Fliodhas
“Fliodhais knows Irish.”
- b. Tá eagla roimh an bpúca ag Ailill
BE fear before the Puca at Ailill
“Ailill fears the Puca.”
- c. Tá meas ar Meadhbh ag Ailill
BE respect on Meadhbh at Ailill
“Ailill respects Meadhbh”

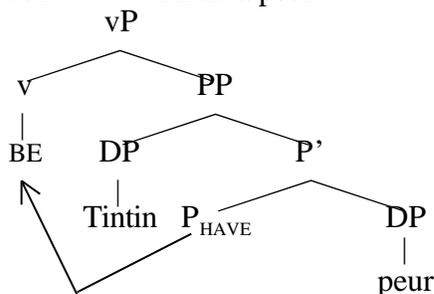
Compare the word order in (74) with an example of a possessive sentence below (repeated from section 4.2):

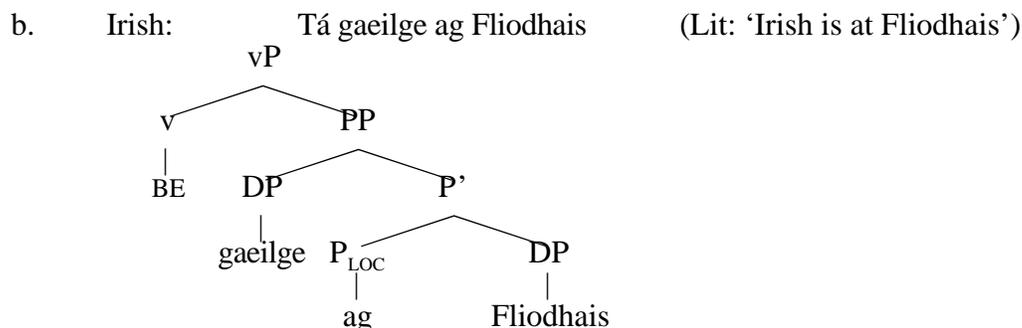
- (75) Tá peann ag Máire
BE pen at Mary
“Mary has a pen”.

Note that the order of arguments which expresses the relation between the state and the experiencer of that state is identical to that which expresses the relation between the item owned and the owner; the state and the thing owned are in subject position, while the experiencer and the owner are in prepositional phrases in object position. The cases appear to be exactly parallel.

Noonan proposes to account for the two cases in the same way, associating both with the lack of a predicate *have* in Irish. In our terms, this would entail that psychological states in languages with P_{HAVE} (like French) are expressed underlyingly as possession relations, with the ordering [Experiencer P_{HAVE} Theme], as illustrated in (76)a) and that in languages without P_{HAVE} like Irish, psychological states are expressed in the [Theme P_{LOC} Experiencer] structure as in (76)b):

- (76) a. French: Tintin a peur (Lit: ‘Tintin has fear’)





To derive the final word order and surface form in each case, certain further derivational steps occur. In French, P_{HAVE} incorporates into the v_{BE} , to give verbal *have*, which then raises further (as do all finite French verbs) to inflectional heads. In Irish, the v_{BE} raises further through the inflectional complex, while the subject moves to a lower inflectional specifier (see McCloskey 1996), giving VSO order.

For Irish, then, extending the lack of P_{HAVE} to an account of psychological predicates seems extremely natural, as the structure of such predicates recalls exactly the Theme-subject structures used to express possession. For French, which expresses psychological predicates for the most part using the main verb *have*, a similar attractive parallel suggests that possession and stative psych predicates share the same structure.

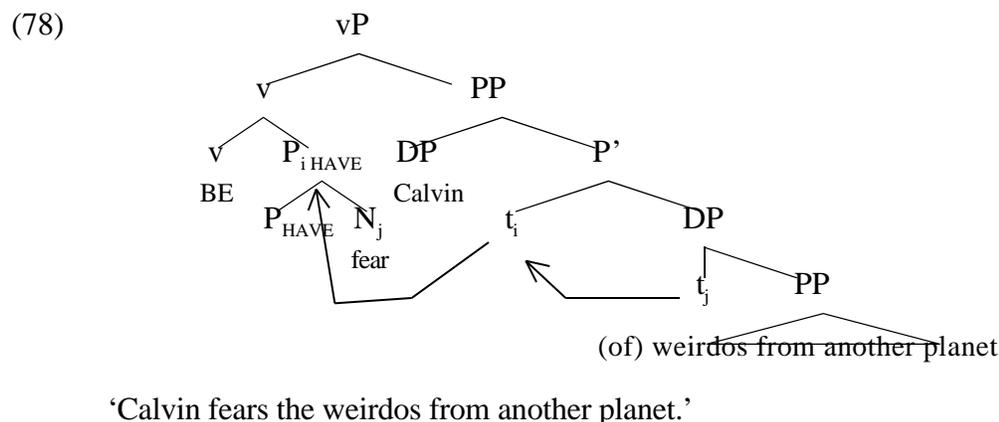
6.2. Incorporation of psychological states in P_{HAVE} languages

Now, consider the realization of psychological predicates as verbs in languages like English. In English, the attribution of psychological states can be paraphrased using several different constructions; three possibilities are shown for English below.

- (77)
- a. Calvin fears the weirdos from another planet.
 - b. Calvin has a deep-rooted fear of the weirdos from another planet.
 - c. Calvin is afraid of the weirdos from another planet.

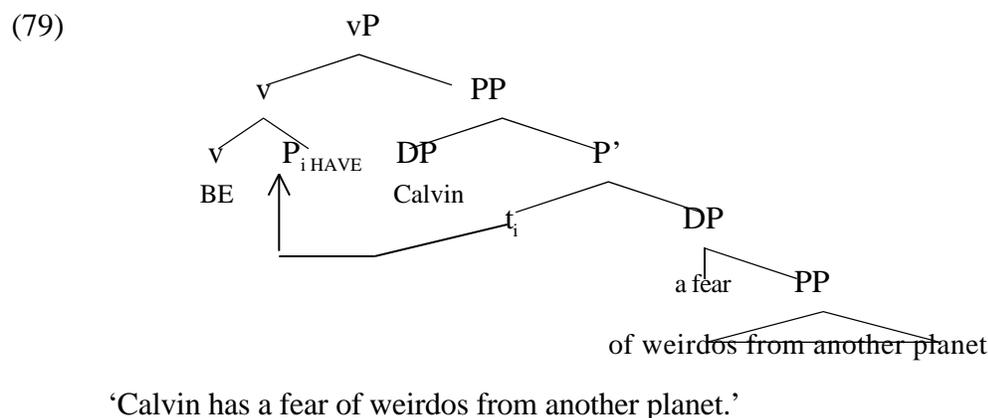
Noonan 1993 proposes that psychological verbs like that in (77)a) are the result of incorporation of the underlying nominal element denoting the psychological state (“fear” in this case) into verbal *have*, along the lines of the proposals of Hale and Keyser 1991. In the current

system, this incorporation would require two steps. First, the nominal complement to P_{HAVE} incorporating into P_{HAVE} and subsequent incorporation of that complex into the BE head above that. This is diagrammed in (78) below.



The complex v head is realized as the verb *fear*.

The constructions which parallel the French case, illustrated in (77)b) above and earlier in (71) will of course have the same derivation, illustrated below in (79). Essentially, rather than incorporate the psychological-state-denoting nominal into the verb, it is simply left *in situ*, and the derivation proceeds as usual, with P_{HAVE} incorporating into the BE v to produce verbal *have*. The first step of the two-step derivation in (78) is left out.



The derivation in (79) essentially leaves out one of the two steps which are required to derive the psych verb in (78): the incorporation of the N head into P_{HAVE} .

is absorbed by the non-incorporated DP *fear* itself, entailing that the object of fear requires Last Resort rescuing by *of*-insertion. However, it is unclear why it should be the case that partial incorporation, resulting in an adjective (as in (80)) does not result in the licensing of a direct object — genitive *of* is still necessarily inserted. Here I simply point at these issues, as no detailed analysis is available at the moment.

6.3. Summary

In this section, we have suggested that predicates expressing a psychological state may also underlyingly be represented as possession structures, pointing to some similarities between possession structures and psychological state predicates including case-marking, use of *have*, and a structural parallel in Irish between Possessors, which as we have seen, must always be objects of a preposition, and Experiencers, which equally must be represented in VP-internal PPs. Three structures commonly used to express English psychological states were argued to represent different derivations applied to the same underlying structure involving P_{HAVE} .

7. Conclusion

In this paper we have seen evidence that double-object verbs decompose into two heads, an external-argument-selecting CAUSE predicate (v_{CAUSE}) and a prepositional element, P_{HAVE} . We made two primary types of argument. First, a consideration of the well-known Oerhle's generalization effects in English motivate such a decomposition, in combination with a consideration of idioms in ditransitive structures. These facts mitigate strongly against a Transform approach to the dative alternation, like that of Larson 1988, and point towards an Alternative Projection approach, similar in many respects to that of Pesetsky 1995. Second, we identified the P_{HAVE} prepositional element with the prepositional component of verbal *have*, treated in the literature by Benveniste 1966; Freeze 1992; Kayne 1993; Guéron 1995. Languages without P_{HAVE} do not allow possessors to c-command possessees, and show no evidence of a double-object construction, in which Goals c-command Themes. On the current account, these two facts receive the same explanation: P_{HAVE} does not form part of the inventory of morphosyntactic primitives of these languages.

Many questions still remain; the double-object construction has been the object of an enormous amount of attention, and will certainly continue to be. The range of languages addressed in this study is quite limited; further in-depth exploration of a number of types of system is still necessary. In particular, languages like Russian, which allow scrambling and have overt case-marking of their DPs, will require a great deal of study; the Japanese case is similar on the surface but was shown by Miyagawa to be uniquely structured on closer scrutiny. The asymmetric and symmetric Bantu languages will also be a testing ground for the approach presented here. On the psycholinguistic front, if possession relations and double-object constructions are as intimately related as this paper suggests, their acquisition should proceed hand-in-hand. The work of Snyder 1996, Snyder and Stromswold 1997 provides some evidence which needs to be supplemented by examination of the acquisition of possession constructions. These and other questions remain to be investigated; with luck, however, the present study points the way to fruitful lines of future inquiry.

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