

CONTRASTING CAUSATIVES:
A MINIMALIST APPROACH

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SIGNED: Mercedes Tubino Blanco

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LIST OF ABBREVIATIONS AND SYMBOLS

a	Adjective
Acc	Accusative
Adess	Adessive
Adv	Adverbial
Agr	Agreement
Appl	Applicative
Aux	Auxiliary
C	Complementizer
Cause	Causative
Cause.dir	Direct causative
Cause.ind	Indirect causative
Cond	Conditional
CP	Complementizer Phrase
Dat	Dative
Des	Desiderative
Det	Determiner
D	Determiner
DP	Determiner Phrase
e	Empty
Ela	Elative
FI	faire-infinitive
FN	hacer-non-verbal-predicate
Foc	focus
FP	faire-par
FQ	hacer-subjunctive
FQ-dat	hacer-subjunctive with dative
FV	final vowel
Gen	genitive
Inch	inchoative
Inf	Infinitive
Intr	Intransitive
Lex	Lexical
Loc	Locative
N	Noun
Nom	Nominative
NP	Noun Phrase
Obj	Object
Obl	Oblique
P	Preposition
Part	Partitive
Pass	Passive

Past	Past tense
Perf	Perfective
Pl	Plural
Poss	Possessive
PP	Prepositional Phrase
Ppl	Past participle
Pres	Present
Prog	Progressive
Prosp	Prospective
SC	Small Clause
Red	Reduplication
Refl	Reflexive
Rel	Relative
Sg	Singular
Spec	Specifier
Sub	Subjunctive
Subj	Subject
t	Trace
T	Tense
TP	Tense Phrase
Top	Topic
Tr	Transitive
Unacc	Unaccusative
v	Verb
vP	Verb Phrase
VoiceP	Voice Phrase
√	Root
√P	Root Phrase
1	1 st person
2	2 nd person
3	3 rd person
Ø	Null

ABSTRACT

This dissertation explores the mechanisms behind the linguistic expression of causation in English, Hiaki (Uto-Aztecan) and Spanish. Pylkkänen's (2002, 2008) analysis of causatives as dependent on the parameterization of the functional head v_{CAUSE} is chosen as a point of departure. The studies conducted in this dissertation confirm Pylkkänen's claim that all causatives involve the presence of v_{CAUSE} . They further confirm that variation is conditioned by both the selectional and 'Voice-bundling' properties of the causative head. I show that this pattern triggers differences across languages, although other factors are also responsible for the existence of multiple causative configurations within languages.

In some languages (e.g. English), causatives require the obligatory presence of an external argument (i.e., Causer). I provide additional data supporting Pylkkänen's proposal that causation (in certain languages) may also exist in the absence of a syntactic Causer. In particular, I offer data from Hiaki indirect causatives and Spanish desiderative causatives (e.g., *¿Te hace salir?* '2sg.dat (expl)makes go.out, Do you feel like going out?'), and weather/temporal constructions (e.g., *Hace mucho calor* '(expl) makes much heat, It's very hot') in support of this hypothesis.

The results of this research, however, question Pylkkänen's claim that certain languages may allow the Root-causativization of transitives and unergatives. I show that this is not possible even in languages that exhibit Causer-less causatives (e.g., Hiaki). Moreover, certain unaccusatives (e.g., *arrive*) also resist (Root) causativization cross-linguistically, regardless of the 'Voice-bundling' properties inherent to the causativizing head. I claim that this happens in contexts in which unaccusative verbs exhibit 'unergative' behavior (i.e., whenever they involve syntactic elements that are base-generated in positions higher than the root).

Cross-linguistic variation in the expression of causation is not always a direct consequence of the internal properties of the causative predicate. Because of language-internal requirements, different languages impose specific limitations on the syntactic realization of causative structures. For instance, English and Spanish heavily rely on Agreement relations among their constituents. The consequence of this is that it is difficult in these languages to discern what elements really are part of causation and what elements are not, as well as the nature of the elements involved in causatives (e.g., whether the dative in Spanish productive causatives is an external argument or an applicative). This dissertation addresses all these questions.

CHAPTER 1

INTRODUCTION

The aim of this dissertation is to look at the syntax of causatives in Spanish, English, and Hiaki, placing special emphasis on the syntax of productive causatives. The research questions behind this investigation are the following:

(1) Research questions

- (a) What are the ‘pieces’ of causation?
- (b) Are the ‘pieces’ of causation the same in all languages?
- (c) How are different types of causatives (ie., lexical vs. productive) syntactically encoded? Do they involve the same ‘pieces’?
- (d) How does the general internal architecture of languages contribute to the linguistic expression of causation?
- (e) What determines crosslinguistic variation in the expression of causation? Are the ‘pieces’ of causation encoded differently across languages or are they constant while variation is contributed by elements external to causation itself?

In order to answer these questions, I adopt, as a departure point, the minimalist model recently developed by Pylkkänen (2002, 2008) in which she accounts for specific patterns of variation observed in the formation of lexical and morphological causatives in a number of languages. For this author, variation in causatives essentially originates in the ‘pieces’ of causation themselves. She argues that the central piece of causation, the functional element *Cause*, is parameterized in the sense of Chomsky’s (1981) Principles and Parameters model. That is, semantically, *Cause* is a functional element that contributes the meaning of causation to linguistic structures; syntactically, different instances of *Cause* involve contrasted properties across languages and, presumably, also within languages, in the expression of different types of causation (lexical vs.

productive). This is, according to Pylkkänen, what explains the observed variation in the linguistic expression of causation both across and within languages.

Pylkkänen's model makes a very important contribution to the study of variation in causative structures by making straightforward predictions about the behavior and properties of the elements participating in causatives in a number of languages. However, the model is not free of pitfalls. In this dissertation, I review Pylkkänen's account of causatives, in order to (i) revise some of the wrong predictions that Pylkkänen's model appears to make involving the syntax of certain causatives, (ii) extend the revised model to account for the syntax of productive causatives, which are not specifically treated by Pylkkänen, and which may be expressed periphrastically (ie. Spanish or English) or morphologically (ie. Hiaki or Japanese). Chapter 2 offers an extensive review of Pylkkänen's model.

1. Crosslinguistic variation in lexical causatives: the causative-inchoative alternation
Consider the English sentences in (2). The verb in these sentences, *open*, exhibits the causative-inchoative alternation.

- | | |
|--|--|
| (2) a. Inchoative <i>open</i>
The door opened | b. Causative <i>open</i>
John opened the door |
|--|--|

The contrast exhibited in the sentences in (2) is a clear illustration of the causative-inchoative alternation in English. The verb *open* is an *alternating* verb in that it has two uses: a) intransitive (2a), and b) transitive (2b). Verbs exhibiting both transitive and intransitive uses are alternating if (i) the transitive use means 'cause to V-intransitive'

and (ii) ‘the semantic relationship between the two variants is reflected in the fact that the subject of the intransitive variant and the object of the transitive variant bear the same semantic role’ (Levin and Rappaport Hovav 1993: 79). Thus, the verb *open* in (2) participates in the alternation because (i) the transitive sentence in (2b) can be paraphrased as *John caused the door to open*, and (ii) the subject of the intransitive variant in (2a), *the door*, has the same semantic role than –and is in fact identical to, the object of the transitive variant in (2b).

Transitive alternating verbs are conventionally described as *lexical causatives*, whereas their intransitive counterparts are identified as *inchoative* (ie., Lakoff (1965), Lyons (1969), Fodor (1970), Cruse (1972), Dowty (1979), Borer (1991), Haspelmath (1993), Levin & Rappaport-Hovav (1995), Song (1996), Piñón (2001), Alexiadou et al. (2004), Schäfer (2008, 2009)). Typically, alternating verbs are change-of-state verbs. Their difference in terms of meaning/thematic structure is that only the causative use involves the presence of an (often agentive) causer. If an alternating verb is used inchoatively, the event will be perceived as spontaneous. *Open* in (2) is a change-of-state verb (ie., both sentences in (2) involve a change of the state undergone by the door, from an initial state *closed* to the resultant state *open*).

Regarding the meaning contrast involving the causative and the inchoative uses, only the causative sentence in (2b) explicitly specifies the cause originating the change of state (ie. the agent *John*). In the case of the inchoative sentence in (2a), the source causing the change of state is linguistically omitted (ie., only the change of state *per se* and the resultant portion of the event is presented, but not the source causing the door to

open)¹. Other alternating change-of-state verbs are *close*, *break*, *dry*, *stop*, *sink*, and *boil*.²

The causative-inchoative alternation is a crosslinguistic phenomenon. Thus, change-of-state verbs such as *open* and *break* universally form lexical causatives. Nonetheless, the alternation is not exempt from variation from one language to another. The alternation has received multiple analyses both typological and theoretical.

Classical typological classifications may be found in Comrie (1981), Haspelmath (1993) or Shibatani (2002). Typological studies identify causative alternations with respect to the form they present (ie., whether the alternation involves the derivation of one form from the other). They classify languages regarding the type of alternations they present.

For instance, in his (1993) typological survey on the causative-inchoative alternation, Haspelmath identifies several language classes, depending on what form seems to be derived from the other. Thus, some languages (eg. French, (4a)) exhibit what he terms the *causative* alternation in which the inchoative form is basic and the causative form is morphologically derived. Some other languages (eg. Russian, (3b)) exhibit the *anticausative* alternation, in which the basic form is the causative and the inchoative is derived. Some other languages (eg. Japanese, (3c)) exhibit *non-directed* or *equipollent* alternations in which neither form is derived from the other. In *suppletive* alternations (eg. Russian, 3d), different verb roots are used. Finally in *labile* alternations (eg. English, (3e)) the same verb is used for both forms. I show some examples in (3) and (4).

¹ See Ramchand (2008) for an event-based account of the phenomenon, whereby she divides the change of state event in three different sub-events, the initiating event expressing the source causing the change of state, the process expressing the actual change of state, and the result encoding the resultant state.

² See Levin & Rappaport Hovav (1995) for a more detailed lexical-semantic account of the phenomenon.

(3) *Haspelmath typological classification of the alternations*³

a. Causative – French

<i>fondre</i>	<i>faire fondre</i>
melt (intr.)	make melt, melt (tr.)

b. Anticausative – Russian

<i>katat'sja</i>	<i>katat'</i>
roll (intr.)	roll (tr.)

c. Non-directed/equipollent – Japanese

<i>attum-arū</i>	<i>atūm-eru</i>
gather (intr.)	gather (tr.)

d. Suppletive – Russian

<i>goret'</i>	<i>žeč'</i>
burn (intr.)	burn (tr.)

e. Labille – English

<i>burn</i> (intr.)	<i>burn</i> (tr.)
---------------------	-------------------

Lakoff (1965), Lyons (1969), Fodor (1970), Cruse (1972), Dowty (1979), Levin & Rappaport-Hovav (1995) and Borer (1991) are examples of theoretical analyses of the construction. Many of the theoretical approaches to the construction discuss the question of whether the causative or the inchoative forms are one derived from the other. Fodor, for instance, presents arguments contra approaches such as Lakoff (1965) and Lyons (1969), that lexical causatives (ie., *melt*, *kill*) are not derived from their inchoative forms (ie., *melt*, *die*). One of the arguments he offers against this view has to do with the event structures that 'cause to die/melt' and 'kill/melt' encode. He claims that *kill/melt* cannot mean *cause to die/melt* because the two structures involve differences in their event

³ All the examples in (3) with the exception of (3e) have been taken from Haspelmath (1993:91-92[6-10])

structure: whereas *cause to die/melt* is bieventive *kill/melt* is monoeventive.⁴. He shows this in the following examples.

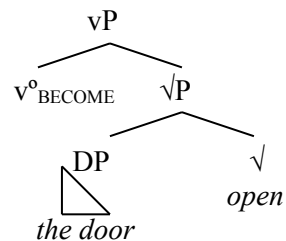
- (5) a. (Floyd (caused (the glass to melt on Sunday))) (by (heating it on Saturday))
 b. *Floyd melted the glass on Sunday by heating it on Saturday
 Fodor (1970: 433[17, 19])

Fodor argues that, were causative *melt* derived from non-causative *melt*, the sentence in (5b) would be grammatical, like (5a). The contrast then shows, according to Fodor, that causative *melt* is not derived from inchoative *melt*. After Fodor, some authors such as Cruse (1972) continued defending Fodor's approach. Many other authors, however, still sustained that the causative is derived from the inchoative form. Dowty (1979), for instance, posits that the causative is derived from the inchoative via a 'causative rule'. The result is the addition of a predicate, CAUSE, to the original form, which has a semantic impact.

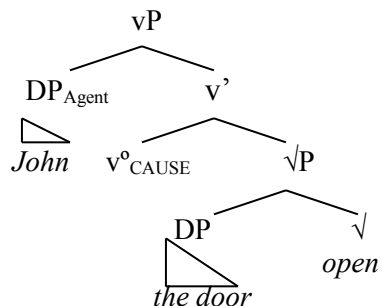
More recent approaches (ie., Borer (1991), Harley (1995, 2006), Piñón (2001), Pylkkänen (2002, 2008), Ramchand (2008), Schäfer (2008)) argue that no form is derived from the other, but they both involve different syntactic configurations in which the same (lexical) root (ie., $\sqrt{\text{ }}$) participates. Different syntactic configurations involve different functional heads (e.g., v_{BECOME} vs. v_{CAUSE} for i.e., Harley (1995) or Res(ult) vs. Proc(ess) vs. Init(iation) for ie., Ramchand (2008)). In these models the lexical root provides the basic lexical meaning to the construction, whereas the syntactic configuration determines whether the resulting construction is inchoative or causative. I show a diagram in (6).

⁴ See chapter 3 for further discussion on the event structure of lexical causatives. For further reading see, for instance, Shibatani (1975, 2002), Harley (1995, 2006) or Ramchand (2008)).

(6) a. Unaccusative

*The door opened*

b. Causative

*John opened the door*

Harley (2006: 27[30])

In this dissertation I adopt an approach along the lines of (6) in which the causative-inchoative alternation does not involve one form derived from the other, but each form is independently formed, compositionally. Chapter 3 offers an account of the causative-inchoative alternation (ie., lexical causatives) in English, Spanish, and Hiaki.

2. Crosslinguistic variation in productive causatives

Consider the English sentences in (7). The verb *sleep* is used non causatively in (7a) and causatively in (7b).

(7) a. *Non causative*
John is sleeping

b. *Causative*
Mary is making John sleep

The contrast in (7) distinguishes an English productive causative construction (7b) from its non-causative counterpart (7a). Unlike lexical causatives (see previous section), English productive causatives involve the overt presence of a causative verb, *make* (7b). Typically, this causative along with the presence of an additional (external) argument, *Mary* (7b), are surface indicators of causation in English or other languages like Spanish

The presence of an overt causative marker, however, is not always an indication of productive causation. This is, for instance, the case of languages that express causation morphologically, such as Hiaki, Japanese or Finnish. In these languages, lexical and productive causatives may be expressed via an identical base form. An example is offered in (8).

(8) *Lexical vs. productive causation in Japanese*

- a. Taroo-ga hahaoya-o sin-ase-ta
Taro-nom mother-acc die-cause-past
i. ‘Taro caused his mother to die’
ii. ‘Taro’s mother died on him’ (adversity)
Pylkkänen (2008: 108[56])
- b. Taroo-ga musuko-o sini-taku-sase-ta
Taro-nom son-acc die-des-cause-past
i. ‘Taro made his son want to die’
ii. *’Taro was adversely affected by his son’s wanting to die’ (adversity)
Pylkkänen (2008: 109[60])

Both Japanese sentences in (8) express causation via the suffix *-(s)ase* ‘cause/make’.

Nonetheless authors such as Shibatani (1973), Miyagawa (1998), Harley (2006) and also Pylkkänen (2002, 2008) show both surface and structural evidence that distinguish lexical from productive causatives, even in affixal languages like Japanese.

For instance, as pointed out by Pylkkänen (2006, 2008), only the sentence in (8a) may be interpreted as a lexical causative. The sentence in (8b) is obligatorily interpreted as a productive causative. This is so since only the sentence in (8a) is (i) ambiguous in its interpretation, and (ii) allows an idiosyncratic interpretation, the so called ‘adversity’

interpretation of causatives (8a, ii). Because of the way structural properties trigger compositional interpretations, productive causatives disallow idiomatic readings, so the intended idiomatic interpretation of (8b, ii) is disallowed.

A morphological contrast between lexical and productive causatives has been discussed by authors like Harley (2006). The contrast involves the surface form of the causative suffix. Whereas lexical causative markers tend to exhibit idiosyncratic forms (ie., *-osi*, *-e*, \emptyset), productive causative markers tend to exhibit invariable forms (ie., *-sase*). A clear example of this morphological distinction is shown in (9). The example is from Shibatani (1973).

(9) a. Lexical

Taroo-wa Hanako-o rokuzi-ni ok-*osi*-ta
 Taro-top Hanako-acc six-dat get.up-cause-past
 ‘Taro got Hanako up at six’

b. Productive

Taroo-wa Hanako-o rokuzi-ni oki-*sase*-ta
 Taro-top Hanako-acc six-dat get.up-cause-past
 ‘Taro made Hanako get up at 6’

In (9), the lexical causative (9a) is the example that exhibits allomorphy in its surface form (ie., *-osi*). The productive causative (9b), in contrast, is expressed via the typically invariable form *-sase*.

Adverbial scope is another test used by authors like Shibatani (1973) in order to distinguish lexical from productive causatives. This test is indicative of the amount of structure that is embedded by the causative.⁵

⁵ Pylkkänen (2002, 2008) uses the adverbial modification test in order to identify the nature of the functional material that is present in different types of causatives. See chapters 2 and 3 for further discussion on Pylkkänen’s approach.

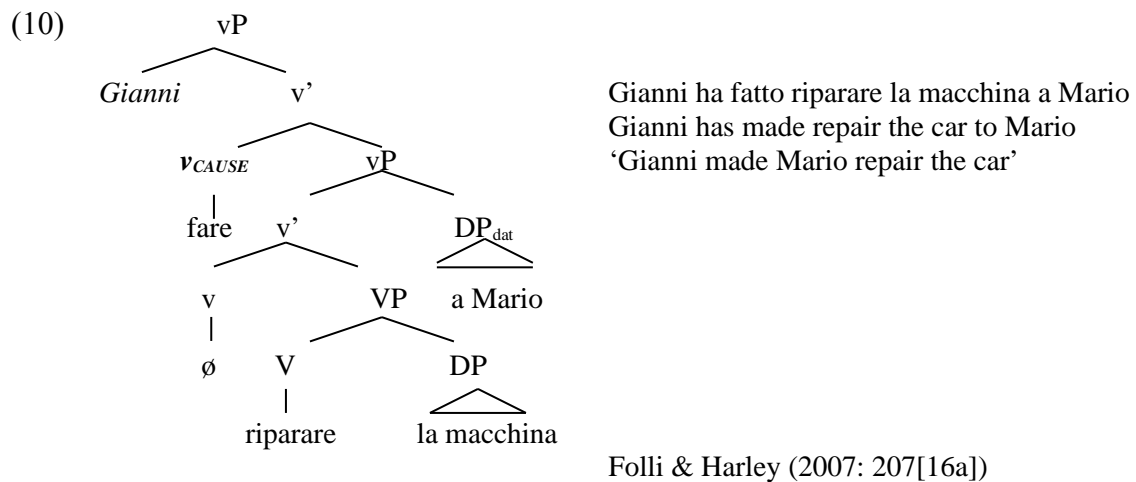
Shibatani explains that only productive causatives allow ambiguous scope of temporal adverbs. For instance, in the lexical causative in (9a) above, the temporal adverb *rokuzi-ni* ‘at six’ has non-ambiguous scope and it necessarily modifies the whole clause. That is, the adverb simultaneously indicates the time of Taro causing Hanako to get up (ie, the *causing* event) and the time of Hanako getting up (ie., the *caused* event). This is an indication that there is no structural separation between the causing event and the caused event in lexical causatives.

In productive causatives, in contrast, the temporal adverb *rokuzi-ni* ‘at six’ has ambiguous scope. That is, the adverb may independently modify the causing event or the caused event. If it modifies the causing event, we get the interpretation that Taro, at six, *made* Hanako get up. If it modifies the caused event only, we get the interpretation that Taro (e.g., at five) made Hanako get up at six.

So in productive causatives, modification of the caused event may happen independently of the causing event, which is a sign that this causative type is bi-eventive. In the case of lexical causatives, the two events cannot be independently modified, so they are identified as mono-eventive. Further discussion of the differences between productive and lexical causatives will be offered in chapter 3.

Most approaches to causatives associate the presence of the external argument or agent, typically identified as the Causer, with the presence of a verbal/predicative element involving causation. Theoretical approaches assume that light (functional) verbs introduce the external argument (ie., Hale & Keyser (1993), Chomsky (1995), Harley (1995, 2006), Folli & Harley (2003, 2007)). These approaches coincide in that it is the

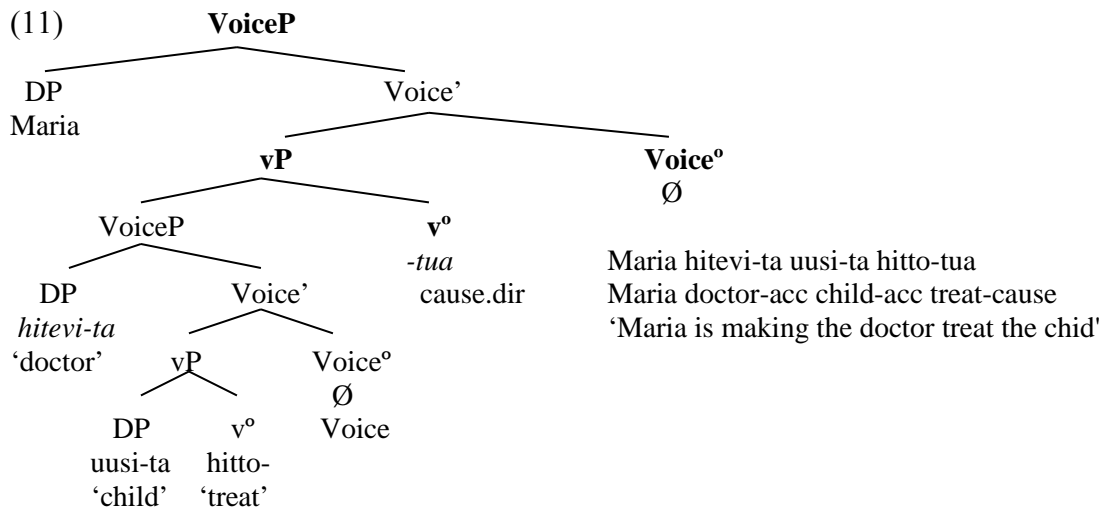
presence of v_{CAUSE} that guarantees the presence of the additional external argument in (7b). In other approaches to causation that do not treat $CAUSE$ as a light verb (Fillmore (1971), Shibatani (1973), Baker (1988)) the appearance of the external argument (eg., agent, ‘force’, instrument, cause, etc) in causative structures is still triggered by the presence of causation, typically as a theta role assigned from the verb. I show a diagram of an Italian productive causative under Folli & Harley’s analysis in (10).



In Folli & Harley’s analysis in (10), the light verb v_{CAUSE} introduces the external argument/agent/causer *Gianni*. Analyses such as (10) presuppose then that productive causatives and causatives in general all involve the presence of a Causer.

In contrast, authors such as Pylkkänen (2002, 2008), Schäfer (2008, 2009), Alexiadou et al. (2004, 2005), Harley (2007) and Tubino & Harley (to appear) offer arguments in favor of Kratzer’s (1994, 1996) proposal that the external argument is introduced by an independent functional projection, Voice, which does not have any causative component to its semantics. In this sense, there is a dissociation between the mechanism that brings about causation (ie., v_{CAUSE}) and the mechanism that introduces

external arguments into structures. This is a desirable idea, since the external argument-cause relation is asymmetrical: Cause involves an external argument but the presence of an external argument does not involve Cause. I show a diagram of Tubino & Harley's proposed structure of Hiaki productive causatives in (11).



Tubino & Harley (to appear)

The diagram for the Hiaki productive causative in (11) shows the independence of the Causer *Maria* from the light verb (the causative marker/suffix) *-tua* 'make', as they are introduced in the structure by independent functional heads, Voice° in the case of the external argument, and v° (ie., cause) in the case of the causative marker. This is the approach I will follow in this dissertation.

Approaches that dissociate the appearance of Cause from the presence of an external argument (such as Pylkkänen 2002, 2008) identify a source for crosslinguistic variation in that some languages present causative structures lacking an external argument. This is the case of Finnish desiderative causatives (12).

- (12) *Maija-a laula-tta-a*
 Maija-part sing-cause-3sg
 ‘Maija feels like singing’

Pylkkänen (2008: 95[32a])

The Finnish desiderative causative in (12) exhibits a causative marker, *-tta*, in the absence of an external argument (the only argument *Maija* is not an external argument, but an experiencer).

Another source of crosslinguistic variation identified in productive causatives (eg., Shibatani 1975) is the affixal versus non-affixal character of the causative marker. For instance, the Finnish causative marker *-tta* and the Hiaki causative marker *-tua* are affixal, whereas the English causative marker *make* and the Romance causative markers *fare* (Italian) and *hacer* (Spanish) are non-affixal. Despite this morphological contrast, causative structures show parallel syntactic patterns crosslinguistically. Such is the case of Spanish causatives, which like Finnish causatives (12), may allow the presence of a causative marker *hacer* ‘make’ in the absence of an external argument (13).

- (13) *Me hace cantar*
 1sg.dat make(3sg) sing
 ‘I feel like singing’

The Spanish non-affixal causative in (13) shares with the Finnish affixal causative in (12) (i) the possibility of finding the causative verb *hacer* in the absence of an external argument, (ii) the experiencer interpretation of its only argument, the first singular clitic *me*, (iii) the desiderative interpretation of the construction. In chapters 4, 5, and 6, I study this and other syntactic parallelisms observed in the structure of English, Hiaki, and Spanish productive causatives.

3. Structure of the dissertation

In chapter 2, I introduce and discuss the framework I adopt in my analysis, Pylkkänen's (2002, 2008). In this chapter, I describe Pylkkänen's predictions and I point out potential problems with the framework. In chapter 3, I use data from English, Spanish and Hiaki lexical causatives in order to test Pylkkänen's framework, and I explain some constructions found in these languages that pose a problem to the framework. In chapters 4, 5, and 6 I develop an analysis based on Pylkkänen's framework for English, Hiaki and Spanish productive causatives respectively. I conclude that Pylkkänen's framework successfully predicts the core structure of productive causatives. Nonetheless, the addition of layers of syntactic structure, typical of these constructions as compared with their lexical counterparts, let language-proper mechanisms independent of causation itself be a major source of variation in the linguistic realization of productive causatives across languages.

CHAPTER 2

THEORETICAL FRAMEWORK

1. Introduction

In this chapter, I discuss Pylkkänen's (2002, 2008) model for causatives, which is the theoretical framework adopted as the basis for the study of causatives undertaken in this dissertation. This chapter does not present new data other than to support specific points, but it is merely a review of Pylkkänen's proposal, discussion, and results. In section 2, I present and discuss Pylkkänen's original data and I introduce ideas that are central to her proposal. In section 3 I discuss Pylkkänen's pieces of causation, the functional head Cause and the functional head Voice; In section 4 I discuss Pylkkänen's Voice-bundling parameter. In section 5 I discuss her Selection parameter. Section 6 illustrates how Pylkkänen's framework works regarding predictions associated with different applications of the parameters. Section 7 is the conclusion.

2. Introducing Pylkkänen (2002, 2008)

2.1. The data

Causative structures across languages exhibit systematic patterns of resemblance as well as variation. Pylkkänen (2002, 2008) offers the sentences in (3) to illustrate a clear systematic similarity in the way English, Japanese and Finnish express lexical causatives. All three languages in (1-3) allow the causative-inchoative alternation: English *break* (1a,

b), Japanese *kusa-* ‘rot’ (2a, b), and Finnish *hajo-* ‘break’ (3a, b)).⁶

(1) *English zero (lexical) causatives: The causative-inchoative alternation*

- | | |
|---|--|
| a. <i>Non-causative</i>
The window broke | b. <i>Causative</i>
Mary broke the window |
|---|--|

(2) *Japanese causatives*

- | | |
|--|---|
| a. <i>Non-causative</i>
Yasai-ga kusa-tta
Vegetable-nom rot-past
‘The vegetable rotted’ | b. <i>Causative</i>
Taroo-ga yasai-o kus-ase-ta
Taro-nom vegetable-acc rot-cause-past
‘Taro caused the vegetable to rot’ |
|--|---|

(3) *Finnish causatives*

- | | |
|---|---|
| a. <i>Non-causative</i>
Ikkuna hajo-si
Window(nom) break-past
‘The window broke’ | b. <i>Causative</i>
Liisa hajo-tt-i ikkuna-n
Liisa(nom) break-cause-past window-acc
‘Liisa broke the window’ |
|---|---|

Pylkkänen 2008:81[1-3]

The sentences in (1-3) represent the basic data analyzed by Pylkkänen. Next I introduce the key ideas regarding Pylkkänen’s analysis.

⁶ The English causatives referred to throughout Pylkkänen’s work are English zero (ie., lexical) causatives. This dissertation will focus on the syntax of periphrastic (ie., productive or syntactic) causatives (eg., English causatives with *make*). The restrictions encountered in productive causatives as well as their argument realization are different than those observed for lexical causatives. Compare the following English examples:

- | | |
|---|---|
| (i) a. <i>John made Mary cry</i> | b. <i>John made Mary sit in the chair</i> |
| (ii) * <i>John cried Mary</i> | b. <i>John sat Mary in the chair</i> |

Pylkkänen explains the restrictions in (ii) associated with the (zero) causativization of certain types of verbs such as the unergative *cry* in terms of the syntactic properties of this causative type. Pylkkänen’s discussion on this matter will be described later in this chapter. She does not discuss the syntax of English productive causatives with *make* (eg. (i)), which will be the main focus of this dissertation.

2.2. The lexical vs. productive distinction

The three examples above exhibit the so-called inchoative-causative alternation in English, Japanese and Finnish, respectively, the (a) examples representing non-causative constructions in each of the languages, the (b) examples exhibiting their causative counterparts.

Structures participating in the inchoative-causative alternation have been traditionally classified as ‘lexical causatives’ (ie., Comrie 1976, Shibatani 1973, 2002; Levin & Rappaport-Hovav 1995). In chapter 1 I discuss the traditional opposition made between lexical and syntactic or productive causatives, (ie., *Mary **made** John break the window*). Structurally speaking, lexicalist studies of causatives (ie., Levin & Rappaport Hovav 1995) have classified sentences like (1b) as ‘lexical’ and sentences like (3b) as ‘productive’, claiming that the former are formed in the ‘lexicon’ (ie., the causative component of English verbs like *break* is learned as part of its lexical entry) whereas the latter are formed compositionally, in the syntax.

Pylkkänen (1999, 2002, 2008) challenges this view by claiming that all structures in (1-3) are the same in that they are *all* formed compositionally, in the syntax. They all share one same component, the causative element that she terms Cause. The sentences in (1-3) exhibit variation because the causative element, Cause, that is part of all causative sentences, is syntactically flexible, that is, it is compatible with configurations of different nature (in Pylkkänen’s terms, it is parameterized, in Chomsky’s (1981) sense). This is, in a nutshell, the essence of Pylkkänen’s proposal. In the next subsections I discuss other important ideas to take into account to understand her model.

2.3. Causation and the Causer

The causative-inchoative alternation in the sentences in (1-3) involves an argument-structure-altering process. In this process, some predicate (eg. *break* (1), *kus-* ‘rot’ (2), and *hajo* ‘break’ (3)) has the number of its arguments increased by the introduction of a new element, which becomes the syntactic subject of the sentence and which is typically interpreted as an external argument or *Causer*⁷. That is, in all the examples above, the (b) sentences exhibit the additional arguments *Mary* (1b), *Taroo-ga* ‘Taro’ (2b) and *Liisa* ‘Lisa’ (3b), which are interpreted as having an active participation in bringing about the events described by the non-causative sentences in (1a), (2a) and (3a) respectively.

This argument-increasing phenomenon is one of the main points of resemblance shared by causative structures across languages. Pylkkänen (2002, 2008) points out that this is not totally accurate. She argues that, in some languages (eg. English) the syntax of causative sentences appears to be linked, in effect, to an increase in the number of arguments, as compared with their non-causative counterparts. In other languages (eg. Japanese and Finnish), in contrast, the presence of ‘causation’ in a sentence does not necessarily involve an argument-number-increase with respect to non-causative counterparts. In this section, I discuss the implementation of the causative head Cause, and how this syntactic element affects both the syntax and meaning of causatives in

⁷ In the causative literature, a *Causer* is the agentive main subject of causative sentences, which is typically introduced in the structure as a result of causativization itself. In this dissertation, I will also make use of this terminology. The Causer is an external argument that plays an active role in causation by bringing about the caused event. For instance, in the causative *John closed the door*, *John* is the Causer, as the external argument that performs the *closing of the door*. The causer role of this argument is overtly indicated in the paraphrase of the sentence, *John caused the door to close*.

Pylkkänen's framework.⁸

2.3.1 Causation: An argument increasing phenomenon?

Compare the following causatives in English, Japanese and Finnish.

(4) *Causatives with no external argument*

a. *English zero causatives*

Mary broke the chair (cf. the chair broke, non-causative)

- '(i) Mary caused the chair to break,
- (ii) #The chair broke on Mary'

b. *Japanese adversity causative*

Taroo-ga musuko-o sin-ase-ta

Taro-nom son-acc die-cause-past

- '(i) Taro caused his son to die
- (ii) Taro's son died on him (to Taro's grief)'

Pylkkänen 2008:90(19)

c. *Finnish desiderative causative*

Maija-a naura-tta-a

Maija-part laugh-cause-3sg

- 'Maija feels like laughing'

Pylkkänen 2008:95(32b)

In English, zero causatives (4a) are identifiable by the very presence of an agentive extra argument (eg. *Mary*). In fact, English verbs with a causative meaning *require* that at least one of their arguments be interpreted as an external argument, so a non-external-argument reading of *Mary* in (4a) is simply not an option in English (eg. reading (ii)).

Pylkkänen claims that both the Japanese and the Finnish sentences in (4) are inherently causative, even when the Causer argument is syntactically unavailable.

⁸ Different authors use different labels for the functional head involved in causatives. Pylkkänen (1999, 2002, 2008) uses the label 'Cause' for this head. Other authors such as Harley (1995, 2006), Folli & Harley (2003, 2007) use v_{CAUSE} to refer to this same head. In my analysis I will adopt Harley's and Folli & Harley's label, v_{CAUSE} .

Morphologically speaking, both (4b) and (4c) contain causative morphology, which is overtly realized by causative suffixes (ie., the Japanese *-ase-*, (4b) and the Finnish *-tta* (4c)). Semantically speaking, both readings of (4b) and the sentence in (4c) have causative meaning, even when the syntactic presence of a Causer is excluded (ie. the (4b, ii) and (4c)). For instance, the Japanese sentence in (4b) is ambiguous. The locus of this ambiguity is the presence vs. absence of a Causer. In Japanese (4b), only in the first reading is the nominative *Taroo-ga* ‘Taro’ interpreted as the agent or instigator (ie. the Causer) that brings about the caused event (eg. Taro *caused* the son to die). In the second reading of this sentence in (ii), in contrast, *Taroo-ga* ‘Taro’ is not a Causer, but it is interpreted as an experiencer, adversely affected by what is denoted by the caused event (eg. Taro *adversely experienced* the son’s death).

Similarly, the Finnish causative in (4c) does not involve the presence of an external argument, since the interpretations ‘Maiija caused somebody to laugh’ or ‘Somebody caused Maiija to laugh’ are unavailable in the sentence in (4c). The reason why this is so is that the only argument available in the causative sentence, the partitive *Maiija* ‘Maiija’, is not involved in the caused event as an agent or instigator, but it is interpreted as an experiencer. Because an external argument (ie. a Causer) is lacking, the desiderative is the only reading available for the Finnish causative in (4c).

2.3.2. The interpretation of the causer-less causatives

Pylkkänen does not fully address why Japanese causatives lacking an external argument receive an adversity interpretation whereas Finnish causatives lacking an external argument receive a desiderative interpretation. To me, the different interpretation of the two structures appears to be the consequence of the argument relations as well as the type of event available in each of the constructions.

2.3.2.1. The adversity interpretation of Japanese causer-less causatives

In the case of the Japanese adversity causatives, the origin of the adversity reading seems to be the consequence of a (possession) relation established between the nominative and accusative arguments invariably present in the structure. Pylkkänen notes Japanese adversity causatives are similar in interpretation to Japanese adversity passives illustrated in (5).

(5) *Japanese adversity passives*

Hanako-ga dorobou-ni yubiwa-o to-rare-ta
 Hanako-nom thief-dat ring-acc steal-pass-past
 ‘Hanako was affected by the thief stealing her ring’

Pylkkänen (2008: 65[120])

In passives such as (5), a new (nominative) argument, *Hanako-ga* ‘Hanako’ appears, establishing a possession relation with the argument in accusative, *yubiwa-o* ‘ring(acc)’. Because of this possession relation, the possessor receives a *malefactive* interpretation.

This construction lacks an external argument. The argument that appears in nominative in adversity causative constructions, *Taroo-ga* ‘Taro-nom’ (4b), establishes a possession relation with the argument appearing in accusative *musuko-o* ‘son-acc’. This

(malefactive) possession relation is probably the cause of the adversity interpretation of the causative (ie., Taro is adversely affected by the son's death), although Pylkkänen does not offer an explicit analysis of the two arguments and how the structural relation between them affects the interpretation.⁹

2.3.2.2. The desiderative interpretation of the Finnish causer-less causative

Pylkkänen does not explain in much detail the origin of the Finnish desiderative interpretation of causatives with no external argument either. In her (1999) paper, she compares the Finnish construction with the following desiderative construction in Tohono O'odham (6).

- (6) *Tohono O'odham desiderative causative*
 s-ñ-ko:s-*im*-*c* 'at
 prefix-object-sleep-des-cause aux
 'I am sleepy' (ie., 'I feel like sleeping'/'Something makes me feel like sleeping')
 Zepeda (1987: 348[1]))

The O'odham construction in (6) contains the desiderative suffix *-im* embedded by the causative suffix *-c*. The only argument licensed in this construction is the object 1sg prefix *ñ-*. The interpretation of the construction is similar to the interpretation of the Finnish desiderative causative, 'I am sleepy (ie., I feel like sleeping)'. For this reason, Pylkkänen suggests that it is plausible that, besides causative morphology, the construction in Finnish includes an unpronounced desiderative morpheme, analogous to the O'odham desiderative suffix *-im*, which is responsible for the interpretation of the

⁹ Pylkkänen analyzes the nominative arguments appearing in adversity passives as introduced by an applicative head. See Pylkkänen (2002, 2008) for further details on this construction. See Kubo (1992) for an alternative analysis of these constructions.

causative as desiderative. I show Pytkänen's suggested structure for the Finnish construction in (7).

- (7) Maija-a laula-ø-tta-a
 Maija-part sing-des-cause-3sg
 'Maija feels like singing'

Pytkänen (1999:170[16])

In (7), the null desiderative suffix (ø) results in the desiderative interpretation of the sentence. This is an appealing explanation of the phenomenon. Zepeda shows that, although sentences like (6) tend to omit the Causer, it is possible, under very restrictive limitations, to find explicit Causers in this type of construction. The causer will always be an abstract Cause rather than an agent and it has to refer to some internal state or emotion of the object.

- (8) a. *Causer names some internal state of the object (the object's tiredness)*
 s-ñ-dah-im-c 'at 'a:ñi **g gewkogdag**
 prefix-object-des-cause aux I det tiredness
 'Tiredness made me want to sit down'

Zepeda (1987: 356[17])

- b. *Causer doesn't name internal state of the object (work is external to the object)*
 *s-n-'i'-im-c 'at **g cipkandag**
 prefix-object-drink-des-cause aux det work
 'Work made me desire to drink'

Zepeda (1987: 358[23])

In Finnish, the inclusion of a Causer in desiderative causatives is allowed, although it does not seem to obey the same restrictions as the Causer in O'dham desiderative causatives (9).

- (9) Tämä-n kuvalehde-n ostaminen häve-tt-i minu-a
 This-acc magazine-acc buying(nom) be.ashamed-cause-past/3sg me-part
 'Buying this magazine made me feel ashamed'

Nelson (1999: 147[8b])

Like causative suffixes, desiderative affixes are typically overt in agglutinating languages. In O’odham, non-causative desiderative sentences involving the desiderative suffix *-im* exist alongside the desiderative causative construction, as shown in (10).

- Pyllkkänen does not show whether Finnish exhibits sentences analogous to (10) in which the desiderative interpretation of sentences may be obtained without the support of the causative suffix *-tta*. On the contrary, a Finnish non-causative sentence analogous to (10) (ie., in the absence of a causative suffix) would be interpreted as a factitive, not as a desiderative (11).

- (11) Mină laula-n
I(nom) sing-1sg
'I sing'
Nelson (1999: 148[12])]

The difference between this sentence and the desiderative causative is, however, more than just the absence of the causative suffix (12).

- (12) Minu-a laula-tta-a
 I-part sing-cause-3sg
 ‘I feel like singing’

Nelson (1999: 148[12b])

The differences between (11) and (12) are, respectively (i) the absence versus the presence of the causative suffix *-tta*, (ii) the 1sg versus the 3sg tense agreement (ie., the verb agrees with the 1sg overt subject in (11) but it establishes default 3sg agreement in (12)), and (iii) the nominative case of the only argument in (11) versus the partitive case of this argument in (12).

This is, however, no evidence that the desiderative causative contains a null desiderative. First, Finnish does have non-causative clauses with desiderative (conditional) meaning, as Pylkkänen shows.

- (13) Halua-*isi*-n naura-a
 want-cond-1sg laugh-inf
 ‘I would like to laugh’

Pylkkänen (2008: 98[37])

Second, O’odham non-causative desiderative sentences (10) exhibit the same argument relations as the non-causative factitive sentence in (11). In O’odham non-causative desideratives (10), the only argument, *Mali:ya*, is not an object but a subject. In the Finnish sentence in (11), the only argument *Minä* is nominative (a subject). In the O’odham desiderative causatives (8) the only argument is always an object; the only argument of Finnish desiderative causatives is a partitive, typical of objects or derived subjects (ie., subjects of passives).

All in all, it looks like there should be no reason for sentences such as (11) to receive, at least, an ambiguous interpretation between factitive and desiderative, if Finnish did have a null desiderative suffix. Since this is not the case, I conclude that Finnish does not have a null desiderative suffix and that the source of the desiderative interpretation of desiderative causatives in this language is just derived from the type of configuration involved in this construction (ie., an external-argument-less cause embedding atelic events understood as states).¹⁰

Andrew Carnie (p.c.) suggests the possibility that Finnish desiderative and causative suffixes may be homophones (ie., *-tta*). If both desiderative and causative suffixes in Finnish shared the same phonological realization, perhaps it would be possible to find *-tta-tta* sequences in which one instance of *-tta* would correspond to the desiderative, the other to the causative. I do not know whether this is a possibility. In any case, a failure of the language to exhibit double instances of the *-tta* suffix does not necessarily mean that the causative and desiderative are not homophones. This is so since some languages impose restrictions on sequences of suffixes with identical phonological realization. This is the case of Hiaki, as we will see in chapter 5, that disallows sequences of the identical causative suffix *-tua*.

- (14) *Inepo [Maria-ta Peo-ta-u hiotei-ta (a)=vit-*tua*]-*tua*-k
 1sg Maria-acc Pete-acc-to letter-acc (3sg)=see-cause-cause-perf
 ‘I made Maria send a letter to Pete’

¹⁰ Pylkkänen shows that the reason why the only argument appears in partitive case is precisely because the event embedded by the causative is atelic, since this is the case marking of objects of atelic events in Finnish:

(i) Jussi osa-a ranska-a
 Jussi(nom) know-3sg French-part
 ‘Jussi knows French’

Pylkkänen (2008: 96[33b])

Whenever a productive causative in this language embeds a lexical causative with identical phonological realization, only one instance of the suffix surfaces, the other one becoming null (\emptyset).

- (15) Inepo [Maria-ta Peo-ta-u hiotei-ta (a)=vit]-tua- \emptyset -k
 1sg Maria-acc Pete-acc-to letter-acc (3sg)=see-cause-cause-perf
 ‘I made Maria send a letter to Pete’

Were Finnish subject to similar restrictions, no examples would be found involving *-tta-tta* sequences in which one is an instance of the desiderative suffix, the other an instance of the causative suffix. This issue is then hard to resolve.¹¹ Nonetheless, the contrast between the argument realization in desiderative causatives and simple desideratives in O’odham offers a clearer answer to this question. In (8) and (10) I discussed Zepeda’s point that there is a contrast in O’odham in which the only arguments involved in desiderative causatives (8) are objects, whereas the only arguments appearing in simple desideratives (10) are realized as subjects. If the Finnish suffix *-tta* were used in the expression of simple desideratives and causatives independently, it would be reasonable to think that the argument involved in the simple desiderative would be realized, either as a subject (nominative), or as an experiencer (elative) (16).

- (16) a. *Nominative (stative)*
 Jussi osa-a ranska-a
 Jussi(nom) know-3sg French-part
 ‘Jussi knows French’

¹¹ However, as Heidi Harley (p.c.) points out, were the suffix *-tta* a (non-causative) desiderative suffix, instances of the suffix rendering (non-causative) desiderative readings (ie., *Maija wants to sing*) should be possible, contrary to fact.

b. *Nominative (conditional)*

Minä halua-isi-n
 1sg(nom) want-cond-1sg
 ‘I would like’

c. *Nominative (experiencer subjects)*

Minä pidän sinu-sta
 1sg(nom) like you-ela
 ‘I like you’

Pylkkänen (2008: 96[33b], 97[36a])

Conversely, derived subjects (passive subjects) and objects can be partitive in Finnish (17).

(17) a. *Partitive (Derived subject)*

Pekka-a rakaste-ta-an
 Pekka-part love-pass-agr
 ‘Pekka is loved’

b. *Partitive (Object)*

Jussi osa-a *ranska-a*
 Jussi(nom) know-3sg French-part
 ‘Jussi knows French’

Pylkkänen (2008: 96[33b], 34]

Let us recall the argument realization in the desiderative causative.

(18) *Maija-a* laula-tta-a

Maija-part sing-cause-3sg
 ‘Maija feels like singing’

Pylkkänen (2008: 96[33c])

The only argument, *Maija-a*, is partitive, which makes it pattern with either derived subjects or objects, but not as non-derived subjects. This implies that the sentence in (18) has an implicit subject (like passives) and that the argument *Maijaa* is a derived subject, as suggested by Pylkkänen. This all implies that the suffix *-tta* is a causative suffix only, as it does not participate in the type of configurations in which desiderative suffixes in other languages participate (ie., licensing base generated subjects).

In chapter 6 I will present evidence from two unrelated languages, Chemehuevi (Serratos 2008) and Spanish which, like Japanese and Finnish, also exhibit causer-less causative constructions. The Spanish construction I will show is similar to the Finnish one just discussed, also involving an overt causative marker (ie., *hacer* ‘make’) lacking an external argument. The interesting aspect of this construction is that, like the Finnish

desiderative, the Spanish agentless causative also receives a desiderative interpretation.

Unlike Pylkkänen, I will not assume that the Spanish construction includes a null desiderative morpheme, but that the kind of configuration in which the causative appears (ie., stative and lacking an external argument) results in the desiderative interpretation obtained.

2.3.3. Concluding, causers are not intrinsic to causation

Back to the initial examples in (4), recall that the only possible interpretation for the English causative in (4a) is that in which the nominative argument *Mary* is agentive (i), while an interpretation in which this argument is perceived as an experiencer (ii) is disallowed, just because English zero causatives require that their argument structure include the presence of an external argument.

This is one of the central ideas in Pylkkänen's account of causatives. That is, causative structures vary across languages in whether they obligatorily require the syntactic presence of a Causer or not. According to her, the locus of this variation is in the syntax of the causativizing element *Cause* and the parameterization of its interaction with the syntactic element *Voice*, the head responsible for the introduction of external arguments. Section 4 discusses Pylkkänen's implementation of this relationship as well as its impact on both the form and meaning of causatives across languages. Nonetheless, in this dissertation I show that the properties of causatives are not necessarily derived from whether they are realized as suffixes, as might be concluded from works such as Pylkkänen's or Shibatani's (1976). The existence of external-argument-less productive

causatives in a synthetic language such as Spanish shows that the optional presence of an external argument is not tied to the morphological characteristics of languages.

3. Pylkkänen's pieces of Causation

In this section I discuss the different elements that contribute to causative formation in Pylkkänen's framework.

3.1. The syntax and semantics of Cause

In Pylkkänen's framework, one single element is attributed the introduction of causation structurally: The functional head *Cause*. In this section I offer some discussion of its nature and the role it plays in Pylkkänen's model.

3.1.1. Pylkkänen's Cause

Recall the sentences in (4) above. I repeat them in (19).

(19) *Lexical causatives with no external argument*

a. *English zero causatives*

Mary broke the chair (cf. the chair broke, non-causative)

b. *Japanese adversity causative*

Taroo-ga musuko-o sin-ase-ta

Taro-nom son-acc die-cause-past

'(i) Taro caused his son to die

(ii) Taro's son died on him (to Taro's grief)'

c. *Finnish desiderative causative*

Maija-a naura-tta-a

Maija-part laugh-cause-3sg

'Maija feels like laughing'

Pylkkänen (2008)

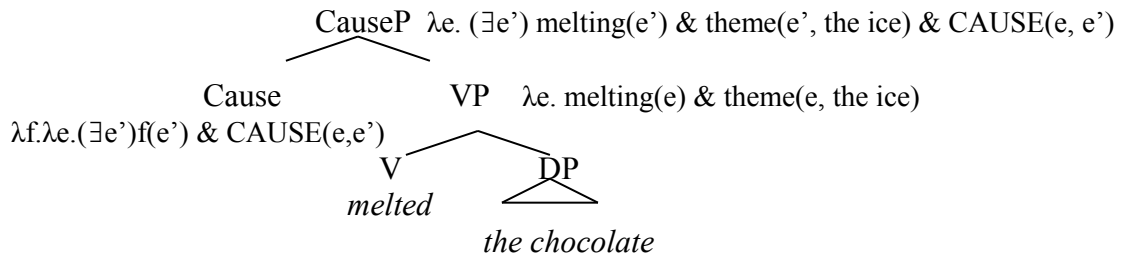
All sentences in (19) contain a causative component in terms of both their morphology and their semantics. Pylkkänen argues that this is so since *all* causative constructions involve the presence of a verbal functional head, *Cause*, ‘which combines with noncausative predicates and introduces a causing event to their semantics’ (Pylkkänen 2008:84). She proposes the following semantic denotation in (18) for *Cause*.

- (18) *Universal causative element*
 $\text{Cause: } \lambda P.\lambda e. (\exists e') P(e') \ \& \ \text{CAUSE}(e, e')$

Pylkkänen assumes Parsons’ (1990) view that *Cause* is a relation between two events, the causing event, *e*, and the caused event (ie., the event denoted by the embedded predicate), *e'*, in (18). For instance, in a causative sentence such as *Mary melted the chocolate*, Pylkkänen assumes a caused event, *e'*, which involves the melting of the chocolate, and also a causing event, *e*, involving the existence of some cause giving way to an event of chocolate melting.

In strictly syntactic terms, Pylkkänen follows a tradition, also assumed in previous work on causatives such as Miyagawa (1998) and Harley (1995, and subsequent work), whereby *Cause* takes the form of a functional ‘light verb’ that heads its own projection (*CauseP*), and takes the syntactic material participating in the caused event as its complement, as shown in (19).

(19) *(Mary) melted the chocolate*



In the sentence in (19) the functional verb Cause gives the sentence its causative meaning, ‘somebody (Mary) caused the chocolate to melt’, by virtue of embedding the non-causative predicate VP *melted the chocolate* ‘ie., the chocolate melted’.¹²

Semantically speaking, Cause is responsible for both introducing the causing event (e') and relating it with the event involved in the embedded material (e). This same syntactico-semantic analysis of Cause will be assumed throughout this dissertation.

3.1.2. Cause: a little history

In this section I offer an overview of the development of Cause as a functional verbal element.

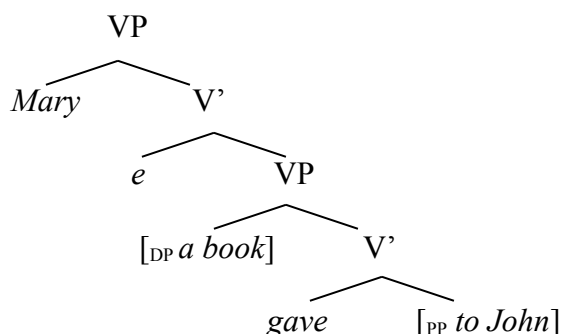
3.1.2.1. Larson’s VP-shells

The proposal of Cause as a functional head embedding a lower lexical predicate is initially based on Larson’s (1988) proposal of VP shells, which were originally intended

¹² The structure in (19) is meant to illustrate the status of Cause as a functional v^0 head that provides the material it embeds with causative meaning. For ease of exposition, the analysis of the rest of the material involved in the sentence *Mary melted the chocolate* has been oversimplified. A complete analysis of the rest of the elements participating in lexical causatives will be developed and shown in the following sections.

to account for ditransitive constructions in English. In Larson's framework, each of the VP shells is responsible for introducing each one of the two objects (ie., direct and indirect) in ditransitive sentences, as shown in (20).

(20) *Larson's VP shells*



The structure in (20) represents Larson's analysis of the core argument structure of the ditransitive sentence *Mary gave a book to John*. He proposes that such structure contains two verbal (ie. VP) shells. The most embedded VP shell hosts the lexical verb *gave* as its head, which takes the indirect object PP *to John* as its complement and the direct object DP *a book* in its specifier position. The higher VP shell, in turn, is generated with an empty *e* head. It takes the embedded VP shell as its complement and hosts the subject DP *Mary* in its specifier position¹³.

The crucial idea contributed by Larson's (1988) proposal is the availability, in the argument structure of predicates, of multiple verbal heads, which may have an impact on the number of arguments allowed in structures with certain degree of complexity, such as ditransitives, and which open up space for additional functional content in the verbal

¹³ Larson's (1988) VP shell framework involves a further step, whereby the lexical verb *gave* in (20) moves up to the head of the higher VP shell in order to discharge the external argument theta-role to the agent DP, which is in its specifier position. This detail is merely informative, however, as neither Pylkkänen nor myself assume this proposal for external theta-role assignment.

domain. That is, in addition to the lexical meaning and argument structure inherent to the verb *give* (ie., *give* x), the verbal domain in sentences like (20) expands in order to contribute additional functional material that may have an impact on the overall interpretation and argument realization of the resulting structure (ie., *give* x [to somebody]).

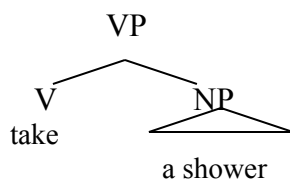
3.1.2.2. Light verbs and complex predication

Scholars concerned with complex predication (ie., Butt & Ramchand 2003, Rosen 1989, Butt 1995) analyze verbal structures involving more than one predicate by identifying a ‘light verb’ (Jespersen 1954) as part of the structure.

Light verbs are ‘light’ because although they have syntactic import, they have ‘light’ semantics. Grimshaw & Mester (1988) relate the ‘lightness’ of light verbs with the fact that they are ‘thematically incomplete (...). Although it is a main Verb, its argument structure is more like that of an auxiliary’ (p. 210). For instance, the verb *have* functions as a light verb in expressions such as *have a rest*. The verb is syntactically functional (ie., the head of the VP) and participates in different conjugations (ie., *He is having a rest*). However, the expression does not mean ‘to own a rest’. Rather, light verbs are known as ‘helping’ predication of, for instance, V+NP complexes (ie., *have a rest*, *take a shower*) by ‘verbalizing’ the NP. I show the structure in (21).¹⁴

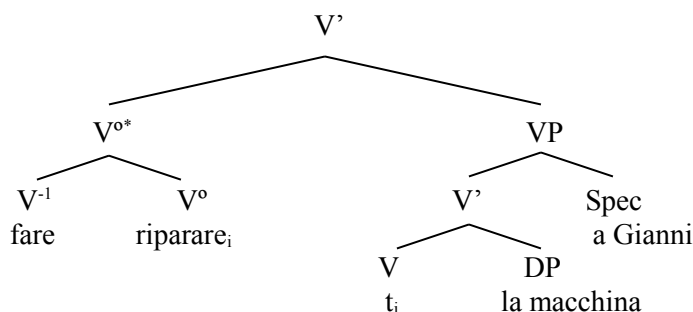
¹⁴ This diagram is an oversimplification just meant to illustrate how the idea of light verb works.

(21) Light verbs with phonological realization



In (21) the NP *a shower* is used predicatively by virtue of being the complement of the light verb *take* that is responsible for the event syntax and semantics of the complex (the complex predicate is understood as an event). The lexical content of the verb is nonetheless ‘light’, and it does not contribute much to the structure at this level.¹⁵

Light verbs do not only combine with non-verbal elements. Rosen (1989), Guasti (1992, 1993, 1996, 1997), and Baker (1988), for instance, analyze the causative member of productive causatives (eg., *make*) as a light verb. These analyses generally assume that the (structurally lower) lexical verb *incorporates* to the (structurally higher) light verb, thus forming the complex construction. In this sense, productive causatives are complex predicates. I show Guasti’s analysis in (22).

(22) Guasti’s analysis of Italian productive causatives with *fare* ‘make’

Guasti (1997: 137[45])

¹⁵ See Butt (2003) for a more thorough description of light verbs in complex predication.

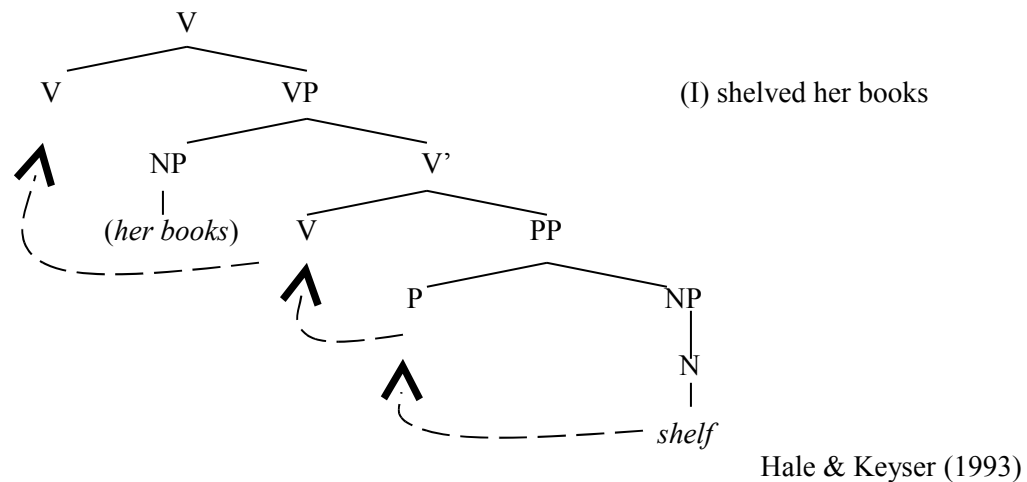
In Guasti's analysis, the causative verb *fare* 'make' is treated as a light verb that takes a further VP as a complement. The head of the lower VP, *riparare* 'repair' undergoes incorporation to the (higher) light verb, forming the complex predicate *fare riparare* 'make repair'. The light verb *fare* just contributes causative semantics to the structure, whereas its complement contributes lexical content.

3.1.2.3. Light verbs with null phonological content

So far we have seen light verbs with phonological content like *have*, *take* and *fare* 'make'. The concept of light verb has been extended, however, to the treatment of syntactically verbal elements with null phonetic content.

Hale & Keyser (1991, 1993), for instance, analyze the denominal predicates in sentences such as *shelve the books* or *saddle a horse* as complex predicates involving a light verb plus a NP or a PP. In such cases, the light verb is present in the structure but lacks phonological content. Like in the case of Baker's (1988) and Guasti's (1992 and subsequent work) analyses of complex predicates, Hale & Keyser's structures also involve syntactic incorporation of the non-verbal complement to the light verb. I show the basic structure in (23).

(23) Hale & Keyser's analysis of denominal verbs



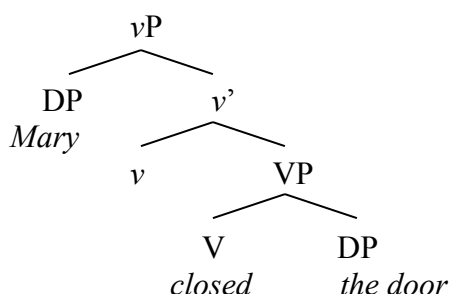
The sentence *I shelved the book* in (23) is analyzed in a similar way to the sentence *I put the books on the shelf*. The difference is that in the latter sentence the verb *put* and the preposition *on* have phonological content. In the case of (23), the material in the **P** and **V** heads is null. The noun head *shelf* undergoes incorporation, first to the null preposition, then to the null light verb heads.

The realization of these cyclic movements obeys Travis' (1984) Head Movement Constraint, which proposes that the movement of a head need to be done cyclically, from head to head. Because the noun *shelf* has incorporated to a null light verb, it phonologically surfaces in the structure with verbal morphology, *I shelved the books*.

Chomsky (1995) adopts the idea that verbal predicates are composed of a higher

functional layer or shell, a typically phonetically null v , and a lower lexical layer or shell, V. This analysis of verbal predicates is still generally assumed in minimalist approaches to syntax.¹⁶ I show the structure in (24).

(24) *Transitive ‘light verb’*



The structure in (24) shows the argument structure analysis for the transitive sentence *Mary closed the door* in a layered VP-shell fashion, along the lines of Larson (1988). The verbalizing ‘light verb’ not only has a ‘verbalizing’ function in (24); this functional head is also responsible for the introduction and the assignment of external θ -role to the DP *Mary* in its specifier position, as well as the assignment of accusative case to the object DP *the door*.¹⁷

¹⁶ Proponents of Distributed Morphology (ie., Halle & Marantz 1993, Marantz 1997, Harley & Noyer 1998, 1999) use the label ‘root’ $\sqrt{}$ rather than V for lexical roots, as the category of lexical roots is not assumed until these do not compose, in the syntax, with the specific category-assignment heads n^o , v^o , or a^o . This is the view also adopted by Pykkänen (2002, 2008), which will be further developed later.

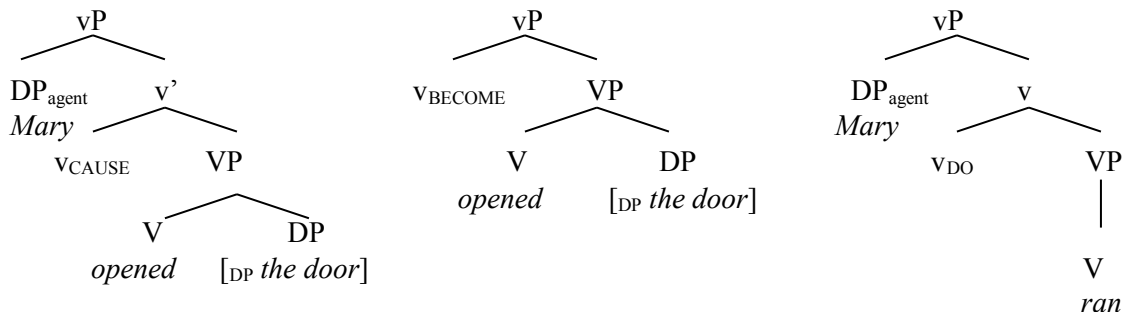
¹⁷ The implementation of accusative case assignment to objects by v has a certain range of variation in the minimalist literature. For some authors, following the former theory of AgrOP, accusative case assignment involves a strict locality relation between little v and the object DP, and it only occurs after movement of the object DP within the lower VP projection, from its original complement of VP to the [spec, VP] position. In more current frameworks such as Chomsky (2000, 2001), accusative case assignment may occur *in situ*, via checking under an Agree relation, as it does not require a strict spec-head relation between the assigner and the assignee. This is the position assumed throughout this dissertation.

3.1.2.4. Different ‘flavors’ of v

A number of linguists specializing on the relation between transitivity and causation (eg., Miyagawa (1998), Harley (1995) and subsequent work, Folli & Harley (2002)) propose that the different nature (eg. causative, unaccusative, stative, unergative) of events is not determined by lexico-semantic information contained in the lexical entries of the verbal roots, but it is rather dictated by the existence of different types of v heads that contain specific event-semantic content. The structures in (25) show this contrast for the sentences *Mary opened the door* (25a), *The door opened* (25b), and *Mary ran* (25c).

(25) *Flavors of v*

- a. v_{CAUSE} ‘(Mary opened the door)’ b. v_{BECOME} ‘The door opened’ c. v_{DO} ‘(Mary) ran’



In (25a), v_{CAUSE} determines the causative nature of the sentence *Mary opened the door*, in (25b) v_{BECOME} is responsible for the unaccusative nature of the sentence *The door opened*, and in (25c) v_{DO} is behind the unergative nature of the sentence *Mary ran*.¹⁸ In Harley's (1995) analysis, the different types of v heads are assumed to have an impact on the

¹⁸ The structures in (25) are partial analyses of the causative sentence *Mary opened the door*, the unaccusative sentence *The door opened* and the unergative sentence *Mary ran*, as their only purpose here is to illustrate some of the different types of v heads proposed in work such as Harley (1995). For further details, see the original author and subsequent work.

argument structure and syntactic properties of the predicates they embed.

As proposed in Chomsky (1995), v_{CAUSE} is not only responsible for the causative interpretation of the predicate *open the door* in (25a). Its transitive nature makes it compatible with a VP complement (ie., *open*) that licenses the object DP *the door*, by assigning it accusative case. Furthermore, it opens up a specifier position for the licensing and theta-assignment of the agentive DP *Mary*, which is interpreted as the Causer of the causative event.¹⁹

In contrast, the unaccusative nature of v_{BECOME} in (25b) impacts the syntax of the predicate it embeds by not assigning accusative case to the embedded object DP *the door* and by not opening up a specifier position for the licensing of agentive DPs, which explains the absence of Causers in unaccusative sentences.

3.1.3. Summary

Earlier in this section, Pylkkänen's causative head, *Cause*, was discussed. This head is similar to Harley's v_{CAUSE} in that it behaves like a light verb (v) head, that is, it has functional (causative) content that impacts the syntax and the semantics of the predicates composing with it, giving them a causative interpretation. There is a crucial difference between Pylkkänen's *Cause* and Harley's v_{CAUSE} . While the latter necessarily opens up a

¹⁹ This departs from views like the Verb Internal Subject Hypothesis (Koopman & Sportiche (1991)), in which subjects are originated (and thematically marked) internally to the verb (ie., *closed* in (25)). In approaches based on Chomsky (1995), the Verb is a complement to a functional vP , and it is this functional vP that licenses external arguments (ie., subjects) in its specifier position. The proposal that external arguments are licensed by a functional head different from VP is original from Kratzer (1994, 1996) as we will see in the next section.

slot for the licensing of external arguments, Pylkkänen's Cause may appear in causative sentences with no agentive-like arguments, as suggested by the data in 2.3. above. The following sections expand on this idea and discuss the way in which Pylkkänen resolves the introduction of external arguments in causative constructions as well as the potential independence of these 'special' arguments from the causativizing head Cause.

3.2. The Causer in Pylkkänen's framework: Kratzer's (1994, 1996) Voice

Pylkkänen adopts Kratzer's (1994, 1996) proposal in which the semantic introduction of agents occurs in the syntax by a functional head, which she terms Voice, and which is separate from the head that introduces the lexical predicate. Kratzer's proposal is based on the idea that agents are not arguments of lexical verbs. In this sense, they are external arguments, as opposed to themes or patients that are internally generated within the verb phrase. Kratzer finds empirical evidence in support of her proposal in Marantz (1984), which shows that (i) external arguments have a special status as compared with internal arguments, and (ii) internal arguments play a crucial role on the composition of the verb's meaning as opposed to external arguments, which do not.

For instance, Marantz argues that whereas external arguments are excluded from the lexical representation of verbs, internal arguments are both present and assigned a thematic role by the verb. Consider the verb *buy* in the sentence in (26).

- (26) a. John bought a pack of American Spirits
 b. buy (theme)

Out of the two arguments in the sentence in (26a), only the theme, *a pack of American*

Spirits, is included in the lexical representation of the verb *buy* in (26b). For Marantz, subjects are arguments of *predicates*, not of verbs. The evidence he offers in support of his argument is based on idiomatic readings of certain verbs, which are intimately tied to internal arguments, as these trigger the particular interpretations of the verbs, but exclude external arguments, which do not contribute anything to the idiomatic reading.

- (27) a. kill a cockroach
 b. kill a conversation
 c. kill an evening watching TV
 d. kill a bottle
 e. kill an audience

The idiomatic readings of *kill* in (27) are strictly conditioned by the particular internal arguments appearing along with the verbs. For instance, for the idiomatic reading of (27d) to apply, the verb *kill* imposes strict selectional restrictions on its internal argument (i.e., it has to be some container that holds some liquid or, more specifically, some liquor). If the internal argument has different properties (eg., it is an animal), then the reading in (27a) is the only one available. In contrast, external arguments (i.e., subjects) do not form idiomatic readings along with verbs. For instance, an external argument such as *Mary kill* has the same meaning if combined with *a cockroach* (27a), *a conversation* (27b), or *a bottle* (27d). So this is evidence that only internal arguments form part of the verb's lexical representation.

Kratzer takes this as evidence that the functional head Voice is the sole responsible for the presence of the external argument in a sentence. She uses semi-neo-Davidsonian event semantics for the formal implementation of her proposal. Neo-Davidsonian event semantics (28b) is distinguished from Davidsonian event semantics

(28a) in that only the event argument is an argument of the verb, whereas each argument is introduced by a separate predicate. In Davidsonian event semantics, all arguments, including the event argument, are directly related to the verb; they are opposed to adjuncts, that are not directly related to the verb. For instance, the logical representation of a verb such as *buy* may be one of the following.

- (28) a. Davidsonian
 buy $\lambda x \lambda y \lambda e$ [*buy*(x)(y)(e)]
 b. Neo-davidsonian
 buy $\lambda x \lambda y \lambda e$ [*buying*(e) & Theme(x)(e) & Agent(y)(e)]

Kratzer 1994:110[figures 1,2]

In (28) *buy* is a 3-place predicate that involves an agent, a theme, and an event. In Kratzer's view, *buy* is a 2-place predicate, where the inner argument of the verb is the Theme(x) (ie, what's being bought) and the higher argument is the Event Argument (e). Its lexical entry is shown in (29), where the agent has been eliminated. Because the verb retains the ability to introduce one of its non-event arguments, but does not introduce the external argument, she terms this approach semi-neo-Davidsonian.

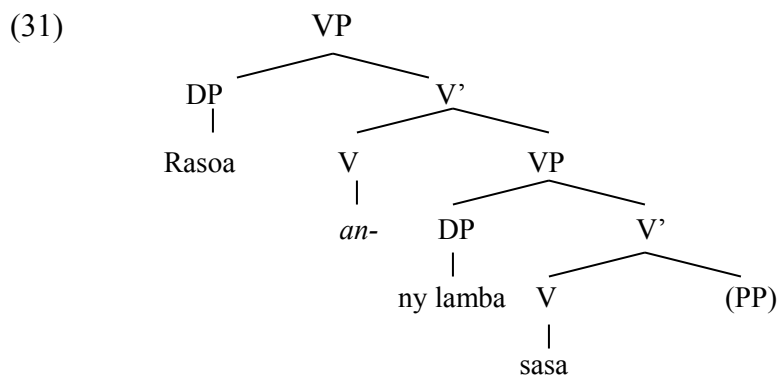
- (29) *buy* $\lambda x \lambda e$ [*buy*(x)(e)]

Kratzer 1994:110[figure 3]

According to Kratzer, the agent is added to structures by an independent predicate, syntactically encoded in an independent projection, since it is not a real argument of *buy*. She supports this idea with a proposal previously made in (Hung 1988) based on data from Malagasy, in which an overt suffix, *-an-* realizes active morphology.

- (30) M+*an*+sasa ny lamba (amin ny savony) Raso
 wash+active the clothes (with the soap) Raso
 'Raso washes the clothes (with the soap)' Hung (1988)

The structure is analyzed as in (31).



Kratzer (1996:117[14b])

The diagram in (31) exhibits a complex verb structure in which the higher layer exhibits a light verb that is phonologically overt, *an-*. This higher layer is what Kratzer identifies as the agent-introducing functional head, which she labels Voice as, in Malagasy, it is the instantiation of Voice morphology.²⁰ Kratzer extends this analysis to all verbs with external arguments in any language. In Kratzer's account, then, external arguments are introduced by the functional head Voice, and they are both semantically and syntactically independent from VP (ie., the syntactic projection that introduces the lexical verb or verbal root). Voice has a double role: it (i) introduces the external argument, and (ii) assigns accusative Case to internal arguments.^{21,22}

Voice is related to its verb via Event Identification, which according to Kratzer is

²⁰ Kratzer does not discuss, however, whether the Voice particle *an-* appears in Malagasy in active sentences that do not involve agents. Thanks to Gerardo López (p.c.) for pointing this out to me.

²¹ See Kratzer (1994, 1996) for arguments on the functional (ie., inflectional), as opposed to lexical, status of *Voice*.

²² The following clarification is important at this point. Kratzer's *Voice* is the equivalent of the functional head *v* in, for instance, Chomsky (1995) and subsequent work as the light verb that introduces external arguments. Kratzer's structure does not assume the presence of a lower light verb that, for instance, in causatives, provides the structure with causative meaning. Pytkänen's approach is different in that she proposes a division of labor between two distinct functional heads regarding the introduction of external arguments (ie., *Voice*) and the introduction of causative semantics (ie., *Cause*).

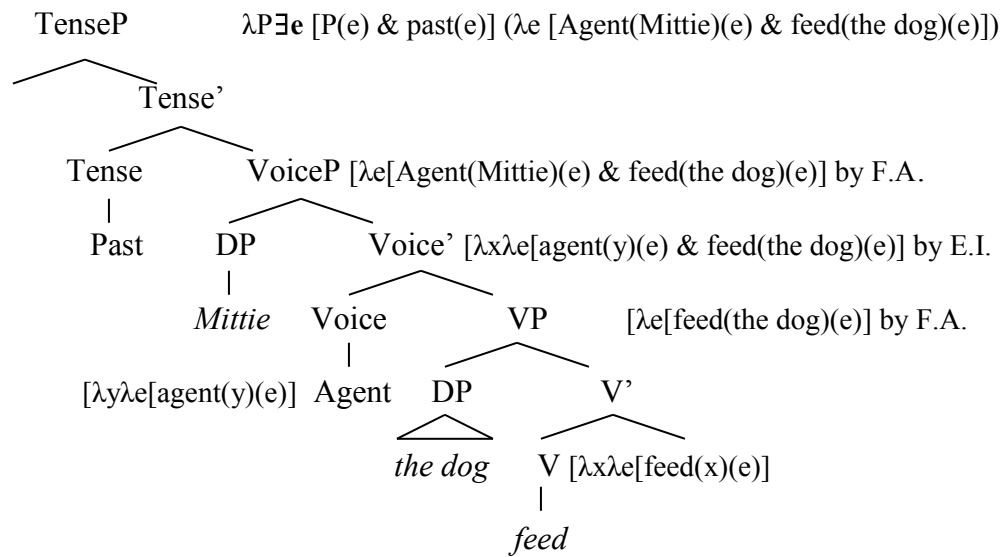
‘one of the several admissible conjunction operations (...). It takes a function f and a function g as input and yield a function h as output.’ (p. 122). Functions are either of the type $\langle e, \langle s, t \rangle \rangle$ or of the type $\langle s, t \rangle$, where s is the type of ‘events’, e is the type of ‘individuals’ and t is the type of ‘truth-values’. In Event Identification, entities of the type $\langle s, t \rangle$ are then functions from events to truth-values and entities of the type $\langle e, \langle s, t \rangle \rangle$ are functions that map individuals to functions from events to truth-values. With this in mind, we can understand the semantic relations in the diagram in (32).

$$\begin{array}{ccc}
 (32) & \begin{array}{c} f \\ \langle e, \langle s, t \rangle \rangle \\ \lambda x_e \lambda e_s [\text{agent}(x)(e)] \end{array} & \begin{array}{c} g \\ \langle s, t \rangle \\ \lambda e_s [\text{feed}(\text{the dog})(e)] \end{array} \\
 & \begin{array}{c} h \\ \langle e, \langle s, t \rangle \rangle \\ \lambda x_e \lambda e_s [\text{agent}(x)(e) \ \& \ \text{feed}(\text{the dog})(e)] \end{array} & \text{Kratzer (1996:122[24])}
 \end{array}$$

The Event Identification in (32) shows then how the verb and Voice are semantically combined. As for the location of Voice in the syntax, Kratzer proposes that it “can appear anywhere in the hierarchy of a verb’s inflectional heads, as long as the Event Argument is not existentially quantified” (Kratzer 1994: 125). The Voice Phrase’s denotation is a property of events, not a truth-value, but a higher inflectional head, Tense, is what will existentially quantify the open event argument in the denotation of VoiceP, as in (33).²³

²³ F.A. stands for Functional Application; E.I. stands for Event Identification

(33) Mittie fed the dog



Kratzer 1994:125[29]

In (33) Voice is the ‘agentive’ functional head that introduces the external argument, the subject DP *Mittie*. This functional head composes with the lexical VP via Event Identification, but stays unsaturated (the combination does not result in a truth-value). Right above Voice is the inflectional head Tense. It is the inflectional head Tense, higher than Voice in the structure, that existentially quantifies and saturates the Event Argument (e).

Pylkkänen, too, assumes [Spec, VoiceP] position as the locus of external arguments or Causers of causatives. In order to account for syntactic variation in the crosslinguistic behavior of lexical causatives, Pylkkänen builds her argument around the potential parametric setting of languages. The syntax of Voice and its interaction with the causative head Cause are key in the development of the first of Pylkkänen’s parameters of variation in causatives. The parameter, which she calls *Voice-bundling* is discussed in

the next section.

4. Pykkänen's *Voice-bundling* parameter

Pykkänen develops her framework by claiming that the causative head Cause is parameterized in two ways and the different parameterization of this functional head is what triggers crosslinguistic variation. I will discuss each of the possible parameterization frames undergone by Cause in this and the following sections. This section discusses the Voice-bundling parameter.

4.1. The data

Let us remember one particular contrast Pykkänen points out about causatives in English and Japanese (34).

(34) *Causatives with no external argument*

- | | |
|---|---|
| <p>a. <i>English zero causatives</i>
 Mary broke the chair
 '(i) Mary caused the chair to break,
 (ii) ≠ The chair broke on Mary'</p> | <p>b. <i>Japanese adversity causative</i>
 Taroo-ga musuko-o sin-ase-ta
 Taro-nom son-acc die-cause-past
 '(i) Taro caused his son to die
 (ii) Taro's son died on him (to Taro's grief)'</p> |
|---|---|

In the English causative in (34a) the causer, *Mary*, is obligatory (ie., ii). This same argument is optionally absent in Japanese (34b, (ii)).

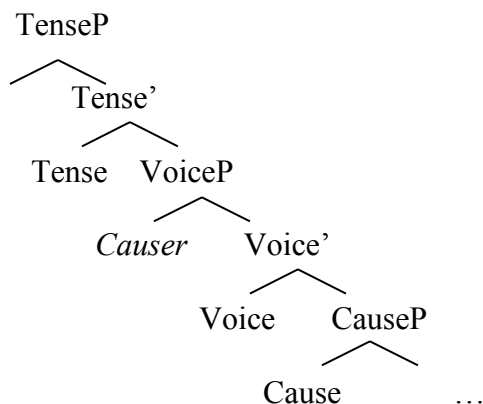
Such a contrast suggests that whatever head introduces the causers *Mary* (34a) and *Taroo-o* 'Taro-nom' in (34b), this head cannot be the causativizing head Cause in section 3.1. Were this the case, the Japanese sentence in (34b) would obligatorily have one sole interpretation: that in (i). In other words, if Cause were the functional head

involved in the licensing of causers, all causative sentences would obligatorily have a causer, contrary to fact (ie., 34b(ii)).

4.2. Voice and Cause: two different functional heads

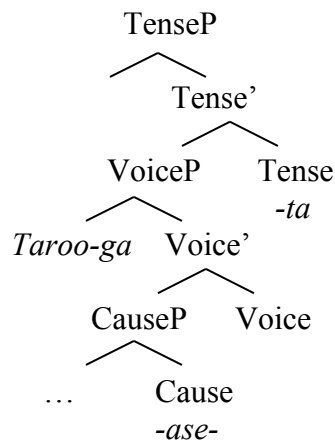
Working on the proposal by Kratzer just seen in section 2.5., Pylkkänen proposes that causative sentences involve two functional heads, the causativizing head Cause, responsible for the introduction of causative semantics, and the head Voice, responsible for the introduction of external arguments or causers. The structure in (35) illustrates the way in which Voice and Cause are combined in lexical causatives.

(35) *The separation of Voice and Cause in lexical causatives*



Structures like (35) explain how, in Japanese, it is possible for causative sentences to exclude the presence of the causer, as in (34b). The structure in (36) shows how (35) may be implemented for Japanese.

(36) Non-agentive causatives in Japanese



In (36), three functional heads are separate pieces in the structure of the Japanese lexical causative *Taroo-ga musuko-o sin-ase-ta* 'Taro-nom son-acc die-cause-past, Taro's son died'. The highest functional head, Tense, hosts the past tense morpheme *-ta*. Next comes VoiceP, which licenses the Causer *Taroo-ga* 'Taro-nom' in its specifier position.²⁴ A third functional head, Cause, both hosts the causative morpheme *-ase-*, and is responsible for the causative meaning of the sentence.

The independent status of the two heads Voice and Cause explains then why, in Japanese, causatives do not necessarily involve the presence of a Causer. The autonomy of Cause with respect to Voice in, for instance, Japanese does not explain, however, why in some languages like English (34a) Cause does not seem to be available independently of Voice, given the non-existence, in this latter language, of non-agentive causatives.

²⁴ The structure in (36) observes the original structure of Japanese, a right-branching SOV language. Only the portion of the sentence showing the independence between Cause and the Causer are shown here. For ease of exposition, the portion of the sentence showing the material embedded under Cause, [*musuko-o sin*] 'eg. the son died' has been left out from the structure in (36).

4.3. The Voice-bundling parameter

Pylkkänen claims that the crosslinguistic variation in (34) can be explained by appealing to the parameterization of Cause with respect to Voice. Cause is parameterized: (i) it may appear in a structure independently, as a causativizing head, or (ii) it may require the presence of the incorporated head Voice in order to properly form causative structures. The two possible settings corresponding to the Voice-bundling parameter of Cause are the following:

(i) Voice-bundling

In languages with Voice-bundling Cause, Cause and Voice cannot occur as separate functional heads. Rather, Cause is syntactically realized as the bundle *Voice-Cause*, heading a unique causativizing Voice-Cause projection. Causatives in these languages require the obligatory presence of Causers.

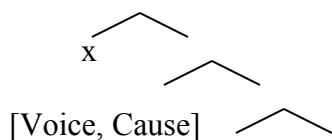
(ii) Non-Voice-bundling

In languages exhibiting non-Voice-bundling Cause, Cause and Voice are independently realized by separate functional heads, each of them heading its own projection: VoiceP, which introduces the Causer, and CauseP, which provides the sentence with causative morphology and semantics. Causatives in these languages do not obligatorily require the presence of a Causer.

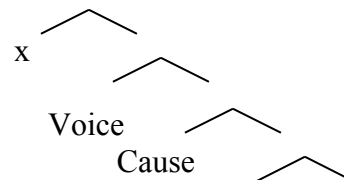
The structures in (37) illustrate the contrast between Voice-bundling and Non-Voice-bundling Cause, as shown in Pylkkänen (2002, 2008). In (37), x represents the external argument (ie., the Causer) introduced by Voice, when present. The unspecified material under Cause represents its complement.²⁵

²⁵ The nature and type of elements that may be licensed as the complement of Cause will be fully discussed in section 5. As an anticipation, elements of three different types may be embedded by Cause: a) a bare root $\sqrt{\text{ }}$, b) a vP, c) a Phase (ie. what roughly corresponds to a full clause).

(37) a. Voice-bundling



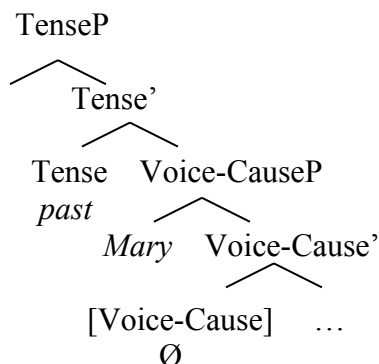
b. Non-voice-bundling



Pylkkänen (2008: 84[10])

The Japanese sentence in (36) above corresponds to the structure in (37b) as an example of non-Voice-bundling Cause. Recall how, in the Japanese lexical causative in (36), Voice and Cause are independently realized, heading their own projections.

Compare the structure in (37b) with that in (37a), which illustrates the syntax of Voice-bundling Cause. English Cause is parameterized as Voice-bundling. The structure in (38) shows the implementation of (37a) for the English sentence *Mary broke the chair*.

(38) *Voice-bundling in English lexical causatives*

In the English lexical causative in (38), syntactic causation is configured as the bundle

Voice-Cause.²⁶ Unlike Japanese, English Cause is realized by zero morphology (ie., Ø).

Because of the obligatory presence of Voice, the presence of the Causer *Mary* is required

²⁶ As in the Japanese example in (36), and for ease of exposition, the structure in (38) only shows the functional domain of the English lexical causative *Mary broke the chair*. The lexical domain of causatives will be discussed in the following sections.

in this type of configuration. This explains why lexical causatives lacking an external argument are ungrammatical in English, suggested earlier by the non-availability of the second reading of (34a).²⁷

Pylkkänen proposes a second source of crosslinguistic variation in lexical causatives also associated with the parameterization of Cause. This second source of variation in causatives, which Pylkkänen terms *Selection*, has to do with the kinds of complements that different Cause heads are compatible with. The details are fully discussed in the next section.

5. Selection

5.1. Cause is parameterized for Selection

Pylkkänen proposes the availability of different types of Cause heads in causatives across languages that vary in terms of their selectional properties (ie., *selection* in Pylkkänen's terms). In order to implement this claim, Pylkkänen draws from Marantz's (1997) account on the decomposition of 'lexical' words into non-categorial roots and category-assigning functional heads. I discuss Marantz's framework in the following subsection.

²⁷ We will see, in e.g., chapters 4 and 5, that the voice-bundling distinction becomes complicated in the case of productive causatives in English and Hiaki. For instance, while unaccusative causatives haven't been attested in either English or Hiaki causatives, evidence (e.g., from passive causatives) suggests that the type of Cause that participates in productive causatives in these languages cannot be Voice-bundling. Harley (2009) argues on the basis of English nominalizations of verbs containing verbalizing morphology (eg., *nominalization*) that even English is a non Voice-bundling language. See original work for further details on this proposal.

5.1.1. Marantz (1997): acategorial roots

Marantz's (1997) non-lexicalist framework proposes that 'words' can be decomposed into (i) acategorial roots ($\sqrt{}$) which are abstractions of the conceptual material denoted by words, and (ii) category-defining heads (eg. n^0 , v^0 , a^0), which carry syntactic information with strictly functional import²⁸.

Thus, word items are nouns, verbs or adjectives, not because they are atomically stored in the lexicon as primitives with fixed category values, but because they *become* nouns, verbs and adjectives, as complex structures, as a result of the syntactic operation Merge (eg. Chomsky 1995) between functional material and abstract roots. For instance, the word *rain* in English corresponds to two different lexical items: *rain* (v^0) and *rain* (n^0), as shown in (39).

- | | |
|---|--|
| (39) a. <i>'Rain' as a verb</i>
It <i>rained</i> yesterday | b. <i>'Rain' as a noun</i>
I would like to see some <i>rain</i> |
|---|--|

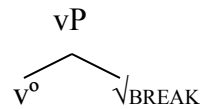
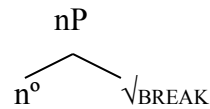
The syntactic structures resulting in the two words *rain* in (39a) and (39b) are respectively given in (40a) and (40b), according to the framework proposed in Marantz:

²⁸ These category-defining functional heads are a type of 'light' verb, v . As discussed in section 3.1. above, light verbs were originally tied in syntactic theory to the auxiliaries that appear in complex predicate formation. In some languages (ie., Persian, see for instance, Folli, Harley & Karimi (2005), Karimi (1987, 1997)), many verbs are complex predicates in that they are normally composed of some acategorial element plus an auxiliary that gives the complex the status of a verb. Even active or passive interpretation as associated with one same argument (tim-e 'team' in (i)) is derived by the use of different light verbs (ie., *dâd* 'give' and *xord* 'collide').

- | | |
|---|---|
| (i) a. <i>dâd</i> 'give' as a light verb
tim-e mâ unâ-ro shekast <i>dâd</i>
team-EZ we they-râ defeat gave
'Our team defeated them' | b. <i>xord</i> 'collide' as a light verb
tim-e mâ az unâ shekast <i>xord</i>
team-EZ we of they defeat collided
'Our team was defeated by them' |
|---|---|

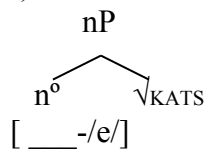
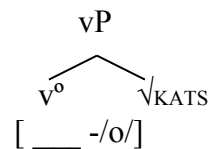
Folli, Harley & Karimi (2005:1376[18])

In Marantz's framework, all words are complex in this same sense: some word becomes a verb, noun, adjective as part of complex-predicate/nominal configuration.

(40) a. *break* (v^0)b. *break* (n^0)

For a single acategorical abstract root such as \sqrt{BREAK} , two outcomes are possible (ie., a configuration in which *rain* is a verb (40a) and a configuration in which *rain* is a noun (40b)). There is no need for redundant information to be stored in the brain (i.e., no need to have two lexical items of different category sharing identical conceptual / phonological information).

Pylkkänen (2002, 2008) assumes the following empirically supported contrast: in languages like English, the category-assigning heads n^0 and v^0 are phonologically unrealized (ie., Halle & Marantz 1993, Harley & Noyer 1998, 1999, 2000). Because n^0 and v^0 have zero morphology in English, *rain* (v^0) and *rain* (n^0) are homophonous words in this language. In other languages such as Finnish, n^0 and v^0 are realized by overt morphemes. The trees in (41) show this contrast for the Finnish root *kats*-‘look’.

(41) a. *katse* ‘look’ (n^0)b. *katso* ‘look’ (v^0)

In Finnish, then, the root \sqrt{KATS} ‘look’ has phonologically different suffixes depending on its syntactic category, *katse* when a noun (41a), and *katso* if it is a verb (41b).

An additional advantage of Marantz’s compositional framework is the idea that acategorical roots are independent items that may be directly manipulated by the syntax without the intervention of specific functional material. Thus, (i) an abstract root may be,

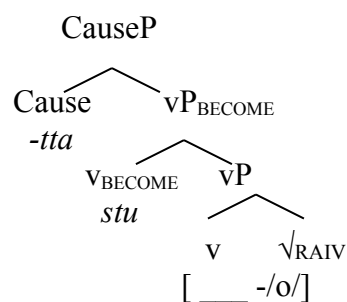
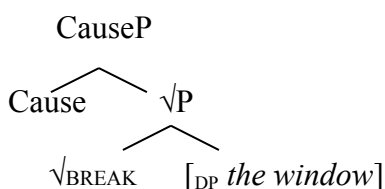
but is not required to be, merged with a specific category-defining head in order to be syntactically available, and (ii) abstract roots are capable of directly taking complements of their own.

These two assumptions are crucial in order to understand Pykkänen's analysis of causatives, as she assumes that the specialized functional v^0 head, Cause, brings causation into the syntax and the semantics of sentences, and that this head may be merged with different kinds of material including acategorial roots. The details of Pykkänen's proposal of a *selection* parameter for Cause are discussed in the next subsection.

5.1.2. The Selection parameter

Working on Marantz's proposal, Pykkänen claims that lexical causatives across languages may be compatible with at least two different configurations: 1) Cause composes directly with an acategorial root ($\sqrt{\text{ }}$), (English, 42a). In this case, causatives do not require an additional vP in the structure they embed; 2) Cause composes with a complex structure headed by a separate category-defining v^0 head, (Finnish, 42b).

- (42) a. *Cause* + $\sqrt{\text{ }}$ (English zero causatives) b. *Cause* + v (Finnish causatives)



The configuration in (42a) corresponds to English zero causatives, such as *Mary broke the window*. In this sentence, Cause is a functional v^0 head that directly takes the root $\sqrt{\text{BREAK}}$ as a complement and ‘causativizes’ it.²⁹ No need for an additional verbalizing v^0 head is required in this causative type.³⁰ The structure in (42b) corresponds to Finnish causativized predicates such as the one shown in (43).

(43) *Causativization of the verbalized root raivo ‘rage(v)’ in Finnish*

raivo-stu-tta
 rage(v)-become-cause
 ‘Cause to become enraged’

Pylkkänen (2008:116[85a])

The causative structure shown for Finnish in (42b), exhibits the different layers of verbal structure that may be selected by Cause. The Finnish overt verbal morphology in (43) is evidence that this language does allow multiple layers of functional material intervening between Cause and the root. For instance, in (43), Cause embeds the inchoative morpheme *-stu-* ‘become’, which in turn embeds the verbalizing morpheme /o/, which further embeds the root $\sqrt{\text{RAIV}}$.³¹

²⁹ In Pylkkänen’s framework, a verbal, v^0 , head is a type of light verb in that (i) it gives acategorial roots the category of verbs and (ii) it may contribute verbal (ie., event) semantics to constructions containing it. In the following examples, Cause, as a type of v^0 head may give roots the category of verb and the status of event just by virtue of composing with them. When composing with events (Cause + v^0), Cause contributes causative semantics to a construction that may be already eventive (ie., because the kind of light verb v^0 that it contains is of an eventive type). Notice, however, that constructions involving v^0 are not always eventive. They may be stative if the light verb v^0 participating in them are stative (ie., ‘become’). See, for instance, Harley (1995) or Folli & Harley (2004) for further discussion on different types of v^0 heads.

³⁰ The configuration in (42a) can be contrasted with the one for its inchoative (ie., non-causative) counterpart, *The window broke*, which Pylkkänen does not discuss in her work, but which, I assume following frameworks such as Harley (1995), and Marantz (1997), involve a different specialized v^0 head (eg. Become), directly composing with the root $\sqrt{\text{BREAK}}$ in languages like English. The inherently verbal nature of Become would ‘verbalize’ the root while not causativizing it.

³¹ An analogous structural layering similar to the one shown for Finnish is hard to prove for English, due to the fact that its verbalizing morphology is typically phonologically null (eg. noun *break* in *Give me a break*, inchoative *break* as in *The window broke*, and causative *break* as in *Mary broke the window* are homophonous). In the limited cases whereby overt verbal morphology is available in English (eg. *-ize* as in

The contrasted configurations shown in (42) suggest that Pylkkänen's causativizing head, Cause, is set up differently regarding its selectional properties across languages. In order to implement this idea, Pylkkänen proposes a three-way parameterization of Cause in terms of selection. According to her analysis causatives across languages contain a causativizing head Cause that comes in three *flavors*: Phase-selecting (i), Verb-selecting (ii), or Root-selecting (iii).³²

(i)

Phase-selecting

Cause selects a phase³³ (ie., according to Pylkkänen, a phase is a structure that may host external arguments and/or high applicatives³⁴)

(ii) Verb-selecting

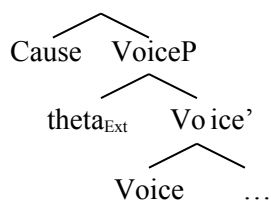
Cause selects a subjectless verbal (ie., vP) clause (cf. (42b))

(iii) Root-selecting

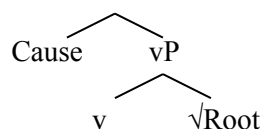
Cause selects an a-categorial root (ie., \sqrt{P}), (cf. (42a))

The following structures in (44) show the three possible configurations the complements of the different Cause heads may present:

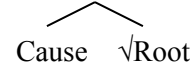
(44) a. Phase-selecting Cause



b. Verb-selecting Cause



c. Root-selecting



Adapted from Pylkkänen (2008:85[11])

memor-ize, *-ify* as in *solid-ify*, or *-en* as in *fat-(t)-en*), it is not clear whether the kind of v^0 head involved is a causativizing (ie. Cause) or a non-causativizing one (ie. Become). See Pylkkänen (2002, 2008) and Harley (2009) for further details regarding distinct types of morphological verbalizers in English.

³² It is assumed from Pylkkänen's text, and I assume throughout the dissertation, that at least regarding selection, the parameter-settings of Cause are not language dependent, but they are structure dependent. That is, Cause may switch settings within the same language giving way, as we will see, to a variety of options in the causative inventory of particular languages.

³³ See Chapters 4, 5, and 6 for discussion on the complement of Cause as a phase. For some general references on phases, see Chomsky (2000, 2001) and subsequent work, Legate (2003), Johnson (2006) and references therein. See McGinnis (2000, 2001) for details on the syntax of phases and applicatives.

³⁴ Also in the sense of Pylkkänen (2002, 2008), McGinnis (2000, 2001), or Cuervo (2003). See chapter 6 for some discussion on the syntax of applicatives in Spanish. For further details on the syntax of applicatives in different languages, see the aforementioned authors.

The structures in (44) show the possible configurations allowed in the complement position by parameterized Cause, as suggested by Pylkkänen.³⁵ For instance, the type of Cause in (44a) allows a Voice projection in its complement position. This makes it compatible with a complement containing an external argument. In Pylkkänen's account, Bantu languages like Venda or Luganda exhibit this type of Cause. She proves this point by showing how these languages allow lower-scope agentive modification, as shown in (45) for Luganda.

(45) *Phase selection Cause: Luganda*

Omusomesa ya-wandi-s-a	Katonga <i>ne obu nyikivu</i>
teacher 3sg.past-write-cause-fv	Katonga <i>with the dedication</i>
'The teacher made Katonga write <i>with dedication</i> '	
	Pylkkänen (2008:119[93])

In (45) the presence of the agent-oriented adverbial *ne obu nyikivu* 'with dedication' as modifying the subordinate verb *wandi-* 'write', indicates that the embedded domain contains agentive material, hence the presence of the external argument.

This kind of lower-scope complementation is ungrammatical in causatives in other languages, such as Finnish. In Finnish, as Pylkkänen shows, agentive complementation is disallowed in the lower domain (46).

³⁵ These are the three original structures proposed in Pylkkänen (2002, 2008). For ease of exposition, I added Voice as the head licensing the external argument in (44a). It is implied in Pylkkänen's analysis in (44a) that Cause may directly take Voice as its complement, which suggests that Pylkkänen takes for granted the fact that VoiceP is a phase in the sense of Chomsky's (2000, 2001). Chomsky's discussion on Phase Theory, however, proposes the existence of two possible phases: vP and CP, not VoiceP. Pylkkänen's assumption of VoiceP as a phase, however, is not incompatible with Chomsky's original proposal as vP as a phase. This is so since vP is Chomsky's the external argument introducing light verb, whereas VoiceP is the head that introduces external arguments in Pylkkänen's framework. See Chapter 4 for further discussion on this issue. In chapter 6 I offer discussion on the Spanish causative v^o *hacer* 'make' that may take a CP phase besides a VoiceP phase.

- (46) Ulla rakenn-utt-i Mati-lla uude-n toimistopöydä-n *innokkaasti*
 Ulla build-cause-past Matti-adess new-acc office.table-acc enthusiastically
 a. ‘Ulla, enthusiastically, had Matti build her a new office desk.’
 b. *’Ulla had Matti, enthusiastically, build her a new office desk.’
 Pylkkänen (2008)

The sentence in (46) contains the agent-oriented modifier *innokkaasti* ‘enthusiastically’.

As the two alternative readings in (a) and (b) indicate, this sentence is grammatical only if this modifier is interpreted as appearing in the higher (ie., causative) domain (ie., (a)), but not if it is understood as an embedded modifier (ie., (b)). This contrast is due to the fact that the type of Cause head available in Finnish causatives is, as seen in (46b) above, of the Verb-selecting type. Because this type of Cause is Verb-selecting, it disallows agents in the lower domain. Verb-selecting Cause, however, does allow functional verbal material to intervene between the root and Cause, as seen in (46) above.

Intervening material between Cause and the root is prohibited in the third type of Cause (44c), termed Root-selecting by Pylkkänen. One instance of this type of Cause was seen above for English zero causatives (42a). Recall that this type of Cause directly selects acategorial roots, disallowing any type of material to intervene in between. Japanese lexical causatives are one more instance of Root-selecting Cause. In addition to lexical causatives, Japanese also has a productive causative type that is Verb-selecting.³⁶

Only Japanese lexical causatives allow the adversity interpretation. Productive causatives do not. Observe the following contrast in the possible interpretations of the

³⁶ Although Pylkkänen does not embrace the lexical-productive distinction traditionally attributed to causatives, she understands the existence of different causative heads within languages, as is the case in the Japanese example in (45). Thus, the lexical causative in Japanese is Root-selecting whereas the productive causative in Japanese is Phase-selecting. Pylkkänen rejects the lexical-productive classification as it is inconsistent with her claim that all causative types are syntactic (including the so-called lexical causatives). As mentioned in other parts of this dissertation, I do use the lexical-productive terminology for ease of exposition, but I assume, with Pylkkänen, that all causatives are syntactic.

Japanese causative in (47):

- (47) Taro-wa niku-o kog-*e*-sase-ta
 Taro-top meat-acc burn-*intr*-cause-past
 a. ‘Taro caused the meat to become scorched’
 b. *’The meat got scorched to Taro’s detriment’ (adversity)
 Pylkkänen (2008:110[64])

The type of Cause involved in the sentence in (47) needs to be, at least, Verb-selecting, according to Pylkkänen’s classification.

This is because of two main reasons: a) it exhibits verbal morphology, the intransitivizing suffix *-e-*, intervening between Cause (ie., *-sase-*) and the root *kog-* ‘burn’; b) the adversity interpretation, typical of Japanese Root-selecting causatives is unavailable. In other words, because the Japanese causative in (47) includes the presence of verbal morphology (ie., the inchoative (verbal) suffix *-e-*), the adversity interpretation in (47b), only associated with Root-selecting causatives is unavailable. This proves, once again, that (i) the idiomatic interpretation of Japanese causatives involves the combination of a causative head directly with a root, (ii) the fact that Cause may appear in syntactic configurations of different type, even within languages, and each configuration imposes restrictions on both syntax and interpretation. This will be one of the ideas adopted throughout the dissertation.

5.2. Summary

This section so far has shown how the causativizing head Cause restricts the amount and kind of structure it may appear with in different languages. Recall that Cause is parametrically set for a two-way parameter, which Pylkkänen terms Voice-bundling.

On the one hand, we saw that depending on the specific setting of Cause for this parameter, the obligatory presence of Causers may be required in lexical causatives in some languages (eg., English) but not other languages (eg., Japanese).

On the other hand, we've just seen that the Selection parameter of Cause makes this head compatible with embedded material of different kinds. For instance, Phase-selecting Cause requires the presence of embedded Causees only in causative types in which Cause is specifically set for this parameter, but not in those causative types in which Cause is set for a different parameter (eg. if Cause is Verb-selecting). The next section illustrates an instance in which the two possible settings of Cause work in tandem.

6. Voice-bundling and Selection working in tandem

Observe the following sentences in (48-50). They illustrate the causativization of unergatives and transitives in Japanese, Finnish and English.

(48) Japanese

a. Unergative roots

John-ga kodomo-o nak-asi-ta
J.-nom child-acc cry-cause-past
'John made the child cry'

b. Transitive roots

John-ga Taroo-ni Eigo-o os-hie-ta
J.-nom T.-dat English-acc learn-cause-past
'John taught Taro English,
lit. John caused Taro to learn English'

(49) Finnish

a. Unergative roots

Jussi itke-tt-i las-ta
J. cry-cause-past child-part
'Jussi made the child cry'

b. Transitive roots

Taro ope-tt-i Jussi-lle japani-a
T.(nom) learn-cause-past J.-abl Japanese-part
'Taro taught Jussi Japanese,
lit. Taro caused Jussi to learn Japanese'

(50) English

a. Unergative roots

*John cried the child

b. Transitive roots

*John learned Mary Finnish

Both Japanese (48) and Finnish (49) allow causatives of unergatives and transitives, but this is not the case of English, given the ungrammaticality of both sentences in (50).

Pylkkänen explains this contrast by appealing to the different parameterization of Cause in these languages, in terms of both Voice-bundling and Selection. The following chart in (51) shows the different parameterization of Cause in the three languages according to Pylkkänen's proposed classification.

(51) *Cause in Japanese, Finnish, and English according to Pylkkänen's classification*

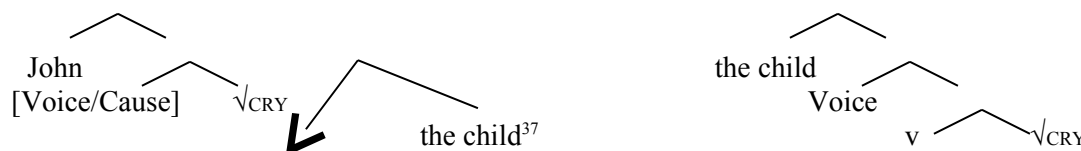
CAUSE	<i>Voice-bundling</i>	<i>Selection</i>
<i>Japanese</i>	Non Voice-bundling 	Root-selecting
<i>Finnish</i>	Non Voice-bundling 	Verb-selecting
<i>English</i>	Voice-bundling 	Root-selecting

In the next subsection, I explain Pylkkänen's predictions of the contrasts in (48-50) regarding their structural contrast, shown in the chart.

6.1. Voice-bundling / Root-selecting Cause (English): No agentive complement

Pylkkänen explains that the grammaticality mismatch between English (50) and Japanese/Finnish (48-49) is actually the result of the setting of Cause for both Voice-bundling and Selection. As the chart in (51) shows, English zero causatives are both Voice-bundling and Root-selecting. Because of this, English causativized unergatives have the structure in (52a). Compare it with its non-causativized counterpart in (52b).

(52) a. *English causativized unergative* b. *English non-causativized unergative*



The structure in (52a) shows all the positions available for the licensing of arguments in a hypothetical English causativized unergative. Because English Cause is Voice-bundling, there is no room in the [Voice/Cause] projection other than that reserved for the Causer *John*. Because it is Root-selecting, there is no intervening material (ie., no available positions) between [Voice/Cause] and the Root $\sqrt{\text{CRY}}$.³⁸

Because the Root $\sqrt{\text{CRY}}$ is unergative, it does not take complements (cf., (52b)). It is clear, then, that the causativization of unergatives is ungrammatical in English because, whereas the Voice-bundling parameter requires the obligatory introduction of a new

³⁷ The arrow pointing down signifies that the argument *the child* fails to be syntactically merged in the structure available.

³⁸ I include both Voice and v as projections participating in the structure of the English unergative in (52b). This is consistent with the kind of argument structure assumed in Pylkkänen, as Voice is necessary to license the agentive subject *the child* and v is needed to verbalize the root $\sqrt{\text{CRY}}$. In the case of the hypothetical causativized unergative in (52b), the bundled head [Voice/Cause] both licenses the agentive subject *John* and verbalizes the Root, given the specific properties of Cause in English.

argument in the structure (ie., the Causer, *John*), the Root-selecting parameter limits the amount of positions available for the licensing of the argument thematically associated to the Root $\sqrt{\text{CRY}}$ (ie., the agent *the child*). In consequence, this latter argument remains stranded and unlicensed. The same problem arises in the case of English causativized transitives (50b): the configuration created by English Cause does not contain any structural position available for the licensing of the agent of $\sqrt{\text{LEARN}}$, *Mary*.

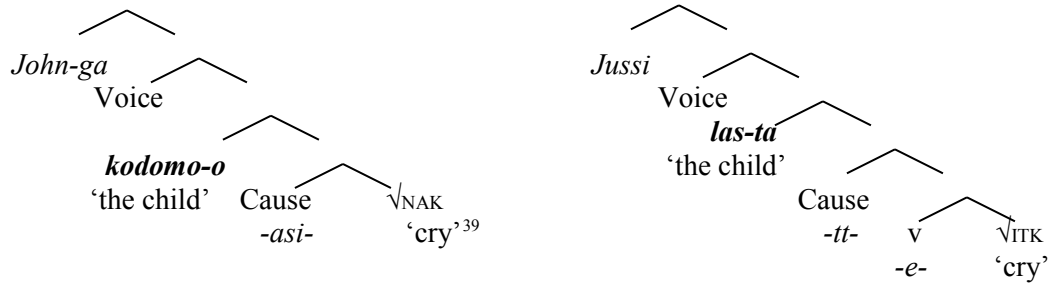
6.2. Voice-bundling Cause (Finnish, Japanese): Agent complements are allowed

The Japanese and the Finnish examples in (48-50) are both grammatical, unlike their English counterpart. This is contrasted with the English Root-selecting / Voice-bundling Cause that just does not have enough structural positions to host arguments other than the external argument obligatorily introduced by [Voice/Cause] and the complement of the Root ($\sqrt{\text{ }}$) (see 6.1. above).

The classification in the chart in (51) does not explain this contrast straightforwardly. This is so since neither Japanese nor Finnish Cause select configurations that specifically allow embedded agents (ie., embedded VoiceP). Recall that only phase-selecting causatives contain VoiceP as part of their complement. According to Pytkänen, structures in which Cause is set as a non Voice-bundling head allow unergative / transitive complements precisely because the separation of Voice and Cause into two different functional heads opens up more syntactic positions for argument licensing. Notice that this is even possible for Japanese Cause, a Root-selecting causative head according to Pytkänen, that nonetheless licenses agentive complements. The exact

position in which the agent of causativized unergatives and transitives in Non-Voice-bundling languages is licensed is shown below, in (53).

(53) a. *Japanese causativized unergative* b. *Finnish causativized unergative*



Adapted from Pylkkänen (2008: 120[94])

Both structures in (53) exhibit two external arguments, the causative agents or Causers *John-ga* 'John' (53a) / *Jussi* (53b), and the 'internal' agents or Causees *kodomo-o* (53a) / *las-ta* (53b) 'the child'.

These 'internal' agents are introduced in the structure proposed by Pylkkänen as internal arguments of Cause + {√Root / vP}. That is, she claims that the presence of both Causees in both the Japanese and the Finnish causativized unergatives is possible because of the specifier position of Cause. This [Spec, Cause] position is available only whenever Voice and Cause appear in the syntax as independent heads. In the case of English, this is not possible because the bundling of these two functional heads makes it impossible for Cause to have its own specifier position. The same exact position would license the agent of transitives embedded by Cause in these languages. In Chapter 3, however, I will argue against this analysis.

³⁹ Cause in both Japanese and Finnish appears as a suffix to the root (and to the Root+v in the case of Finnish). For ease of exposition, I did not observe this ordering in the trees in (53).

As for the theta-role of this ‘internal’ external argument licensed as a consequence of the event Cause being non Voice-bundling, it is not fully discussed by Pylkkänen. She just proposes it as one of the two ‘internal’ arguments of Cause, one being the Root (in the case of Japanese), the other being the causee (2008, p. 119). Nothing else is said regarding this issue.

6.3. Summary

In this section, I have discussed the main tenets behind Pylkkänen’s (2002, 2008) crosslinguistic analysis of causatives. We have seen that this analysis is based on the claim that whereas causatives in all languages are formed out of a constant set of elements, namely the causativizing head Cause that embeds material of certain kind, crosslinguistic variation appears as a result of the particular parameter settings of the causativizing head Cause in terms of two variables: a) Voice-bundling, and b) Selection. The most interesting consequences of Pylkkänen’s analysis can be seen in how certain structures associated with causatives in some languages are highly restricted in analogous structures in other languages (i.e., the causativization of unergatives and transitives is allowed in Japanese and Finnish while it is prohibited in English zero causatives). In the next subsection, I offer a chart showing Pylkkänen’s original predictions for causatives.

6.4. Pylkkänen's predictions

The chart in (55) shows Pylkkänen's predictions derived from the parametric settings of Cause in terms of Voice-bundling and Selection, given the data studied throughout this chapter. The predictions are made in terms of the following variables:

- (a) Allows unaccusative causatives
- (b) Allows causativization of unergatives and transitives
- (c) Allows verbal morphology to intervene between Cause and the Root
- (d) Allows adverbial modification embedded under Cause

(55) *Pylkkänen's predictions*⁴⁰

	<i>Voice-bundling</i>	<i>Non-Voice-bundling</i>
<i>Root-selecting</i>	<i>English zero causatives</i> (a) No (b) No (c) No (not even category defining) (d) Only allows Root modifiers	<i>Japanese adversity causatives</i> (a) Yes (b) Yes (c) No (not even category defining) (d) Only allows Root modifiers
<i>Verb-selecting</i>	<i>Bemba esha causatives</i> (a) No (b) Yes (c) Yes, but non agentive (d) Yes, but non-agentive modifiers	<i>Finnish –tta (desiderative) causatives</i> (a) Yes (b) Yes (c) Yes, but non-agentive (d) Yes, but non-agentive modifiers
<i>Phase-selecting</i>	<i>Luganda causatives</i> ⁴¹ (a) Unclear (b) Yes (c) Yes (d) Yes	

⁴⁰ Notice that Pylkkänen only discusses Japanese adversity (ie., lexical) causatives in her work. She does not discuss Japanese productive causatives that, unlike the Japanese causatives listed in (55), are Phase-selecting, because among other characteristics, they may embed external arguments.

⁴¹ Venda causatives are also included in Pylkkänen's (2002, 2008) work as Phase-selecting. In her analysis, Pylkkänen fails to identify the Voice-bundling properties of both Luganda and Venda causatives. The examples from these two languages included in Pylkkänen (2008, section 3.4.4., pp. 117-119) have, then, the sole purpose of showing the Phase-selecting properties of both languages regarding, for instance, their adverbial scope possibilities as well as the full-clause status of the predicates embedded by Cause. For further details and examples regarding these two languages, see the aforementioned work.

The chart offers a shortcut explanation of the contrasts seen in this chapter involving the English, Japanese and Finnish (eg., the availability of unaccusative causatives in Japanese and Finnish but not in English). It also provides some diagnostics that are handy when testing the Voice-bundling as well as Selection possibilities of causatives crosslinguistically. For instance, only Phase-selecting causatives (eg., Luganda causatives) allow agentive modification under Cause. In the following chapters, I will make use of these tests in order to identify these properties in the causatives of English, Hiaki and Spanish.

7. Discussion and conclusion

As shown throughout this section, Pylkkänen's proposal based on the double parameterization of Cause seems to be supported by specific contrasts regarding variation in the internal syntax of lexical causatives across languages.

Her model makes very interesting predictions that unify the syntactic formation of causatives crosslinguistically. Most importantly, she gives away with the lexical-productive distinction assumed in many traditional studies of causativization. One major unification point is her claim that the differences between causatives do not lie on whether they are made in the lexicon or in the syntax, but on the different types of configurations different causative heads are compatible with. This point is very important because it involves a significant reduction in the machinery implicated in causative formation. If she is right on this point, it will be a very elegant way to prove that languages are not that different after all, since they are all formed out of the same basic

pieces.

Another significant point made by Pylkkänen has to do with the fact, contra more traditional proposals, that the element that introduces the event argument associated with causation into structures (ie., the causative functional head *Cause*) is not the same element that introduces external arguments (ie., *Causers*), but the two arguments enter the syntax separately, as part of different syntactic projections. This is a controversial as well as important point. It is controversial as in most cases causation does seem to be intimately associated with an external argument or causer. It is important because this claim explains phenomena such as the fact that the external argument that is present in causative sentences is not always agentive. Most importantly, it provides an explanation as to why, in some languages, causation appears overtly in the absence of a causer associated with it. This dissertation will continue exploring these important points with data from other languages.

There are some points made by Pylkkänen that seem a bit more speculative. For instance, the syntactic licensing of the ‘internal’ agent (ie., the embedded agent) proposed by Pylkkänen to structurally accommodate agentive causees of unergatives and transitives in Non Voice-bundling languages is an ingenious idea. As seen in the previous section, it explains why Japanese Root-causatives and Finnish Verb-causatives can license an embedded agent despite the fact that their causative head does not allow agents as part of their complement. The argument seems speculative because, although it is true that the structure does offer a syntactic position to accommodate an argument that cannot be accommodated otherwise, it is not clear how, thematically speaking, this argument is

licensed. The argument is an agent, but it is not licensed in the same way as Pylkkänen claims agents are licensed (ie., via a Voice head). Since Voice is the head assumed to take part in introducing agents, an analysis in which all such arguments are introduced by one single head seems more coherent than an analysis in which this task is performed by heads of different nature.

Nonetheless, the idea of embedded subjects of causatives being termed (and indeed interpreted) as ‘internal’ agents is both intuitively and structurally sound within the realm of causatives. That is, the ‘internal’ agent is considered by Pylkkänen one of the arguments directly licensed by Cause, in its specifier position. This position makes the internal agent intimately linked to the causing event, probably as ‘affected’ by this event (given its role is an internal argument of Cause). It is also linked to the caused material (ie., the complement of Cause) via Cause. This network of relationships associated with the causee makes Pylkkänen’s proposal suitable for the kind of roles causees tend to play, as ‘affected’ agents. It would be interesting to see whether the causees introduced in this way vary, in any way, from causees introduced differently (eg., by an embedded VoiceP in the case of ‘productive causatives’). This dissertation does not provide such an answer for which the issue is left open for future investigation.

Another controversial point in Pylkkänen’s work involves Japanese lexical causatives as they work clearly different than their productive counterparts. For instance, they exhibit a great deal of idiosyncratic allomorphy in the expression of Cause (eg., *ø*, *-e*, *-s*, *-as*, etc.), as compared with their productive counterparts that just exhibit the suffix *-(s)ase* (ie., Harley 2008: 13[13]). Of course, phase theory (Chomsky 2000, 2001, Legate

2003) may be able to account for these asymmetries, namely if the causative suffix and its complement happen within the same phase (ie., root-selecting or verb-selecting Cause), they are eligible/subject to phonological idiosyncrasies. If the causative suffix and its complement happen in different phases (ie., phase-selecting Cause), phonological variations are not permitted. I will discuss this issue in the following chapters.

In this dissertation, I assume the main tenets of Pylkkänen's analysis of causatives and I apply it to the syntax of productive causatives in Hiaki, Spanish, and English. That is, in this dissertation I assume that

- a) The causativizing head Cause has the same import in the syntax of lexical and productive causatives. That is, Cause is present in the syntax of any causative sentence whatever its type.
- b) Voice is the functional head responsible for the introduction of external arguments in the syntax of both causative and agentive non-causative sentences, regardless of whether these agents are generated in the matrix or in the embedded domain. In this latter aspect, I divert from Pylkkänen's analysis as just discussed, that is, in general, Voice will be implicated in introducing external arguments. If embedded structures contain external argument I will take it as a sign that the type of Cause treated is Phase-selecting.
- c) Lexical roots and functional category-assigning heads are independent syntactic pieces.
- d) Cause may embed different types of structure (ie., it may be root-selecting, v-selecting, or phase-selecting).
- e) Cause and Voice are individual functional heads. In consequence, I will assume that the presence of Cause in a given structure does not automatically involve the presence of an external argument.
- f) A phase-selecting Cause does not always equal a 'Voice'-selecting Cause. That is, in some languages, a phase-selecting Cause will select phases other than VoiceP (i.e., CP). See chapter 6 for further details.

Crucially, if Pylkkänen's analysis is right, it should predict most (if not all) of the contrasts previously pointed out in the literature and left unsolved that involve any type of causativization regardless of the amount of material embedded by Cause. For instance,

Pylkkänen rejects the lexical-productive distinction held in more traditional studies of causatives but most of her work is centered on the properties of the traditionally termed ‘lexical’ causatives. In the following chapters I explore whether Pylkkänen’s predictions account for contrasts in the syntax of other types of causatives across languages other than lexical (ie., productive causatives).

CHAPTER 3

EXPLORING ROOT CAUSATIVES

1. Introduction

In chapter 2 I discussed Pylkkänen's (2002, 2008) model of causativization in which a) *all* causative constructions are syntactic, and the syntactic component responsible for causativization is the functional head Cause occurring as part of their syntactic structure (ie., section 3.1.); b) not all causative constructions contain the functional head Voice as part of their syntax (section 3.2.), which explains why it is possible, in some languages (ie., Japanese, Finnish) to find unaccusative causatives; c) the functional head Cause is parameterized into Voice-bundling (section 4) and Selection (section 5).

The structural analysis she gives of causatives based on the parameterization of Cause results in several predictions on the behavior of causatives across languages. Two important ones are i) the possibility, according to Pylkkänen thanks to a Non Voice-bundled Cause, to find zero causatives of unergatives and transitives in languages such as Japanese but not in languages like English (section 6), and ii) the guarantee that English zero causatives will systematically license only unaccusative roots.

In this chapter, I show examples from English and Hiaki root causatives in which Pylkkänen's predictions are not as clear-cut. In English, not all unaccusatives may form root causatives, as unaccusatives like *arrive*, *appear* or *die* fail to do so. Hiaki is a non Voice-bundling language that exhibits morphological causatives (like Japanese and

Finnish) and shows some affinities with Japanese. For instance, the transitive version of Hiaki *muuke* ‘die’ derives an adversity interpretation, just like Japanese *sin-ase* ‘die-cause’. Also like Japanese and unlike English, Hiaki allows the lexical causativization of unaccusative *appear*. Nonetheless, Hiaki disallows the root causativization of both transitives and unergatives, which suggests, contra Pylkkänen, that root (ie. lexical) causatives are incompatible with both unergatives and transitives, and that cases in which unergatives appear in root causatives must be exhibiting then unergatives with unaccusative syntax.

The chapter is organized as follows. In section 2, I revisit Pylkkänen’s points that will be relevant in this chapter; in section 3, I discuss the case of Hiaki root causatives. I show that they are Non Voice-bundling and Root selecting, like Japanese. I show that Hiaki root causatives share a few similarities with their Japanese counterparts but, contra Pylkkänen’s predictions, they fail to causativize unergatives and transitives; In section 4, I discuss the case of English failure to form root causatives of unaccusatives like *arrive*, *appear* and *die*. I give one structural and one morphological argument that explain the restriction. None of them, however, disproves Pylkkänen’s analysis as I conclude that, if these verbs do not form root causatives is because i) their inner structure involves elements other than the theme (structural explanation) and/or ii) their root is in competition with a more highly specified root (morphological explanation); in section 5 I conclude that Pylkkänen’s predictions regarding the root causativization of unaccusatives are correct, but her predictions about the root causativization of unergatives and transitives must be revised.

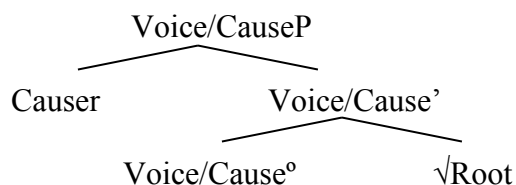
2. Pykkänen's model for Root causatives

The type of Cause that forms root causatives may also be Voice-bundling (ie., English zero causatives (ie., *John opened the door*)) or Non Voice-bundling (ie., Japanese 'lexical' causatives). In this section I discuss relevant points involved by this (Voice-bundling / non Voice-bundling) division regarding root causatives, as the understanding of this parameter is central to this chapter.

2.1. Voice-bundling Root causatives

In the diagram in (1) I show the basic structure of a Voice-bundling/Root-selecting Cause type.

(1) The structure of a Voice-bundling/Root-selecting Cause type (eg. English zero causatives)

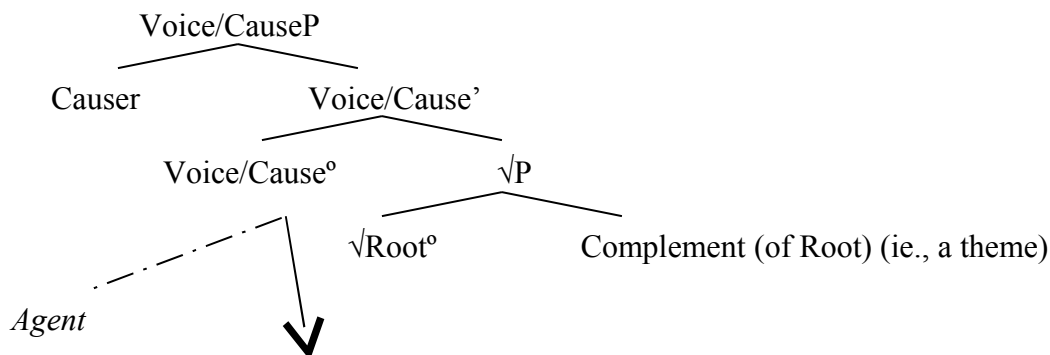


Argument-licensing-wise, a Voice-bundling causative head that is root-selecting obligatorily licenses (i) a Causer in its specifier position and (ii) a root complement. The root may have a complement of its own but it can never be associated with an agent, as shown in (2).⁴²

⁴² The falling arrow associated with the Agent indicates that this argument fails to be inserted in the kind of configuration created by English zero Cause.

(2) No embedded agents are allowed under

(3) English zero Cause



Agents other than the causer are excluded from configurations such as (2), because only a causer can be licensed above Cause and only themes can be licensed below Cause. This is so since only themes may be complements of roots (see e.g., Perlmutter (1978, 1986), Burzio (1986), Levin & Rappaport Hovav (1995), as well as Marantz (1984) and Kratzer (1994, 1996), described in Chapter 2) and there is no syntactic position available for argument licensing above the Root and below Cause. Pylkkänen concludes that roots associated with agents (ie., unergative and transitive roots, *dance* and *read*, respectively) cannot be licensed under English zero Cause. She also concludes that only unaccusatives (ie., *open*, *sink* or *break*) are eligible as root complements of English zero Cause, since they are associated with theme rather than with agent complements.

What is not clear from Pylkkänen's claims is whether *any* unaccusative may be licensed under English zero Cause. If all unaccusatives just involve a theme complement as part of their internal structure, then any unaccusative should be allowed under this causative head. But this is clearly not the case, as the following English zero causatives in

(3) demonstrate.

- (3) a. *John arrived Mary to the station
- b. *John died Mary
- c. *John appeared a picture on the screen

The sentences in (3) are ungrammatical as they *all* resist zero causativization. The ill-formedness of (3) is not predicted by the structure in (1-2), as *all* root complements of zero Cause in (3) are unaccusatives (ie., *arrive*, *die*, *appear*) that are not associated with agents, but with themes. Unless the roots in (3) involve elements other than their theme complements as part of their argument structure, nothing in Pykkänen's model explicitly prevents the sentences in (3) from being grammatical. In this chapter (section 4) I show that Pykkänen's predictions are correct if one understands that the internal dynamics of different verb classes may make the three-way *transitive-unergative-unaccusative* classification less transparent. Next I introduce non Voice-bundling Root causatives, which will be the structure I will be concerned about in the first part of this chapter.

2.2. Non Voice-bundling Root causatives

Non Voice-bundling Root causatives may be found in Japanese. A typical sentence exhibiting this structure, according to Pykkänen, looks like (4).

(4) *A Japanese Root causative*

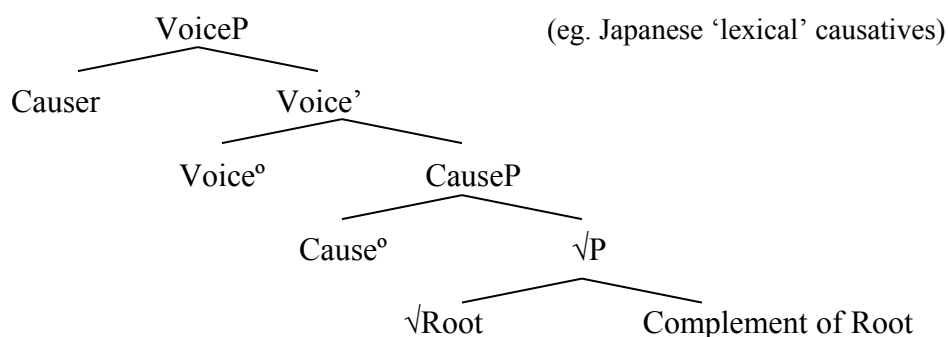
- Taroo-wa niku-o kog-asi-ta
- Taro-top meat-acc burn-cause-past
- a. 'Taro scorched the meat'
- b. 'The meat got scorched to Taro's detriment'

Pykkänen (2008: 108[55])

In the sentence in (4) the Root causative suffix *-asi-* directly embeds the root *kog* 'burn'.

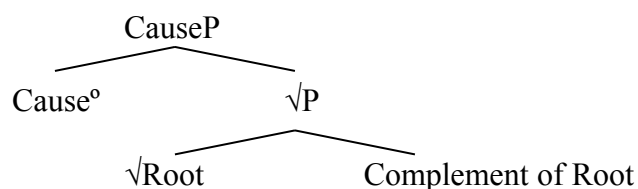
The structure has two readings, one involving the external argument *Taroo-wa* ‘Taro(top)’ (4a), the other excluding an external argument (ie., the adversity reading in (4b)). In this latter reading the topic argument *Taroo-wa* ‘Taro’ is an experiencer. These two readings are available for this type of causative, according to Pylkkänen, thanks to the fact that the causative functional head Cause is not bundled to Voice, like in English (1), but each functional light verb heads its own projection. I show the structure in (5).

(5) The structure of a Voice-bundling/Root-selecting Cause type



When the light verb Voice° appears in the structure, we obtain the reading in (4a) involving an external argument, the Causer *Taroo-wa* ‘Taro’. Because Japanese Cause is non-Voice-bundling, however, Cause may appear in the absence of VoiceP. If this happens, we obtain the reading in (4b). I show the structure in (6).⁴³

(6) Structure of an adversity causative in Japanese



⁴³ In (5) and (6) I do not include a [Spec, CauseP] position, although recall from Chapter 2 that Pylkkänen does make use of this position in order to accommodate Causees of unergatives and transitives.

The diagram in (6) represents the structure proposed by Pylkkänen for unaccusative causatives (ie., causatives with an adversity interpretation in Japanese). Because Cause appears in the absence of VoiceP, no external argument (ie. Causer) is required in this type of causatives, although the causative marker *-asi-* (4) is overtly realized.

One consequence derived from this structure, according to Pylkkänen, is the possibility of finding Japanese Root causatives of unergatives and transitives. To find such structures with the adversity interpretation is evidence that they truly are Root causatives, as argued by Oehrle & Nishio (1981). An example offered by Pylkkänen is shown in (7).

- (7) *Unergatives can be Root causatives in Japanese*
 Ano kodomo-ga itumo oya-o nak-asi-te iru
 That child-nom always parents-acc cry-cause-prog iru
 ‘That child is always troubling his parents’

Pylkkänen (2008: 121[98])

Further evidence she offers to show that these are root causatives is seen in (8) whereby the sentence in (7) exhibits a Root (lexical) causative (ie., *-asi-*) embedded by a Phase (productive) causative (ie., *-(s)ase*). This test was developed by Kuroda (1993).

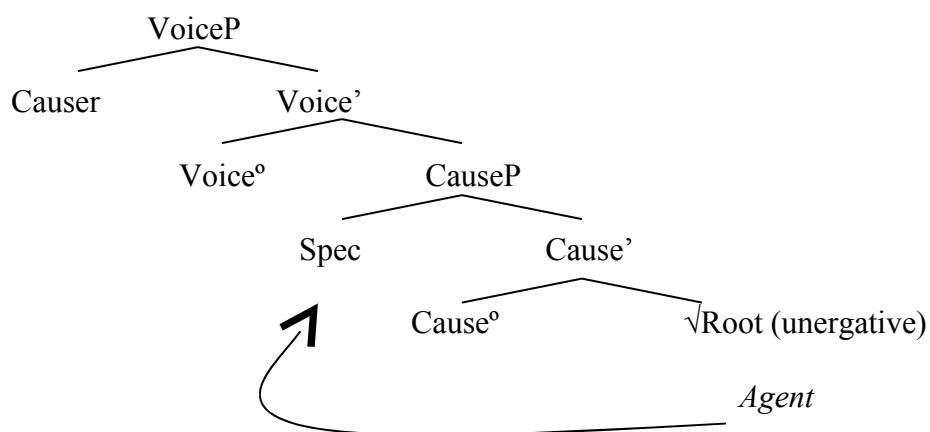
- (8) Taro-ga Jiroo-ni sensei-o nak-as-ase-ta
 Taro-nom Jiro-dat teacher-acc cry-cause(lexical)-cause(productive)-past
 ‘Taro made Jiro make the teacher cry (ie., trouble the teacher)’

Pylkkänen (2008: 122[100])

Pylkkänen explains that the Root causativization of unergatives is allowed in Japanese thanks to the Non Voice-bundling nature of the Japanese Root-selecting Cause. Unlike English (ie., (2)), the structures involving Japanese Root-selecting Cause may license two internal arguments in addition to the external argument licensed in [Spec, Voice] (ie., (2)).

One internal argument (ie., the embedded object) is licensed as a complement of the root. The other (ie., the embedded external argument or Causee) is structurally licensed in the Spec position of Cause. This is allowed because, according to Pykkänen, all you need to license an embedded external argument is an available position under Voice and above the Root, and Cause, being unbundled, has the ability to independently license arguments in its Spec position. I show the structure proposed by Pykkänen in (9).

(9) Pykkänen's proposed structure for Japanese Root causatives (unergatives)



The diagram in (9) shows how the external arguments of Japanese Root causatives of unergatives are structurally licensed: in [Spec, Cause]. The proposal of this structure leads to controversy, however.

First, it is not clear whether the embedded external argument is thematically licenced by Cause as well (ie., base-generated in [Spec, Cause]). If so, the following is not clear. The mechanism that allows Cause to thematically license the external arguments it embeds (its causee), but not the external argument, within its own domain (its causer) can only be inferred by assuming Kratzer's (1994, 1996) proposal (see chapter 2) that external arguments and internal arguments are licensed by different

predicates. The exact mechanism allowing this operation, however, is not explicitly described and demonstrated in Pykkänen's work, which creates confusion.

The semantic interpretation of the external argument supposedly generated in [Spec, CauseP] is different than that of the matrix external argument (the Causer), base-generated in [Spec, VoiceP]. This can be used as evidence for Pykkänen's distinction. None of the external arguments is thematically licensed by the roots they relate to, following Kratzer.

The problem is that one external argument (ie., the embedded external argument) is also interpreted as *affected* by the causing event that is headed by Cause, which is the same head that licenses it in its Spec position, but Pykkänen does not clearly discuss any of these points. In the following section, I will discuss data from Hiaki (Uto-Aztecan) that, like Japanese, exhibits morphological causatives, and forms Root causatives that are non Voice-bundling. We will see that this language allows structures similar to Japanese (ie., the morphological marking of transitivity/intransitivity, an adversity reading of transitive *muucha* 'die'). It does not allow, however, the Root causativization of unergatives and transitives, contra Pykkänen's predictions. Let us explore the case.

3. Hiaki lexical causatives

3.1. Productive and lexical causatives in Hiaki

Hiaki forms many complex predicates, including productive causatives, via the suffixation of causative morphemes. For instance, consider the productive causativization of *nooka* 'speak' by the direct causative *-tua*, shown in (10).

- (10) a. *Non-causative* b. *Causative*
 Maria nooka-k Huan Maria-ta nok-tua-k
 Mary speak-perf John Mary-acc speak-cause-perf
 ‘Mary spoke’ ‘John made Mary speak’

The sentences in (10) show Hiaki productive causative formation, which involves the affixation of *-tua* to the verbal root $\sqrt{\text{NOK}}$ for the verb *nooka* ‘speak’.⁴⁴ The embedded subject *Maria* becomes accusative, *Maria-ta*.

Many lexical causatives in this language exhibit the transitivizing suffix *-(t)a* added to the roots. Root causatives in Hiaki tend to be morphologically contrasted with their non-causative counterparts via intransitivizing morphology, *-(t)e*. This can be seen in the following alternating pairs (11).⁴⁵

(11) NON-CAUSATIVE	CAUSATIVE	MEANING
a. hamt- <i>e</i>	hamt- <i>a</i>	<i>break</i> (eg. glass)
b. kott- <i>e</i>	kott- <i>a</i>	<i>break</i> (eg. wood)
c. kwas- <i>e</i>	kwas- <i>a</i>	<i>cook</i>
d. kivak- <i>e</i>	kivach- <i>a</i>	<i>enter</i> (sg.subj) / <i>bring</i> (sg.obj)
ki'im- <i>u</i>	kiim- <i>a</i>	<i>enter</i> (pl.subj) / <i>bring</i> (pl.obj)
e. ro'akt- <i>e</i>	ro'akt- <i>a</i>	<i>roll</i>
f. kahho'ot- <i>e</i>	kahho'ot- <i>a</i>	<i>melt</i>

The pairs in (11) show the morphological non-causative / causative alternation in Hiaki.

The lexical causative alternation is not always morphologically marked in this language.

This is the case of the pair in (12) that exhibits a suppletive kind of alternation (ie., different roots are used for the two members of the causative pair).

⁴⁴ A preliminary clarification is necessary at this point. The productive causative *-tua* appears suffixed to Roots, but this does not mean that the functional causative head realized by *-tua* directly embeds Roots in productive causative formation. Lexical causatives, studied in this section, are Root causatives because they syntactically embed Roots. I will show this clearly later in this section as well as in chapter 5.

⁴⁵ The following lists are illustrative of the phenomenon but in no way are they exhaustive. For further pairs, both involving the causative/inchoative alternation and the transitive/intransitive alternation, see Guerrero (2004) chapter 3, Jelinek & Escalante (2001), Dedrick & Casad (1999) or Harley (2007).

(12)	NON-CAUSATIVE	CAUSATIVE	MEANING
	muuke	me'a	<i>die</i> (sg.subj) / <i>kill</i> (sg.obj)
	koko	sua	<i>die</i> (pl.subj) / <i>kill</i> (pl.obj)

I just outlined lexical causative formation in Hiaki. Hiaki patterns with Japanese in that lexical causatives tend to be morphologically distinct than their non-causative counterparts. For the sake of comparison, I next outline the causative alternation in Japanese.

3.2. Japanese

In Japanese, as we have seen, productive causativization is always done by means of the suffixation of *–sase* to verbs.⁴⁶ Root (ie., lexical) causativization is more idiosyncratic in that it takes different morphological forms. In some cases, lexical causatives are morphologically marked by means of the suffix *–sase*, although lexical causatives in this language may also take other forms. The following examples are taken from Shibatani (1976) and Harley (2008). The example in (13) is a productive causative, morphologically marked with the suffix *–sase*. The examples in (14) are all lexical causatives. Some are followed by their productive counterparts for the sake of comparison.

⁴⁶ Structurally, productive causatives in Japanese cannot be the result of the direct embedding of verbal roots by *–sase* because this suffix may embed other verbal suffixes, such as the desiderative suffix *–taku*– (i).

- (i) Taro-ga musuko-o sini-taku-sase-ta
 Taro-nom son-acc die-des-cause-past
 a. 'Taro made his son want to die' (productive interpretation)
 b. *'Taro was adversely affected by his son's wanting to die' (lexical interpretation)
 Pylkkänen (2008: 109[60])

The contrasted semantics of the sentence in (i) are the consequence of the presence of the intervening verbal suffix *taku* between the root and the causative suffix *sase*. This suggests that lexical causatives are root causatives but productive causatives must embed, at least, vP.

(13) *Productive*

Taroo-wa Yoshi-o ik-*sase*
 Taro-top Yoshi-acc go-cause
 ‘Taro made Yoshi go’

Harley (2008)

(14) *Lexical*

SUFFIX	NON-CAUSATIVE	CAUSATIVE	PRODUCTIVE	MEANING
a. <i>-e-ru</i>	tat-u	tat- <i>e-ru</i>	tat- <i>ase-ru</i>	‘stand’
b. <i>-as-u</i>	nak-u	nak- <i>as-u</i>	nak- <i>ase-ru</i>	‘cry’
c. <i>-u</i>	husag- <i>ar-u</i>	husag-u		‘obstruct’
d. <i>-s-u</i>	hita-ru	hita- <i>s-u</i>		‘soak’
e. <i>-os-u</i>	oki-ru	ok- <i>os-u</i>		‘get up’
f. <i>-se-ru</i>	ki-ru	ki- <i>se-ru</i>		‘put on’
g. akas-u	hagur- <i>e-ru</i>	hagur- <i>akas-u</i>		‘stray’

The examples in (13-14) show the paradigm of causative formation in Japanese. In the example in (13) I show the productive causative for the root *ik-* ‘go’.^{47,48,49} The examples in (14) show the verbs in their non-causative form followed by their corresponding lexical causatives. As Shibatani (1976) puts it, lexical causative forms cannot be predicted, but they are rather idiosyncratic and fall within different morphological classes. At times, the corresponding causative form of some Japanese verbs is identical to its non-causative counterpart. This is the case of *hiraku* ‘open’.

⁴⁷ The examples in (14a-b) are from Shibatani (1975:9); the rest of examples in (14) are adapted from Harley (2006: 14[13])

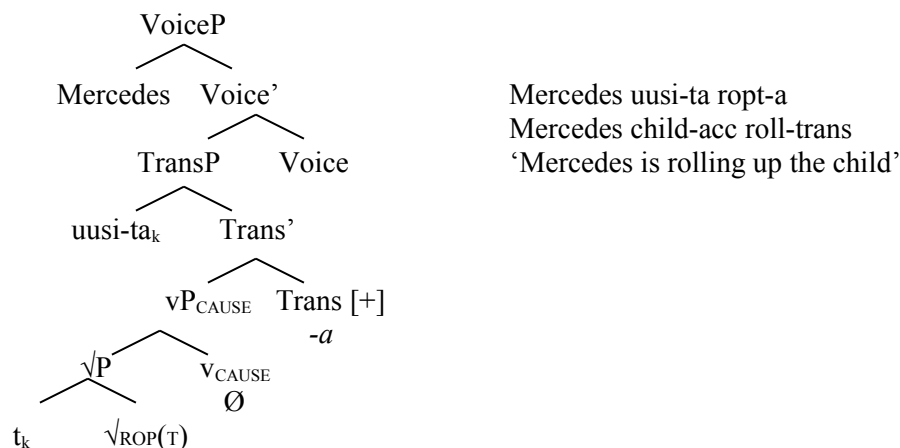
⁴⁸ In (14c), it is the non-causative form that exhibits overt (ie., passive *-ar-*) morphology. If compared with the causative forms in the other examples, it looks the causative suffix in this group exhibits zero morphology, rather than a *-u* suffix.

⁴⁹ As in (c), the non-causative form in (14g) also exhibits overt morphology, the suffix *-e*. One of the puzzles regarding the causative morphology in Japanese is precisely the fact that the suffix *-e* may mark non-causative morphology in some cases (14g) but causative morphology in some other cases (14a). Heidi Harley (p.c.) suggests that the identical morphology of this suffix corresponding to multiple uses / meanings may be an indication that *-e* is the morphological realization of an underspecified *v*^o, which is what she proposes for *-ify* in English that also varies between *v*_{CAUSE} and *v*_{BECOME}.

An interesting point worth discussing regarding the alternating pairs in (14) is the fact that many of these verbs are unergative in some languages like English, but they participate in the inchoative/causative alternation in Japanese. An example of these inchoative verbs is *naku* ‘cry’ (14b), one of the ‘unergative’ verbs used by Pylkkänen in order to argue that unergatives can be lexically/root causativized in Japanese. As Heidi Harley (p.c.) points out, the fact that verbs like *naku* ‘cry’ participate in the inchoative/causative alternation is indication that these verbs must be unaccusative, rather than unergative, when used intransitively in Japanese. This is the line of thought I will defend regarding Japanese alternating roots throughout this chapter. I will resume discussion on this point later. Next I discuss the properties of Hiaki lexical causatives, according to Pylkkänen’s classification.

Hiaki ‘lexical’ causatives are Root selecting and Non Voice-bundling, just like Japanese. I show the structure in (16).

(16) Root causatives in Hiaki



The diagram in (16) shows the structure for a Root causative in Hiaki. As the structure shows, lexical v_{CAUSE} in Hiaki is Non Voice-bundling and Root selecting. I deal with these two parameters one at a time.

3.3.1. Lexical v_{CAUSE} in Hiaki is Root selecting

As the diagram shows, the functional head v_{CAUSE} is like Japanese (5) in that this causativizing head directly embeds the root, *ropt-* 'roll'. Unlike Japanese, however, the lexical causative head v_{CAUSE} has zero realization in Hiaki. We know this because, although the causative/inchoative alternating pairs in Hiaki involve a morphological *-a/-e* contrast, these are marks of transitive / intransitive morphology as the transitive suffix *-(t)a*, does not always involve causativization. This is the case of the pairs in (17) whose relation is that of transitivity, but not of causativity (see Jelinek (1997)).

(17) INTRANSITIVE

- a. *omte* 'be angry'
- b. *ve'okte* 'stick out tongue'
- c. *chepte* 'jump'

TRANSITIVE

- omta* 'hate, be angry at' (\neq make angry)
- ve'okta* 'lick' (\neq make stick out tongue)
- chepta* 'jump over something' (\neq make sb./sth. jump)

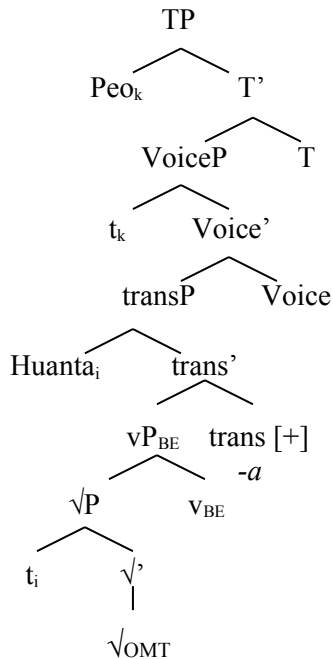
None of the transitives in (17), involves the causativization of its intransitive counterpart. For instance, the transitive *omta* ‘be angry at’ (17a) is the transitive counterpart of the intransitive *omte* ‘be angry’. However, *omta* ‘be angry at’ is not the causativized version of *omte*. If this were the case, the meaning of *omta* would be ‘make somebody angry’, contrary to fact. This suggests that, although lexical causatives in Hiaki exhibit a morphological alternation with respect to their non-causative (inchoative) counterparts, the morphological markers that are phonologically present in these constructions may not be causative, but just transitivity markers.

Transitive markers are not embedded by, but they rather embed, verbalizing little v^0 / light verbs in Hiaki. These include v^0_{CAUSE} , v^0_{BE} , v^0_{DO} and so on. I discuss this at length next.

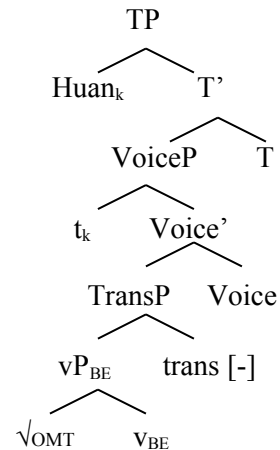
Consider, for instance, the non-causative alternating verbs *omte* / *omta* ‘be angry’. They both exhibit overt (in)transitivizing morphology, *-te* for the intransitive form, *-ta* for its transitive counterpart. This is the same type of alternating morphology exhibited by other roots like *hamte* / *hamta* ‘break’ that do undergo the causative alternation, since *hamta* does mean ‘cause to break’. However, in the case of *omte* / *omta* ‘be angry’ (17a) the alternating pair does not hold a non-causative / causative relation, as *omta* ‘be angry (trans)’ does not mean ‘to cause to be angry’, but it simply means ‘to be angry at somebody’. In both intransitive and transitive cases, the nominative subject of *omta* is not a causer, but an experiencer. Most importantly, regardless of the transitive / intransitive marker, the kind of vP involved in both intransitive and transitive cases is a stative v^0_{BE} . This shows that TransP embeds vP and not vice versa.

Theoretically speaking, this means that in cases like the ones in (17), the verbalizing element is not v^o_{CAUSE} , but other kinds of verbal heads (ie., v^o_{BE} (17a), v^o_{DO} (17b-c)), since the interpretation of the transitive verbs is not causative. The subjects of these verbs may be licensed by Voice, the head that introduces external arguments, but in the absence of v^o_{CAUSE} , the sentence is not interpreted causatively. The accusative object in (18a) is a goal of the root $\sqrt{\text{OMT}}$ ‘be angry’. I show the contrast between transitive *omta* and intransitive *omte* ‘be angry’ in (18).

(18) a. *omta*



b. *omte*



In (18) the transitivity suffixes *-a* (18a) and *-e* (18b) head a Trans(sitivity)P, as proposed in Jelinek (1997) and Jelinek & Escalante (2001). TransP is a functional projection that is responsible for the valency of the verbs (ie., the transitivity properties of verbs), and it has phonological realization in Hiaki.

As in Jelinek (1997), TransP appears in the structure regardless of whether the verb is transitive (18a) or intransitive (18b), precisely because this head determines the transitivity of verbs, and because both transitive and intransitive markers are overtly realized in this language, as seen in the diagram. The head of this projection, Trans^o, determines the valency of sentences in its feature specification, [+trans] (18a) or [-trans] (18b).

I depart from Jelinek's analysis in the way I implement the mechanisms involved in TransP. In my analysis, it is crucial to separate transitivity from the event semantics of verbs, as they are distinct phenomena: the former distinction is strictly structural, whereas the latter pertains to event semantics. For Jelinek, TransP is the functional light verb that indicates both the valency (ie., structural properties) and the event semantics of verbs. In my analysis, TransP is only a structural type of head that licenses objects in its Spec position and is responsible for their (acc) case. Themes are thematically licensed directly by the roots, as their complements.⁵⁰ The sentences in (18) both lack themes. In the transitive version of the sentence, the accusative argument, *Huanta* 'John(acc)' has been base-generated as a goal to the root (ie., Pete experiences anger at John). Since it needs to be structurally licenced, the goal *Huan* is moved to TransP, where it receives accusative case. The structures in (17b-c) would receive similar analyses, with the difference that the element licensed in [Spec, VoiceP] would be interpreted as an agent rather than as an experiencer, because VoiceP is composed with a v_{DO} type rather than with a v_{BE} type, as

⁵⁰ This mechanism is similar to the one in Chomsky's (1995, 2000, 2001) for vP, although unlike Chomsky's vP, TransP neither introduces external arguments (ie., VoiceP does) nor is it responsible for the event semantics of the verb, because this head has a strict structural purpose. In Chomsky's analysis, Trans^o would be considered the realization of just the structural part of vP.

in (18). Both accusatives in (17b-c) are base-generated, not as themes but as adjuncts to the root. In order to be structurally licensed, however, they are raised to TransP, where they receive accusative.

The event semantics of verbs is then not provided by TransP in my analysis, but by a different light verb, vP, which may be of different types (stative, inchoative, causative, etc). This is both a functional light verb and a category assigning little v that directly selects acategorial roots and gives them their category of verbs.

Structurally speaking, TransP always generates a Spec position in Jelinek's analysis, regardless of the valency of the verb (ie., intransitive TransP also generates a Spec position, that may be filled or not -- unaccusative verbs have this position filled in but it is empty in the case of unergatives). For me, [Spec,Trans] only exists if the feature content of Trans^o is [+]. If Trans^o is [-], TransP does not project a Spec position in my analysis.

In analysis proposed here, it is not necessary to project [Spec, TransP] in the case of unaccusatives because themes are thematically licensed as the objects of Roots. If a theme is contained in a structure whose Trans^o is [+trans], it is raised to its Spec position and assigned accusative. If, on the other hand, a theme is contained in a structure whose Trans^o is [-trans], it is raised for structural reasons to the only Spec position that is available, [Spec, TP], where it is assigned nominative.

Such step is desirable since, unlike objects of transitives, the structural subjects of both unaccusatives and unergatives receive nominative case (from T^o) regardless of whether they are thematically licensed as objects of Roots (unaccusatives) or in the Spec

position of VoiceP (unergatives). Also, the realization of Trans^o for both unaccusative and unergative clauses is *-e*. The identical relation of unaccusatives and unergatives with TransP is explained if this functional head just serves structural purposes.

The division of labor between TransP and vP is then necessary in Hiaki because i) at times transitive / intransitive alternating verbs may have identical event semantics (ie., the transitive/intransitive pair in (18a) is different regarding transitivity while identical regarding the (stative) semantics of the verb; ii) but at other times, transitive / intransitive alternating pairs may have different event semantics (ie., the causative/inchoative pair *cheokta* ‘melt(cause)’ / *cheokte* ‘melt(become)’ exhibit different event semantics; iii) most importantly, verbs whose valency is overtly marked identically (eg., as transitive) may exhibit different event semantics (transitive verbs may be v_{CAUSE} , v_{BE} , v_{DO} etc.).

In Jelinek’s analysis, verbalizing heads other than *-(t)e* / *-(t)a* are also analyzed as ‘Trans’. This makes sense, since for Jelinek Trans^o is not only structural but it is also a light verb responsible for the event semantics of clauses. Thus, this author analyzes the productive causative head *-tua* as Trans^o. Sentences involving *-tua* may embed the (in)transitivizing suffixes *-e/-a*.⁵¹ This is seen in (19).

- (19) a. *(-tua) productive causative of rokte* ‘roll(intr)’
 Mercedes senu-k roakt-*i*-tua-k
 Mercedes one-acc roll-intr-cause-perf
 ‘Mercedes made somebody roll’

⁵¹ The intransitivizing suffix *-e* undergoes a vocalic change to *-i* if it appears as part of a stem embedded by certain suffixes such as the causativizing suffix *-tua*. An example:

- | | | | |
|-----|--|------|---|
| (i) | Inepo aman vuite
1sg there run(sg.subj)
‘I’m running (over there)’ | (ii) | Inepo aman vuit <i>i</i> -pea
1sg there run(sg.subj)-des
‘I feel like running (over there)’ |
|-----|--|------|---|

- b. (-tua) *productive causative of rokta* ‘roll(trans)’
 Maala Mercedes-ta ili uusi-ta piisam-po roakt-a-tua-k
 Mother Mercedes-acc child-acc blanket-loc roll-trans-cause-perf
 ‘Mother made Mercedes roll the child in the blanket’

In (19) the productive causative suffix *-tua* systematically embeds the (in)transitivizing suffixes *-e* (19a) and *-a* (19b). In productive causatives there are two events. The outer event in (19) is brought about by *-tua* and the inner event is brought about by a vP that embeds the root $\sqrt{\text{ROAK}}$ and that may be intransitive (*roakte* (19a)) or transitive (*roakta* (19b)).

In Jelinek’s analysis, *-tua* is treated as Trans° that embeds a further Trans° , realized by *-e* (19a) and *-a* (19b). This is consistent with her analysis of Trans° as both an eventive light verb and a structural transitivizer. Here, *-tua* in (19) is treated as the morphological realization of the causativizing head v_{CAUSE} (this is similar to Jelinek’s analysis for reasons I am about to explain). This causative head embeds the inner event headed by TransP , as seen in (18).

The causativizing head v_{CAUSE} is treated here as a functional head different from Trans° . Nonetheless, this head, in Hiaki may be historically derived from the combination of the verbalizing head *-tu*, plus the transitivizing suffix *-a*.⁵² In other words, *-tua* contains Trans° , but it is a functional head in which both vP and Trans° are bundled into one single head. Because *-tua* contains Trans° , it may structurally license arguments in its

⁵² Rudy Troike (p.c.) informs me that in Classical Nahuatl, there are a number of causative suffixes, sometimes as alternants with the same verb with subtle differences in meaning. Some contain *-ti*, which is the Nahuatl reflex of Uto-Aztecan’s *-tu*, which suggests that this part of the causative in Hiaki goes back to Uto-Aztecan. The following Nahuatl suffixes all end in *-a*, which supports my intuition about the separability of *-tu* and *-a*: *-wia*, *-lia*, *-tia*, *-ltia* (the *-lia* is sometimes an applicative, corresponding to the Hiaki applicative suffix *-ria*).

Spec position. The v^o *-tu* serves as a verbalizing suffix that derives other parts of speech into verbs. It tends to give verbs a change-of-state interpretation. In (20) I show some examples with the verbalizing suffix *-tu* not involving *-tua*.

- | | |
|---|---|
| (20) a. <i>Verbalization of a pronoun</i> | b. <i>Verbalization of an adjective</i> |
| Inepo inepo-tu-vae | Aapo naamukia-tu |
| 1sg 1sg-TU-prosp | 3sg drunk-TU |
| ‘I’m going to be me’ | ‘He’s becoming a drunk’ |

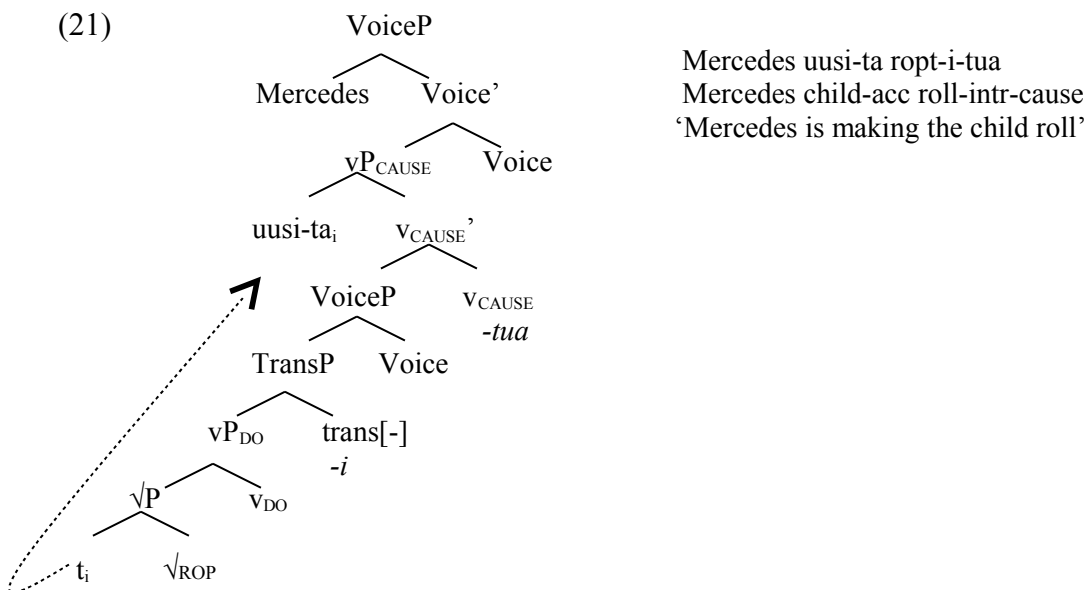
In the sentences in (20), *-tu* embeds a pronoun (20a) and an adjective (20b) and turns them into (change-of-state) predicates. This is consistent with an analysis that considers the causativizing suffix *-tua* as a grammaticalization of *-tu* + *-a*, since *-tua* ‘make’ causatives always involve a transitive change of state. As a grammaticalized functional light verb and for ease of exposition, however, I will analyze *-tua* here as a single projection head.

The point I would like to make here has to do with the surface organization of the two suffixes historically producing *-tua*: the transitivizing suffix *-a* embeds the verbalizing suffix *-tu* (recall that Hiaki is left-branching). This supports the order of embedding proposed for the structures in (16, 18): vP (ie, *-tu*) is embedded by $TransP$ (ie., *-a*).

Now, although it might look that the suffix *-a* is actually a causative suffix, since it is really the point of contrast between the causative suffix *-tua* and the inchoative / verbalizing suffix *-tu*, I claim that this is not so. The combination of a change-of-state verbalizing suffix (*-a*) plus the transitive suffix *-a* is what makes *-tua* causative but none of its parts in isolation make a causative, since *-a* alone, as we have seen, does not make

causatives.⁵³

The example in (21) exhibits the productive causativization of the intransitive verb *ropte* ‘roll(intrns)’.



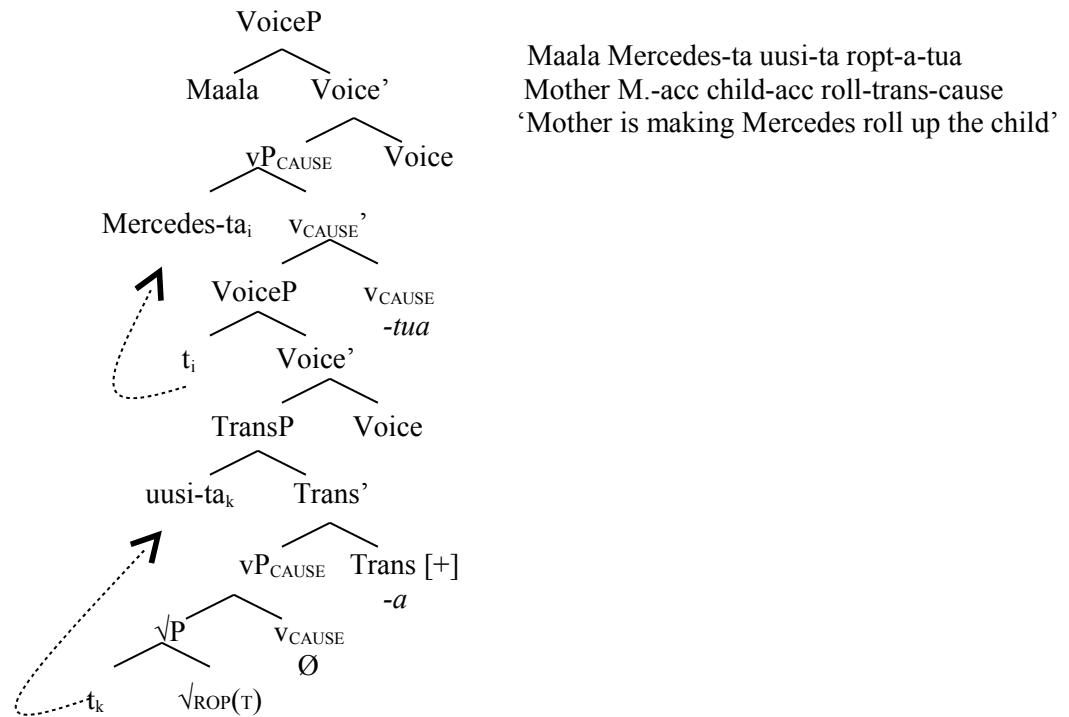
The syntax of Hiaki productive causatives will be fully discussed in chapter 5. What is relevant at this point is the syntax of the material embedded by the causativizing head *-tua*. In (21), the embedded theme *uusi-ta* ‘the child’ is moved to the Spec position of $v_{CAUSE} -tua$ because this is the position where the Trans component of this bundled head structurally licenses this argument (ie., the Causee).

As the structure shows, there is no other position closer to the thematic position of *uusi-ta* that may structurally license this argument, as the event in which this argument has been base-generated is embedded by a Trans^o whose feature specification is [-trans], and recall that a TransP with negative feature specification involves no Spec position.

⁵³ This decompositional style is perhaps reminiscent of proposals such as Ramchand’s (2008).

As proposed above, lexical causatives in Hiaki do not involve the productive causative *-tua* (in (21)). They rather contain a light verb realized by zero morphology, which is embedded by TransP.⁵⁴ This explains why most lexical causatives in this language involve the transitivizing suffix *-a*. Because lexical causatives contain ‘Trans’ as part of their head, they always involve transitive syntax (ie., they involve roots containing objects). The diagram in (22) shows the productive causativization of a lexical causative in Hiaki.

(22) Analysis of a zero causative in Hiaki embedded by the productive causative *-tua*



⁵⁴ Although perhaps the light verb in Hiaki zero causatives is sometimes realized by *-t*, as in *roakta* ‘roll(cause)’ / *roakte* ‘roll(inch)’, *ropta* ‘roll(cause)’ / *ropte* ‘roll(inch)’ and so on. If this is so, the causative meaning of the *-ta* combination will be a consequence of a feature bundle between the features of the change-of-state vP and the transitive features of Trans (ie., *-a*). This makes sense since both *-tua* and lexical causatives in Hiaki license an accusative object (ie, a Causee). For ease of exposition, however, I will not analyze the vP and TransP as bundled into the same head, although this issue remains as a subject of future research.

The diagram in (22) shows two causativizing projections. The higher one is headed by the productive causative *-tua*, which is the morphological realization of the light verb v_{CAUSE} . As just explained, the *-a* part of this suffix is the morphological realization of the Hiaki transitivizing suffix. For this reason, the causativizing bundle $v_{\text{CAUSE}} + \text{Trans}$ structurally licenses the accusative Causee *Mercedes-ta* in its Spec position. This head in turn embeds an inner event, headed by the argument-introducing projection VoiceP. It is here that the accusative causee, *Mercedes-ta*, is thematically licensed. For reasons that I will discuss next, Hiaki does not exhibit the Voice / Cause bundled head proposed by Pylkkänen. Embedded by VoiceP comes TransP that is responsible for the transitive structure of lexical causatives and that is morphologically realized as *-a*. This projection licenses a further accusative argument, the theme *uusi-ta* ‘the child’, in its Spec position, and embeds the vP responsible for causative semantics, the zero causative head v_{CAUSE} .⁵⁵

We have seen that the presence of Trans^0 just above v_{CAUSE} in Hiaki explains why most lexical causatives in this language exhibit transitive morphology. However, we have seen that the reverse does not hold. As we have seen earlier (eg. *omta* ‘angry(trns)’(18)), not all instances of transitive morphology in Hiaki involve lexical causativization. Transitive morphology is not exclusive of causative verbal projections, but it rather appears in Hiaki as part of *all* verbal projections. In Pylkkänen’s terms, lexical v_{CAUSE} in Hiaki is also Non Voice-bundling. I will discuss this next.

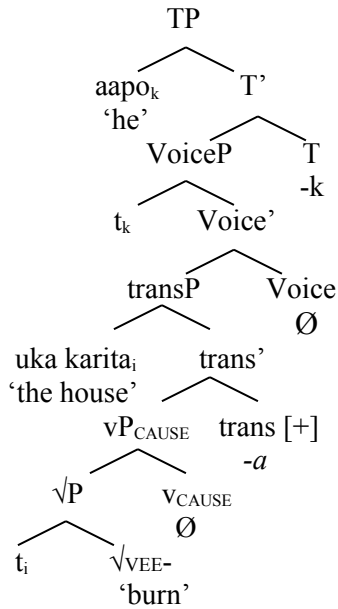
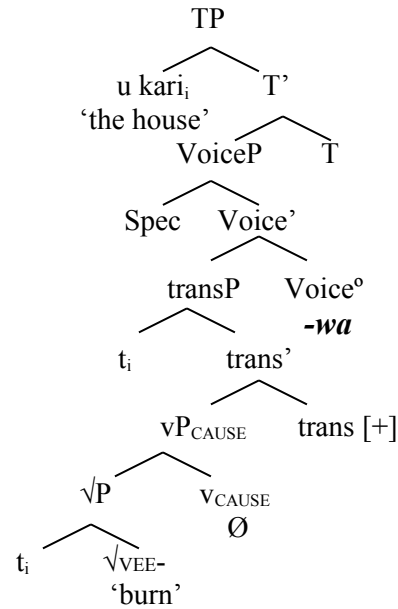
⁵⁵ Although see the previous fn.

3.3.2. Hiaki is non Voice-bundling

Both lexical and productive Hiaki v_{CAUSE} are non Voice-bundling. I discuss the non Voice-bundling properties of Hiaki productive v_{CAUSE} in chapter 5. Evidence from the passivization of Hiaki lexical v_{CAUSE} shows that this head is non Voice-bundling. Hiaki passives are formed by adding the passivizing suffix *-wa* to verbal roots. This includes roots that have been lexically causativized, as shown in (23).

- | | |
|--|--------------------------------|
| (23) a. Active | b. Passive |
| Aapo uka kari-ta vee-ta-k | U kari vee-ta-wa-k |
| 3sg det(acc) house-acc burn-trans-perf | det house burn-trans-pass-perf |
| ‘He burned the house’ | ‘The house was burned’ |
| | Jelinek (1997: 182[10]) |

Jelinek (1997) analyzes the suffix *-wa* as the overt realization of the VoiceP head. In Jelinek’s account, when sentences are active, Voice^o has zero realization and licenses an external argument in its Spec position (ie., *aapo* ‘3sg’ (23a)). When sentences are passive, Voice^o is overtly realized as *-wa* and no argument is licensed in its Spec position (24).

(24) a. *Active*b. *Passive*

The diagrams in (24) show the structure of an active lexical causative (24a) and its passive counterpart in (24b). As proposed by Jelinek (1997), the passive suffix *-wa* is the overt realization of passive Voice^o head. I assume this analysis here.

The crucial point here is that passive facts in Hiaki show that v_{CAUSE} cannot be bundled with Voice^o. If this were the case, the passive version of *-vee-ta* 'burn-trans' would not be *vee-Ø-ta-wa* (burn-cause-trans-pass) as is the case, but it would be *vee-Ø+wa-ta* (burn-cause+pass-trans)⁵⁶. This is so since transitive morphology embeds the causative vP as seen above, so if Voice were bundled with the causative vP, transitive morphology would need to embed the bundled head, contrary to fact. An analysis in which v_{CAUSE} is non Voice-bundling is more consistent with the facts in (23).

⁵⁶ It would be *vee-t-wa-a* (burn-cause-pass-trans) in an analysis assuming that *-t* is the overt realization of the Hiaki lexical causative.

3.3.3. Summary

I just discussed the general properties of Hiaki lexical v_{CAUSE} . I have shown that this causative head is root-selecting and non Voice-bundling, which makes it pattern with Japanese Root Cause. Next I show some characteristics presented by lexical causatives in Japanese and Hiaki.

3.4. Hiaki and Japanese lexical causatives contrasted

Pylkkänen predicts that a causative head that is both Root selecting and non Voice-bundling should pattern with Japanese. In this sense, Hiaki should exhibit lexical causatives of both unergatives and transitives. It should also exhibit unaccusative causatives along the lines of the Japanese adversity causatives. In this subsection I show that none of these are borne out in Hiaki, which suggests that Pylkkänen's predictions should be revised.

3.4.1. Hiaki disallows the lexical causativization of unergatives

Japanese is claimed by Pylkkänen (2002, 2008) to allow the root causativization of unergatives. As discussed in section 2 above, this is due to the fact that Cause is non Voice-bundling in this language. Hiaki is non Voice-bundling as well. However, the root causativization of unergatives is disallowed in this language. This is shown in (25).

- | | | |
|---|---|---|
| (25) a. non-causative
vams-e=e!
hurry-intr=2sg
'Hurry up!' | b. root causative
*Maria Santos-ta vams-a
M. S.-acc hurry-trans
'Maria made Santos hurry up' | c. productive causative
Maria Santos-ta vamih-tua
M. S.-acc hurry-cause
'Maria made Santos hurry up' |
|---|---|---|

The sentences in (25) show that the only way to causativize the unergative root *vamse* ‘hurry up’ is to do it productively (25c), but the root causativization of this root is disallowed (25b). This is unlike the cases seen from Japanese (26) which, Pylkkänen claims, are cases of unergatives that allow root causativization in Japanese.

- (26) Ano kodomo-ta itumo oya-o nak-asi-te iru
 That child-nom always parents-acc cry-cause-prog be
 ‘That child is always troubling his parents’
 Pylkkänen (2008: 121[98])

In the example in (26), the unergative root *nak* ‘cry’ has undergone root causativization. As explained in section 2 above, one of the reasons we know this is the case is because of the adversity interpretation of the sentence. Pylkkänen claims that this example is possible in Japanese thanks to the non Voice-bundling setting of Cause in this language. But if a non Voice-bundling v_{CAUSE} is all that is required for unergatives be allowed in root causativization contexts, the restriction in Hiaki (25b) is surprising, as v_{CAUSE} in this language has the same properties than v_{CAUSE} in Japanese. Also, as suggested above, the fact that the Japanese root *nak* ‘cry’ participates in the inchoative/causative alternation makes this root pattern with unaccusatives rather than unergatives.

In other words, the fact that *cry* is unergative in languages like English does not entail that roots with similar encyclopedic meaning in other languages (e.g., *nak*- in Japanese) need to have the same thematic properties. On the contrary, there are numerous studies on unaccusativity (eg., Levin & Rappaport-Hovav (1995), Burzio (1986), Rosen (1989)) that identify verbs with similar semantics as being unergative in some languages and unaccusative in other languages. For instance, Rosen (1989) lists verbs that are

- Thus, because the fact that one verb is unergative in a particular language (eg., English) does not automatically make it unergative in another language (eg., Japanese), the unergativity of a root like *nak-* ‘cry’ in Japanese is unclear, which invalidates Pylkkänen’s claim that this verb is unergative in Japanese. Because this point is controversial, then, more examples exhibiting Japanese lexical causatives of unergatives and transitives are required to prove Pylkkänen’s claim. In fact, Tomioka (2006) shows Japanese examples in which ‘the lexical causative morpheme (ie., irregular form or *sasi*) attaches to a root or a monomorphemic unaccusative verb, but not to a transitive or bimorphemic unaccusative verb p. 117). I show the examples in (28).

- ⁵⁷ One test that shows that *sleep* is, in effect, unaccusative in Spanish is the fact that it may be used in an absolutive construction, patterning with other unaccusatives.

- (i) a. {Dormidos / llegados / *corridos} los niños, nos fuimos a la fiesta
Slept/ arrived / *run} the children, 1pl.refl went(1pl) to the party
'Once the children had {fell asleep/arrived/*run}, we left for the party'

- b. *The causative suffix attaches to a monomorphemic unaccusative*
 Kotaro-ga bo:ru-o sotto soroga-si-ta
 Kotaro-nom ball-acc gently roll-cause-past
 ‘Kotaro rolled the ball gently’
- c. *The causative suffix attaches to a transitive*
 *Kotaro-ga Naoko-ni isu-o {kowasi-si-ta/kowas-asi-ta}
 K.-nom N.-dat chair-acc {break.trans-cause-past/break.trans-cause-past}
 ‘Kotaro made Naoko break the chair’
- d. *The causative suffix attaches to a bimorphemic unaccusative*
 *Kotaro-ga Naoko-o tao-re-si-ta
 Kotaro-nom Naoko-acc fall-unacc-cause-past
 ‘Kotaro made Naoko fall’

Tomioka (2006: 117)

The examples in (28) show restrictions in Japanese regarding the compatibility of Root (ie., lexical) cause. While the causative suffix ((*s(a)si*) may attach directly to (unaccusative) roots with no transitivity marker (28a,b), it cannot attach to roots containing transitivity markers, such as the transitivized *kowasi/kowas* ‘break(trans)’ (28c) or the intransitivized *taore* ‘fall(intrans)’ (28d). As Tomioka claims, the root *tao* ‘fall’ has two roots, one transitive *taos-*, one intransitive *taore-*. This supports a proposal in which Japanese is like Hiaki in that it exhibits transitivizing/intransitivizing morphology, but in that transitive markers do not equal causativity.

However, this is not clear for Japanese, due to the vast list of possible morphemes that may attach to intransitive/transitive (or causative) pairs. For instance, it is possible to find causative/non-causative pairs in which the causative member exhibits zero morphology (29).⁵⁸

⁵⁸ All examples from (29) through (32) are from Tsujimura (2007).

(29)	ROOT	INTRANSITIVE	TRANSITIVE	MEANING
	o-ru	o-re-ru	o-ru	‘break’
	tog-u	tog-a-ru	tog-u	‘become sharp/sharpen’
	tuag-u	tunag-a-ru	tuag-u	‘become connected/connect’

But it is also possible to find transitive morphology that does not clearly involve causation (30).

(30)	ROOT	INTRANSITIVE	TRANSITIVE	MEANING
	noko	koko-r	noko-s	‘leave behind’
	too	too-r	too-s	‘pass’
	tasuk	tasuk-ar	tasuk-e	‘help, rescue’
	mi	mi-r	mi-e	‘see’
	kik	kik-	kik-oe	‘hear’

Sometimes, non-causative transitive verbs fail to exhibit causative morphology (31).

- (31) Hanako-ga doresu-o kat-ta
 Hanako-nom dress-acc buy-past
 ‘Hanako bought a dress’

Sometimes Japanese causative/non-causative pairs do not exhibit any morphological change (32).

- | | |
|--|---|
| (32) a. Mado-ga hiraku (intr.)
window-nom open
‘The window opens’ | b. Taroo-ga mado-o hiraku (caus.)
Taro-nom window-acc open
‘Taro opens the window’ |
| c. Sokudo-ga masu (intr.)
speed-nom increase
‘The speed increases’ | d. Kuruma-ga sokudo-o masu (caus.)
car-nom speed-acc increase
‘The car increases the speed’ |

Tomioka’s (2006) results in (28) along with the irregular morphological patterns exhibited by the Japanese pairs in (29-32) and the participation of roots like *nak-* ‘cry’ in the inchoative/causative alternation suggest that, as in Hiaki, (i) only unaccusatives allow lexical causativization in Japanese and (ii) it is not clear whether the suffixes associated with lexical causativization are causative suffixes or just transitive suffixes like Hiaki *-a*.

Given the data seen so far I claim, contra Pytkänen, that a non Voice-bundling v_{CAUSE} does not license root causatives of unergatives or transitives in Hiaki (and also Japanese) because the embedded external argument (ie., causee) cannot be syntactically licensed. Instead, I follow Heidi Harley (p.c.) in that any apparently unergative root that allows lexical causativization has the ability to syntactically behave unaccusatively. This is, for instance, what happens to the Japanese root *nak* ‘cry’ in (26) above, as pointed out throughout this section. The ability of unergative roots to behave unaccusatively is then idiosyncratic. This is why the phenomenon is not productive and is related to idiomatic meanings. Examples of unergative verbs that may behave unaccusatively are, for instance, Spanish *saltar* ‘jump’ (33) or English *run* (34). These verbs are unergative but they may be used causatively. When used causatively, the meaning of these verbs is idiomatic and unaccusative.

- | | |
|---|---|
| (33) a. Unergative use of <i>saltar</i> ‘jump’
María está saltando
Mary is jumping
‘Mary is jumping’ | b. Causativized unaccusative <i>saltar</i> ‘jump’
Me vas a saltar un ojo
1sg.dat go(2sg) to jump an eye
‘You’re going to hurt my eye
(lit., make my eye pop out)’ |
| (34) a. Unergative use of <i>run</i>
Mary is running | b. Causativized unaccusative <i>run</i>
Mary is running the business |

Both cases in (33) and (34) exhibit a contrast between the same root (ie., *saltar* ‘jump’ (33) and *run* (34)) that is compatible with both unergative and unaccusative syntax. In the examples in (b) in which they exhibit unaccusative syntax, both unergative verbs in (33) and (34) can be lexically causativized.⁵⁹ Crucially, this cannot mean that lexical Cause in

⁵⁹ See also Folli & Harley (2007) for similar examples from Italian showing that *saltare* ‘jump’ in Italian has also may be used both unaccusatively and unergatively. This double use results in syntactic asymmetries, as this verb can only appear in passivized causatives if used unaccusatively but not if used

English or Spanish is non Voice-bundling like Japanese and Hiaki, since we know from Pylkkänen (2002, 2008) that, at least English lexical cause is non Voice-bundling. It is more reasonable to assume that there are some verbs such as *salto* ‘jump’ and *run* that are unergative in their basic intransitive use, but that also allow unaccusative uses. I extend this explanation to the Japanese and Hiaki cases in which apparent unergatives can undergo root causativization. When this happens, it is not thanks to the properties of v_{CAUSE} but it is rather allowed by certain roots only, those that are compatible with unaccusative syntax.

3.4.2. The adversity interpretation of transitive *die*

The verb *die* resists lexical causativization in English and Spanish (35).

(35) a. *English*

*John died (cf. killed) Mary in a car accident

b. *Spanish*

*Juan murió a María en un accidente

Juan died to Maria in an accident

‘Juan died (cf. killed) Mary on an accident’

According to Pylkkänen (2002, 2008), the Japanese root *sin-* ‘die’ allows lexical causativization in the adversity causative construction (36a), although this language also has the suppletive root *koros* with meaning ‘kill’ (36b).

unergatively:

- (i) *Il Ponte Vecchio fu fatto saltare*
The bridge old was made jump
‘The Old Bridge was exploded’

- (ii) ?? *Marco fu fatto saltare*
Marco was made jump
‘Marco was made to jump’
Folli & Harley (2007: 227[46])

(36) *Japanese*

- | | |
|--|--|
| <p>a. <i>adversity causative</i>
 Taro-ga musuko-o sin-ase-ta
 T.-nom son-acc die-cause-past
 ‘lit. Taro died his son,
 cf. Taro is afflicted for his son’s death’
 (Pylkkänen (2008))</p> | <p>b. <i>kill</i>
 Jiro-ga Ichiro-o korosi-ta
 Jiro-nom Ichiro-acc kill-past
 ‘Jiro killed Ichiro’
 (Tomioka (2004))</p> |
|--|--|

The productive causative form of *sineru* ‘die’ is identical in form to that of the adversity causative. This means that the sentence in (36a) has an ambiguous interpretation between (i) ‘Taro is afflicted for his son’s death’ and (ii) ‘Taro caused his son to die’. Crucially, in contexts in which the adversity interpretation is not available, the causative form *sin-ase* ‘die-cause’ has the syntax of productive causation, not of lexical causation. This is seen if we compare the sentence in (36a) with the one in (37).

- (37) Taroo-ga musuko-o sini-taku-sase-ta
Taro-nom son-acc die-des-cause-past
a. ‘Taro made his son want to die’
b. *‘Taro was adversely affected by his son’s wanting to die’
Pylkkänen (2008)

The causative with *sineru* ‘die’ in (37) is a productive causative, but not a lexical causative. Because it is a productive causative, the causative suffix *-sase* necessarily embeds a structure bigger than a root.⁶⁰

Conversely, the lexical causative sentence in Japanese with a clear causative meaning, which clearly means ‘make die’, is not the *sin-ase* ‘die-cause’ adversity

⁶⁰ According to Pylkkänen it embeds vP although I believe that the fact that a) it licenses an embedded desiderative suffix *-taku* and, as seen in the discussion of desideratives in Tohono O’odham in chapter 2, desideratives license subjects rather than objects, and b) Japanese productive causatives embed structures with external arguments is evidence that *-sase* is a Phase-selecting Cause (in the sense of Pylkkänen). See also chapter 2 for arguments against Pylkkänen’s proposal that lexical causatives in Japanese license embedded subjects in the specifier of Cause.

causative in (36a) but the lexical causative with the suppletive root *koros-* ‘kill’ in (36b).

This is, at least, the intuition of native speakers.⁶¹ In any case, given Pykkänen’s claim that *sin-ase* ‘die-cause’ may be a case of root (ie., lexical) causativization, Japanese exhibits two forms of lexical causativization of *sineru* ‘die’, one is the familiar root causativization of *sin-* by the suffix *-ase* that results in an adversity reading (36a), the other is the expression of the lexical causative by means of a suppletive root, *koros-* ‘kill’ (36b).

Hiaki behaves very similarly to Japanese regarding the *die/kill* pairing. In this language, the lexical roots for ‘die’ are *muuke* (singular subject) and *koko* (plural subject), whereas the lexical roots for ‘kill’ are *me’a* (singular object) and *sua* (plural object). The intransitive roots *muuke* / *koko* cannot be used causatively. This is seen in (38).

(38) *Hiaki* ‘die’ / ‘kill’

a. *non-causative*

Huan aman *muuke-k*
Huan there die(sg.sub)-perf
‘John died over there’

b. *causative muuke*

*Peo Huan-ta *muuk-e-k*
Pete John-acc die-intr-perf
‘Pete died John’

c. *causative me’a*

Peo Huan-ta *me’a-k*
Pete John-acc kill(sg.obj)-perf
‘Pete killed John’

The root *muuke* ‘die(sg.)’ does have a transitive counterpart, the root *muucha*.

Interestingly, the use of this root is very similar to the Japanese adversity causative, given its use is restricted to contexts in which it means ‘to lose somebody to death’ (39).

⁶¹ Although see the discussion on Fodor (1970) in chapter 1.

(39) *The adversity interpretation of ‘die-trans’ in Hiaki*

Vempo vem malawa *muuch-a-k*
 3pl 3pl.poss mother die-trns-perf
 ‘They lost their mother to death’

The sentence in (39) exhibits the verb *muucha* ‘die(trns)’, which is a transitivized version of the unaccusative *muuke* ‘die (sg.)’, at least, morphologically speaking. The transitive sentence in (39) does not have a causative interpretation. Like in Japanese adversity causatives, the sentence in (39) does not receive its literal interpretation ‘They died their mother’, but the interpretation is idiomatically given as something along the lines of ‘They suffered the death of their mother’. But unlike its Japanese counterpart, the Hiaki sentence in (39) does not exhibit causative morphology but just transitive morphology *-a*.

Another difference between the sentence in (39) and its Japanese counterpart (36a) is that the Hiaki transitive sentence cannot be ambiguous with its causative counterpart. This is, again, because of morphological differences. In Japanese, the productive causative form *sin-ase* ‘die-cause’ (37) shares the same morphology with the adversity causative (36a). In Hiaki, the adversity interpretation is only available via the root *muk* ‘die’ plus the transitivizing suffix *-a*, which results in the form *muucha* ‘die(trns)’ (39). The productive causative for ‘die’ in Hiaki is the result of combining the root *muk-* ‘die’ with the causativizing suffix *-tua*, forming *muktua* ‘cause to die’. Conversely, both Japanese and Hiaki have suppletive roots lexically denoting ‘cause to die’. In the case of Japanese, this language has the root *koros-* ‘kill’. In the case of Hiaki, the lexical causatives of ‘die’ are *me’a* ‘kill(sg.obj)’ and *sua* ‘kill(pl.obj)’.

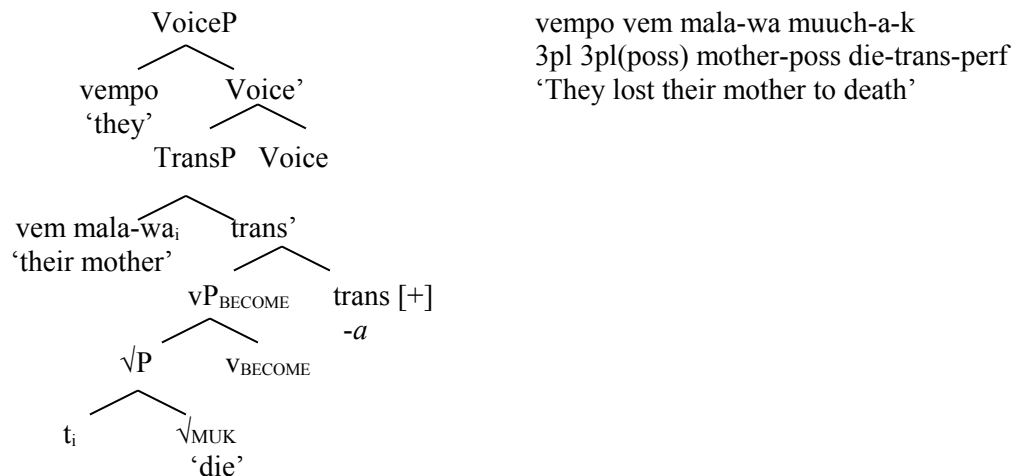
According to Pylkkänen, the reason why the adversity interpretation is available

in Japanese is due to (i) the root causativization of *-sase* and (ii) the disjunction between Voice and Cause in this language: in these constructions, Cause is present in the absence of Voice.

In Hiaki, there is no evidence that the adversity construction involving *muucha* (die-trans) is also causative. The only morphological evidence here is that the verb *muuke* ‘die(sg.subj)’ is used transitively. That is, the sentences in (38-39) are contrasted in terms of transitivizing morphology. The sentence in (38a) contains the verbal form *muuke* ‘die(sg)’ that exhibits intransitive morphology (ie., *-e*). The sentence in (39), in contrast, contains the verbal form *muucha* ‘die (trns)’ that exhibits transitive morphology (ie., *-a*). The lexical causative corresponding to *muuke* ‘die (sg)’ is realized via the suppletive form *me’a* ‘kill (sg)’ (38c).

The meaning difference between (38c) and (39) is in terms of causativity. More specifically, I suggest that even though the sentences in (38c) and (39) are not contrasted in terms of transitivity, which is overtly realized as transitive *-a*, only (38c) contains a causativizing verbal head (v_{CAUSE}). The sentence in (39) is transitive but it is crucially non-causative. In this sense it has a similar structure as the *omta* ‘be angry’ cases seen above in 3.3.1. That is, in (39), the subject *vempe* (3pl) is not interpreted as a causer but as an experiencer, not because v_{CAUSE} is present in the absence of Voice, but because Voice is present in the absence of Cause. I show the structure in (40).

(40)



The diagram in (40) shows the structure of a sentence containing the transitive *muucha* 'die (trns)'. The vP involved in this sentence is not causative, but it is rather the unaccusative v_{BECOME} . This verbal head is compatible with Voice that introduces an external argument.⁶² Because the verbal head associated with Voice is non-agentive, the external argument introduced by this head does not receive an agentive interpretation, as v_{BECOME} is incompatible with agents.

It is rather interpreted as an experiencer (ie., the person experiencing somebody else's death). Because Trans^0 has a $[+]$ value, the embedded theme *vem mala-wa* 'their mother' is structurally licensed in $[\text{Spec}, \text{trans}]$. The sentence analyzed in (40) exhibits then a similar situation to the one discussed for *omta* 'be angry (trns)' (§3.3.1.), whereby a verb exhibiting transitive morphology does not need to involve causative semantics. The difference is that whereas $\sqrt{\text{MUK}}$ 'die' always licenses a theme (ie., if intransitive, the theme is the subject, if transitive, the theme is the object), $\sqrt{\text{OMT}}$ 'be angry' does not

⁶² See Schäfer (2007) for an account in which not all elements introduced in VoiceP are agentive.

licenses themes (ie., it is unergative when used intransitively). In the same way as the subject of *omta* was an experiencer (ie., the person experiencing anger), the subject of *muucha* also is an experiencer (ie., the person experiencing somebody's death).

Pylkkänen (2002, 2008) shows that the Japanese verb combination *sinase* 'die-cause' are causative despite their non-causative interpretation with evidence in which, she claims, a *by-phrase* naming a causing event (rather than an agent) may be added to the combination. She contrasts these sentences with adversity passives that, unlike adversity causatives, disallow a *by-phrase* naming a causing event. Pylkkänen explains that this contrast is due to the fact that only adversity causatives contain Cause. I show the sentences in (41).

- (41) a. Japanese adversity causatives allow *by-phrase* naming a cause

Taroo-ga sensoo-ni.yotte musuko-o sin-ase-ta
 Taro-nom war-by son-acc die-cause-past
 'Taro's son was caused to die on him by the war'

- b. Japanese adversity passive disallows *by-phrase* naming a cause

*Taroo-ga sensoo-ni.yotte musuko-ni sin-are-ta
 Taro-nom war-by son-acc die-pass-past
 'Taro's son died on him by the war'

Pylkkänen (2008:91[22])

In Japanese, it is then possible to test the presence of a causative element in adversity causative sentences. In Hiaki this is a hard task, as this language completely disallows *by-phrase*s even with passives (see Escalante (1999)). Since lexical v_{CAUSE} is non overt in this language, there is no morphological evidence behind a causative analysis of the adversity use of *muuke* 'die'. In addition, Hiaki lacks any semantic evidence that its adversity transitive involves v_{CAUSE} (ie., it is impossible to insert the agent by adding a *by-phrase* in

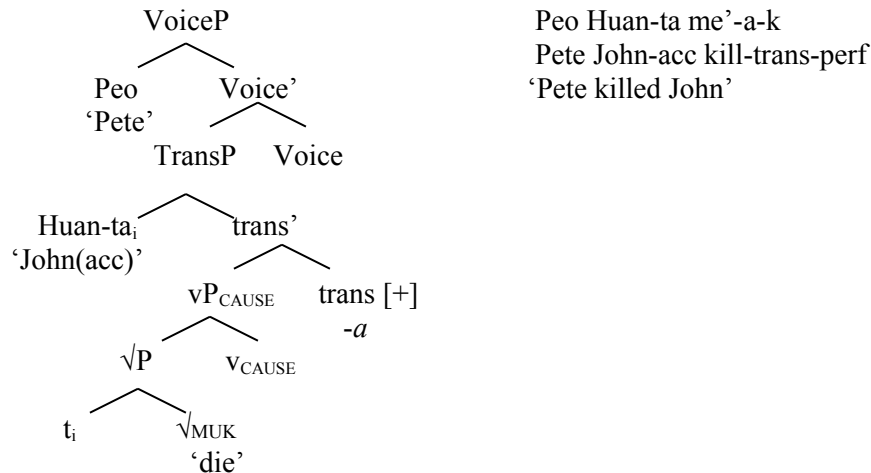
this language). I will assume, then, that *muucha* ‘die-trans’ sentences in Hiaki are not causative.

The similarities with the Japanese structure, however, are apparent from the examples. Because of this, it would be reasonable to postulate a parallel analysis of the two structures, so either both Japanese and Hiaki have adversity constructions that involve i) a causative functional head in the absence of an external argument (ie., Pylkkänen’s proposal) or ii) a non-causative but transitive head (my proposal).

The examples shown (28-32) above suggest that it is not that easy to associate the suffixes *-asi*, *-osi*, *-e*, \emptyset and so on to causative morphology since they may also mark non-causative transitive morphology. However, Pylkkänen’s demonstration of the existence of causativity in (41) suggests that the Japanese *-ase* suffix may be marking causativity rather than just transitivity in *sinase* ‘die (adversity)’. Because a solution to this dilemma would necessarily involve a deeper study of Japanese morpho-syntax and this is beyond the scope of this dissertation, I will leave this question open for future research.

Next I contrast the sentence analyzed in (40) with the structure of the lexical causative *me’a* ‘kill’ (42).

(42)



The tree in (42) shows the structure of causative *me'a* 'kill (sg.subj)' in Hiaki. It is clearly contrasted with the structure shown for *muucha* 'die (trans)' in (40) in that the structure of *me'a* does contain a causativizing head v_{CAUSE} . In this case, the external argument licensed by VoiceP, *Peo*, receives the interpretation of a Causer. The causativizing head is morphologically realized by zero morphology, but as a causative verbal head, it is embedded by Trans°, which is morphologically spelled out as *-a*. This suffix is then overtly realized as part of the resulting lexical causative form *me'-a*. The root $\sqrt{\text{MUK}}$ 'die', however, is not morphologically realized as such, but it appears in a suppletive form *me-*. The next subsection devotes some discussion to suppletive verb forms in lexical causativization contexts.

3.5. Other suppletive forms in Hiaki

In the previous subsection we have seen that the Hiaki lexical causative for the root $\sqrt{\text{MUK}}$ 'die' is morphologically realized in its suppletive form *me'a* 'kill (sg)'. Root suppletion

in Hiaki shows up in other situations besides lexical causativization. For instance, some Hiaki verbal roots are suppletive for number. This is precisely the case of *muuke* / *koko* ‘die (sg / pl)’. Both singular and plural forms for ‘die’ in Hiaki have corresponding lexical causative suppletive forms. Thus, the plural lexical causative form for ‘die’ *koko* is the suppletive plural form *sua* ‘kill (pl)’. Notice that, like the other lexical causatives seen so far, the lexical causative *sua* ‘kill (pl)’ overtly realizes the overt transitivity suffix –a. Other suppletive verbs for number with suppletive lexical causatives in Hiaki are shown in (43), as listed in Guerrero (2004).

(43) *Suppletive lexical causatives in Hiaki* (taken from Guerrero (2004))

	SINGULAR		PLURAL	
	NON-CAUSATIVE	CAUSATIVE	NON-CAUSATIVE	CAUSATIVE
a. ‘Die, kill’	<i>muuke</i>	<i>me’a</i>	<i>koko</i>	<i>sua</i>
b. ‘Fall, drop’	<i>weecha</i>	<i>watta</i>	<i>watte</i>	<i>watta</i>
c. ‘enter, bring’	<i>kivake</i>	<i>kivacha</i>	<i>kiimu</i>	<i>kiima</i>
d. ‘sit, put’	<i>yehte</i>	<i>yecha</i>	<i>ho’ote</i>	<i>hoa</i>
e. ‘stand, put’	<i>kikte</i>	<i>kecha</i>	<i>hapte</i>	<i>ha’abwa</i>
f. ‘lay down, put’	<i>vo’ote</i>	<i>teeka</i>	<i>to’ote</i>	<i>to’a</i>

The list in (43) shows number suppletive pairs in Hiaki with corresponding lexical causatives, as in Guerrero (2004). Some of these forms are suppletive in the singular but not in the plural form, as for instance *weecha* ‘fall (non-causative, sg.)’ / *watta* ‘drop (causative, sg.)’ (43b) or *vo’ote* ‘lay down (non-causative, sg.)’ / *teeka* ‘put (causative, sg.)’ (43f). Other of the forms listed in (43) are suppletive for number but their lexical causatives maintain the same root. This is, for instance, the case of the plural forms *watte* ‘fall (non-causative, pl.)’ / *watta* ‘drop (causative, pl.)’ in (43b).

3.5.1. A case study: Suppletive causative forms for ‘die’ crosslinguistically

Suppletive lexical causative roots are not exclusive of Hiaki. Other languages (eg., Japanese, English and Spanish) also exhibit suppletive lexical causative forms corresponding to the unaccusative ‘die’ (44).

(44) Suppletive lexical causatives ‘die/kill’

Suppletive forms ‘die/kill’	‘die’ (non-causative)	‘kill’ (lexical causative)
a. <i>Japanese</i>	<i>sineru</i>	<i>korosu</i> ‘kill, suppletive’
b. <i>English</i>	<i>die</i>	<i>kill</i>
c. <i>Spanish</i>	<i>morir</i>	<i>matar</i>

The table in (44) shows that, besides Hiaki, other languages like Japanese, Spanish, and English also use lexical causative suppletive forms for ‘die’. Recall that Pylkkänen claims for Japanese (44b) that a non-suppletive version of *sineru* ‘die’, *sinaseru* ‘cause to die’, is also available to express lexical causativity (ie., the form that derives the adversity interpretation). Recall that, according to Pylkkänen, this is only permitted if the causativizing head v_{CAUSE} appears in the absence of an external argument. The suppletive example with *koros* ‘kill’ in (44b) is contrasted with the adversity *sinase* ‘die sb. (adversity)’ as *koros-* is the causative form of *sineru* ‘die’ that involves an external argument. Recall that it is not clear, however, despite Pylkkänen’s test in (41) whether the suffix *-ase* in the form *sinase* ‘die sb. (adversity)’ is necessarily marking causativity in this context or just transitivity.

Hiaki, English and Spanish are contrasted with Japanese in that they disallow root causatives that are lacking an external argument. Recall that, in these three languages, Root v_{CAUSE} is realized by zero morphology, but in Japanese this head is analyzed by

Pylkkänen (and others, eg., Harley (2008), Miyagawa (1998, 1999)) to be realized by overt morphology. Nonetheless, all four languages exhibit suppletive forms to express the causative version of *die*, as seen in (44). In the next subsection I discuss the phenomenon of suppletion as already discussed in the literature.

3.5.2. The phenomenon of suppletion in lexical causatives

The phenomenon of suppletion as associated with lexical causatives has been previously discussed in the literature (ie., Shibatani (1976), Comrie (1985), Harley & Noyer (2000), Siddiqi (2006)).

Suppletive lexical causatives may be the result of the availability of different roots specified for non-causative / causative contexts. In some cases, languages contain different lexical roots with specific non-causative / causative specifications. In such cases, the root specified for non-causative contexts is incompatible in constructions containing causative verbal heads. The reverse situation also applies, that is, constructions containing causative verbal heads are only compatible with roots unspecified for causative v types but they are incompatible with roots specified for non-causative v types (ie., Harley & Noyer (2000), Siddiqi (2006)). This is the case of the suppletive verbs *die* / *kill* and their crosslinguistic counterparts. English has a few more non-causative / causative suppletive roots of this kind. Baron (1974) lists the following.

(45) *English suppletive causatives*

NON-CAUSATIVE	CAUSATIVE
a. believe	a'. persuade
b. buy	b'. sell
c. come	c'. bring
d. eat	d'. feed
e. fall	e'. drop
f. fear	f'. frighten
g. have	g'. give
h. hear	h'. tell
i. learn	i'. teach
j. see	j'. show
k. send	k'. receive
l. swell	l'. inflate
m. understand	m'. explain

Baron (1974: 304[9])

Harley & Noyer (2000) address this phenomenon under a Distributed Morphology approach (Halle & Marantz 1993).⁶³ In this framework the different morphological realizations of roots are called Vocabulary Items (VI). Roots are contained in syntactic positions as part of configurations of different kinds. Different VIs have an encyclopedic meaning associated with them. They are also specified for different values that indicate which syntactic configuration the VIs are compatible with. For instance the examples in (46) show the different specifications for the VIs *open* (46a), *grow* (46b), *arrive* (46c), and *destroy* (46d).

⁶³ See Siddiqi (2006) for an alternative DM approach to related phenomena.

(46) *Licensing specifications of Vocabulary Items*

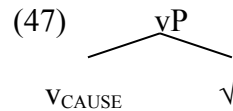
PHONOLOGY	LICENSING ENVIRONMENT	ENCYCLOPEDIA
a. <i>open</i>	[+/-v], [+DP], [+/- cause]	what we mean by <i>open</i>
b. <i>grow</i>	[+v], [+DP], [+/- cause]	what we mean by <i>grow</i>
c. <i>arrive</i>	[+v], [+DP], [-cause]	what we mean by <i>arrive</i>
d. <i>destroy</i>	[+v], [+DP], [+cause]	what we mean by <i>destroy</i>

adapted from Harley & Noyer (2000: 13-14)

The licensing contexts of the VIs in (46) are dependent on the specific values of three different features: a verbal feature [+/- v], an argument compatibility feature [+/- DP] and a causative feature [+/- cause]. For instance, the VI *open* is compatible with both verbal and non-verbal environments (ie., the specification for the verbal feature is ambivalent [+/-v]). This explains why *open* can both be a verb and an adjective. The VI *grow*, in contrast, can only be a verb because the specification for its verbal feature [v] is monovalent (ie., it is set to [+v]). This explains why *grow* is only used as a verb.

In terms of the causative feature [cause], only *open*, *grow* and *destroy* are compatible with causative environments. This is determined by the ambivalent character of the features for *open*, and *grow*. In the case of *destroy*, this VI can only be inserted in causative environments, since its [cause] feature is set for a positive value. The VI *arrive* (46c) is compatible with non-causative verbal environments. This is so since the specification for its [v] and [cause] features are positive and negative respectively.

Imagine a syntactic configuration such as the following, in (47).



The configuration in (47) contains a causative verbal head v_{CAUSE} . In this particular configuration, the VIs *grow*, *open*, and *destroy* may be inserted, but the VI *arrive* cannot be inserted because this VI is specified for $[-\text{cause}]$, which does not match the syntactic environment in (47). Were *arrive* inserted in a configuration such as (47), the derivation would simply crash. In other words, VIs such as *arrive* are only compatible with *non-causative* syntactic environments.

I just discussed that some VIs may be *blocked* from being inserted in a syntactic environment given particular contexts of insertion. Next I discuss the possibility that these VIs are *blocked* from insertion because they are in competition with other VIs with identical encyclopedic information, but with different feature specification.

3.5.3. *Kill* as a suppletive lexical causative

Harley & Noyer (2000)'s treatment of suppletive causative roots could be adopted to explain restrictions associated with the lexical causativization of the unaccusatives such as *die*. It may also be extended to explain why verbs like *appear* have lexical causatives in some languages (ie., Japanese, Hiaki) but not other languages (ie., English, Spanish). We just saw that English *arrive* is said not to be used in syntactic environments such as

(47) because this VI does not contain a positive value for its feature [cause].^{64,65}

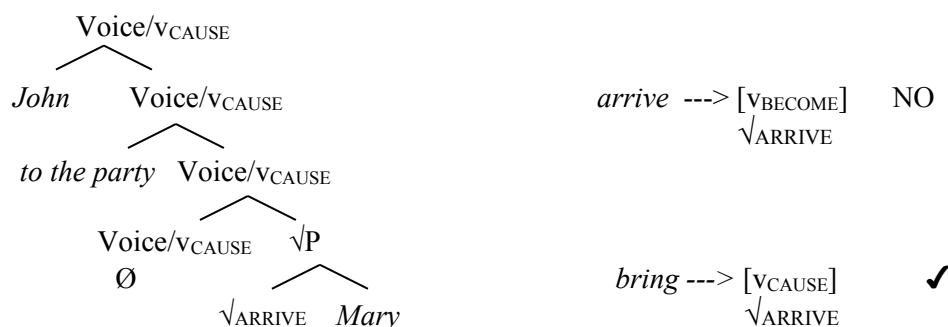
Other unaccusative verbs such as *open* are ambivalent for the feature [cause]. It may be the case that the VI *open* is *underspecified* for [cause]. In this situation, *open* is compatible with environments containing v_{CAUSE} as well as with environments containing a different v type such as v_{BECOME} . The case of *arrive* is different in that this VI is specified for [cause] with a negative value, both in Harley & Noyer's (2000) and Siddiqi's (2006) account. This means that this VI is compatible with environments containing v types other than v_{CAUSE} . Conversely, we might say that *arrive* is specified for a particular v type, say v_{BECOME} . In such case, this VI could be inserted only in syntactic environments containing this particular verb type. For this reason, when a root such as $\sqrt{\text{ARRIVE}}$ appears syntactically embedded by v_{CAUSE} , English has to resort to other VIs compatible with such configuration. This is the case, for instance, of *bring* or *take*, both VIs containing the meaning of 'cause to arrive'. I show this graphically in (48).

⁶⁴ In Siddiqi (2006), the VI for *arrive* includes the symbol $\neg[v]$ that prevents this VI from being inserted in causative contexts that involve $[v]$. It can only be inserted in non-causative contexts that, in Siddiqi's analysis, do not involve $[v]$. This system is similar to the one proposed in Harley & Noyer (2000), although with theory-internal variations such as the introduction of root allomorphy that allows root VIs to directly compete with each other for insertion. In any case, in both frameworks suppletion is explained in terms of (i) the competition of VIs for insertion in the syntax; (ii) the blocking of more poorly specified VIs by more highly specified VIs in a specific context of insertion, as long as the more highly specified VI does not contain conflicting features that are not contained in the context of insertion. These are two ideas assumed here.

⁶⁵ Although see my analysis for the blocking of English *arrive* in causative contexts in section 4.

(48) *bring* as ‘cause to arrive’

‘John brought Mary to the party’



In (48) two VIs compete to be licensed in the syntactic position held by the root *√ARRIVE*.

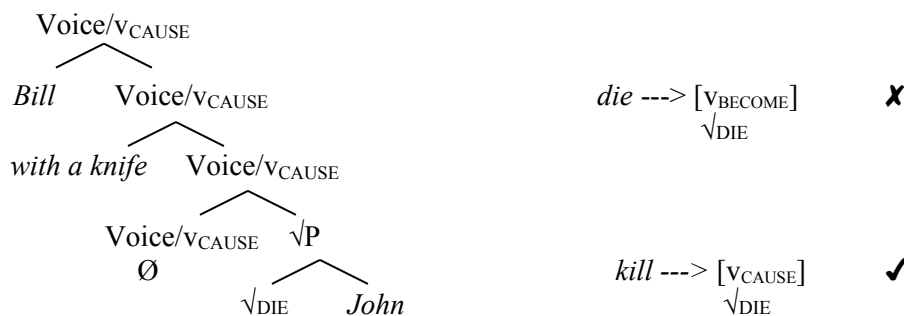
The VI *arrive* is blocked from this position because its feature specification indicates that this VI is only compatible with syntactic environments containing the verb type *v_{BECOME}*.⁶⁶

The VI *bring* is compatible with the syntactic configuration in (48) as its feature specification indicates. An identical explanation can be adopted for the case of *die/kill*.

The diagram in (49) illustrates it.

(49) *kill* as ‘cause to die’

‘Bill killed John with a knife’

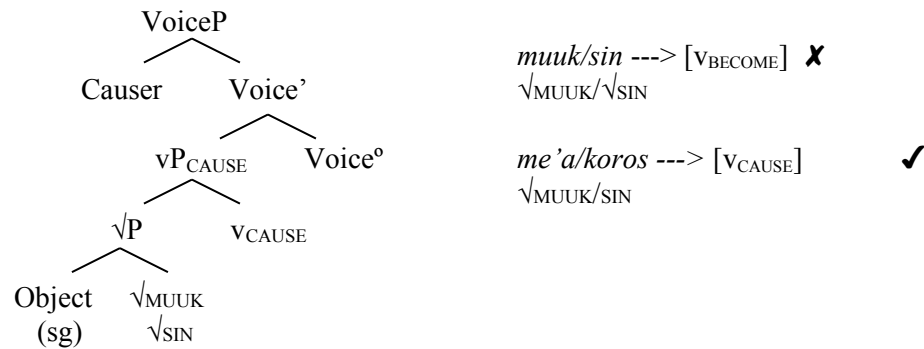


The examples in (49) show how, in English, the VI *die* is only compatible with contexts involving the verbal head *v_{BECOME}*. This VI is banned from syntactic environments

⁶⁶ Alternatively, *arrive* can be analyzed as unspecified so it can be inserted in environments containing non-causative *v*. Its causative counterpart *bring* is specified [cause] and, although it cannot be inserted in non-causative environments due to overspecification (see Elsewhere or Panini’s Principle in Kiparsky (1973)), it blocks the more poorly specified *arrive* from being inserted in causative environments.

involving other *v* types, such as the one in (48) which exhibits v_{CAUSE} . The English lexical inventory (or, more precisely, the List containing the VIs of an English speaker) is provided with another VI, *kill* that entails the basic meaning denoted by the Root $\sqrt{\text{DIE}}$ and that is compatible with v_{CAUSE} type. It is this VI then that is licensed in the syntactic environment in (48). The same explanation given for English in (49) accounts for the suppletive forms *me'a* ‘kill(sg.subj)’ in Hiaki and *koros* ‘kill’ in Japanese. I show the analysis in (50).

(50) *me'a* ‘kill’ and *koros* ‘kill’ as ‘cause to die’



Thus, in (50) Hiaki and Japanese, causative syntactic contexts exhibiting the roots $\sqrt{\text{MUUK}}$ and $\sqrt{\text{SIN}}$ ‘die’ involve the VIs *me'a* ‘kill, sg.obj’ and *koros* ‘kill’, respectively, rather than the VIs *muuk* ‘die(sg.obj)’ and *sin-* ‘die’.⁶⁷

I have explained the Hiaki and Japanese counterparts of *kill* as causative suppletive forms for the counterparts of *die* in these languages. Hiaki, Japanese, and English (and Spanish) behave identically in that they all exhibit a causative suppletive form for *die*. Next I offer a summary of the section.

⁶⁷ The Hiaki forms are further specified, *me'a* as ‘die’ only in contexts whereby the object is singular, *sua* ‘die’ only in contexts in which the object is plural.

3.6. Summary

In this section I have discussed the syntax of Root causatives of languages such as Hiaki and Japanese that exhibit overt transitive/causative morphology. First I have shown that Pylkkänen's claim that non Voice-bundling root causatives allow the causativization of both unergatives and transitives is not borne out in Hiaki, a language that patterns with Japanese in that it is both non Voice-bundling and Root-selecting. While data from Tomioka (2006) proves that Japanese only allows the root causativization of monomorphemic unaccusative roots (contra Pylkkänen's prediction), cases discussed by Pylkkänen in which Japanese apparently exhibits root causativization of unergatives may be actually cases of unergative roots behaving unaccusatively. I have provided crosslinguistic support of this claim with data from English and Spanish in which canonically unergative verbs exhibit unaccusative uses.

In this section I have also shown that, although the Japanese case is not completely clear, the overt morphology exhibited by Hiaki transitive/intransitive alternating pairs is not causative morphology. Evidence in support of this claim is cases of transitive/intransitive pairs such as *omte/omta* '(become) angry' in which the transitive form does not involve causativity (eg. *omta* means 'become angry at sb.' rather than 'make sb. angry').

Like Japanese, Hiaki exhibits a construction, *muucha* 'die(trans)' that is composed of the root for 'die', *muuk-* plus the transitive suffix *-a*. Although the transitivity of this form is clear given its morphological contrast with its intransitive counterpart, there is no empirical evidence that this form is also causative, given the fact

that transitive morphology in Hiaki does not necessarily entail causative semantics. In fact, I have argued by using the DM framework proposed in Harley & Noyer (2000) that Hiaki exhibits causative suppletive forms for ‘die’, with clear causative semantics that block the non-causative forms *muuke* ‘die, sg.subj’ and *koko* ‘die, pl. subj’ from being inserted in causative syntactic configuration.

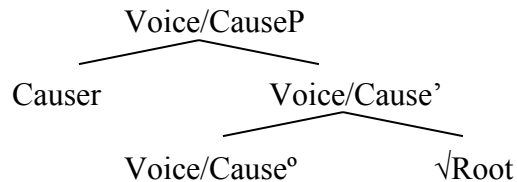
I have shown that the availability of suppletive forms for verbs like *die* is a fact crosslinguistically, which supports the analysis. This includes Japanese, which exhibits the clear suppletive causative form *koros* corresponding to non-causative *sin-* ‘die’. Despite Pylkkänen’s claim that the Japanese form *sin-ase* ‘die-cause’ is an unaccusative causative of *sin-* ‘die’, its identical semantics with respect to the non-causative transitive Hiaki form *muucha* ‘die(trans)’ suggests that it is necessary to further test the causative nature of the Japanese forms in *-ase*. In this section, I have also shown that non-morphological languages such as English and Spanish sometimes may also exhibit causative suppletive forms (eg., *kill* was shown to be a suppletive form for *die*). Next I deal with some gaps found in the formation of root causatives in languages that appear to be Voice-bundling (eg., English) according to Pylkkänen’s classification.

4. Root causativization of unaccusatives in Voice-bundling languages

Recall, from section 2.1, that languages like English are analyzed as Voice-bundling in Pylkkänen’s framework. In these languages, the causative head involved in root causatives appears in the syntax bundled, as a single light verb, with the external-argument-introducing head Voice. I repeat the basic structure of v_{CAUSE} in these languages

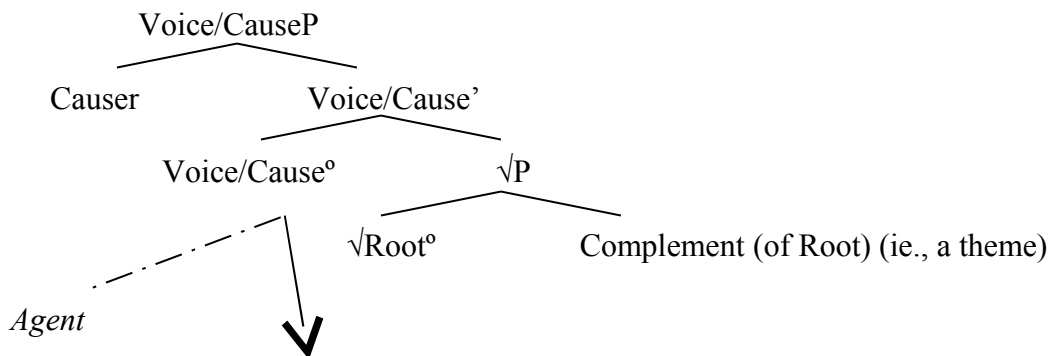
in (51).

(51) The root causativization of a Voice-bundling v_{CAUSE}



Pylkkänen's analysis predicts that, in these structures, it is not possible for v_{CAUSE} to embed unergative or transitive roots, given that these root types require external arguments for their argument structure to be complete, and we know from Kratzer (1994, 1996) that external arguments are licensed in a functional projection above the Root. Since v_{CAUSE} directly embeds roots but also licenses its own external argument (ie., the Causer) in [Spec, Voice/CauseP] the licensing of an embedded external argument is excluded from configurations such as (51). I repeat the structure in (52).

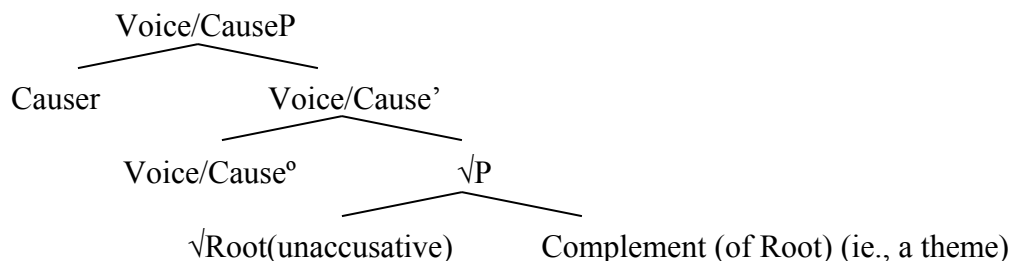
(52) No embedded agents are allowed under English zero Cause



Pylkkänen claims that, in these languages, only the root causativization of unaccusatives is allowed. This is so since the only arguments of unaccusative roots are licensed

internally to the root, as their complements (53).

(53) Voice/CauseP allow unaccusative complements



The diagram in (53) suggests that, if all unaccusatives involve is an internal argument in their complement position, Pykkänen's proposed structure potentially allows *any* unaccusative as complement of a Voice-bundling Root Cause. But this is clearly not the case, as the following English (54) and Spanish (55) zero causatives disallow certain unaccusatives as their complement. The Spanish sentences in (55) are exact correspondants of the English sentences in (54).

(54) *English*

- a. *John arrived Mary to the station
- b. *John died Mary
- c. *John appeared a picture on the screen

(55) *Spanish*

- a. *Juan llegó a María a la estación
- b. *Juan murió a María
- c. *Juan apareció una foto en la pantalla

The sentences in (54) and (55) *all* resist zero causativization. The ill-formedness of these sentences is not predicted by the structure in (53), as *all* root complements of zero Cause in (54) and (55) are unaccusatives (ie., *arrive*, *die*, *appear*) that are not associated with agents, but rather with themes. Unless the roots in (54-55) involve elements other than their theme complements as part of their argument structure, nothing in Pykkänen's model explicitly prevents these sentences from being grammatical. In this section, I show that Pykkänen's predictions for root causativization are partially correct if one

understands that the internal dynamics of different verb classes may make the three-way *transitive-unergative-unaccusative* classification less transparent.

4.1. Suppletion cannot explain all cases

In section 3.5, a suppletive analysis was provided to explain why the root *die* does not appear in causative contexts crosslinguistically (even in non Voice-bundling languages such as Hiaki). A suppletive analysis may be also provided for *arrive* (ie., *bring*), although the non-causative/causative correspondance in this particular case is less transparent (ie., to infer that *bring* involves ‘cause to arrive’).

English and Spanish lack a corresponding causative for *appear* and *aparecer* ‘appear’ respectively. The case of *appear* is an even more complicated one to explain under a suppletive analysis in languages like English or Spanish. This is so since it is hard to find a good suppletive causative that accurately entails the meaning of *appear* in these languages. English verbs such as *show*, *reveal* or *display* could be partially understood as causative counterparts of *appear*, although they are not compatible with this verb in all its uses.

- (56) a. The keys appeared on the table
 b. Mary showed the keys on the table (# as ‘Mary made the keys appear’)
 c. Mary revealed the keys on the table (# as ‘Mary made the keys appear’)
 d. Mary displayed the keys on the table (# as ‘Mary made the keys appear’)

The sentences in (56b-d) are intended as the causative counterparts of the non-causative *appear* in (56a), but none of them seems to be a good candidate for a construction containing the root $\sqrt{\text{APPEAR}}$. Interestingly, the correspondance between *appear* and its

causative candidates in (57) becomes clearer if the external argument is a cause rather than an agent.

- (57) a. Age lines appeared on her face
- b. Time {*appeared / revealed / showed / displayed} age lines on her face
- (58) a. As the sky cleared, the ship appeared in the horizon
- b. The clearing sky {*appeared / revealed / showed / displayed} the ship in the horizon

The (b) examples in (57-58) show that verbs such as *reveal*, *show* and *display* are indeed compatible with causative contexts corresponding to non-causative *appear*, although perhaps *reveal* is the most idiomatic one, hence the most compatible one in the contexts of use in (56-57).⁶⁸

Correspondences such as the ones in (57-58) may lead to the conclusion that *appear* is in effect banned from causative contexts in English and Spanish because the causative use is restricted to suppletive forms such as *reveal*, *show* and *display*.⁶⁹

Nonetheless, this is problematic, since the contexts in which *appear* finds a suppletive causative counterpart are highly restricted (ie., (56)). A more adequate account other than the blocking of the unaccusative by a causative root that explains the banning in (54-55c) in languages such as English and Spanish is then required. In this section I offer such account. First, I test the unaccusativity of *appear* and *arrive* in English.

⁶⁸ Proof that there is not a one-to-one correspondance between *appear* and a suppletive causative form is the fact that in Spanish *reveló* ‘reveal’ is more adequate in the context of (57b), but it is not idiomatic in (58b). A more appropriate root in contexts such as (58b) would be *mostró* ‘showed’.

⁶⁹ Heidi Harley (p.c.) points out that for any of these verbs (ie., *reveal*, *display* or *show*) to be a true suppletive causative form of *appear* they should have a ‘bring into (visible) existence’ reading, correlating with the ‘come into (visible) existence’ reading available for *appear*. This applies to *show*, that may have this reading in some contexts (eg., *The clearing sky showed a ship in the horizon*), whereas in other contexts it is a suppletive causative form for *see* (eg., *Show me why this is not correct!*) as in Baron’s (1974) list in section 3.5., (45).

4.2. Testing unaccusativity

The unaccusative/unergative distinction was first proposed by Perlmutter (1978) and followed up by Burzio (1986) and Levin & Rappaport-Hovav (1995). The basic distinction proposed a two-way division between monadic (ie., one argument) verbs. The basic distinction goes as follows: the only argument of unergative verbs corresponds to its structural or ‘deep’ subject, that is, it’s an external argument (59a), but the only argument of unaccusative verbs is a surface subject but actually corresponds to its structural or ‘deep’ object, cf., it is an internal argument (59b).

- | | |
|--------------------------|---|
| (59) a. John is laughing | <i>Unergative</i> : ‘John’ is a deep subject |
| b. John is dying | <i>Unaccusative</i> : ‘John’ is a deep object |

Unaccusativity tests vary across languages. In English, Levin & Rappaport-Hovav (1995) argue against the accuracy of tests such as *there*-insertion or *x’s way* since they render mixed results. The *there*-insertion and locative inversion tests are intended to identify unaccusative verbs. For instance, *arrive* passes this test, but *run* does not.

- (60) a. There *arrived* three guests
 b. *There *ran* three athletes

The *x’s way* test identifies unergative verbs. For instance, *run* passes this test, while *die* does not.

- | | |
|--|------------------------|
| (61) a. The jogger <i>ran</i> his way to better health | L&R-H (1995: 156[54a]) |
| b. *The old man <i>died</i> his way to heaven | |

These tests, however, lead to mixed results. For instance, there are monadic verbs that fail both tests. This is the case of *fall* (62).

- (62) a. *There *fell* some players during the soccer game
 b. *John *fell* his way to victory

Conversely, some verbs pass both locative inversion and x's way tests, which should be a contradictory result. This is the case of *work* (63).

- (63) a. On the third floor *worked* two young women called...
 b. He *worked* his way to the top

Sanz (2000: 138[20])

I will use these tests here, however, as complements to other tests that have been proposed to tell unaccusatives from unergatives in English. L&R-H (1995) use the following diagnostics as more effective unaccusativity tests. The *resultative* test is used by these authors as the most effective one for English. For instance, unaccusative verbs like *open* may appear predicated by a resultative phrase (64a), but unergatives like *play* fail this test (64b).

- (64) a. The lid broke *open* (ie., became open by breaking)
 b. *The kid played *exhausted* (ie., became exhausted by crying)

Another test commonly to test the unaccusativity of English verbs is the ability of unaccusatives but not unergatives to form adjectival perfect participles (Hoekstra 1984, Levin & Rappaport 1986, Levin & Rappaport Hovav 1995), as in the example in (65).

- (65) a. A recently {*appeared, arrived*} person [unaccusatives]
 b. *A recently {*worked, walked*} person [unergatives]

L&R-H add that adjectival perfect participles may be formed only from telic intransitive verbs (ie., achievements). This generally is a characteristic of unaccusative verbs, while unergative verbs are typically atelic (ie., activities). There are some unaccusative verbs (ie., verbs of existence) that are atelic (ie., states) and hence do not pass this test, as indicated in L&R-H.

- (66) *A recently existed creature

I will use this test for unaccusativity here, taking into account the telicity restriction. I will also use the resultative test despite the fact that this diagnostic too, fails to identify all verbs traditionally considered unaccusatives, as Sanz (2000) points out. For instance, *arrive*, a verb traditionally considered unaccusative, in languages like Italian, fails this test, because the adjective that follows the verb cannot be a resultative, but rather must receive a depictive reading (67).

(67) Willa arrived *breathless*

Sanz (2000): 139[21]

In (67), the secondary predicate *breathless* does not name the state of the subject as a result of the event denoted by *arrive* (ie., *Willa* does not become *breathless* as a result of *arriving*), but it is a depictive, that is, it implies that the subject *Willa* was *breathless* when she arrived.

Sanz (2000) concludes that unaccusativity is not syntactically identifiable in English. Nonetheless she claims that unaccusative and unergative verbs may be distinguished in their interpretation. She places the two-way distinction in terms of telicity: unaccusatives are telic (ie., achievements) whereas unergatives are atelic (ie., activities). Thus, unaccusatives like *arrive* encode an end-point in their interpretation but unergatives like *dance* do not. In effect, classical telicity tests confirm this interpretation contrast.

For instance, one common telicity test involves the compatibility of telic predicates (and the incompatibility of atelic predicates) with time-frame adverbials such as *in an hour* (Vendler (1967)). This test also involves the compatibility of atelic predicates (and the incompatibility of telic predicates) with time-span adverbials (eg. *for an hour*). The

sentences in (68-69) show that predicates like *arrive* appear along with time-frame adverbials like *in an hour*, which predicates *dance* tend to disallow (68). Conversely, predicates like *dance* allow time-span adverbials like *for hours* which predicates like *arrive* reject (69).

- | | |
|--|--|
| (68) a. John <i>arrived</i> in an hour | (69) a. #John <i>arrived</i> for an hour |
| b. #John <i>danced</i> in an hour | b. John <i>danced</i> for an hour |

Another telicity test in English is the progressive test. In this test, the predicates are used in the progressive (eg. *is arriving* for *arrive*). Since atelic predicates do not include an end-point as part of their meaning, when these predicates are used in the progressive, it can be assumed that the completion of the activity has already taken place. Because telic predicates *do* involve the completion of an end-point, the progressive cannot be used with these predicates to mean that the eventuality has been completed, but it rather means that the eventuality is in certain stage toward its completion. This contrast can be seen in the examples in (70a) for the telic (unaccusative) verb *arrive* and in (70b) for the atelic (unergative) verb *dance*.

- | |
|---|
| (70) a. John is arriving (\neq John has arrived and is still arriving) |
| b. John is dancing (= John has danced and is still dancing) |

L&R-H (1995) present evidence against the use of telicity as a determining unaccusativity test. They show two classes of intransitive verbs that pattern with unaccusatives in some syntactic tests but are atelic in their meaning. For instance, verbs like *cool* and *harden* are “degree achievement verbs” (Dowty 1979). Unlike other change of state verbs, the verbs within this group are atelic because they do not necessarily involve the attainment of an endpoint. Another class of atelic unaccusatives identified by

L&R-H is what they term “atelic verbs of inherently directed motion”. Verbs within this class are *rise* and *fall*. In effect, these verbs pattern with atelic verbs in the common tests:

- (71) a. The soup *cooled* for half an hour L&R-H(1995):172[93a]
 b. The temperature *rose* steadily for three hours L&R-H(1995):173[95a]

To show the unaccusativity of the verbs in (71), L&R-H (1995) use two unergativity diagnostics: the *x's way* test and the *cognate object* test. In effect, the verbs *cool* and *rise* both pattern with unaccusatives in these tests.

- (72) *x's way* test for unergativity
 a. *The soup cooled its way to room temperature L&R-H(1995):173[101a]
 b. *She rose her way to the presidency L&R-H(1995):173[97a]
- (73) *cognate object* test for unergativity
 a. *The soup cooled a quick cooling
 b. *She rose a wobbly rise L&R-H(1995):173[98b]

The mixed results in the diagnostics reviewed above suggest that the unaccusative / unergative distinction in English is far from clear-cut. Nonetheless, if used in combination, the tests may show some consistency. For instance, the telicity tests seem to render quite accurate results despite the exception groups in (71). In (74) I summarize the unaccusativity tests for English that I will be using here.

- (74)
- | | |
|---|------------------------------------|
| a. <i>there</i> -insertion (ie., (60)) | [unaccusatives Y, unergatives NO] |
| b. <i>x's way</i> (ie., (61)) | [unergatives Y, unaccusatives NO] |
| c. resultative test (ie., (64)) | [unaccusatives Y, unergatives NO] |
| d. adjectival participals (ie., (65)) | [unaccusatives Y, unergatives NO] |
| e. time-frame adverbials (ie., (68-69)) | [unaccusatives TF, unergatives TS] |
| f. progressive test (ie., (70)) | [unaccusatives Y., unergatives NO] |
| g. cognate object test (ie., (73)) | [unergatives Y, unaccusatives NO] |

Next I test the unaccusativity of the verb *break*, which, as I show next, is one of the unaccusatives that allows causativization, as predicted by Pylkkänen.

4.2.1. Testing unaccusativity: *break*

Break is one of the unaccusative roots that allow root causativization (75).

- | | |
|-----------------------|--------------------|
| (75) a. NON-CAUSATIVE | b. CAUSATIVE |
| The window broke | I broke the window |

According to the tests described above, the English root *break* is an unaccusative verb.

- | | | |
|--|----------------------------|-----|
| (76) a. <i>there</i> -insertion
* <i>There</i> broke a glass (in the kitchen) | Alexiadou & Schäfer (2009) | NO |
| b. <i>x</i> 's way
*John broke <i>his way</i> to the concert | | NO |
| c. resultative test
The lid broke <i>open</i> | | YES |
| d. adjectival participals
The recently <i>broken</i> car | | YES |
| e. time-frame adverbials
The car broke <i>in one day</i> | | YES |
| f. progressive test
The car is <i>breaking</i> (\neq the car has finished the process of breaking) | | NO |
| g. cognate object test
*The car broke a nice breaking | | NO |

The tests in (76) suggest that *break* is not unergative since it does not pass the *x*'s way (b) or cognate tests (g) nor involves a completion of an end-point when it appears in the progressive (f). Most results suggest that this verb is unaccusative. It passes the resultative test (c), the adjectival participial test (d), and it can be modified by time-frame adverbials (e). It does not pass the *there* insertion test, which is also predicted by L&R-H (1995) as typical of change-of-state verbs in general.

Now we have seen that the unaccusativity tests reviewed do predict, when combined,

the unaccusativity of English verbs quite accurately. Next I discuss the case of *arrive* and *appear* as unaccusative verbs that do not allow zero causativization in English.

4.2.2. Testing unaccusativity: *arrive* and *appear*

In English, verbs such as *arrive* and *appear* are also unaccusative, as they pass the tests for unaccusativity (77).

(77) a. <i>there</i> -insertion	YES
<i>There</i> {arrived/appeared} a rat (in the kitchen)	
b. <i>x</i> 's way	NO
*John {arrived/appeared} <i>his way</i> to the concert	
c. resultative test ⁷⁰	NO
*John {arrived/appeared} <i>happy</i>	
d. adjectival participals	YES
The recently {arrived/appeared} boy	
e. time-frame adverbials	YES
The man {arrived/appeared} <i>in one day</i> / * <i>for one day</i>	
f. progressive test	NO
The boy is {arriving/appearing}	
(≠ the boy has finished the process of x-ing)	
g. cognate object test	NO
The boy {arrived/appeared} a nice {*arrival/*appearance}	

The tests in (77e) and (77f) confirm the telicity of the verbs *arrive* and *appear*, which is typical of unaccusative verbs. In (77e), the two verbs are compatible with the time-frame adverbial *in an hour*, which measures telicity, and incompatible with the time-span adverbial *for an hour*, which is only compatible with atelic predicates. When used in the

⁷⁰ These verbs do not pass the resultative test as the adjective receives a depictive rather than a resultative interpretation, that is, John isn't happy as a result of *arriving* or *appearing*.

progressive (77f), none of the events denoted by these three verbs can be interpreted as on-going actions where instances of the event have already been completed. That is, the sentence *The boy is arriving* does not imply that the boy has already completed an event of arriving, which confirms the telicity of the verbs.

Conversely, the verbs *arrive* and *appear* both fail the unergativity tests in (77). In (77b) the verbs fail to participate in the *x's way* construction typical of unergative verbs. The test in (77g) shows that these verbs pattern with other unaccusatives in that they disallow cognate objects. With respect to other unaccusative diagnostics, the verbs *arrive* and *appear* pass most tests (ie., *there* insertion test (77a) and adjectival participials (77d)). None of these verbs pass the resultative test (77c) since none of these verbs can appear along with a resultative adjectival predicated of the subject *John*, as the resultative is a depictive (ie., it shows the state of *John* before and during the course of the eventuality, rather than as a result of the event). This is not a typical behavior of change-of-state unaccusative verbs (ie., *break* passes this test (76c)), but the overall results of the diagnostics applied in (77) confirm that the verbs *arrive* and *appear* are unaccusative rather than unergative.

4.2.3. Comparing *break* with {*arrive* / *appear*}

The results of the unaccusativity diagnostics applied to *break* (76) and *arrive* and *appear* (77) suggest that all of these verbs are unaccusative. Nonetheless, the tests also suggest differences in their internal structure other than the unaccusative/unergative two-way distinction. For instance, regarding the resultative test (c), only *break* patterns with

unaccusatives (i.e., whereas *break* is compatible with the resultative test (76c), *arrive* and *appear* are not (76c)). Regarding the *there*-insertion test (a), *break* patterns with unergatives, as this verb does not pass this test (76a). The verbs *arrive* and *appear*, however, do pass this test (77a). Of course, the main point of contrast that concerns us here is, as I introduced above, the fact that *break* is compatible with zero causativization whereas *arrive* and *appear* are not. I resume discussion of this issue in the next section.

4.3. Identifying the locative element

One difference between unaccusative change-of-state verbs like *break* and unaccusative verbs such as *arrive* and *appear* is the presupposition of a locative element in their semantics. That is, in both sentences (78), a location is presupposed. This is contrasted with (79), in which no location is presupposed.

- (78) a. The train has arrived (e.g., at the station, to Paris)
- b. The keys have appeared (e.g. on the table, under the bed)
- (79) a. The window broke (no need to presuppose a location)
- b. The door opened (no need to presuppose a location)

The contrast in (78-79) is probably the source of the contrast seen in the unaccusativity tests in the previous section. Whereas *arrive* and *appear* are allowed in contexts of *there* insertion, *break* and *open* are not (80).

- (80) a. There {arrived/appeared} three men (in the room)
- b. *There {broke/opened} three doors (in the house)

Levin & Rappaport-Hovav (1995) treat verbs of existence and appearance (e.g., *appear*) as well as verbs of inherently directed motion (e.g., *arrive*) as basically dyadic

Other authors (ie., Lyons (1969), Hoekstra and Mulder (1990)) also discuss the deictic component in the argument structure of these verbs. While Lyons claims that ‘all existential sentences are at least implicitly locative’ (1967: 390), Hoekstra & Mulder propose a theme participant plus a location as associated with this verb type. McCloskey (2009) identifies such a locative element overtly in existential sentences in Irish. This is the locative *ann* ‘in-it’ which is not restricted to contexts involving the verb ‘be’ (81).

- (81) a. Beidh go leaor bia *ann*
 be(fut) plenty food in-it
 ‘There will be plenty of food’
- b. Fágann sin cuid mhór daoine *ann* nach bhfuil fail acu ar sheirbhísí leighis
 leaves that many people in-it neg c is access at-them on services healing(gen)
 ‘That means that there are many people who have no access to health care’
- McCloskey (2009:6[11a], 8[14a])

Hiaki also exhibits an overt locative element not only associated with existentials, but common with many verbs, both transitive and intransitive. Although much research is still to be done regarding this locative in Hiaki, it is common (and seemingly obligatory) in sentences involving *arrive* (82a) or passives of intransitives (82b), which otherwise would lack a locative PP.

- (82) a. Maria ??(*aman*) yepsa-k
Maria there arrive(sg.subj)-perf
'Maria arrived (there)'
b. ??(*Aman*) yi'i-wa-k
there dance-pass-perf
'There was (people) dancing there'

In languages like English and Spanish, whenever the deictic component is not overtly expressed, it is contextually presupposed (83) and (84). This is shown by the fact that, if used as out-of-the-blue the following sentences in (83) and (84) presuppose either some location or some presupposed information.

(83) *English*

a. *Appear*

A student appeared

b. *Arrive*

{A student / a letter} has arrived

(84) *Spanish*

a. *Appear*

Ha aparecido un estudiante

Has appeared a student

‘A student has appeared’

b. *Arrive*

Ha llegado {un estudiante / una carta}

Has arrived {a student / a letter}

‘{A student / a letter} has arrived’

The sentences in (83-84) all involve an implied location as associated with the meaning of the verbs *appear* (a) and *arrive* (b). In the case of *appear*, the English sentence presupposes a location (e.g., ‘here’) if the sentence is intended as out-of-the-blue or presupposed information (e.g., there was a search for students) otherwise. The same happens in the case of *arrive*. If intended as out-of-the-blue, this sentence presupposes a location (e.g., ‘here’). The Spanish sentences exhibit an interesting word order phenomenon typical of Romance languages. The next subsection expands on this issue.

4.4. Word order and pro-loc in Romance

In Romance languages such as Spanish or Italian, word order facts in out-of-the-blue statements are typically used as unaccusative diagnostics. For instance, whereas unaccusative verbs allow their subjects to appear in postverbal position, this is not possible with unergatives. The sentences in (85) show this.

(85) a. *Unaccusative llegar* ‘arrive’ (out-of-the-blue)

A: ¿Alguna novedad?	B: Ha llegado una carta
Any news?	Has arrived a letter
	‘A letter has arrived’

b. *Unergative gritar* ‘yell’ (out-of-the-blue)

A: ¿Alguna novedad?	B: #Ha gritado un borracho ⁷¹
Any news?	Has yelled a drunk
	‘A drunk has yelled’

Benincà (1988) and Tortora (2001) observe that, in Romance languages, out-of-the-blue statements involving verbs such as *arrivare* (It) and *llegar* (Sp) ‘arrive’ trigger post-verbal subjects. This post-verbal requirement is cancelled with other unaccusative verbs, such as *partire* (It) and *salir* (Sp) ‘leave’ that do not observe such restriction.

(86) *Italian*

A: Cosa è successo? ‘What happened?’

B: a. È arrivata Maria’. a’. ??Maria è arrivata	b. ??È partita Maria	b’. Maria è partita
is arrived M.	is left M.	M. is left
‘Maria arrived’	‘Maria left’	‘Maria left’

Folli et al. (2008:[(1a,a’), (3a, a’)])

The contrast is explained in terms of a deictic locative element, *pro-loc*, that forms part of the internal semantics of verbs containing speaker-oriented deixis such as *arrivare* ‘arrive’. Folli, Harley & Tubino Blanco (2008) further notice that whenever *arrivare* appears with additional verbal material, the subject cannot keep the final position observed in (86).

⁷¹ I mark the sentence with # because this sentence is grammatical if it is not intended as out-of-the-blue.

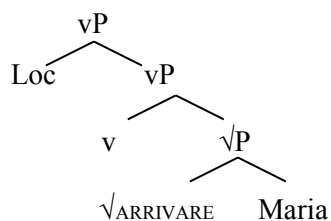
- (86) ??È arrivata Maria {tardi / presto / bene / sana e salva}
 is arrived Maria {late / early / well / healthy and safe}
 'Maria has arrived {late / early / well / healthy and safe}

Folli et al. (2008)

These authors attribute the contrast to prosodic requirements available in Italian. They explain that this language has a canonical SV order (observed in (86b)). For a subject to be postverbal in a broad focus context, (i) a *pro-loc* must be present and (ii) the postverbal subject must bear focal stress. Otherwise, the subject must be preverbal regardless of the presence of a *pro-loc* in the structure (87). I claim that the *pro-loc* argument, present in some unaccusative verbs (such as *arrive*, but not *break*), is also responsible for the restriction observed in both English and Spanish (also presumably in Hiaki) regarding the root causativization of these verbs.

I agree with L&RH's (1995) claim that verbs of appearance (*appear*) and inherently directed motion (*arrive*) select two internal arguments in the sense that both arguments need to be present in structures involving the roots $\sqrt{\text{APPEAR}}$ and $\sqrt{\text{ARRIVE}}$. The *pro-loc* element proposed by Benincà does not appear in the syntax as an external argument (ie., it does not have the semantics typical of external arguments). I suppose this argument is base-generated in a position higher in the structure than the Root. For the structure to work with Pytkäinen's analysis, this would be [spec,vP] (88).

- (88) *Syntax of arrivare 'arrive'*



In (88), the presence of ‘Loc’ blocks lexical causativization of *arrive*.⁷² Because the root $\sqrt{\text{ARRIVARE}}$ is necessarily associated with a ‘loc’ element, this triggers the syntactic merge in the structure of a vP that licenses the locative in its specifier position. We have seen earlier that root causativization is only possible with unaccusative roots, that is, with roots thematically associated to themes only.

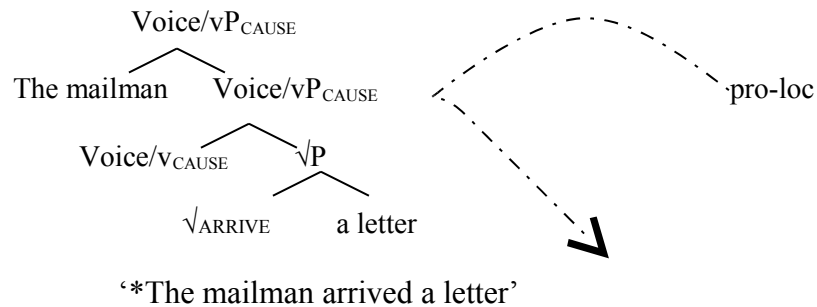
Roots with unergative syntax are excluded from lexical causativization because the structure cannot accommodate syntactic elements thematically associated with the root but that need to be syntactically merged at positions higher than the root. Because unergatives are associated with external arguments and these are base-generated higher than the roots they are associated with, unergatives are excluded from causativization.

The verb *arrive* is unaccusative according to the diagnostics seen earlier. However, it is thematically associated to a pro-loc element that needs to be syntactically licensed above the root. Because the zero causative vP in English and Romance is root-selecting, there is no room left under vP to license the loc element. In this sense, *arrive* is banned from lexical causativization because this verb syntactically behaves like an unergative in the sense that it is thematically linked to a participant (the pro-loc) that,

⁷² It could be argued that the structure in (88) is problematic since *Maria* is the one in the location at the end of the event, and for this to be possible, the loc element should be predicated of *Maria* in a small clause (SC) structure. However, I claim that the structure roots associated with a pro-loc element must be different than roots that select SC complements in which one of them is locative. Were this the case, cases such as *arrive* be compatible with causativization, at least in English, in the same way as other English unergative roots with resultative, goal phrases and other PPs can, e.g., *I danced Mary across the room*. However, *arrive* cannot become causativized regardless of whether it includes a goal PP, e.g., **I arrived Mary to the station*. This suggests that the locative element in inherently directed motion such as *arrive* must be in a position other than that occupied by goal phrases or resultatives of motion unergatives (ie., the predicate of an SC position within the complement of the root) because only the latter verbs allow causativization. As for how the structure explains phenomena such as (87), in which the adverbial *tarde* ‘late’ also appears in the structure, Folli et al. have an explanation for that: the subject, in such cases, cannot stay in sentence-final position because the clause does not meet the second requirement for non-canonical subjects, namely, with the presence of a predicate (ie., *tarde* ‘late’), the subject would no longer bear focal stress.

even though it is not an external argument, it is still base-generated in a position higher than the root. Then, the lexical causativization of *arrive* is impossible because *pro-loc* intervenes between this causative *v* type and its root-complement.⁷³

(89) *Lexical causativization of 'arrive'*

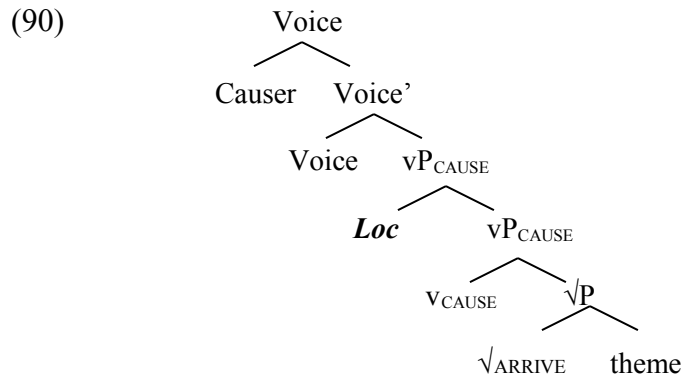


The structure in (89) shows that the lexical causativization of *arrive* is not possible in English because the *pro-loc* element required by *arrive* as part of its argument structure is lacking a syntactic position where it could be licensed. I am proposing here that the locative deictic, as part of the verb’s semantics, as proposed by Benincà, is base-generated within the immediate domain of either roots entailing speaker-oriented deixis semantics, such as *arrivare* ‘arrive’ or the vPs that introduce the event associated with these roots. In the case of (88), the deictic syntactically shows up as a locative head ‘loc’ which is base generated right above the vP that embeds the Root $\sqrt{\text{ARRIVARE}}$.

⁷³ The curvy arrow in the graphic symbolizes the failure of *pro-loc* to be thematically licensed in the structure.

4.5. The deictic component has nothing to do with Voice-bundling

The restriction affects Voice-bundling languages as proposed by Pylkkänen as well as clearly non Voice-bundling languages like Hiaki, which is further evidence that, regardless of the Voice-bundling parameter, unergatives and transitives are banned from root causativization, as suggested in section 3. In Pylkkänen's framework, a non Voice-bundling language should freely allow the causativization of roots associated with a locative component such as *arrive*, since this element could be licensed in [Spec, vP_{CAUSE}], as shown in (90).



This is not borne out in Hiaki since this language, just like English and Spanish, disallows the root causativization of *arrive*.

- (91) *Maria Santos-ta aman yepsa-k
 Maria Santos-acc there arrive(sg.subj)-perf
 ‘Maria is making Santos arrive (there)’

Like in English, the only way *yepsa* ‘arrive(sg.subj)’ may be causativized in Hiaki is via the productive causative *-tua* (92).

- (92) Maria Santos-ta aman yevih-tua-k
 Maria Santos-acc there arrive(sg.subj)-cause-perf
 ‘Maria is making Santos arrive (there)’

The problem these sentences present to an account based on Pylkkänen's Voice-bundling / non Voice-bundling distinction is the fact that a non Voice-bundling language such as Hiaki should freely allow sentences like (91) if we assume that $\sqrt{\text{YEPSA}}$ 'arrive(sg.subj)' is causativized by vP_{CAUSE} that, as seen in (90), may allow the presence of a *pro-loc* argument in its Spec position.

Recall that Hiaki does not allow the Root causativization of unergatives, which is also against Pylkkänen's predictions for non Voice-bundling causatives. It must be the case, then, that root causatives, regardless of whether they are Voice-bundling or not, must select roots with their argument structure already saturated, that is, all arguments associated with the root should be thematically licensed by the time v_{CAUSE} embeds a root. This is why they need to exhibit unaccusative syntax in which the root is associated with a complement rather than an agent. In cases like *arrive* (and also *appear*), despite the fact that these verbs are unaccusatives, they cannot be root causativized because their argument structure will not be saturated by the time the root is embedded by v_{CAUSE} .

Hiaki does allow the root causativization of *machia* 'appear' (93).

- | | |
|--|--|
| (93) a. <i>non-causative</i> | b. <i>causative</i> |
| Mesa-po yeu machia-k ume yaavem | Nee mesa-po yeu machia-k ume yaavem |
| table-loc out appear-perf det(pl) keys | 1sg table-loc out appear-perf det(pl) keys |
| 'The keys appeared on the table' | '(lit.) I appeared the keys on the table' |

In (93b), *machia* 'appear' is clearly root causativized. We know this because there is no morphological indication of the presence of the productive causative *-tua*. This presents a problem for the claim made here that Non Voice-bundling v_{CAUSE} resists the lexical causativization of roots that contain a deictic component. Like *yepsa* 'arrive (sg.subj)',

machia ‘appear’ involves a deictic component. But this deictic component appears in the syntax as the overt preposition *yeu* ‘out’ rather than as a pro-loc element, as it was the case with *yepsa* ‘arrive(sg.subj)’. The locative *mesa-po* ‘table-loc, on the table’, in contrast, is optional.

- (94) Peo au yeu machia-k
 Pete 3sg.refl out appear-perf
 ‘Pete appeared himself (cf., Pete showed himself)’

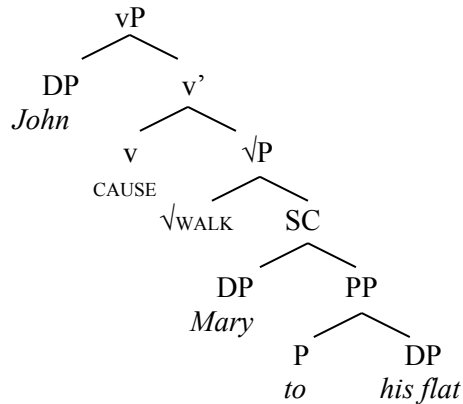
In (94) then no locative phrase is present besides the deictic preposition *yeu* ‘out’. I propose that the root causativization of *machia* ‘appear’ in Hiaki is allowed in the same way as some English constructions with explicit goal arguments can be lexically causativized. In English, the root causativization of unergatives is banned but not if a goal phrase or other prepositional elements are part of the argument structure. The prepositional element / goal phrase is obligatory for the causativization of English unergatives (95).

- (95) a. *I ran Mary
 b. I ran Mary *(to the store)
 c. I ran John *(away)

The causativization of unergatives with prepositional / goal material has been discussed in the literature by linguists such as Levin & Rappaport Hovav (1995), Hoekstra & Mulder (1990) or Folli & Harley (2006). Folli & Harley (2006) specifically address the problem by providing a strictly syntactic explanation of the data. They observe that the only structure type involving unergatives eligible for causativization is the one that includes PP complements of the type shown in (95). In their analysis, the causativized agent and the PP complement appear in the syntax as members of a Small Clause (SC),

following work by Hoekstra (1984). The structure is shown in (96).

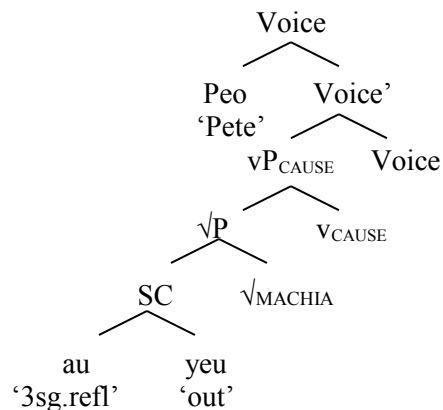
(96) Folli & Harley (2006) analysis of *John walked Mary to his flat*



Adapted from Folli & Harley (2004:29[21b])

Under this analysis, the causativization of the unergative root *walk* is possible because there is no conflicting element syntactically above the root *walk* that prevents v_{CAUSE} from directly taking the root as a complement. With this in mind, it is possible now to understand our Hiaki cases in (93). In these constructions, the root *machia* 'appear' involves a prepositional element, *yeu* 'out'. This element is selected by *machia* within its complement, a SC, along with the internal argument. I show the structure in (97).

(97)



Peo au yeu machia-k
 Pete 3sg.refl out appear-perf
 'Pete made himself appear'

In (97) the root causativization of *machia* ‘appear’ is possible thanks to the prepositional element *yeu*, that is selected by *machia* within its complement. This element licenses the internal argument *au* ‘3refl’ as its subject. Given the contrast with the case of *yepsa* ‘arrive(sg.subj.)’, I will assume, as suggested in fn. 73, that the pro-loc elements associated with roots (e.g. *yepsa* ‘arrive(sg.subj.)’) are base-generated in positions higher than the roots rather than in the complement positions of roots. In the cases of other roots, such as *machia* ‘appear’ and English verbs of movement such as *walk* (96), the roots themselves are not associated to a deictic component, but this is expressed overtly, via e.g., a prepositional element, that is base-generated in the complement position of the roots along with the theme. This explains why *machia* ‘appear’ may be causativized in whereas *yepsa* ‘arrive (sg.subj)’ resists causativization in Hiaki.

4.6. There-construction and locative inversion: a deictic correlative?

L&RH (1995) associate the syntactic behavior of *arrive* and *appear* just discussed with the occurrence of these verbs in *there*-constructions in English as well as locative inversion contexts.

(98) a. *there*

There {appeared/arrived} one girl in disguise

b. *locative inversion*

In Tucson {appeared/arrived} two unidentified individuals

The sentence in (98a) shows a *there*-construction in which both *appear* and *arrive* may participate. The example in (98b) shows the possibility for these verbs to participate in locative inversion. In the literature these two phenomena have been associated with

unaccusative verbs such as *appear* and *arrive* (ie., L&RH (1995) among many others).

In fact, evidence like (98) is compatible with certain unaccusative classes, such as the ones discussed here, but incompatible with other unaccusative classes. Interestingly, an unaccusative class that does not participate in the *there*-construction or locative inversion is the one represented by change-of-state verbs (ie., *break*), precisely the group that typically participates in the causative alternation.

(99) a. *there*

*There {broke/opened} three doors

b. *locative inversion*

*In that house {broke/opened} three doors

The use of the phenomena exhibited in (98-99) as an indication of the deictic semantics of the verbs participating in it is nonetheless controversial. Whereas some authors (L&RH (1995), Kayne (2008), or McCloskey (2009)) treat expletive *there* as associated with a deictic element, there is a vast literature that analyzes this element as a mere syntactic expletive (Chomsky 1999, 2000, among others).

I will not discuss the expletive vs. deictic analysis of *there* here for reasons of space. Nonetheless, I will address some issues related to that topic. One problem with the analysis of *there* as marking a deictic component is its appearance in sentences involving verbs other than those in the *arrive* or *appear* class. For instance L&RH discuss the compatibility of *there*-constructions and locative inversion with certain unergatives.

(100) a. There danced many girls at that party

b. Around them sang many girls

(adapted from L&RH (1995: 256[75a]))

In (100) the unergatives *danced* and *sang* are used in a *there*-construction (100a) and in locative inversion contexts (100b).

L&RH claim that the verbs appearing in these constructions (ie., verbs of existence and appearance) are ‘informationally light’. They claim that these verbs a) do not add any information other than that provided by the postverbal PP, which by setting a scene suggests that something will happen in that scene (1995:231); b) do not have a manner component. They add that agentive subjects appearing in these constructions along with unergatives (ie., *many girls* (100)) are ‘deagentivized’. The ‘deagentivization’ is a consequence of these verbs being ‘informationally light’. They explain that when verbs have these characteristics, they do not need to encode specific information regarding / associated with their external arguments. This explains why we perceive the agents in these constructions as somehow detransitivized. They show that in fact when unergatives occur in the constructions in (100), they necessarily predicate of non-specific / prototypical subjects, but not of specific subjects.

- (101) a. *There sang Mary
b. ??Around them sang Mary

In a sense, unergative verbs participating in these constructions behave like unaccusatives, according to these authors.⁷⁴ I do not entirely assume this explanation for these cases. I believe that some unergative verbs may appear in these constructions because they have some inherent properties that are compatible with this semantic environment.

⁷⁴ Which is precisely the explanation assumed by Folli & Harley (1994) for English motion verbs and the one I adopt for the case case of *yeu machia* ‘out appear’ above.

Nonetheless, some of the insights in L&RH may actually explain the contrast seen in the use of the verbs *show*, *reveal* and *display* as the suppletive causatives of *appear*, as associated with the agentivity of their causers. These verbs are anomalous as suppletive forms of *appear* if used agentively because agentivity loads verbs with an additional informational burden. An ‘informationally light’ verb such as *appear* cannot take a suppletive causative form that is ‘informationally heavy’. It is for this reason, perhaps, that *show*, *reveal* and *display* might work as ‘suppletive’ causatives of *appear* but only in their non-agentive use.

Back to the compatibility of unergatives with the *there*-construction and locative inversion, I suggest that the reason why unergative verbs may appear in these syntactic environments, in fact, because these verbs may encode a deictic component as part of their argument structure. This deictic may be implied, locative or temporal.

- (102) a. Mary danced ??({all night long/ at the party})
 b. John is singing ??({now/tomorrow/at the concert})

In the sentences in (102) a deictic element is implied as part of the argument structure of the verbs, either contextually presupposed or overtly. In this sense, these verbs are intrinsically comparable with other verbs that prototypically appear in the *there*-construction and locative inversion, such as *appear* and *arrive*.

4.7. Potential problems

I just proposed that verbs like *arrive* or *appear* are unaccusatives that disallow root causativization because they contain a deictic component as part of their argument

structure that prevents the roots from being thematically saturated before they can be directly embedded by lexical v_{CAUSE} . In this section I discuss some potential problems that this proposal may encounter.

4.7.1. *Leave* does not behave the same as *arrive*

In this section, I have shown that certain unaccusative verbs such as *arrive* and *appear* do not participate in the alternation in languages such as Romance and English because the syntactic realization of the deictic element associated with the semantics of these verbs interferes with the syntax of lexical Cause in these languages.

The Romance word order facts discussed in section 4.4. provided independent evidence that *arrive* and *appear* are syntactically associated with two participants in their argument structure, a theme, syntactically realized as a complement of the root, and the deictic argument, realized in a position higher than the roots. There is a potential problem, however, related with this analysis, as the word order restrictions shown for Romance do involve a contrast between unaccusative verbs like *partire* ‘leave’ vs. *arrivare* ‘arrive’. The facts are repeated in (103).

(103) *Italian*

- | | | | |
|---------------------|------------------------|----------------------|---------------------|
| a. È arrivata Maria | a'. ??Maria è arrivata | b. ??È partita Maria | b'. Maria è partita |
| is arrived M. | M. is arrived | is left M. | M. is left |
| ‘Maria arrived’ | ‘Maria arrived’ | ‘Maria left’ | ‘Maria left’ |

Folli et al. (2008:[(1a,a'), (3a, a')])

The sentences in (103) show a contrast in the word order associated with *arrivare* ‘arrive’ (103a) and *partire* ‘leave’ (103b). While the theme is preferred in a postverbal position in

(103a), it is preferred in a preverbal position in (103b). Recall that the subject postverbal position associated with verbs such as *arrive* (103a) was argued to be triggered by the presence of a deictic element as part of the argument structure of these verbs that occupies the preverbal position.

I also argued that the preverbal position of the deictic argument explains why verbs containing the deictic component cannot participate in lexical causativization in English and Romance: this argument needs to have been thematically licensed (e.g., by vP) prior to embedding by v_{CAUSE} , but the licensing vP would block this process as Root v_{CAUSE} cannot embed material other than roots. Now verbs like *partire* ‘leave’ do not show the same word order facts as *arrivare* ‘arrive’. Nonetheless, *partire* ‘leave’ also bans lexical causativization.

(104) a. *English*

*The engineer left the train five minutes behind schedule
(cf. the engineer made the train leave five minutes behind schedule)

b. *Spanish*

*El maquinista salió el tren con cinco minutos de retraso
‘The engineer left the train with five minutes of delay (ie., behind schedule)’

In the sentences in (104) the unaccusative verbs *leave* (104a) and *salir* ‘leave’ (104b) cannot be causativized. It could be posited that the verb *leave* does not allow

causativization because its deictic argument interferes between v_{CAUSE} and the root

$\sqrt{\text{LEAVE}}$.

But the facts in (103) are contradictory with those in (104) if preferred word order in Romance does reflect the syntactic position of the deictic argument of *arrive* and *leave*. L&RH point out a contrast in the behavior of verbs of appearance (ie., *appear*) vs. verbs of disappearance (ie., *disappear*) regarding their participation in the

there-construction and locative inversion. While verbs of appearance prototypically participate in both constructions, verbs of disappearance disallow both.

(105) *Verbs of disappearance*

a. *there-construction*

*There disappeared three books from the shelf

b. *Locative construction*

*From the shelf disappeared three books

These authors claim that verbs of disappearance generally share their same characteristics as verbs of appearance, but they are excluded from the constructions in (105) because of the discourse function of the construction. They claim that “an entity whose disappearance is being described is likely to be central to the discourse and not discourse-new” (1995: 231). The same restriction applies to *leave*.

(106) *leave*

a. *there-construction*

*There left three men on the evening train

b. *locative construction*

*On the evening train left three men

The sentences in (106) illustrate the restriction of *leave* from participation in *there*-constructions and locative inversion. *Leave* is a verb that patterns with *disappear* in that both are ‘source’-oriented, in MacDonald’s (2008) terms (ie., the verbs inherently denote the source: one *leaves* or *disappears* from a place). This is contrasted with *appear* or *arrive* in that these verbs are ‘goal’-oriented (ie., the verbs inherently denote the goal/location: one *appears* or *arrives* at/in a place). Verbs like *appear* and *arrive* are goal-oriented and select both a deictic participant and a theme as part of their argument structure, as explained in section 4.4.

Verbs like *disappear* and *leave* are source-oriented and also select both a deictic participant and a theme as part of their argument structure. This explains the identical behavior of these verbs regarding lexical causativization (104). Their contrasted behavior regarding word order in Romance and their participation in *there*-constructions and locative inversion is due to the role of the two arguments selected by *arrive/appear*, on one hand, and *leave/disappear*, on the other hand, regarding discourse orientation.

In this sense, both the word order facts and locative inversion are ultimately dependent on discourse rather than narrow syntax. That is, in both cases, the deictic argument is base generated in an argument position higher than the roots, blocking lexical causativization.

When discourse syntax comes into play, the theme participant associated with the roots *arrive/appear* and *leave/disappear* will take different roles, creating a contrast in the preferred word order of the theme argument with respect to the root. Because the deictic argument is inherent to the semantics of these verbs, the themes selected by them will assume the spatial/temporal position denoted by the deictics. The position denoted by the deictics also has to do with the position of the speaker. The relation between the speaker and the position assumed by the theme is highly relevant to discourse and it will determine the surface position of the arguments as I explain below.

In the case of *arrive/appear*, the theme is allowed to keep its postverbal position because the goal/location inherent to *arrive/appear* (canonically the position of the speaker) is canonically contextualized as old information (topic). When the theme argument assumes the position denoted by the deictic, the theme is canonically

contextualized as new information (focus). Notice how, if the theme is contextualized as old information, the word order facts change.

(107) A. I'm expecting Maria. Any news about that?

B. *Sí, ha llegado María
yes, has arrived Mary
'Yes, Mary arrived' (ie. Mary was expected)

In the case of *disappear/leave*, the opposite scenario holds. The two participants associated with the roots *disappear/leave* are base-generated in the same positions in which the two participants associated with the roots *appear/arrive* are base-generated: the theme argument is selected by the root as a complement whereas the deictic argument is generated in a position higher than the root. However, the scenario associated with the semantics of source deictics (inherent to *leave*) is different than the scenario associated with the semantics of goal deictics (inherent to *arrive*).

In scenarios involving goal deictics, the speaker is canonically assumed to be in the position denoted by the deictic, whereas the theme argument is expected to assume that position. In a sense, the goal deictic is interpreted as 'old information'. In scenarios involving source deictics, the speaker still holds the position of the source deictic, but so does the theme argument. For this reason, this argument is canonically interpreted as 'old information' (topic).

This explains why, in canonical situations, source oriented verbs like *leave* take topic themes, whereas goal oriented verbs like *arrive* take focus themes. The interpretation of (108) illustrates that whenever the speaker does not hold the position denoted by the goal deictic, the word order facts in Romance are altered.

(108) A. Any news?

- | | | |
|------------------------|---------------------|----------------------|
| B. a. María ha llegado | b. Ha llegado María | c. #Ha llegado María |
| Mary has arrived | has arrived Mary | has arrived Mary |
| ‘Mary has arrived’ | | |

b. Presupposition: the speaker is in the place where Mary arrives

c. Presupposition: the speaker is *not* in the place where Mary arrives

The sentences in (108) involve the goal oriented verb *llegar* ‘arrive’. The sentences in (108b-c) exhibit the canonical realization of the theme argument *María* ‘Mary’ in out-of-the-blue contexts. But this is so only if the speaker is assumed to be in the position denoted by the goal deictic associated with *llegar* ‘arrive’, as the anomalous status of (108c) indicates.

This shows that the elements included in the syntax of *arrive* and *leave* do affect word order facts, but the relations created by the deictic relations involved in events of different kind (ie. the speaker orientation with respect to the other deictic elements inherent to the verbs) also affect word order facts, as demonstrated in (107). This contrast cannot happen in the case of *salir* ‘leave’ because, as L&RH or McDonald’s framework propose regarding verbs of disappearance, the theme can never be interpreted as ‘new information’ in these contexts. In other words, it fails to receive broad focus interpretation.⁷⁵

⁷⁵ As Heidi Harley (p.c.) points out, notice that *leave* has a different argument structure in English than, for instance, *salir* ‘leave’ does in Spanish. Whereas *leave* may be used transitively (but non-causatively) in English (eg., *John left the party*), this is never an option in Spanish (eg., **Juan salió la fiesta* ‘John left the party’). A prepositional phrase with *de* ‘from’ is always required in these cases (eg., *Juan salió de la fiesta* ‘John left from the party’). Notice that, in this case, the meaning of the sentence is not that ‘John left the party to not return’ but it is rather that ‘John momentarily left the party but he returned, that is, he just went out’. The correct transitive use of *salir* ‘leave’, in these cases is, rather, with the use of a different root, the transitive root *dejar* ‘leave’, as in *Juan dejó la fiesta* ‘John left the party’. In sum, the Spanish root *salir* ‘leave, go.out’ entirely lacks a transitive use unlike its English counterpart *leave*, which is further indication of the idiosyncrasy of languages in their uses of verbal roots applied to specific contexts.

Whereas the canonical word order associated with goal-oriented verbs such as *llegar* ‘arrive’ is V-S if the deictic inherent within the verb specifies a location that coincides with the speaker’s location, the position of the subject varies if the deictic specifies a location other than the speaker’s. In the case of *leave*, because both theme and the speaker are assumed to hold the position inherently denoted by the verb, the theme is canonically interpreted as a topic, which triggers S-V order in Romance.

Thus, the word order facts in (103a) are evidence that *arrive* generates a goal-deictic as part of its argument structure, blocking lexical causativization, yet the contrast of *arrive* and *leave* in terms of word order in Romance (103) is not a problem for this analysis, because the reasons behind the word order contrasts are discourse-driven rather than purely syntactic.

4.7.2. Japanese

The last section of this chapter describes a second potential problem associated with the analysis of *arrive* and *appear* proposed in this section. In section 4.5., I showed that non Voice-bundling languages such as Hiaki do exhibit the same restrictions as the Voice-bundling languages English or Spanish regarding the root causativization of these unaccusative verbs. This led me to the conclusion that regardless of the voice-bundling properties of the causative head, Root v_{CAUSE} is incompatible with roots that need to license material other than their complement theme. Japanese presents a problem to this proposal, however, as it appears to exhibit lexical causatives of *arrive* and *appear*. The examples are from Volpe (2001).

(109) *appear*a. *non-causative*

Eizoo-ga gamen-ni *araw*-are-ta
 Picture-nom screen-loc appear-intr-past
 ‘A picture appeared on the screen’

b. *causative*

Purogurama-ga gamen-ni eizoo-o *araw*-asi-ta
 Program-nom screen-loc picture-acc appear-trans-past
 ‘lit. The program appeared a picture on the screen’
 Volpe (2001:14[3,4])

(110) *arrive 1*a. *non-causative*

Fune-ga Hakatafuto-ni *tsui*-ta
 Ship-nom Hakata.port-goal arrive-past
 ‘The ship arrived at the Port of Hakata’

b. *causative*

Sencho-ga Hakatafuto-ni fune-o *tsuk*-e-ta
 Captain-nom H.port-goal ship-acc arrive-trans-past
 ‘lit. The captain arrived the ship at the Port of Hakata’
 Volpe (2001:14[7b,8b])

(111) *arrive 2*a. *non-causative*

Bill-ga Tom-ni tegami-o okut-ta ga *todok*-anakat-ta
 B.-nom T.-dat letter-acc send-past but arrive-neg-past
 ‘Bill sent Tom the letter but it didn’t arrive’

b. *causative*

John-ga Maria-ni kozotumi-o *todok*-e-ta
 J.-nom M.-dat packet-acc arrive-trans-past
 ‘lit. John arrived the packet to Maria’

adapted from Yamaguchi (1998)

The sentences in (109-111) exhibit the lexical causativization of *appear* (109) and *arrive* (110-111) in Japanese.⁷⁶ These examples suggest that, for some reason, this language does not observe the restrictions associated with corresponding roots in English, Spanish and Hiaki. In the case of *appear* (109), the example is not clear as to whether this is a case of productive or root causativization. This is so since the morphological marker *–asi* may also appear in productive causativization contexts.

⁷⁶ Volpe glosses the suffix *–asi-* as ‘trans’, which is the traditional gloss these suffixes have received (ie., Jacobsen 1981, 1992) but I gloss the suffix *–asi-* as causative when using Pylkkänen’s examples, since this is the gloss this latter author originally used. As discussed throughout this chapter, it is not clear whether the suffixes that appear in Japanese lexical causatives exhibit causation or transitivity. I will not pursue this issue further here.

Further tests on the Japanese cases would be necessary in order to investigate this case, which I will not do here for reasons of space. Regarding the examples in (110-111), these seem to be clear cases of root causativization, as the suffix *-e* is in fact typical of root causativization contexts.

I do not have an explanation for these cases other than to appeal to the different syntactic composition of roots in different languages. That is, the roots *tsuk-* and *todok-* ‘arrive’, unlike their English, Spanish and Hiaki counterparts, do not involve a deictic argument that needs to be projected in the syntax. An alternative explanation would be that Pylkkänen is after all right about Japanese in that this language allows the root causativization of roots regardless of the kind of arguments associated with them. Since an exhaustive study about the internal structure and behavior of roots in Japanese is beyond the scope of this dissertation, I leave this issue for future research.

4.8. Summary

In this section I have discussed the syntax of unaccusative verbs like *arrive* and *appear* that fail to participate in lexical causativization. This phenomenon needed to be addressed individually as it is a potential challenge to Pylkkänen’s analysis that predicts that the unaccusative group is the only verb group eligible for lexical causativization in languages like Romance and English.

I showed that these verbs cannot participate in root causativization because of the presence of a deictic argument as part of their internal semantics that needs to be projected as part of their syntactic structure. I showed that this additional argument

requires that the root be merged with a verbal element whereby it can be licensed.

Because roots like *arrive* and *appear* always involve the projection of vP in order to license this deictic, v_{CAUSE} can never embed them as bare roots.

I also discussed that this is not exclusive to Voice-bundling languages like English, but it is also the case in Hiaki, whose roots for ‘arrive’ *yepsa* ‘arrive(sg.subj)’ and *yaha* ‘arrive(pl.subj)’ cannot be directly embedded by lexical v_{CAUSE} . This, along with Hiaki’s failure to root-causativize unergatives and transitives, is further evidence against Pylkkänen’s claim that non Voice-bundling v_{CAUSE} may embed all types of roots.

In the last section I showed that Japanese data involving *arrive* and *appear* are problematic for my proposal, as both verbs in this language seem to allow root causativization. I argued that, whereas I do not have a definite response to this problem, as it requires a deeper study on the nature of roots in this language, the counterexamples suggest that i) either my proposal is right and the deictic component in Japanese roots is not projected as an argument or ii) Pylkkänen’s proposal is right, non Voice-bundling languages allow root causativization of any type of verb and Hiaki is an exception to this pattern.

5. Conclusion

In this chapter I have studied the behavior of root causatives under Pylkkänen’s analysis. More particularly, I have looked at whether any kind of unaccusative is eligible for root causativization, as predicted by Pylkkänen’s model.

In the first part of the chapter, I have looked at the behavior of Hiaki regarding

root causativization. I have discussed the existence, in this language, of a construction involving a transitive use of *muuke* ‘die (sg.subj)’ that, like Japanese *sinase* ‘die-cause’ receives an adversity interpretation (ie., sb. died on sb. else).

I have shown that, although clearly transitive neither the semantics nor the morphology of this construction supports a causative analysis of the construction. This is so since Hiaki exhibits transitive morphology that is clearly not causative, as the intransitive-transitive pair *omte* ‘be angry’ *omta* ‘be angry at sb.’ shows, given that the form morphologically marked ‘transitive’ is clearly not causative (ie, it does not mean ‘make sb. angry’).

The similarities between the Japanese and the Hiaki adversity construction, however, suggest that both languages share the same syntactic structure for the construction, which is problematic for Pylkkänen’s claim that Japanese has unaccusative causative constructions. Moreover, data from Tomioka (2004) in which Japanese disallows root causativization of transitives and bi-morphemic unaccusatives challenges Pylkkänen’s claim that the properties of the Japanese causative allows this language to directly causativize any type of root (including transitives and unergatives).

In the second part of this chapter I showed that Pylkkänen’s prediction that any kind of unaccusative may undergo root causativization seems to be challenged by facts from Hiaki, English and Spanish. It was shown that none of these languages allows the lexical causativization of some unaccusative groups, such as verbs like *arrive*, *appear* or *die*. I explained that these data does not necessarily challenge Pylkkänen’s predictions, however. In the case of *die*, its root causativization is not banned. I showed, by using a

DM proposal by (Harley & Noyer (2000)), that whenever this root is causativized, its suppletive form, *kill*, shows as the morphological form for this root.

In the case of *arrive* and *appear*, I explained that the restriction is derived from differences between the internal structure of these roots and the internal structure of other unaccusative roots (ie., change-of-state roots) that allow lexical causativization. More particularly, I proposed that the deictic component that is present as part of the argument structure of these verbs and that needs to be projected in their syntax prevents lexical V_{CAUSE} from directly embedding the verbs as bare roots, which then blocks causativization. In this sense, what seemed to be exceptions to Pylkkänen's model are not.

The potential problem with her model was presented by data from Hiaki, as the root *yepsa* 'arrive(sg.subj)' disallows lexical causativization. This, once again, presented a problem to Pylkkänen's claim against the existence of any restrictions on the lexical causativization of any type of root in non Voice-bundling languages, although I showed that the issue requires further study as Japanese roots for both *arrive* and *appear* freely allow lexical causativization. In the next chapter I discuss the syntax of productive causatives within Pylkkänen's model.

CHAPTER 4

ENGLISH CAUSATIVES WITH *MAKE*: THE ROLE OF AGREEMENT IN CAUSATIVES

1. Introduction

In previous chapters differences in causatives across languages have been seen, almost exclusively, as a consequence of the internal properties of the causative head v_{CAUSE} , as proposed by Pylkkänen (2002, 2008). In Chapter 3, I showed that this is mostly true regarding Root (ie., ‘lexical’) causatives. I showed that, as a matter of fact, Root causative formation is even more restricted than Pylkkänen predicted it was, because Root causatives (ii) may only embed unaccusatives even when v_{CAUSE} is non Voice-bundling, contra Pylkkänen’s predictions, and (ii) are incompatible with some unaccusatives like *arrive*. I explained that these restrictions are, in fact, the consequence of the nature of Root v_{CAUSE} (ie., it cannot embed anything larger than a bare root), but that sometimes factors internal to particular languages other than the nature of v_{CAUSE} play a role in the shape of their causatives (ie., particular languages allow some unergative verbs to adopt unaccusative syntax).

In this chapter, I focus on the structure of English productive causatives with *make*. After identifying their different selectional properties as the main point of contrast between English productive v_{CAUSE} and its lexical counterpart, I focus on two related constructions involving English *make*: a) English causativized passives (eg., *My mom made me be brought back home from Mexico*) and b) English passives of causatives (eg.,

I was made to dance). I show that, although these constructions contain the same core elements (ie., a causative head v_{CAUSE} that either takes a passive complement or is passivized), the agreement requirements of English contribute to the surface contrast between the two constructions (ie., only the passive causative requires a complement headed by *to*).

The chapter is structured as follows: In Section 2, I show that *make* should be considered a phase-selecting causative head in Pylkkänen's terms, but that a term such as “*phase-selecting*” needs further justification; I introduce Chomsky's Phase Theory framework (ie., Chomsky 2000, 2001) that will be relevant in this chapter; in Section 3, I use English causativized passives and VP ellipsis as evidence of the phasal status of English productive v_{CAUSE} ; in Section 4, I examine the syntax of passive causatives in English; I introduce Pesetsky & Torrego's (2001, 2004a,b, 2006) framework using Agree and I argue that the appearance of *to* in these structures is the consequence of agreement relations established within the clause; Section 5 is the conclusion.

2. English productive causatives: *make*

2.1. English v_{CAUSE} has different flavors

Languages tend to exhibit both lexical and productive causatives. Pylkkänen's model contrasts causatives in different languages whereby the major distinction is made in terms of the different material embedded under v_{CAUSE} (as well as whether the causative head appears bundled up with Voice or whether it appears by itself). As discussed in the previous chapters, I do assume the idea that the behavior of v_{CAUSE} in a particular syntactic

configuration is the consequence of its different selectional (and perhaps also Voice-bundling) properties.

A contrast involving different kinds of v_{CAUSE} heads also occurs within languages. This is the basic distinction between (what we traditionally know as) lexical causatives and their productive counterparts. Thus, within one same language, productive causatives are different from their lexical counterparts regarding the nature of the material allowed under v_{CAUSE} . English, of course, is not an exception. For instance, take the contrast between the lexical causativization of English unergatives in (1a) and its productive counterpart in (1b).

(1) *Causativization of English unergative ‘cry’*

- | | |
|----------------------|----------------------|
| a. <i>lexical</i> | b. <i>productive</i> |
| *Heidi Ø [cried Art] | Heidi made [Art cry] |

The grammaticality contrast between the lexical causative of *cry* in (1a) and its productive counterpart in (1b) suggests variation in the properties of the v_{CAUSE} involved in each causative type. Morphologically, the causative head involved in the lexical causative in (1a) has zero realization. In contrast, the English productive causative head in (1b) is overtly realized by *made*. Syntactically, lexical v_{CAUSE} disallows embedded agents, *Art* (1a), as seen in the previous sections. Its productive counterpart allows this argument type to be part of the embedded structure (1b).

Traditionally, productive causatives have been treated as bi-eventive (ie., Shibatani (1973) and subsequent work). Two events form this causative type, the causing event, headed by *make*, and the caused event, headed by the embedded verb *cry* (1b). Embedded

agents of productive causatives (ie., *Art* (1b)) are known as Causees. They are interpreted as agents of the caused event headed by *cry*, but they are affected arguments of the Causing event headed by *made*.

In contrast, lexical causatives have been traditionally treated as mono-eventive (i.e., both the causativizing head v_{CAUSE} and the verbal root participate in one single event). In terms of Pylkkänen, the English lexical causative in (1a) is Root-selecting, as seen in the previous chapters. Recall from Chapter 2 that Pylkkänen terms the type of causative head that embeds something bigger than vP phase-selecting v_{CAUSE} , i.e., VoiceP. Next I discuss what *phase* means within Pylkkänen's framework.

2.2. English *make* is *phase*-selecting

Structures involving *make* not only allow an embedded subject (ie., Causee), but they require it, as the ungrammaticality of (2) indicates.

- (2) *Mary made run
(intended: Mary made sb. run)

I explicitly stated that causatives with *make* require an embedded subject as opposed to an embedded external argument because the embedded Causee doesn't have to be an agent. It may instead be an unaccusative subject, a passive subject, or the subject of a small clause in a state (3).

- (3) a. Unaccusative
The earthquake [made the buildings collapse]

b. Passive
That dress made [her be taken for her sister]

c. State

I made her [be {happy / with you / the person she is today}]

None of the Causees in (3) (ie., *the buildings* (3a), *him* (3b) and *her* (3c)) are agentive external arguments, yet they are licensed as embedded subjects of *make*. Because *make* does embed external arguments (ie., 1a), constructions involving this causative head should be considered *phase*-selecting, according to Pylkkänen's diagnostics. In this section, I review these diagnostics, but first I briefly discuss what 'makes' a phase and what Pylkkänen means by 'phase'.

2.2.1. What is *phase* for Pylkkänen

Pylkkänen (2002, 2008) considers a *phase* a syntactic unit that contains an external argument, since she terms the type of causative head that embeds external arguments Phase-selecting v_{CAUSE} , as opposed to causative heads that disallow external arguments within their embedded domain (ie., root-selecting and verb-selecting causatives). Since she also assumes that VoiceP is the light verb that introduces external arguments in the syntax, I take this to be an indication that this author considers VoiceP to be a phase. The concept of *phase* comes from recent work by Chomsky (2000, 2001, and subsequent work). Next I discuss some of the properties of phases.

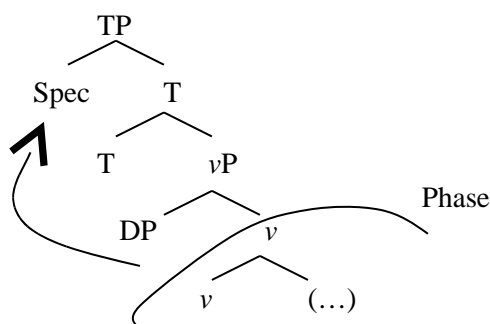
2.2.2. On phases

According to Legate (2003), a phase is 'a self-contained subsection of the (syntactic) derivation, beginning with a numeration and ending with Spell-Out; at the point of Spell-

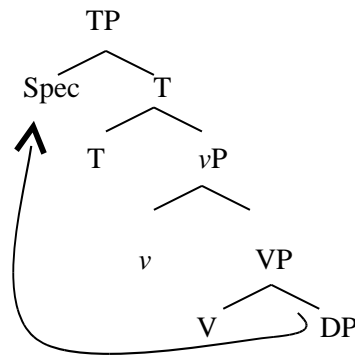
Out, the complement of the phase-defining head is sent to each of the PF and LF components for interpretation (p. 506)'. That is, within a syntactic derivation, a phase is an independent syntactic unit that has fulfilled all that is required for its correct interpretation at the two (ie., interpretive and phonological) components.

In his original (2000, 2001) work, Chomsky hypothesizes that CPs and agentive vPs are phases, but non-agentive (unaccusative and passive) vPs are not. For him, vP is a phase only if it also contains an external argument (ie., transitive and unergative vP). That is, according to Chomsky's framework, only phasal vPs are responsible for the introduction and the thematic licensing of external arguments in its specifier position, as shown in (4).

(4) *Chomsky's vP phase*



In Chomsky's framework, transitive (and unergative) *v* (4) constitutes a phase. The DP it introduces in its specifier position is at the 'edge' of the phase and can be accessed by higher elements, such as T, for EPP reasons as well as feature-checking purposes (e.g., case assignment). Other vP types that lack an external argument (ie., passive and unaccusative vPs) are categorized as *defective* (*v*) and are claimed by Chomsky to not constitute a phase (5).

(5) Chomsky's unaccusative and passive *v*

The only arguments of *defective v* are base generated as complements of V rather than as specifiers of vP. Because defective *v* is not a phase, the complements of vP can still be accessed by T for EPP reasons, as well as agreement purposes.

There is a problem, however, with the identification of the possible complements of *make* with a *phase* under this view. This is so since some structures (ie., unaccusatives and passives) have been long argued to lack an external argument (ie., Burzio (1986)) and, as seen in (3), *make* embeds, besides complements containing external arguments (ie., (1)), complements containing derived subjects that have not been base-generated as external arguments. In the next sections I show that this is not necessarily a problem if we assume that VoiceP, rather than vP, is a phase head.

2.2.3. VoiceP as a phase: introductory ideas

As just seen, because unaccusatives and passives do not contain external arguments, Chomsky (2000, 2001) proposes two different verbal heads, (strong) *v* and defective (weak) *v*. As just discussed, only the former is said to be a phase head.

Legate (2003) argues that, in addition to vPs involving external arguments, unaccusative and passive vPs, too, are phases. She shows a parallel behavior between transitives and passives/unaccusatives regarding reconstruction effects, quantifier raising in antecedent-contained deletion, parasitic gaps, and nuclear stress, which suggests that passives and unaccusatives must involve phases given that, like in transitives, there is evidence of the movement of their arguments to the Phase Edge.

For instance, Merchant (2000) noticed that for negative polarity items (ie., *anyone*) to be licensed in constructions involving antecedent-contained deletion, there must be raising of the DP containing the negative polarity item to a position no higher than negation. This position is identified as the phase edge. Legate notices that the same behavior is exhibited by transitives (6a) and passives / unaccusatives (6b), which suggests that they, too, must be phases (6).^{77,78}

(6) a. *transitive*

Mary didn't [_{VP1} introduce John to [_{DP} anyone you did [_{VP2} e]]]

b. *passive*

Mary wasn't [_{VP1} introduced to [_{DP} anyone you were [_{VP2} e]]]

c. *unaccusative*

The road didn't [_{VP1} go by [_{DP} any of the scenic spots you expected it to [_{VP2} e]]]

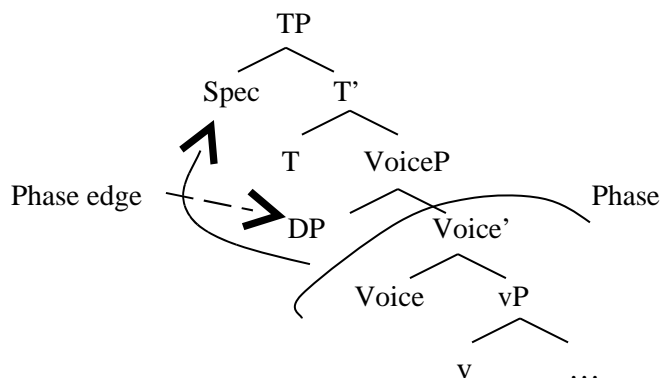
Pylkkänen's framework, as discussed in chapter 2, assumes two types of light verbs as involved in agentive events. For her, VoiceP is the external-argument-introducing functional head and a separate functional vP head introduces events. In

⁷⁷ The notation [e] represents the deletion site (ie., ellipsis).

⁷⁸ I will argue, in section 4, that because they provide a landing site for derived subjects of causatives with passive complements, passive VoiceP are phases, but I will show evidence from ellipsis indicating that they are weak phases that cannot be sent to Spell-Out until the CP phase is complete.

frameworks assuming this idea, vP introduces events only, while it is VoiceP that introduces the external argument (e.g., Embick (1997), Alexiadou et al. (2006), Harley (2007), Alexiadou & Schäfer (2008)). In these models, vP does not typically have an element in its specifier position; VoiceP does. If VoiceP is a phase, the DP introduced in the specifier position of this projection could be said to be at the *edge* of the VoiceP phase, being accessible by higher elements (ie., T) for EPP as well as agreement purposes (7).

(7) VoiceP is a phase



Evidence from both VP ellipsis and passives will be offered in section 3 as support of the proposal that VoiceP is a phase. Theoretically, under this view, Chomsky's distinction between an unaccusative/passive defective *v* and a transitive/unergative *v* is dependent on the nature (or, perhaps, also the presence) of VoiceP, based on the kind of elements it can introduce (eg., agentive VoiceP vs non-agentive VoiceP).⁷⁹

Under this view, structures with no external argument (ie., unaccusatives and passives) are no longer explained by postulating a defective *v*. In here, different types of

⁷⁹ See, for instance, Alexiadou et. al (2005) for proposals positing different kinds of VoiceP.

v denote different event types (ie., Harley (1995), Folli & Harley (2004)), and whether a v introduces an external argument or not is not sufficient to identify the kind of event denoted by a vP (eg., v_{CAUSE} and v_{DO} both introduce external arguments, but just the former is causative). Here, the strong v / weak v phase distinction in (Chomsky 2000, 2001) is understood in terms of either (i) the presence versus the absence of VoiceP (in views that assume that the absence of the external argument is linked with the presence of VoiceP, ie., Pylkkänen 2002, 2008) or (ii) the type of VoiceP involved in different structures (ie., Alexiadou et al. (2005)). I will take this latter view, as I will assume (with Collins (2005)) that at least passives, for instance, do contain VoiceP.

So although *make* selects complements with derived subjects that are not base-generated as external arguments, I will assume that (i) the complement of *make* always contains VoiceP although VoiceP does not always introduce an external argument. Besides introducing an external argument, VoiceP may also (i) not project an argument-introducing specifier position (unaccusatives) or (ii) contain a null element in its specifier position (ie., passives). Since VoiceP will be assumed to be a phase, it will still project an element at its edge.

In order to explain the case of passives and unaccusatives, I will use work by Pesetsky & Torrego (2001, and subsequent work) to argue that Voice^o has an uninterpretable Tense (uT) feature that is valued by some instance of interpretable Tense (iT). As a phase head, Voice^o also carries an EPP feature. The EPP feature on Voice^o has the consequence that its specifier position is *always* filled, either by an external argument or, in the absence of an external argument, by a theme that is attracted to this position

from a lower projection. I will propose that the uT in Voice° is valued, by default, by the iT on matrix T , so the Voice phase does not become saturated until it is merged with T° . The relation between Voice and T in terms of feature valuation has a morphological impact in English that becomes particularly obvious in the interaction between causation and passivization. This Agree system will be discussed in section 4.

The status of VoiceP as a phase will be discussed in section 3. For now, let us remember that, for Pylkkänen (2002, 2008), a *phase-selecting* causative is a type of v_{CAUSE} that embeds syntactic material containing external arguments and, consequently, VoiceP. Next I show that English *make* meets her diagnostics for *phase-selecting* causatives.

2.3. Diagnostics

English causatives with *make* meet the Phase-selecting diagnostics set by Pylkkänen (8).

(8) Pylkkänen's diagnostics for Phase-selecting causatives

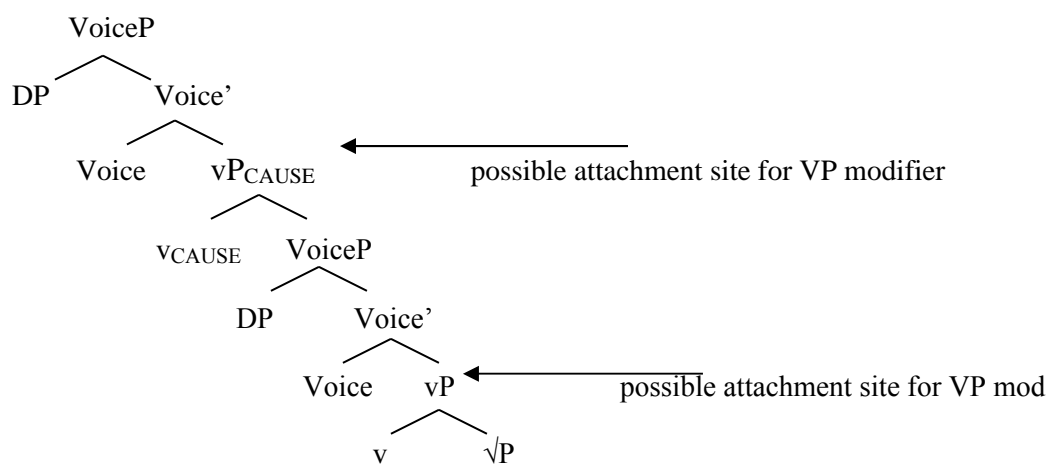
- a. VP modification of caused event is possible
- b. Verbal morphology is possible between the Root and v_{CAUSE}
- c. Agent oriented modification of caused event is possible
- d. High applicative morphology is possible between the Root and v_{CAUSE}
- e. Causatives based on unergatives and transitives are possible

A sixth property is included within the Phase-selecting category. It has to do with the ability of this v_{CAUSE} type to form unaccusative causatives. These are only possible if the causative head is also non-Voice-bundling (ie. Japanese). I will discuss these diagnostics one at a time.

2.3.1. Internal VP modification

Internal VP modification is allowed in Phase-selecting causatives. This is so since their bi-clausal structure makes available two possible attachment sites for a VP modifier, as (9) shows.

(9) VP modifier attachment sites



Adapted from Pytkäinen (2008:102[46])

The structure in (9) represents the syntax of Phase-selecting **v_{CAUSE}**. Since the structure embedded by **v_{CAUSE}** contains a second **vP**, two attachment sites are available for VP modifiers. English causatives with *make* conform to this pattern. This is shown by the fact that the adverbial *in his room* causes an ambiguous interpretation in the following sentence.

- (10) I made John cry in his room
 a. John and I were in his room and I made him cry (high attachment)
 b. I made John cry and he did it in his room (low attachment)

The ambiguity of (10) suggests the existence of two attachment sites in the syntax of the English productive causative. The interpretation in (10a) suggests that the adverbial *in*

his room takes scope over the event introduced by the causative head v_{CAUSE} . The interpretation in (10b), in contrast, suggests that the adverbial does not take scope over the causing event, but it is base generated within the caused event, attached to the lower vP. Productive causatives with *make* in English consist then of at least two vPs.

2.3.2. Verbal morphology between the root and v_{CAUSE}

A second test to show the bi-eventive nature of causatives is the presence of morphology intervening between the matrix and the embedded vPs. In English, it is possible to find intervening verbal material between the causing and the caused event, although this is perhaps limited to the passive *be* (8a). We know, however, that *make* embeds structures containing vPs because when the root is elided, the auxiliary *do* appears instead (11b).

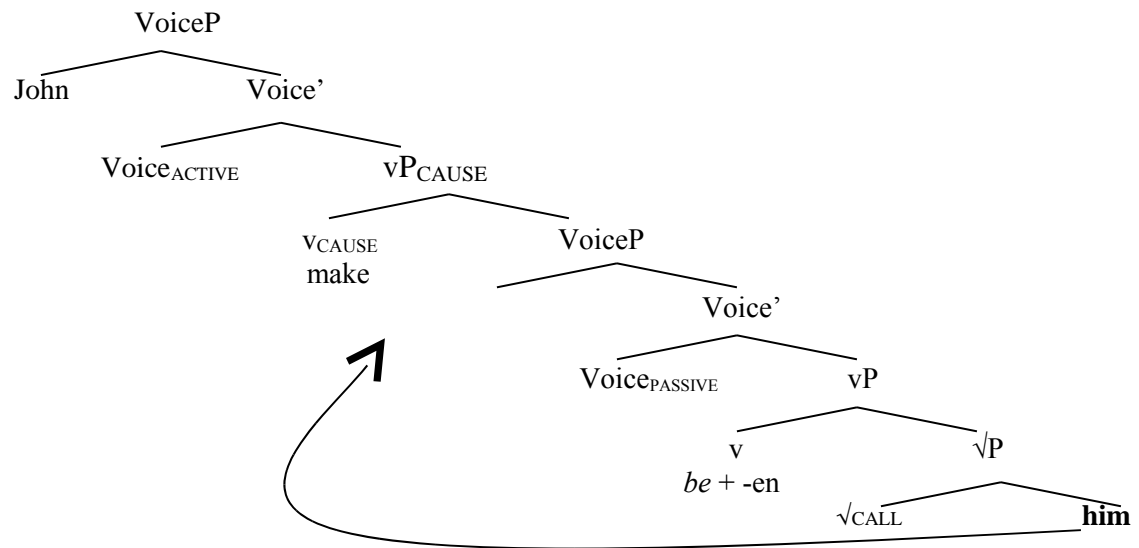
(11) a. *Passive*

John made him *be* called back

b. *Do*

I went to the party because you made me *do* so! (ie., go to the party)

The sentences in (11) show that the causative *make* allows non-root verbal material in its embedded domain. The example in (11a), for instance, shows that a passivized root is allowed as the complement of *make*. For this to be possible, a structure containing both a vP and VoiceP is necessary in the embedded domain. This is so since a non-active Voice is necessary in passive environments.

(12) *Passives embedded by v_{CAUSE}* (Interim analysis)

The diagram in (12) shows that passives within productive causatives are not only evidence that *make* embeds a verbalized root. They are also proof that the structure embedded by *make* contains VoiceP, whose passive nature is responsible for the absence of an external argument in its specifier position. I will revise this analysis when discussing passives of causatives in section 3.

For now, it suffices to say that the fact that *make* embeds passive sentences shows that the structure embedded by this causative head must contain both VoiceP and vP, making it Phase-selecting in Pylkkänen's terms.

2.3.3. Agentive modification is possible under *make*

This third diagnostic contributes further evidence on the presence of VoiceP under *make*.

Pylkkänen shows that agentive modification is only possible in Phase-selecting

causatives, but not in verb-selecting causatives. She shows that languages exhibiting verb-selecting causatives allow ambiguous interpretations only with verbal modification, but not with agentive modification. Phase-selecting causatives, in contrast, do allow agent-oriented verbal modifiers. For instance, Pylkkänen shows evidence from Bemba (verb-selecting) causatives to show that this causative type does allow verbal modification as long as it is non agent-oriented.

(13) *Bemba verb-selecting causatives*

- | | |
|--|--|
| <p>a. <i>Verbal modification (non-agentive)</i>
 Naa-butwiish-ya Mwape ulubilo
 1sg.past-run-cause Mwape fast
 i. ‘I made Mwape run quickly’
 ii. *I quickly made Mwape run’</p> | <p>b. <i>Verbal modification (agentive)</i>
 Naa-butwiish-ya umuana ukwiitemenwa
 1sg.past-run-cause boy willingly
 i. *I made the boy run willingly
 ii. I willingly made the boy run</p> |
|--|--|
- Pylkkänen (2008: 115[78, 80])

The sentence in (13a) shows how a non-agentive verbal modifier *ulubilo* ‘fast’ can modify the caused event (ie., ‘run quickly’)⁸⁰. The sentence in (13b) is presented as evidence that the Bemba causative is verb-selecting but not phase-selecting (ie., it does not contain an external argument in its embedded domain), as the agent-oriented verbal modifier *ukwiitemenwa* ‘willingly’ cannot take scope over the caused event to the exclusion of the causing event.

The English productive causative *make* is a phase-selecting head. This is shown in (14) where the agent-oriented modifier *on purpose* allows ambiguous scope.

(14) *Verbal modification (agentive)*

- I made John cry on purpose
- a. I, on purpose, made John cry (high attachment)
 - b. I made him [cry on purpose] (low attachment)

⁸⁰ It is not clear, however, why it is not possible for this verbal modifier to trigger ambiguous scope (ie., to also modify the causing event). Pylkkänen does not address this restriction.

Once again, the presence of an external argument as part of the structure embedded by *make* has been proven.

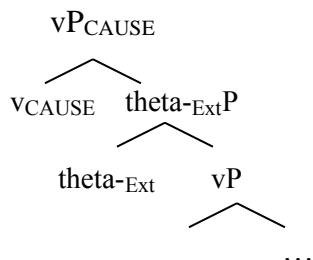
2.3.4. High applicative morphology is allowed between v_{CAUSE} and the root

This is a further property of phase-selecting causatives as proposed by Pylkkänen. Some languages (ie., Luganda) allow overt applicative heads to intervene between v_{CAUSE} and the root.

(15) *Luganda phase-selecting causatives* (from Pylkkänen (2008: 118 [89d-f, 91])

	a. Root	b. Stative/Applicative	c. v_{CAUSE}	d. Stative/App + v_{CAUSE}
i. Stative -i(k)	-laba- 'see'	-lab-ik-a see-stat-a 'be visible, appear'	---	-lab- <i>i</i> -s-a- see-stat-cause-a 'make visible'
ii. Applicative -i(r)	-tambula- 'walk'	-tambul-ir-a- walk-appl-a 'walk for'	-tambu-za- walk-cause 'make walk'	-tambul- <i>i</i> -z-a- walk-appl-cause-a 'make walk for'

The examples in (15) show how v_{CAUSE} in Luganda necessarily embeds a structure that not only contains a second vP, as it embeds a root that already contains stative morphology (15d, i). This causativizing head also embeds an external argument (Voice). According to Pylkkänen, applicatives that appear with unergative roots (ie., *tambula* 'walk') are high applicatives. Since high applicatives (-i- in (15d, ii)) are only possible if external arguments are present, v_{CAUSE} in Luganda must be a Phase-selecting type. The structure of this type of v_{CAUSE} is shown in (16).

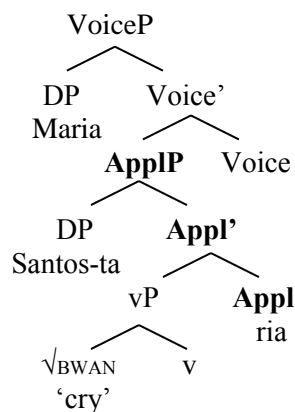
(16) *Phase selecting* v_{CAUSE} 

Pylkkänen (2008: 105[53b])

In (16) the complement of v_{CAUSE} contains the phrase theta-ExtP that licenses an embedded external argument. I assume the terminology theta-ExtP is the equivalent of VoiceP. High applicatives are a good diagnostic for the existence of Voice, as they appear between Voice and vP , as in (17).

(17) *High applicatives**Hiaki*

Maria Santos-ta bwan-ria
 Maria Santos-acc cry-appl
 ‘Maria is crying for Santos’



The diagram in (17) illustrates the syntactic position of the high applicative in Hiaki, by using the structure proposed in Pylkkänen (2002, 2008). As the structure shows, the high applicative has scope over the whole event introduced by vP , by occupying a syntactic position higher than vP . The argument position of the external argument, *Maria*, with respect to the applied argument *Santos-ta* ‘Santos’, shows that the projection that introduces the external argument, VoiceP, is hierarchically higher than the applicative

phrase, ApplP.

Back to causatives, only the Phase selecting type allows high applicatives, because they need to be embedded by an external argument, so the presence of applicative morphology under v_{CAUSE} is evidence that this causative head allows VoiceP in its embedded domain. Unfortunately, English just exhibits a low applicative (ie., *John made him dinner*) so this diagnostic cannot be tested in this language.⁸¹

2.3.5. Causatives of unergatives and transitives are possible

Because phase-selecting causatives contain an external argument, unergative and transitive roots are allowed under v_{CAUSE} of this type. English *make* passes this test, as it allows both unergatives and transitives as complements (18). This is contrasted with their lexical counterparts (19).

(18) *Phase (productive) causatives*

- | | |
|----------------------|---------------------------|
| a. <i>unergative</i> | b. <i>transitive</i> |
| I made John cry | I made Mary eat chocolate |

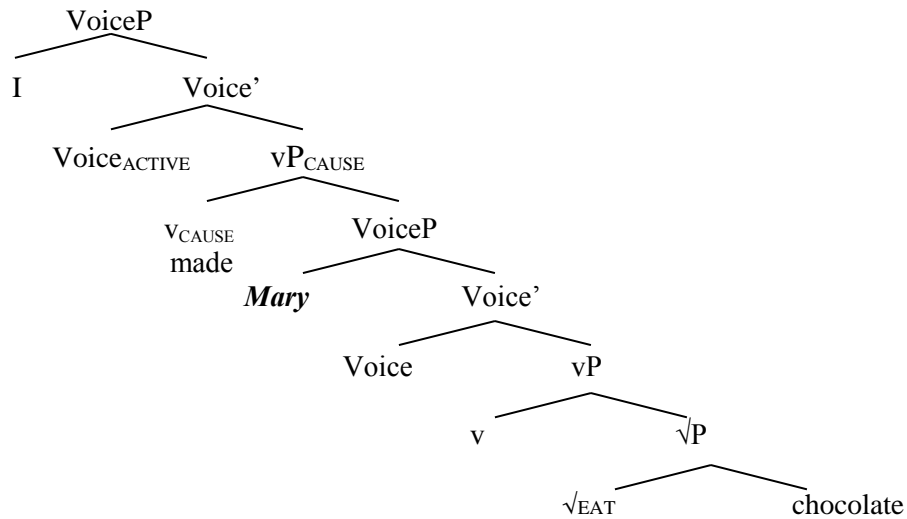
(19) *Root (lexical) causatives*

- | | |
|----------------------|--|
| a. <i>unergative</i> | b. <i>transitive</i> |
| *I cried John | *I ate Mary chocolate (ie., I made Mary eat chocolate) |

Recall that both unergatives and transitives require an external argument associated with them. The contrast between (18) and (19) is explained if we assume that this causative head embeds the external-argument-introducing head Voice (20).

⁸¹ See Pyllkkänen (2002, 2008) for detailed discussion on the syntax of English applicatives.

(20) *transitives under ‘make’*



Because VoiceP is present under *make*, the external argument associated with the embedded event *Mary* can be syntactically licensed. The fact that the sentences in (18) are grammatical is an indication that *make* is a phase-selecting causative.

This is contrasted with ‘lexical’ causatives (19) that are Root-selecting (as discussed in chapter 3). Because of this, they do not contain external arguments under v_{CAUSE} and consequently disallow unergatives and transitives in their embedded domain.

2.3.6. Unaccusative causatives

Pylkkänen argues that languages/structures that form unaccusative causatives are indication of a non-voice-bundling v_{CAUSE} type (as seen in chapters 2 and 3). For instance, the Finnish lexical causative *-tta* is of this type. It can form sentences like (21) containing the causative head in the absence of an external argument.

- (21) Maija-a laula-tta-a
 Maija-part sing-cause-3sg
 ‘Maija feels like singing’
 Pylkkänen (2008: 95[32a])

Because the external argument is missing in (21), the structure receives a desiderative interpretation (ie., ‘something causes on Maija the desire to sing’).⁸² Pylkkänen claims that structures such as (21) are possible thanks to the split between the head that introduces a causative event, v_{CAUSE} , and the functional head that introduces external arguments, Voice. According to her, sentences such as (21) illustrate a configuration whereby v_{CAUSE} is present in the absence of Voice.

It is not clear whether English *make* is Voice-bundling or not. It is clear that English disallows sentences with *make* that do not involve an external argument. The ungrammaticality of (22) shows this, since the interpretation of the following sentences always requires that *make* takes an external argument (either agentive or non-agentive).⁸³

- (22) *unaccusative ‘make’*
 a. *It made Mary dance
 b. *Mary made (to) dance (ie., Mary was caused to dance)
 (intended ‘eg. something unknown made Mary dance’)

The sentences in (22) are ungrammatical if *it* is intended as an expletive. It looks like English *make* requires the obligatory presence of a referential causer argument. That is, English causatives in general are not unaccusative. This makes English v_{CAUSE} a Voice-

⁸² For further discussion on this issue, see chapters 2 and 6.

⁸³ I use an expletive (ie., *it*) in (22a) because English would require it in the context of an external-argument-less verb (ie., *It rained yesterday*). In other languages such as Spanish, the presence of an overt expletive is not required in external-argument-less structures (ie., *Llovió ayer* ‘lit. rained(3sg) yesterday, it rained yesterday’. We will see in chapter 6 that unaccusative causatives are possible with Spanish *hacer* ‘make’ and this type does not require an expletive (ie., *Me hace cantar* ‘1sg(dat) make(3sg) sing, I feel like singing’. See chapter 6 for further details on this construction.

bundling type, in general, in Pylkkänen's terms. I will, however, ignore this distinction as it is not relevant during the remaining of the chapter.

The main contrast exhibited between the different causative heads (ie., the lexical (root-selecting) v_{CAUSE} discussed in chapter 3 vs. the productive (phase-selecting) v_{CAUSE} discussed in this chapter) is based on their differing selectional properties. For this reason, this chapter will solely concentrate on this aspect of the syntax of *make*.

2.4. Summary

The subsections above discuss the properties of English productive causative *make* in terms of Pylkkänen's predictions. The diagnostics applied to this head show that this causative head:

- a) Allows ambiguous scope for verbal modification
- b) Allows verbal auxiliaries between *make* and the root
- c) Allows ambiguous scope for agent-oriented verbal modification
- d) Allows both unergatives and transitives in its embedded domain
- e) Does not form unaccusative causatives

This behavior suggests that *make* is Phase selecting (and Voice-bundling), according to Pylkkänen's classification. Because this causative head embeds a structure that allows an external argument, introduced by an embedded VoiceP, Pylkkänen (2002, 2008) associates VoiceP with the presence of external arguments in the structure. In the next section I discuss cases that suggest that, if *make* is phase-selecting because it contains VoiceP, then VoiceP must also be present with non-external arguments.

3. VoiceP is a phase

In the previous section I have argued that *make* selects structures containing VoiceP, which makes it a phase-selecting causative head under Pylkkänen's classification. This conclusion automatically makes the assumption that VoiceP is a phase. In this section I show arguments from passives and VP ellipsis in support of this hypothesis.

3.1. Passives contain VoiceP

In this section I argue that passives do contain VoiceP, and hence constitute a phase.⁸⁴ Some languages, such as Hiaki, exhibit overt passive morphology in addition to verbal (eg, transitivity) morphology (24).

(23) *Hiaki transitivity suffix –ta plus passive suffix –wa*

U kari vee-ta-wa-k
 det house burn-trans-pass-perf
 'The house was burned'

Jelinek (1997: 182[10])

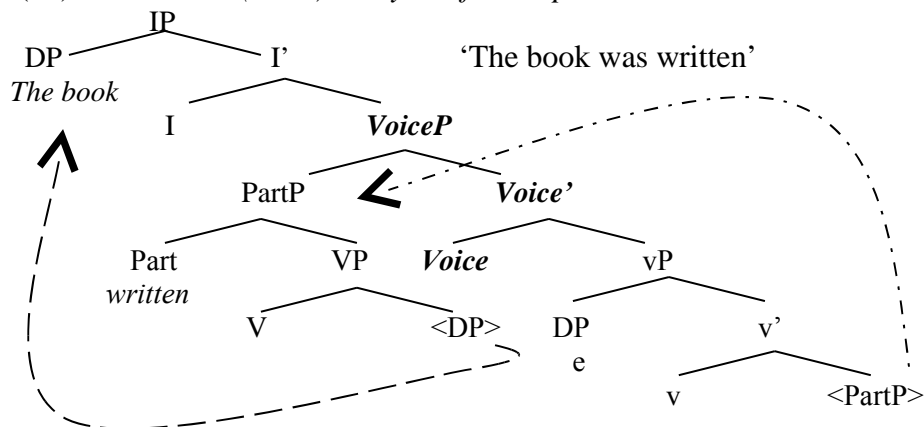
The co-occurrence of both a verbalizing suffix (*-ta*) with a passive suffix (*-wa*) is morphological evidence for the existence of a VoiceP projection, different than vP, in passive constructions.

Collins (2005) also notices this pattern in Kishwahili, and reaches similar conclusions. He proposes a structure whereby the English passive contains a VoiceP projection, to which all the passive-related elements are raised (with the exception of auxiliary *be*). I show Collins's analysis for both 'short passives' (ie., passives lacking a

⁸⁴ In section 4 I will provide further support for this claim with evidence from passive complements of *make*.

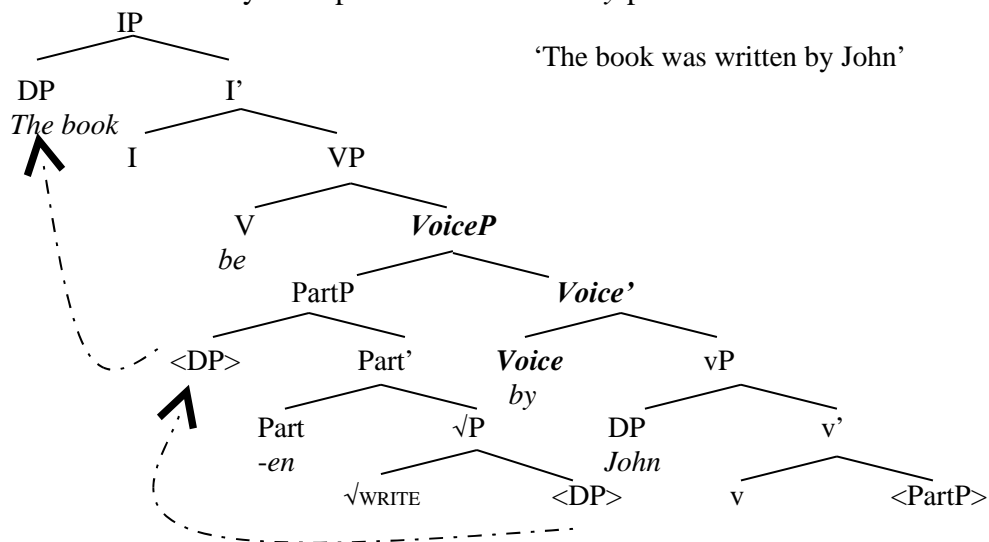
by phrase) and ‘long passives’ (ie., passives containing a *by* phrase) in (24).

(24) a. Collins’s (2005) analysis of short passives



Collins (2005:102[46])

b. Collins’s analysis of passives with overt *by* phrase



The structures in (24) show the existence of VoiceP in passives, as proposed by Collins.

The VoiceP projection is responsible for the passive interpretation of the sentence, as well as for the landing site of passive-related elements in its specifier position. We saw in (23) that morphological evidence in numerous languages supports both the existence and

The motivation in Collins for the movement of the whole PartP to [Spec, VoiceP] in (24a) comes from word order facts. He proposes that this analysis prevents the *by* phrase from intervening between the auxiliary *be* and the past participle, as in (25).

- (25) *The book was by John written
Collins (2005: 85[9a])

Collins argues that sentences such as (25) are impossible if PartP is raised to [Spec, VoiceP]. A priori, however, this argument is unsatisfactory. This is so since, as Heidi Harley (p.c.) points out, in the case of sentences containing a VP adverbial such as *The book was quickly written* or *Books were often written*, these adverbials would need to be posited as contained within PartP in order to account for the fact that they precede (rather than follow) the participle, because the participle, according to Collins, has been raised to [Spec, VoiceP]. The problem is that there is no real motivation to posit this low structural position for these adverbials (particularly *often*).⁸⁵

In the analysis he proposes for passives with an overt *by* phrase (24b), *by* occupies the Voice^o position, whereas the DP that goes with it occupies the specifier position of the vP embedded by Voice, as in (26). This cannot be the case, however, because this

⁸⁵ The word order of passive complements of *make* provide further arguments against the raising of PartP to [Spec, VoiceP]. I will discuss these constructions in section 4.

analysis proposes that the *by* phrase is not analyzed as a constituent (ie., *by* and its DP form part of different projections). If the preposition *by* and its complement do not form a constituent, then the structure proposed by Collins would allow modifiers of vP to intervene between Voice *by* and the vP it embeds. But this is contrary to fact (26).

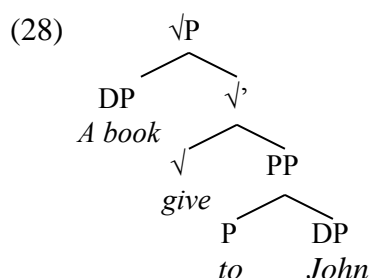
(26) *The book was read by quickly Mary

Finally, in structures containing negativity polarity items, a *by* phrase needs to precede a goal phrase, as also discussed by Collins himself.

- (27) a. *The book was given to any student by no professor
b. The book was given by no professor to any student

Collins (2005: 86[10a, 10c])

The problem with the sentences above is that there seems to be no position in (24b) in which the goal phrase *to any student* would be merged that derives the word order facts in (27). That is, the standard analysis for goal phrases (Larson (1988)) is the following:



The structure in (28) shows that goal phrases are base generated within a goal PP, as complements of the root, along with the theme DP. In (24b), the goal phrase would have need to be moved to [Spec, VoiceP], as part of the PartP. This contradicts the word order facts in (27): the goal phrase necessarily follows the *by* phrase. The negative polarity relations in English cannot be covert (ie., created before movement occurs). Otherwise either sentence in (27) would be grammatical, contrary to fact.

In sum, an analysis in which the PartP stays in situ more conveniently accounts for the facts above. Consequently, I will not assume all the details in Collins's analysis. I will assume, as stated above, that passive (as well as active) sentences involve the presence of a (passive) VoiceP projection. Next I will show arguments based on VP ellipsis data that suggests that (i) VoiceP is present as a functional projection in *all* sentences (passive and active), and (ii) VoiceP is a *phase*.

3.2. VoiceP is contained in active sentences: evidence from ellipsis

Baltin (2007), Merchant (2007) and Aelbrecht (2010) offer evidence from VP ellipsis in favor of the arguments that VoiceP is also present in active sentences, and that VoiceP is a phase. Merchant (2007) shows that VoiceP exists in active as well as passive sentences. He notices the following elliptical situations:

(29) VP ellipsis

- a. The janitor must remove the trash whenever it is apparent that it should be [removed].
- b. The system can be used by anyone who wants to [use it].

Merchant (2007: 3[1a, 2a])

In the sentences in (29) passive elided material (ie, [removed], (30a)) may have an active antecedent (ie., *must remove*) and vice versa, active elided material (ie., [use it], (29b)) may have passive antecedents (ie, *can be used*). Merchant shows that the voice mismatches in (29) are possible only in structures in which VoiceP is not included in the target of ellipsis. In other structures in which VoiceP is targeted too (pseudogapping (30a), sluicing (30b)), voice mismatches are not allowed.

(30) a. *Paul denied the charge, but the charge wasn't by his friends

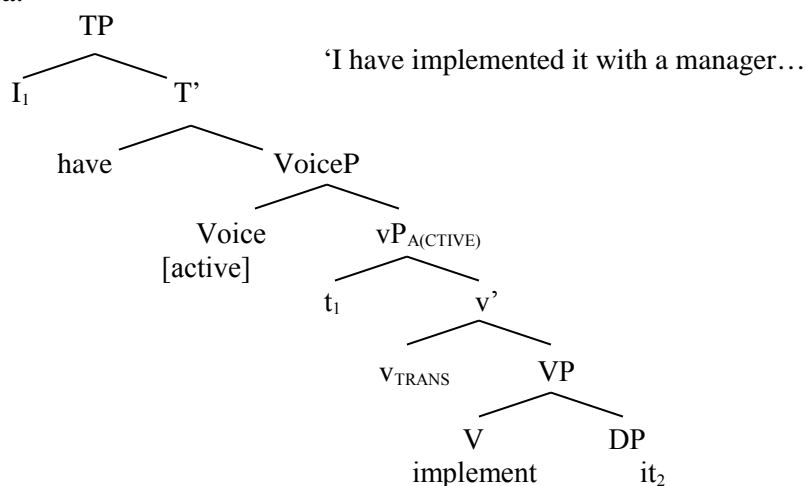
Sag (1976), as cited in Merchant (2007:4[3])

b. *Joe was murdered, but we don't know who

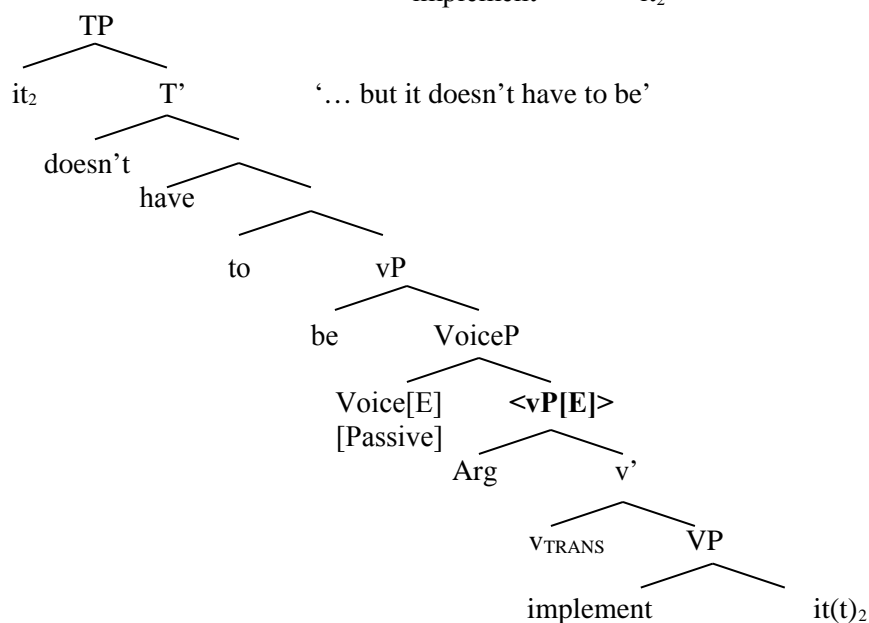
Merchant (2007:5[5a])

The diagram in (31) shows Merchant's analysis of a sentence exhibiting a voice mismatch in VP ellipsis.⁸⁶

(31) a.



b.



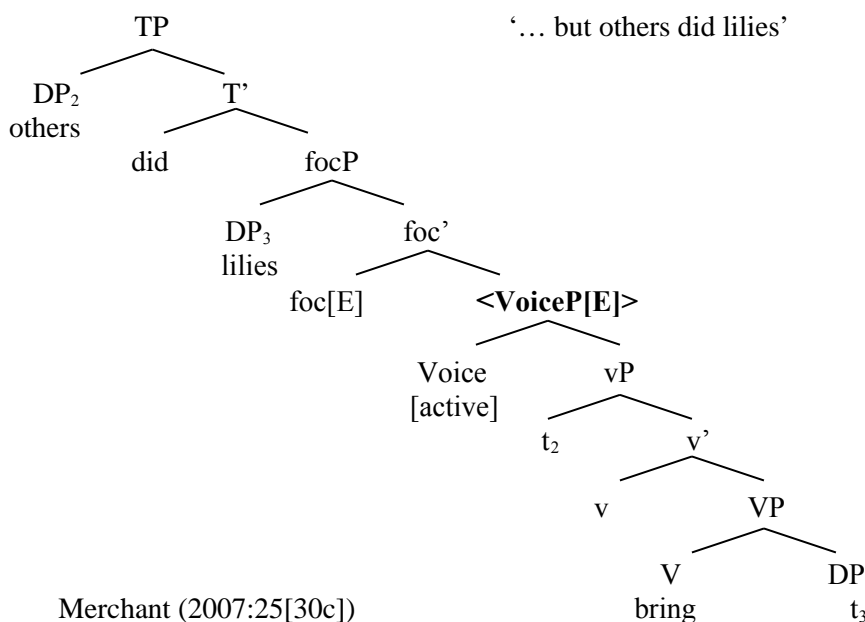
Merchant (2007:17-18[22])

⁸⁶ [E] is the notation used in Merchant (2007) for 'ellipsis'

Both clauses in (31) contain VoiceP. In (31a) Voice° is [active], and in (31b) Voice° is [passive]. In (31b), everything under Voice° appears elided (<vP[E]>). This is, according to Merchant, what explains mismatches in VP ellipsis: because Voice° hasn't been targeted by ellipsis, voice mismatches are possible.

Merchant explains the contrast in (30) in these same terms. For him, there is a crucial difference between cases of VP ellipsis (31) and other cases of ellipsis (e.g., pseudogapping and sluicing). In the latter cases, voice mismatches are not possible precisely because ellipsis targets VoiceP. I show the structure in (32).

(32) *Roses were brought by some but others did lilies



Because VoiceP is elided in pseudogapping, voice mismatches are not allowed in this type of ellipsis, despite the presence of the passive auxiliary. This is, as the diagram indicates, due to the fact that mismatches are allowed only when VoiceP (and the syntactic/semantic features it involves) are structurally present. The contrast between

cases of VP ellipsis and pseudogapping / sluicing supports an analysis in which VoiceP is involved in the structure of passive (as well as active) sentences.

Baltin (2007) and Aelbrecht (2010) further claim that VoiceP is in fact a phase.

Baltin makes a parallel between C and T, on the one hand, and Voice and v, on the other hand. For him, C is the clause peripheral phase that selects different kinds of T depending on its nature (ie., *that* C selects a finite T whereas *for* C selects non-finite T, p. 22).

Conversely, Voice is the clause internal phase and may select different kinds of v heads depending on its nature: active Voice selects *do* (v) whereas unspecified Voice selects a *null* v (p. 22). This reasoning is consistent with an analysis in which passive Voice selects *be* as its v head.⁸⁷ This parallel can be further seen in that both TP and vP are structural case licensers (nominative and accusative respectively) whereas CP and VoiceP are not. Furthermore, VoiceP (like CP) carries EPP features that attract DPs to its edge.⁸⁸

Aelbrecht (2010) uses evidence from English VP ellipsis to argue that VoiceP is a phase and that English nominals (e.g., derived subjects), too, are attracted by Voice^o to its specifier position, probably because of an EPP feature on this head. According to him, these nominals are ‘all constituents that still need to undergo syntactic operations (p. 176)’. In this sense then, Voice^o, like interrogative C^o, has an EPP feature.

He assumes that English VP ellipsis is only allowed by a T head that contains some auxiliary, modal (or is realized by *to*). He shows that ellipsis happens whenever the

⁸⁷ Notice that this cannot be captured in analyses of passives like Collins’s (also Merchant), in which *be* appears in a position outside of Voice.

⁸⁸ See Rackowski (2002) and Rackowski & Richards (2005) for arguments along these lines in order to explain a case of nominal ‘shift’ in Tagalog. For these authors, too, VoiceP is a phase with an EPP feature that attracts relevant nominals to its edge. For data and analysis see the aforementioned authors.

licenser (ie., T) is merged. This means that if ellipsis occurs, it will be triggered by T before it establishes its agreement relations with DPs. In the following sentences a derived subject, *these pants*, can be extracted from the VP where it was base-generated prior to the VP ellipsis. According to Aelbrecht, this is proof that the DP has occupied [Spec, VoiceP] (the edge of the VoiceP phase), prior to establishing an agreement relation with (and having been attracted to) Tense.

(33) This shirt has been washed but *these pants* should be $t_{\text{these pants}}$ <washed $t_{\text{these pants}}$ > too.

Adapted from Aelbrecht (2010: 177[43c])

In sum, Baltin (2007) and Aelbrecht (2010) coincide in identifying VoiceP (rather than vP) with the clause-internal phase, and in affirming that as a phase, the Voice^o head contains an EPP feature that triggers movement of nominals to the phase edge.

I will adopt this view here. That is, I will assume that VoiceP is the clause-internal phase and that English *make*, as a phase-selecting causative head, selects VoiceP (as opposed to vP, TP or CP) as its complement. But before assuming that *make* selects VoiceP, it is necessary to show that it does *not* select TP. I present arguments against this latter option next.

3.3. The complement of *make* is not TP

Numerous authors working with causatives in Romance languages (ie., Folli & Harley (2003), Gonçalves (2001), Guasti (1993, 1997), Treviño (1994), Rosen (1990), Zagana (1982)) show that the complement of *make* does not contain a T(ense) projection. Guasti (1993), for instance, shows that the complement of Italian *fare* ‘make’ cannot embed a

tenseless structure, as it disallows negation (35a), perfective *avere* ‘have’ (35b), and

Tense adverbs, *oggi* ‘today’ (34c).

(34) a. *negation*

?*Ciò ha fatto non parlare (più) Maria
That has made not speak (anymore) Mary
‘That made Maria not speak anymore’

Guasti (1993: 37[39])

b. *Perfective*

*Marco fara aver pulito le toilette al generale
Marco make(fut) have cleaned the toilet to.the general
‘Marco will make the general have cleaned the toilet’

Guasti (1993: 39[53])

c. *TP adverbs*

#Ieri Marco ha fatto pulire le toilette al generale oggi
Yesterday Marco has made cleaned the toilet to.the general today
‘Yesterday Marco made the general clean the toilet today’

Guasti (1993: 40[55])

The Italian examples in (34) show the impossibility of finding negation (34a), perfective *have* (34b), and TP adverbs (34c) in the complement of *fare* ‘make’. She interprets these facts as evidence that the Italian causative simply disallows a TP complement. The general proposal made by Guasti is that the Italian causative head *fare* ‘make’ takes a bare VP as a complement, forming a complex predicate.

English *make* is different from Italian *fare* in some respects. For instance, in structures involving *make* the causee precedes the embedded verb, but this is disallowed in Italian (35).

(35) *Position of the causee*

a. *English: preceding the embedded verb*

Helen makes *John* work hard

b. *Italian: cannot precede the embedded verb*

*Elena fa *Gianni* lavorare

‘Elena makes Gianni work’ (cf. Elena fa lavorare *Gianni*)

Guasti (1997: 125[6])

Nonetheless, English *make* behaves exactly like Italian *fare* regarding the parameters considered in (36).

(36) *The complement of ‘make’ is tenseless in English*

a. *Negation*

*I made John not read the paper

b. *Perfective ‘have’*

*I’ll make my child have cleaned the house by Wednesday

c. *TP adverbs*

#Today I’ll make my child clean the house tomorrow

In (36), English *make* disallows a negated complement (36a), a complement containing perfective *have* (36b) and a complement licensing the TP adverb *today* (36c). This suggests that, like Italian *fare*, English *make* disallows a TP complement.⁸⁹ Because of the diagnostics seen in section 2 (ie., the complement of *make* includes external arguments), *make* selects VoiceP, which is the external-argument introducing head, as seen throughout this dissertation. In the next subsection, I show an asymmetry between

⁸⁹ Heidi Harley (p.c.) reports that some speakers of English allow negated complements of *make* (ie., *I made John not read the paper* (36b)). Negated complements of *make* are generally allowed in Spanish, too, as Treviño (1994) notices. As I will argue in chapter 6, Spanish complements of *hacer* ‘make’ are also VoiceP rather than TP. The fact that they allow negated complements does not necessarily mean that the complement of *hacer* is TP, as it is possible to find constituent negation as well, as shown in (i), where the negation can be interpreted as embedding the vP to the exclusion of the CP where the auxiliary *did* appears. If this is the case, the sentence will be understood as ‘something was done, which involved (you) failing to read the paper’. This can be compared with (ii) where negation is sentential and the most available reading is that in which ‘something wasn’t done, which involved reading a paper’.

(i) Did you [not read the paper]?

(ii) Didn’t you read the paper?

For further reading on sentential vs constituent negation see Choi (2004), Kim & Sag (2002), Embick & Noyer (2001) or Ernst (1992).

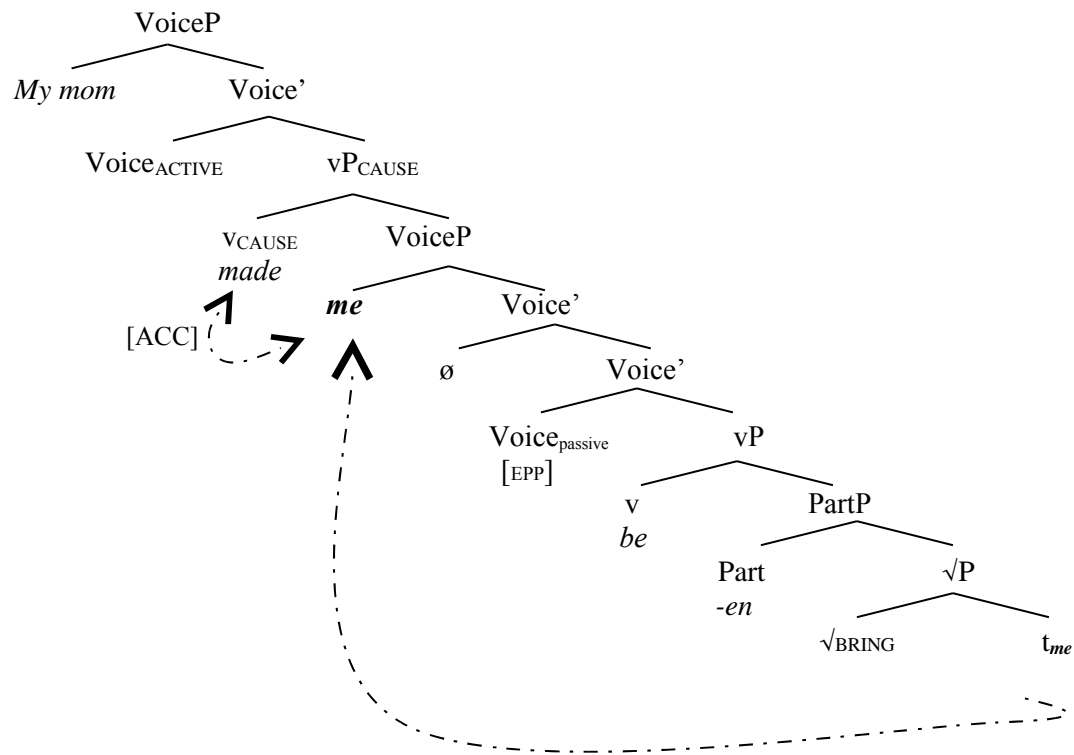
active and passive complements of *make*, which is further evidence that *make* embeds VoiceP rather than TP (ie., CP).

3.4. The complement of *make* is a VoiceP phase

The following sentences (37) show the contrast between active (37a) and passive (37b) complements of *make*.

- (37) a. My mom made [_{VoiceP} my brother bring me back home from Mexico] (active)
 b. My mom made [_{VoiceP} me_i be brought t_i back home from Mexico] (passive)

In both (37a) and (37b), the complement of *make* involves an accusative causee (*her* and *me* respectively) in initial position. In the case of (37a), the causee *her* has been base-generated in the [Spec, VoiceP] position, as an external argument. I just showed that the complement of *make* is not TP. Assuming that it is VoiceP, the causee *her*, in (37a) stays in its base-generated position. In the case of (37b), the causee, *me*, is a derived (passive) subject. This means that this nominal has been base-generated in a lower position, as a complement of the root *bring*. From there, it has been attracted to [Spec, VoiceP]. I show the structure in (38).

(38) *Passives embedded by 'make'*

If **VoiceP** is not a phase edge, the landing position of the passive subject *me* in (38) cannot be understood, as there is no reason, other than the need to check some **[EPP]** feature on the head **Voice°**, for this head to host *me* in its Spec position. As Aelbrecht (2010) argues, the function of the **[EPP]** feature on phase heads (ie., **Voice°**) is to attract those elements within its domain that still contain unvalued uninterpretable features.

This is the case of passive subjects (ie., *me*) as these nominals cannot have their uninterpretable case **[uC]** feature valued by passive **v**, as widely discussed in the literature (ie., Chomsky 2000 and subsequent work). Then, what happens in (38) is that the complement of *bring* (*me*) cannot have its **[uC]** feature valued and is attracted to [Spec,

VoiceP]. From this position, it is probed by active *made*, the head that selects VoiceP as a complement, and values the [*u*C] feature on the nominal in an ECM configuration, as seen in the diagram.

Given these facts, I will assume, with Aelbrecht (2010), that VoiceP is a phase that attracts nominals to its edge so they can have their uninterpretable features valued. Since this happens even in contexts in which VoiceP is passive, we can assume with Legate (2003) that even passive VoiceP is a phase.

Now observe the following asymmetry involving ellipsis of the complement of *make*. The following sentences exhibit a clear contrast: passive complements of *make* disallow VP ellipsis (39a), whereas active complements of *make* allow it (39b).

- (39) a. I didn't want to buy candy and you made me <buy candy>
 b. *I was afraid these guys would see us stealing and your conspicuous outfit
 finally made us be <seen stealing>

Notice that ellipsis in the case of passive complements of *make* is disallowed even in the absence of Voice mismatches (40).

- (40) *Although you were supposed to be fired first, my bad records made me be
 <fired first> instead

The contrast between the sentences in (39) and between (39) and (40) cannot be explained in Merchant's (2007) terms since, for Merchant, VP ellipsis should be allowed in English regardless of Voice mismatches between the elided site and its antecedent. I repeat the example from Merchant (2007) in (41).

- (41) The janitor must remove the trash whenever it is apparent that it should be
 <removed>

In causatives with *make*, ellipsis is only allowed in cases such as (39a), whereby the complement is active. This includes cases in which Voice mismatches occur, as (42) shows.⁹⁰

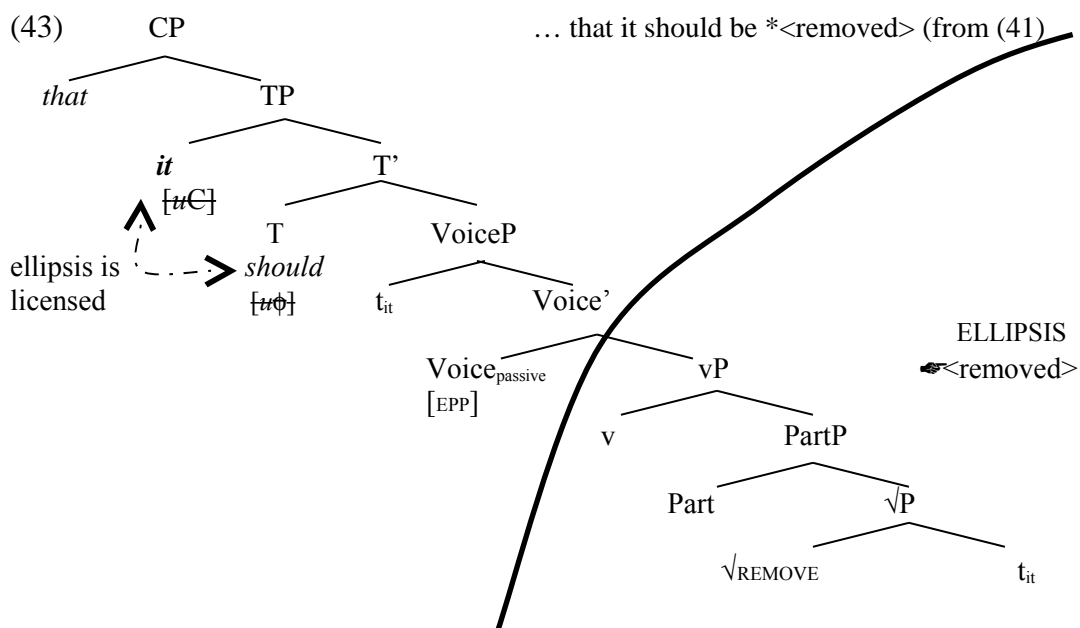
- (42) ?You say you don't like being called after 10PM and then you make me
<call you>

The sentences in (41) and (42) prove Merchant's (2007) point: Voice mismatches are possible in VP ellipsis because it is vP rather than VoiceP that is elided by this operation. The sentence in (42) further proves that VP ellipsis in causatives with *make* is allowed, even in the context of Voice mismatches. The contrast between (42) and (41a-42) is that the latter examples exhibit ellipsis of a passive complement of *make*.

To me, the contrast seems to be due to the fact that, for ellipsis of a passive to take place, the passive subject needs to be in a position local to the ellipsis licenser, which is T(ense) for English, as discussed by Aelbrecht (2010). I am not certain what exact mechanism motivates this restriction, although I will speculate the following. The passive subject has been thematically licensed as the complement of the elided \sqrt{P} root. It is then probed by T, the ellipsis licenser, and attracted to its Spec position. At this moment, T can, by extension, thematically license the ellipsis site, because the presence of the passive subject in the local domain of T helps identifying the ellipsis site, from where it was extracted. This is what happens in Merchant's example in (41).⁹¹

⁹⁰ I marked the grammaticality of this sentence as uncertain reflecting the mixed results I got from the native speakers consulted.

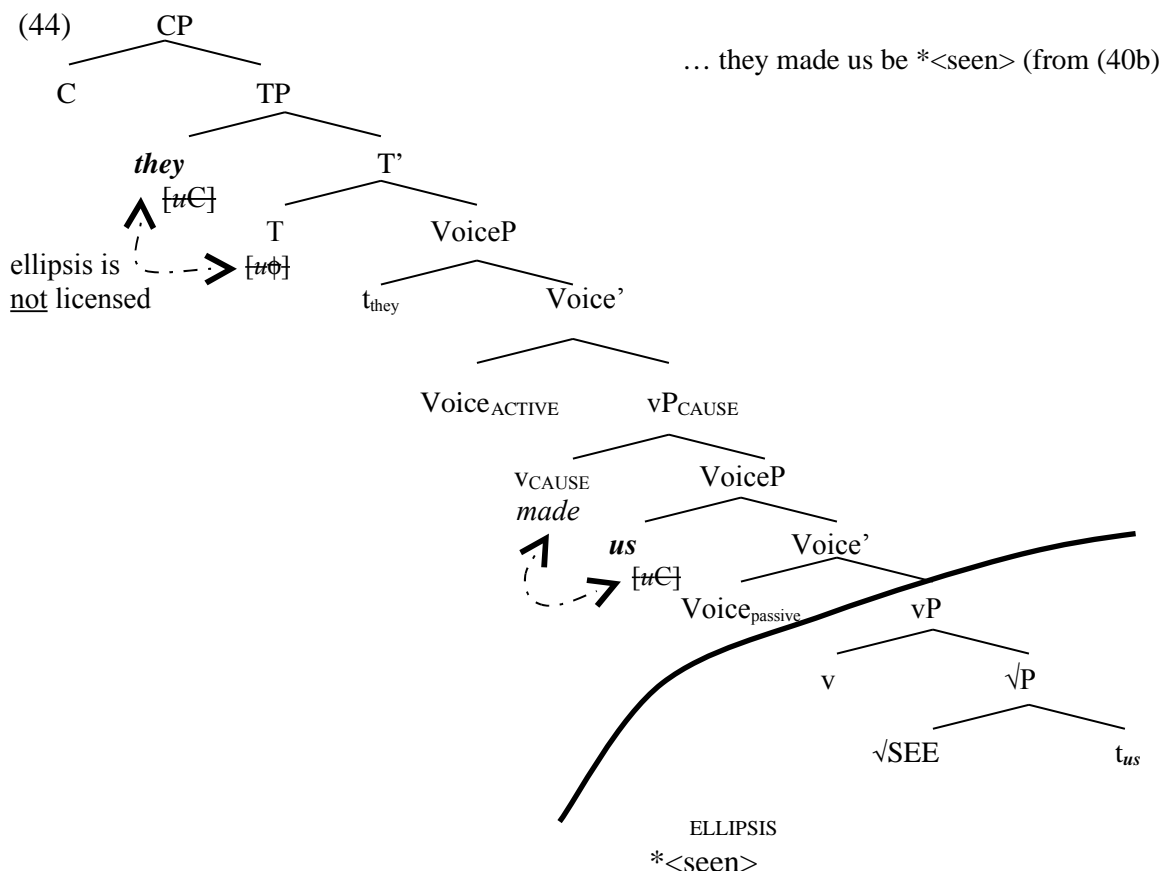
⁹¹ For the sake of simplicity, in the following diagrams I ignore (yet I still assume) the double specifier proposed for passive VoiceP. I also ignore whether other projections besides TP (ie., MoodP) are present in the structure. I will rather assume that the modal *should* occupies TP.



In (43), the passive subject *it* is thematically licensed by the root *remove* and from there it is raised to [Spec, TP] via the [Spec, VoiceP] landing site. Because the passive subject is in the domain of the licenser, T, the referent of ellipsis can be identified.

In passive subjects of causatives the passive subject never establishes an agreement with T, and consequently never reaches the Spec position of the ellipsis licenser, T. Its final landing site is, instead, [Spec, VoiceP]. From there it is probed by (i.e., agrees with) T_o in *make*, receiving accusative case. As a consequence, the passive subject of passive complements of *make* can never serve as a referent of the ellipsis site from the domain of the licenser, T. For this reason, ellipsis of the passive complement of *make* is disallowed. I show the diagram in (44)⁹².

⁹² For reasons of space, I ignore both the PartP and the double specifier projected within passive VoiceP in the diagram in (44).

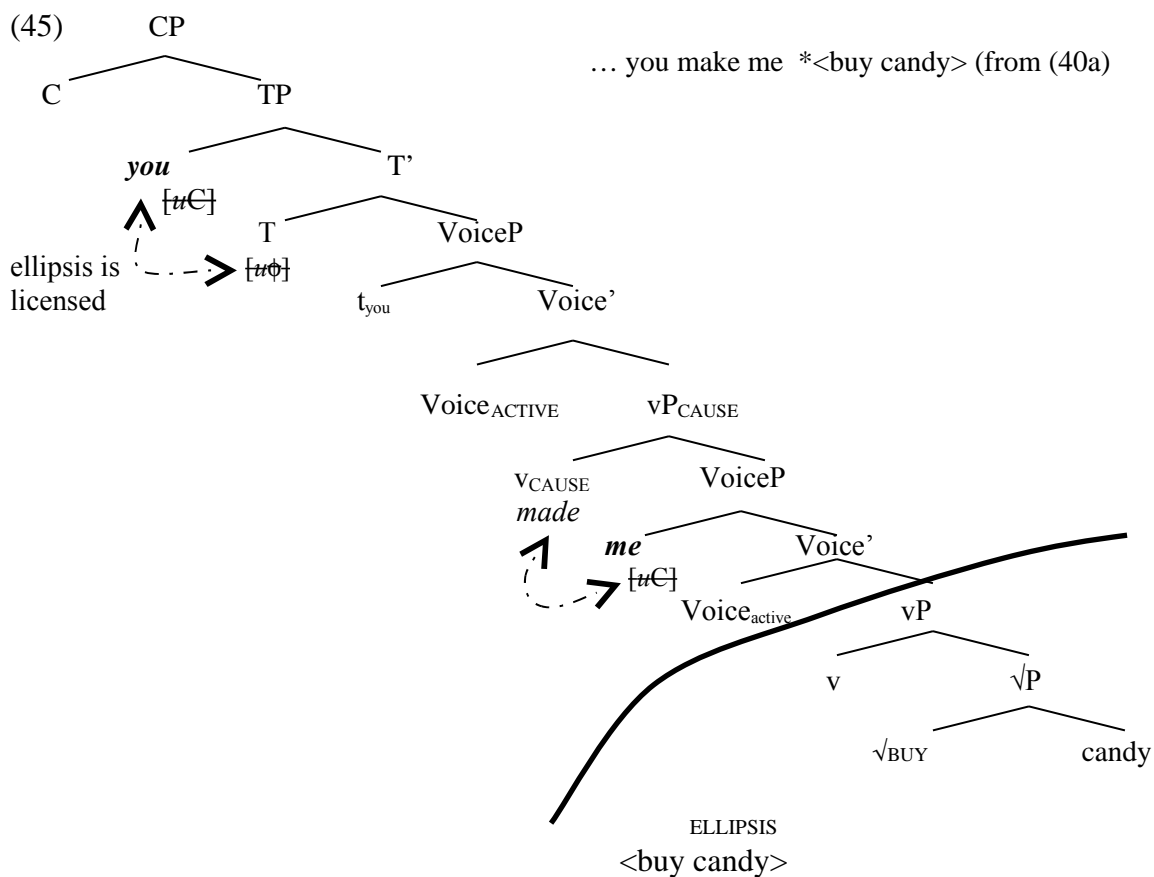


In (44) ellipsis is not allowed because the passive subject moved out of the ellipsis site (for structural reasons) never reaches the local domain of the ellipsis licenser, T. Rather, the derived subject stays within the domain of *make*, as a result of the agreement relation established between the two elements. Because of this, the moved DP is no longer active for Agree with a higher probe such as T.

Meanwhile, *they* in (44) has been base-generated as an external argument, within matrix VoiceP. Because of locality reasons (ie., proximity to the probe), *they* is probed by T and is attracted to [Spec, TP]. As a result, the passive subject *us* in (44) never reaches the immediate domain of the ellipsis licenser, T, and ellipsis is not granted.

The restriction against the ellipsis of passive complements of *make* is related then to the fact that traces (or copies) of elements that have been moved from an ellipsis site have to be within the immediate domain of the ellipsis licenser T. Otherwise, ellipsis is disallowed.

In the case of active complements of *make*, ellipsis is granted precisely because no trace (or copy) of a moved element is left behind in the ellipsis site. I show this in (45).



In (45) there is no trace (copy) that needs to be referentially identified outside of the ellipsis site. This is the reason why ellipsis is granted. The difference between ellipsis of the active complement of *make* (45) and ellipsis of a passive (43-44) is that only in the

latter cases the ellipsis site contains a trace. The restriction seen in (44) has to do with the fact that the trace within the ellipsis site needs to be properly identified by the ellipsis licensor only (i.e., T), and this is not possible in passive complements of *make* because the derived subject that is moved from within the ellipsis site is unable to establish agreement with T. As a result, its trace cannot be properly identified by the ellipsis licensor and ellipsis is not granted.

The contrast between the structures in (43-45) then shows further evidence that *make* embeds a VoiceP phase, but it does not embed a structure containing TP. If that were the case, ellipsis of passive complements of *make* would be granted by the relationship established between the TP embedded by *make* and the passive subject, contrary to fact.

3.5. Summary

In this section I have discussed arguments and evidence that *make* embeds a phase and that this phase is VoiceP (rather than CP/TP). Arguments based on passives (Collins 2005) and ellipsis of passives (Merchant 2007) show that VoiceP is involved in the structure of *all* kinds of constructions, passive or active. Further evidence of ellipsis shows that all varieties of VoiceP are phases (Baltin 2007, Aelbrecht 2010). Finally I have shown evidence that *make* embeds VoiceP, not CP/TP.

After reviewing arguments (ie., Guasti 1993, 1997) based on evidence such as the fact that *make* disallows complements containing perfective auxiliaries, I have shown further evidence based on ellipsis of passive complements of *make* that supports the

hypothesis that TP is not present in the complement of *make*. Having discussed one aspect of the syntax of passive complements of *make* I devote one section to discussing passive causatives with *make*.

4. Passive causatives with *make*

Causative *make* may be passivized, as in (46).

(46) He was made [to ____ read a book]

When the causative *make* is passivized (46), a) The theme DP, *he*, is raised from its base generated position, the external argument of *read* to its landing position, the subject of the passivized causative *was made*; b) The passive causative *was made* embeds the caused event *read a book* via the preposition/particle *to*.

What is interesting about these structures is that the preposition/particle *to* is not present in active instances of *make* (47).

(47) I made him (*to) read a book

In this section I present an analysis of the passive *make* construction and I account for the presence of *to* as the result of the agreement relations that are part of the syntactic architecture of English sentences.

4.1. Passive *make*

In the previous section I devoted some discussion to the syntax of passives. I will expand the subject here. Passive constructions were said to contain a passive VoiceP. The [passive] feature on Voice^o involves the appearance of the auxiliary *be* as the

Within the vP domain, PartP embeds the root $\sqrt{\cdot}$. Given this context, Vocabulary insertion of the root will spell out the past participle corresponding to the root. I show an example for the root $\sqrt{\text{SEE}}$ in (49).

In causatives, the Vocabulary Item *make* is a functional verb, which is not associated to a lexical root.

In passive contexts, *make* is morphologically realized in its past participle form, *made*, as in *Mary was made to buy candy*. Because of this, we need to assume that, in addition to roots, functional verbs like *make* have a corresponding past participle form when they are embedded by PartP, as in (51).

The question is whether functional verbs have a corresponding past participle form or whether they do not. Folli & Harley (2003, 2007) claim that, at least in the case of Italian, they do not. They argue that Italian *fare* ‘make,do’ is the morphological realization of two different light verbs, v_{CAUSE} (the causative functional verb) and v_{DO} (a lexical root). The light verbs v_{CAUSE} and v_{DO} form, respectively, each of the two Romance causative constructions identified by Kayne (1975) as *Faire-infinitive* (FI) and *Faire-par* (FP). I show an example in (50).

- (50) a. FI: v_{CAUSE}
 Gianni ha fatto riparare la macchina a Mario
 John has made repair the car to Mario
 ‘John made Mario repair the car’
- b. FP: v_{DO}
 Gianni ha fatto riparare la macchina da Mario
 John has made repair the car by Mario
 ‘John had the car repaired by Mario’
 Folli & Harley (2003)

In the FI construction (50a), the functional light verb v_{CAUSE} embeds a structure that contains an external argument (ie., (a) *Mario*). This is the corresponding structure to English *make*, as discussed throughout this chapter. In the FP construction (50b), in contrast, the lexical v_{DO} embeds a nominalized VP that does not include an external argument. This construction is roughly equivalent to English *have* causatives, as in *Mary had the car sold*.

Folli & Harley show that Italian passive causatives are only possible in contexts in which *fare* is the Vocabulary Item corresponding to v_{DO} (FP, 50b), but not v_{CAUSE} (FI, 50a). One of the arguments in support of this is the fact that passive *fare* can only embed unaccusatives that do not contain an external argument (51a), but it cannot embed unergatives, because unergatives, containing an external argument, cannot form part of the nominalized VP embedded by v_{DO} (51b).

- | | |
|--|--|
| (51) a. Marco è stato fatto partire
Marco is been made leave
‘Marco was made to leave’ | b. *Marco è stato fatto telefonare (da Gianni)
Marco is been made telephone (by John)
‘John was made to telephone Marco’ |
|--|--|

Folli & Harley (2003)

Among the sentences in (51), only (51b) can be FI (i.e., v_{CAUSE}). This sentence cannot be

FP because *fare* embeds an unergative verb *telefonare* ‘telephone’ and FP does not allow unergative complements, since they involve external arguments (*Marco* in (51b)).

Because of this, we can conclude that the FI construction disallows passivization in Italian.

Folli & Harley associate this restriction with their distinction between lexical (v_{DO}) *fare* and functional (v_{CAUSE}) *fare*. They claim that Italian passives require a verb in past participle form (like English passives), but that only lexical verbs (i.e., v_{DO}) have a corresponding past participle form. FI causatives are then excluded from passive contexts as they involve the causative functional verb v_{CAUSE} that, according to Folli & Harley, lacks a corresponding past participle form.

It is not easy to test whether the Italian distinction proposed by Folli & Harley also applies in the case of English *make*, as passives of causatives are allowed in this language regardless of whether the complement of *make* is unaccusative, unergative, or transitive (52).

(52) John was *made* to {arrive / telephone Marco / sing at the party / eat cake}.

But the facts in (52) are not conclusive. It might be the case that, in English, passives of causatives are always realized by lexical *make* whereas active causatives are always realized by functional *make*. This is, at least, what some scholars (e.g., Santorini & Heycock (1988), discussed in section 4.4.2. below) claim in order to explain the appearance of *to* in the complement of passive *make* only, as seen in the previous section. The following piece of evidence would indeed support this distinction.

A further characteristic of *fare*, also identified by Folli & Harley, is the fact that its

subject (ie., Causer) is obligatory a volitional agent if *fare* is the morphological realization of v_{DO} . If *fare* is a functional head (v_{CAUSE}), its subject may also be non-volitional. This restriction extends to *by*-phrases in passive causatives, since the entity named by the *by*-phrase would correspond to the active subject of *fare*. I show the restriction with an example involving Spanish *hacer* ‘make’.

(53) a. Active

{María / la crisis} hizo perder el trabajo a Juan
 {Mary / the crisis} made lose the job to John
 ‘{Mary / the crisis} made John lose his job’

b. Passive

El edificio fue hecho derribar {por Juan / *por el terremoto}
 The building was made demolish {by John / *by the earthquake}
 ‘{John / *the earthquake} had the building demolished’

Passivized English *make* does pattern with Romance in this regard. That is, when *make* is active, its subject may be volitional or non-volitional. When it is passivized, however, the *by*-phrase may only correspond to volitional agents. I show this in (54).

(54) a. Active

{Mary / the crisis} made John move out

b. Passive

John was made to move out {by Mary / *by the crisis}

The contrast in (54) could be offered in support of a syntactic distinction between the kind of *make* that forms active causatives (54a) and the kind of *make* involved in passive causatives (54b) in English. Nonetheless, further evidence supporting this distinction would be necessary to reach a conclusion regarding this issue. In the absence of such evidence I will assume here that the kind of *v* involved in passive constructions with

make is the same causative light verb v_{CAUSE} discussed so far.⁹³

In this section, I will focus on the contrast exhibited by passive causatives in English that involves the appearance of *to* in the embedded domain of passive *make* (as opposed to its obligatory absence from the complement of active *make*):

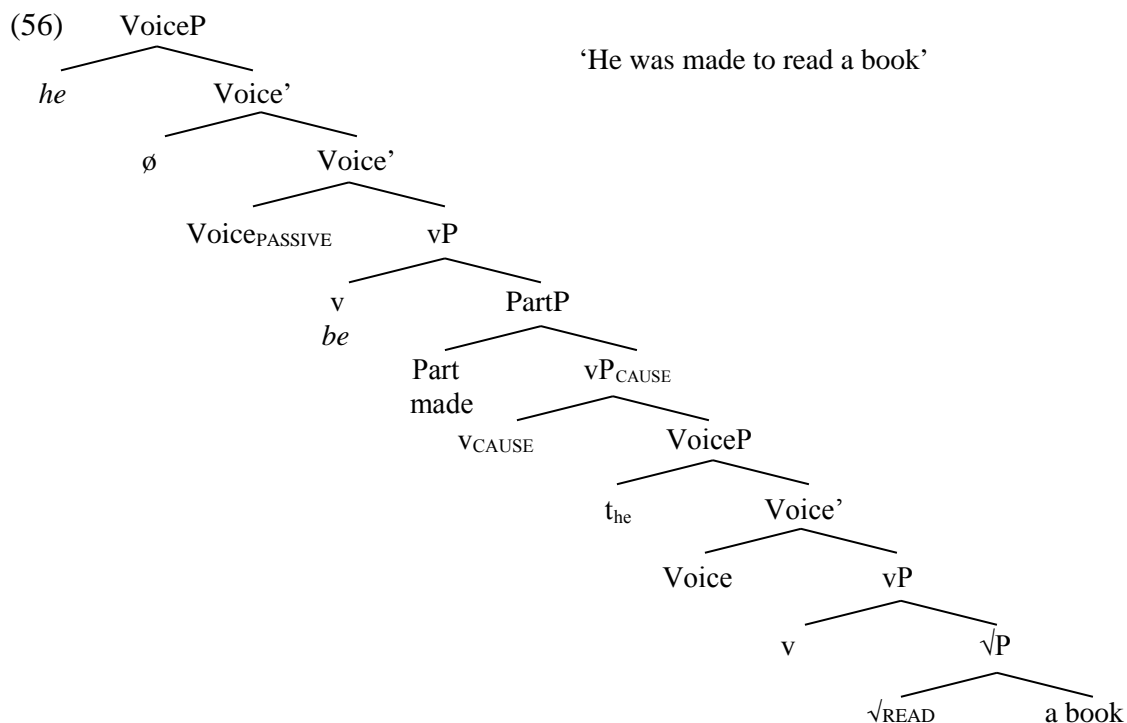
- (55) a. I made John (*to) wash the dishes
 b. John was made *(to) wash the dishes

My goal in this section is to provide an explanation of the nature of the particle *to* in English passive causatives. In particular, my research questions at this point are the following: Where does *to* come from? Does it realize any specific function in the syntax of passive causatives that is not required in the syntax of active causatives? I provide an explanation in the following subsections.

4.2. A preliminary analysis

The following diagram shows the basic structure of passive causatives with *make* that I will assume in this section.

⁹³ Although the contrast exhibited by the sentences in (54) suggests that further research should be done about the topic.



As discussed above, everything in (56) is reminiscent of the syntax of other passives except for the fact that the passivized vP is causative *make*. What is not obvious from the diagram is the syntactic position of *to*. Because of its surface position in (55), *to* must appear somewhere in the structure embedded by *make*. What is not clear at this point is where exactly under *make* *to* appears. Another issue that isn't clear at this point is the nature of *to*? Is it a preposition? Is it infinitive *to*? Is it some a particle of a different kind? In the next subsections I review some previous proposals that have been made in the past regarding the nature of *to* in passives of causatives.

4.3. The nature *to* in the syntax of passive causatives: previous proposals

The presence of the syntactic object *to* in passive causatives with *make* requires an explanation, as this preposition/particle is banned from their active counterparts. The general intuition traditionally observed is that there must be some restriction in English passive causatives that prevents them from directly taking its complement (a VoiceP phase in the present analysis). In this subsection I will discuss some approaches on this subject. I will discuss their major contributions as well as some of their problems. At the end of this section I will offer an alternative explanation to existing approaches of the nature of *to*. I start with Hornstein et al. (2006).

4.3.1. Hornstein et. al (2006): *to* is an inherent case assigner

Hornstein, Martins, & Nuñez (2006) discuss the fact that active and passive verbs of perception exhibit a contrast regarding the absence vs presence of *to* (respectively), that mirrors the contrast exhibited between active and passive causatives with *make*, studied here. I show the contrast between verbs of perception in (57).

(57) Verbs of perception

a. Active

I heard John arrive

b. Passive

John was heard *to* arrive

Hornstein et al. assume that the type of v_{CAUSE} realized by *make* selects a TP complement. They further assume that the embedded (infinitival) TP is defective, as it lacks a person feature that case-values the embedded DP (ie., *he*). They start out their analysis by noticing the following contrast:

- (58) a. He was made to read the book
 b. *He was made read the book

Their explanation of the facts in (58) is entirely based on the Agree framework developed by Chomsky (2000, 2001), whereby case assignment is based on agreement relations between clause elements, as explained in sections 2 and 3 above. They claim that the realization of the ‘*to*’ (as opposed to bare) infinitive in passives of causatives and verbs of perception is the consequence of the failure of embedded (infinitival) T to have its case feature valued by matrix T.

They argue that this situation is the consequence of the intervention of the past participle, which also needs to have its case feature valued by the same matrix T. The appearance of *to* is then treated as the morphological reflex of an inherent case assigner that appears in the event of a caseless infinitival. That is, because the lower T cannot have its case features valued by higher T, the preposition *to* appears so it can assign the caseless embedded T its oblique case. The illustration of Hornstein et al.’s analysis is shown in (59).

- (59) Mary was seen to leave

[TP T [P:3] / [N:SG] /EPP [VP be [PartP -en [G:FEM] /N:SG] /Case:NOM] [VP see
 [TP Mary [P:3] / [G:FEM] / [N:SG] /Case:NOM [T' T [N:SG] / [Case:u] /EPP]
 [VP *t* leave]]]]]]]

Hornstein et al. (2008: 19[47])

In (59), the case feature in T is unvalued, because the past participle *-en* intervenes (it values the case feature given by matrix T to non-finite verbal forms). While these authors do not show the exact position in which *to* is merged, I assume it is in the domain of embedded T.

They compare the insertion of *to* in (59) with the insertion of *of* in the case of caseless nominals (ie. *the destruction *(of) the city*). That is, *to* insertion is seen by these authors as a repair strategy to save derivations in which structures are caseless.

While this approach is internally coherent, I do not adopt it for two reasons. The first reason has to do with the fact that, for Hornstein et al., it is the presence of the past participle in the structure in (59) that is responsible for the insertion of *to*. This cannot be correct, given that active causatives in the perfective do involve the presence of a past participle intervening between the matrix T and the complement of *make*, yet these sentences do not require the insertion of *to* (60).

(60) Mary has *made* John leave

In Hornstein et al.'s analysis, both the participle *made* and the bare infinitive *leave* in (60) would still need to have their case features valued by matrix T, given their nominal nature. However, this analysis does not explain why, in passive structures, the participle prevents the infinitival from valuing its case with matrix T, whereas this is not the case in structures involving perfective *have* (60). I suggest that the insertion of *to*, then, cannot be due to the presence of an intervening participle, but it must be related to the passive nature of the matrix verb.

The second reason why Hornstein et al.'s proposal cannot be right is the fact that, in their analysis, the material embedded by *make* contains a structure larger than VoiceP (i.e., TP). As discussed and shown in section 3, this cannot be true (e.g., *make* disallows perfective auxiliaries as complements, and passive complements of *make* disallow ellipsis).

For the two reasons I just discussed, I suggest that the analysis in Hornstein et al. (2006) in which TP forms part of the complement of *make* cannot be maintained. As I explained in section 3, an analysis in which *make* embeds VoiceP more consistently accounts for the behavior of the elements in these constructions (e.g., with respect to the prohibition of perfective auxiliaries under *make*).

The presence of *to* in the complement of English passive causatives, then, still needs to be explained. Hornstein et al.'s proposal was just discussed: *to* is the morphological realization of an oblique case assigning preposition that is inserted as a repair strategy so the embedded caseless infinitive can receive the case it does not receive from matrix T. The analysis of *to* as a case-assigning preposition was also the explanation given by Roeper & Vergnaud (1980) to similar data. I have discarded this explanation on the basis that English *make* does not seem to embed a structure containing T, at least, in its active form.⁹⁴

4.3.2. Other analyses: Santorini & Heycock (1988) and Higginbotham (1983)

Santorini & Heycock (1988) argue that the reason why active and passive *make* take complements of different kind is that these two forms are syntactically unrelated. That is, these authors show that, in an earlier stage of English, both active and passive causatives existed in two forms, one that embedded a bare infinitive and another that embedded a *to* infinitive. They compare this scenario with other instances of English verbs, such as *help*, that take bare or *to* infinitives in synchronic English.

⁹⁴ Andrew Carnie (p.c.) points out that the fact that *to* is not the usual preposition used in repair strategies further weakens Hornstein et al.'s argument.

- (61) a. John helped Mary win
 b. John helped Mary to win

They argue that, at some point, the passive causative + bare infinitive structure became obsolete and just the *to* infinitive passive survived. The opposite scenario is suggested for its active counterpart. Santorini & Haycock propose that passive causatives with *make* are instances of the passivization of an Exceptional Case Marking + *to* infinitive structure whose active counterpart no longer forms part of the grammar of English. In this way, passive *make* would have the same structure that passive *expect* has in (62).

- (62) He was expected *(to) arrive early

Santorini & Haycock's treatment of the phenomenon is supported by an argument by Higginbotham (1983) in which he proposes that the syntactic contrast exhibited by complements of active and passive *make* (ie., the appearance of *to* in passive context) reflects a semantic contrast. Higginbotham's analysis is based on whether the complements of *make* undergo raising at LF for their correct interpretation or whether they don't. He shows that bare infinitive complements are eventive. Because events are individuals, they undergo existential quantification, and undergo raising at LF for their correct interpretation.

- (63) a. John saw Mary leave
 b. [$\exists x$: leave (Mary, x)] John saw x
 Higginbotham (1983:120[16])

In the case of passive verbs of perception or causatives, Higginbotham, too, notices that they cannot directly embed a bare infinitive.

- (64) a. *John was seen leave
 b. *John was made sing Higginbotham (1983:122[24, 25])

He claims that the structures in (64) are ill-formed because bare infinitives need to undergo raising at LF but the raised material now contains the trace left behind by the passive subject.

(65) $[[t_k \text{ leave}]_i \text{ John}_k \text{ was seen } t_i']$

Higginbotham (1983: 123[37])

According to Higginbotham, (65) is ill-formed because a) the trace t_k of *John* is not within the scope of the antecedent, and b) the matrix *John_k was seen t_i'* contains the trace t_i' ; this is not the trace of *John_k* (the trace of *John_k* has been raised within the remnant), but it is the trace of $[t_k (\text{John}) \text{ leave}]_i$; consequently, this sentence would be equivalent to something like **John was seen Mary* (p. 124[39]), which is ungrammatical.

So, for Higginbotham, causatives taking bare complements cannot be passivized because their passivization would result in ungrammaticality. However, causatives taking *to*-complements can be passivized, in (66).

(66) $[\text{John}_i \text{ was seen } [t_i \text{ to leave}]]$

Higginbotham (1983: 124[41])

The sentence embedded by *seen* contains *to*. According to Higginbotham, the embedded clause is ‘supported’ (by *to*) and does not need to be raised at LF for scope-assignment, as bare complements need to do, but instead can be directly taken as a complement of a matrix verb. He argues that the different structure of sentences like (66) with respect to their active counterparts is reflected by the fact that passive verbs of perception can only be interpreted as epistemic (e.g., *Somebody saw that John left*), as a result of not having undergone raising at LF (p. 124).⁹⁵ So, in a sense, Higginbotham’s analysis, like the one

⁹⁵ By this, Higginbotham probably opposes an epistemic to an eventive/factive reading, which is also available for active verbs of perception. While factives contribute to truth-conditions, epistemics have been

in Santorini & Heycock (1988), establishes the separation between active *make* and passive *make* by assuming that they are syntactically unrelated, which shows in their different interpretations.⁹⁶

Recall that Hornstein et al. assume an analysis in which the active and passive causatives are syntactically related. They, however, show an interesting contrast with verbs of perception that has to do with the distinction in Higginbotham. Because active verbs of perception select for eventive complements, the sentence in (67a) in which *see* selects for a stative complement is ungrammatical. Such a restriction is not observed in its passive counterpart, since passive verbs of perception select for epistemic complements (ie., propositions).

(67) a. *Active verbs of perception select events*

*I saw John know French

b. *Passive verbs of perception select propositions*

John was seen to know French

Hornstein et al. (2008: 200[5])

Even more striking is the following contrast, also contributed by Hornstein et al., that supports an analysis in which active and passive verbs of perception select different complement types.

argued to not contribute to truth-conditions (e.g., Jackendoff 1972, Lyons 1977). This is so because epistemics indicate rather than the truth, the speaker's commitment to the truth. One of the tests that show the non-contribution of epistemics to truth-conditions is their inability to be complements of factive predicates. This test demonstrates the different interpretation of active verbs of perception and their passive counterparts: whereas active verbs of perception may be complements of factive predicates (ie., *it is surprising that*), passive verbs of perception cannot. This indicates that only the former contribute to truth-conditions, and that active and passive verbs of perception render, in fact, different interpretations.

(i) It is surprising that you saw John leave

(ii) ??It is surprising that John was seen to leave

⁹⁶ Recall that this is also the basis of argument made by Folli & Harley (2003, 2007) regarding the contrast between active and passive *fare* causatives in Italian.

(68) a. *active verbs of perception ban aspectual complements*

*I saw Mary {be leaving/have left}

b. *passive verbs of perception allow aspectual complements*

?Mary was seen to {be leaving/have left}

Hornstein et al. (2008: 201[11])

In (68a), the active verb of perception *see* clearly disallows complements containing aspectual information (ie., the progressive *be leaving* and the perfective *have left*). Its passive counterpart with a *to* complement (68b) is more acceptable, according to these authors. I have independently consulted the construction with English native speakers and they seem to be willing to accept (68b) under specific circumstances.

It might be the case, then, that passive verbs of perception do take complements of different kind than their active counterparts. However, causative verbs do not pattern with verbs of perception in this regard. Neither active nor passive causatives can take the stative complement used in (69) for verbs of perception, which suggests that the contrast made by Hornstein et al. regarding the different semantics of passive and active verbs of perception with stative complements is not extended to causatives with *make*.

(69) a. *Mary made John know French

b. *John was made to know French

Similarly, passive causatives disallow complements exhibiting negation (70a), aspectual information (70b) or independent temporal complementation in the matrix and embedded domain (70c).⁹⁷

⁹⁷ Sentences involving negated complements of *make* are subject to variation (as noted in section 3), as some native speakers accept negative complements of passive *make*:

(i) Bill was made {not to / to not} drink alcohol at the party

I assume that those that accept these sentences are the same speakers that accept negation under active *make*, although if Santorini & Heycock and Higginbotham are right in that active and passive *make* involve different structures, this assumption is not needed to capture the real facts.

(70) a. Negation

*Bill was made {not to/ to not} drink alcohol at the party

b. Perfective

*We were made to have left the house before the landlady arrived

c. Independent temporal modification in each domain

*Yesterday I was made to submit the paper this morning (by my professor)

Recall that the diagnostics in (70) were offered earlier (following Guasti (1993)) to show the presence or absence of TP in the embedded domain. The ungrammaticality of the sentences in (70) suggests, once again, that just like the complement of active *make*, the complement of passive causative *make* does not contain TP.

The facts just shown leave us with a structure in which a) negation is disallowed in the embedded domain, both in the active and passive forms; b) the perfective is disallowed in the embedded domain, both in the active and passive forms; c) temporal mismatches between the matrix and embedded domain are disallowed in both active and passive forms; d) passive *make* disallows states in its embedded domain (ie., (69)); e) verbs of perception (ie., *see*) behave differently than causative *make*, especially in their passive form (ie., compare (67-68) with (69-70)).

According to Guasti (1993, 1997), the facts in (70a-c) are a sign that the complement of *make* does not contain TP. I will assume this idea in the analysis of passive causatives with *make* that I am about to propose. In the next section, I explain the theoretical framework, based on work by Pesetsky & Torrego (2001 and subsequent work) that I will use to implement my proposal.

4.4. The role of T(ense) features in Agree relations: Pesetsky & Torrego

4.4.1. The auxiliary *do* is an instance of T in C

My proposal for what explains the appearance of *to* in the embedded domain of passive causatives in English is based on a recent proposal made by Pesetsky & Torrego (2001 and subsequent work). These authors develop a system based on Agree (Chomsky 2000, 2001) where the feature T(ense) plays a major role. In this system, all elements establishing abstract Agree relations in a clause contain some instance of T. The feature T may be interpretable (*i*T) or uninterpretable (*u*T). For instance, nominative case is considered by these authors to be the result of the valuing of *u*T in D by Tense that in turn contains *i*T. In the case of simple interrogative sentences involving the auxiliary *do*, these authors explain the following asymmetry.

- (71) a. What *(*did*) Mary read ____ ?
 b. Who (**did*) ____ read Mary?

Pesetsky & Torrego (2004a: 497[3b-c])

In the interrogative sentence in (71a), the object (accusative) wh-phrase *what* is raised to [Spec, CP]. The overt auxiliary *did* obligatorily shows up. In (71b), the subject (nominative) wh-phrase *who* is raised to [Spec, CP]. The overt auxiliary *did* is prohibited. Pesetsky & Torrego explain that nominative elements (*who*) contain a *u*T feature that is valued as a result of an Agree relation with T. In (71a), *Mary* appears in the nominative by virtue of its relation with T. In (71b), this occurs to the wh-phrase *who*.

In interrogative sentences, C contains a *u*T feature that triggers V-to-T movement, according to these authors. In the case of (71a), the overt auxiliary *did* is the morphological realization of T in C. In (71b), in contrast, the auxiliary *did* does not

appear because, Pesetsky & Torrego explain, it is the nominative wh-phrase *who* that values both T and the EPP requirement in C. That is, interrogative CP has an EPP feature that requires the raising of a wh-word to its specifier position. The subject interrogative phrase *who* is targeted for this operation. But since the nominative wh-phrase also contains a T feature (previously valued by T), this phrase values T in C by being raised to its specifier position. No further V-to-T movement is needed and *did* does not appear. This is due to an economy condition that states that ‘A head H triggers the minimum number of operations necessary to satisfy the properties (including EPP) of its uninterpretable features (2001: 4[6])’.

4.4.2. *That* is an instance of T in C

This system allows Pesetsky & Torrego to explain other asymmetries observed in English. For instance, they explain the *that*-trace effect.

- (72) a. What do you think [(that) Mary read ____]?
 b. Who do you think [(**that*) ____ read the book]?

Pesetsky & Torrego (2004a:498-499[6])

The embedded declarative sentence in (72a) optionally contains *that*. Its object, the accusative wh-phrase *what* is raised to matrix [Spec, CP]. The embedded declarative sentence in (72b) prohibits *that*. Its subject, the nominative wh-phrase *who*, has been raised to matrix [Spec, CP]. The explanation Pesetsky & Torrego propose for the facts in (72) is reminiscent of the one they propose for (71): in both cases, the extraction of a subject wh-phrase prevents the morphological realization of a functional element (ie., *did* in (71b) and *that* in (72b)).

The asymmetry in (72) illustrates the fact that other types of C (eg. embedded C) also bear uT . When embedded C attracts a wh-phrase as a result of successive cyclic movement (72), two things can happen in English: a) *that* optionally appears (72a), b) *that* cannot appear (72b).

Pesetsky & Torrego challenge traditional explanations of the phenomenon by arguing that *that* 'is not C, but a particular realization of T moved to C' (2004a: 499[7]). In the same vein as in (71), the *that*-trace effect in (71b) occurs when both the subject (*who*) and the element in embedded C carry the same feature required by matrix C. First, *that* in (72) is considered an instance of embedded T moved to C. When it hosts successive cyclic movement, C bears a wh- feature in addition to uT . In the case of (72a), the closest wh-phrase is accusative. The movement of this phrase to C deletes the uwh feature but not the uT feature. Subsequent movement of T to C is required. The result is the overt pronunciation of *that*.

(73) What_i did John say [CP t-what_i [T *that*]_j + [C, $\#T$, $\#Wh$] [IP Mary will_j buy t-what_i]]?

Pesetsky & Torrego (2001: 12[29])

So in (73) *that* appears as a result of T-to-C movement. In the case of (72b), the wh-phrase attracted to C bears a uT feature (it is nominative). It values its T feature by virtue of establishing an Agree relation with embedded T. Subsequent movement from T to C is banned because the moved wh-phrase already deletes the uT feature in C.

(74) *Who_i did John say [CP t-[who, +wh, $\#T$]_i [T *that*]_j + [C, $\#T$, $\#wh$] [IP t-who_i will_j buy the book]]?

Pesetsky & Torrego (2001: 13[30a])

The sentence in (74) is ungrammatical because the μ T feature in C can be deleted by the nominative wh-phrase raised to [Spec, CP]. No further movement of T-to-C is necessary. In fact, economy conditions ban such movement, as explained above.

4.4.3. Two types of T

Pesetsky & Torrego (2004a) propose that accusative complements also bear μ T. They receive accusative case as a result of entering on an Agree relation with a different type of T (T_o).⁹⁸ They locate this other T-type under vP.

(75) Verbal predication structure

Subj T_s [_{VP} v T_o [_{VP} V Obj]]

Pesetsky & Torrego (2004b: 503[16])

A difference between T_s and T_o is that only the former contains an EPP feature in English, so only (nominative) arguments that enter agreement with T_s are raised to its specifier position. An accusative argument then agrees with T_o but remains in its base-generated position.

Pesetsky & Torrego explain a number of structures by applying the model just described. These structures include infinitival complements of certain verbs, such as raising verbs like *seem*. I will not discuss the details of such analyses here, as I assume that passive causatives lack an infinitival complement. Nonetheless, the analysis of passive *make* that I develop next is directly based on Pesetsky & Torrego's model.

⁹⁸ Pesetsky & Torrego associate T_o with an aspectual type of T.

4.5. *to* is an instance of T_0 raised to Voice

4.5.1. Asymmetries in passive causatives

Back to our passive causatives examples, some asymmetries can be observed:

(76) *Asymmetries observed in passive and active causatives*

- a. Active causatives ban *to* from its complement regardless of its nature
Mary made John {(**to*) read a book/ (**to*) extremely happy/ (**to*) a good doctor}
- b. Passive causatives require *to* in a verbal complement only
John was made {*(*to*) read a book/ *(*to*) extremely happy/ *(*to*) a good doctor}
- c. nominative Wh- extraction bans *to* in the complement of active causatives
Who did Mary make (**to*) read a book?

The examples in (76) show that the presence of *to* is required in the verbal complement of a passive causative (76b), but it is banned from the complement of active causatives (76a), from active causatives if the complement is non-verbal (76b), and from the verbal complement of active causatives whose subject has undergone wh-movement (76c), which shows that the motivation behind the appearance of *to* is not related the movement of the embedded subject outside of the complement of *make*.

The appearance of *to* in the complement of causatives is clearly the consequence of the passive nature of *make*, as wh-extraction of the subject from the complement of *make* does not result in the insertion of *to*. It is clearly also a property of verbal complements only, as *to* is actually banned from the complement of non-verbal complements of passive *make*.

It is reasonable to think that the reason why *to* appears in the complement of passive causatives has some relation with the A-movement of the embedded external

argument *John* (76b) to matrix TP, or with the movement of the theme DP in simple passive sentences, *the book* in, ie., *The book was read*, from its position as the complement of VP *read* to matrix TP. Next I explain the asymmetries in (76) based on Pesetsky & Torrego's model.

4.5.2. Voice contains a uT feature

In their model, certain words such as *that* or *did* appear in CP as a result to T-to-C raising, that is required for the valuing of a uT feature in C. Recall that CP is a phase. In Pesetsky & Torrego, all DPs contain instances of uT . If all DPs contain instances of uT , it would be natural to assume that all phases contain uT features also. Earlier in this chapter the phasal status of VoiceP was discussed. If VoiceP is a phase, then, VoiceP should contain a uT feature. Within the CP phase, the uT feature in C can be valued in a number of ways, as seen in section 4.4. I propose that, within the VoiceP phase, the uT feature in Voice can also be valued in different ways. I explain the valuation of uT in Voice in the next section.

4.5.3. *To* is an instance of valued T on Voice

I follow Pesetsky & Torrego in assuming that *to* is an instance of a valued T feature. I differ from these authors in that I do not assume that the T feature realized by *to* actually occupies T. It is rather the realization of iT_0 moved to Voice.

- (77) a. The nature of *to*
 to is the realization of iT_o on Voice

- b. DM Vocabulary Insertion rule
 $[VoiceP \ iT_o] \rightarrow to$

The valuation of uT on Voice results in different phonological realizations, depending on the structure in which Voice occurs, just as the valuation of uT in C results in different realizations depending on the structure in which C occurs (ie., null realization as a consequence of the movement of the nominative DP, the auxiliary *did*, the complementizer *that*, section 4.4.).

4.5.4. The valuation of uT on Voice by matrix T

In simple sentences, VoiceP is directly embedded by matrix T. When T is merged with VoiceP, VoiceP contains a set of unvalued uT features: the uT feature on Voice and the uT feature on the DP on [Spec, VoiceP]. Not until these features are valued can this phase be completed. Matrix T contains iT , which probes the uT feature on Voice and deletes it. Then it probes uT on the DP in [Spec, VoiceP], values it, the DP becomes nominative and is raised to [Spec, TP] as a result of the EPP feature on T. In this case, *to* is not realized, because T has successfully valued the uT feature on Voice.

- (78) $[CP [TP \text{ Mary}_i \ \#T, \text{ EPP } [T \ iT \ [VoiceP \ \text{Mary}_i \ [voice \ \#T \ [vP \ \text{read the book}]]]]]$

In (78), Voice establishes an agree relation with local T. Its uT is valued and deleted. The DP in its specifier position agrees with T, gets nominative case, and is raised to [Spec, TP].

4.5.5. The valuation of uT on Voice by matrix T_o

In environments in which Voice appears embedded by a projection other than TP, different scenarios may follow. Scenario 1 appears in cases involving active *make* causatives, discussed throughout this chapter.

- (79) [TP Mary [_T T_s [_{Voice} #F [_{cause} made (T_o) [_{VoiceP} John #F [_{Voice} #F [_{vP} read (T_o) the book]]]]]]]

Recall that, in such cases, the external argument *John* in embedded [Spec, VoiceP] does not get nominative, but it gets accusative case. According to Pesetsky & Torrego (2004a), accusative on *John* is a consequence of the agreement established between this DP and the higher T_o, which is just below *make*.⁹⁹ I repeat the verbal predication structure proposed by Pesetsky & Torrego (2004a).

- (80) Subj T_s [_{vP} v T_o [_{vP} V Obj]]]

Since this head does not have EPP, *John* values its uT feature and stays in its base-generated position. The uT feature on Voice is valued by the same (local) T_o head (as a consequence of the valuation of the external argument in [Spec, VoiceP]). Once again, *to* does not appear in the structure. Meanwhile, matrix T_s, on TP, establishes an agree relation with *Mary* which is the external argument within higher VoiceP. This is the DP that gets nominative case in (79) by virtue of its agree relation with the higher T. Presumably, the Voice head in the higher domain also has its uT feature valued, by

⁹⁹ And accusative on the lower object, *the book*, is the consequence of the agreement established between this DP and the lower T_o, which is just below the lower v^o that embeds the root $\sqrt{\text{READ}}$.

matrix T, but I do not provide further details on this operation for reasons of space.

4.5.6. The valuation of μT on Voice by embedded T_o

Scenario 2 appears when Voice cannot establish a relation with a local finite T. This happens in situations in which Voice is embedded by non-finite T or in situations such as passive causatives (81).

- (81) [TP John_i [T T_s was [voiceP $\#T$ [voice \emptyset [cause+partP made (T_o) [VoiceP John_i $\#T$ [Voice *to* $\#T$ [vP T_o [vPread the book]]]]]]]]]]]

The feature valuation within the matrix clause is clear in (81): matrix T values the μT feature on matrix Voice. What is not so easy to understand is what happens in the embedded domain, because the causative *make* is passive.

Pesetsky & Torrego argue that in passive environments T_o is defective and cannot establish a full agreement with lower DPs (or also lower Voice here). We can assume this idea, which is reminiscent of Chomsky's (2000, 2001) proposal of a 'defective' passive or unaccusative vP. The consequence for our purposes is that lower Voice cannot value its μT feature with a local T, because Voice is directly embedded by a vP whose T does not qualify for Agree.

Then, in (81) *make* fails to value the [μT] feature on embedded Voice. Recall that in English, this is done by a head that is local to Voice°. Once it is done, the phase closes but this doesn't happen until then. This is not a problem, due to the locality of these heads. The problem appears in constructions such as (81): *make* is passive and doesn't contain the feature [iT], leaving the Voice phase incomplete. The embedded domain,

which is available until Voice^o values its feature, contains an instance of T, the T_o present within the domain of the embedded vP. According to Pesetsky & Torrego (2004a), all types of v including unergatives and unaccusatives involve a T_o that contains a *i*T feature.

I suggest that *to* appears on lower Voice as a consequence of the raising of embedded T_o, along with its *i*T feature, to Voice. The *i*T feature on T_o deletes *u*T on Voice, the phase closes, and the derivation survives. Its external argument, meanwhile remains at the edge. It is later attracted to [Spec, TP] by T_s after agreement between the two elements. Agreement happens between matrix T_s and the embedded external argument *John* due to the same reasons Voice^o fails to have its [*u*T] feature valued locally: *make* is passive and cannot value [*u*T] features. I show a diagram in (82).

(82) [TP John_i [T T_s was [voiceP ~~#~~T [voice ∅ [cause+partP made T_o [VoiceP John_i ~~#~~T
[Voice T_o (i) [*i*T] [vP T_o (i) [vP read the book]]]]]]]]]]

The syntactic item *to* is then the morphological realization of lower T_o raised to Voice. This operation is reminiscent of the ones illustrated above, in 4.4.1. and 4.4.2. in which *do* and *that*, respectively, are the morphological realization of T raised to C in two different syntactic environments. In this sense, T shows independent morphological realizations when it is moved from its original position to occupy the position of some head containing uninterpretable features that cannot be valued by other means. Typically, the valuation of features is done in a downward fashion, that is, higher heads containing interpretable features probe uninterpretable versions of the same features that are contained in heads located in lower domains. This is a more economical operation

because it just involves long distance agreement without the need for movement. The operation illustrated in (82) is less economical, since it requires the movement of elements for the purposes of agreement. It is then a last resort operation that only occurs when more economical operations are not available.

4.5.7. Extending the proposal to other structures

The contrast between (81) and (82) explains the appearance of *to* in passive causatives only. This analysis can be extended to other instances of the appearance of *to* in embedded clauses containing non-finite TP.¹⁰⁰

- (83) [TP John_i [T T_s [vP expected T_o [TP [T T_{non-finite} *i*T [VoiceP PRO_i / Mary ~~*u*T~~ [Voice T_o (i) (= *to*) ~~*u*T~~ [vP T_o (i) [vP read the book]]]]]]]]]

The sentence in (83) is an instance of a subject control verb involving PRO or an object control verb involving an embedded overt DP *Mary*. In both cases, the T_o within matrix vP values the *u*T on both external arguments PRO and *Mary* (in [Spec, VoiceP]). The embedded clause is headed by TP. The embedded TP contains non-finite T. I propose that non-finite T contains *i*T, but its lack of finite tense makes it unable to probe *u*T on lower heads. Its presence between the matrix and the embedded structures blocks any potential feature valuation operation between the matrix T_o and *u*T on embedded Voice.

The structure in (83) encounters a problem: *i*T on non-finite T is not eligible for probing any *i*T features in its embedding domain, but it serves as a blocking element for agreement between the matrix and the embedded domain. The most economical means

¹⁰⁰ TP is embedded by CP to form a phase. For this reason, I assume that the embedded domain of (83) also contains CP. I do not include it in the illustration for ease of exposition.

for agreement have been exhausted. There is a last resort operation within the embedded domain that may salvage the derivation. Embedded T_0 can still value uT on Voice via movement. This is precisely what happens: embedded T_0 is raised to Voice, triggering the appearance of *to*.

A last piece of evidence in support of this proposal comes from the ordering possibilities for *not* in ECM and control infinitival clauses.¹⁰¹ If *to* were in the embedded non-finite T^0 rather than in Voice (my proposal), the general intuition would be that *not* follows rather than precedes *to*, as is the case in (84).

- (84) a. I *cannot* read the book
 b. *I *not* can read the book

Nonetheless, *not* can precede *to* (and in fact this order seems to be preferred) in both ECM and subject control contexts, as (85) shows.

- (85) a. I want John *not* to go a'. I want John to *not* go
 b. I want *not* to go b'. ??I want to *not* go

If *to* is assumed to be located in Voice, the facts in (85) are easily explained, since English has both sentential and constituent negation (see section 3). In (85a,b) we would be speaking of sentential negation, whereas in (85a',b') we would be speaking of constituent negation, while the position of *to* on Voice is constant. If *to* is assumed to be in T , on the other hand, the facts in (85) are hard to explain, given that T in English appears to be higher than NegP (ie., 84).

Next I offer a summary of my account.

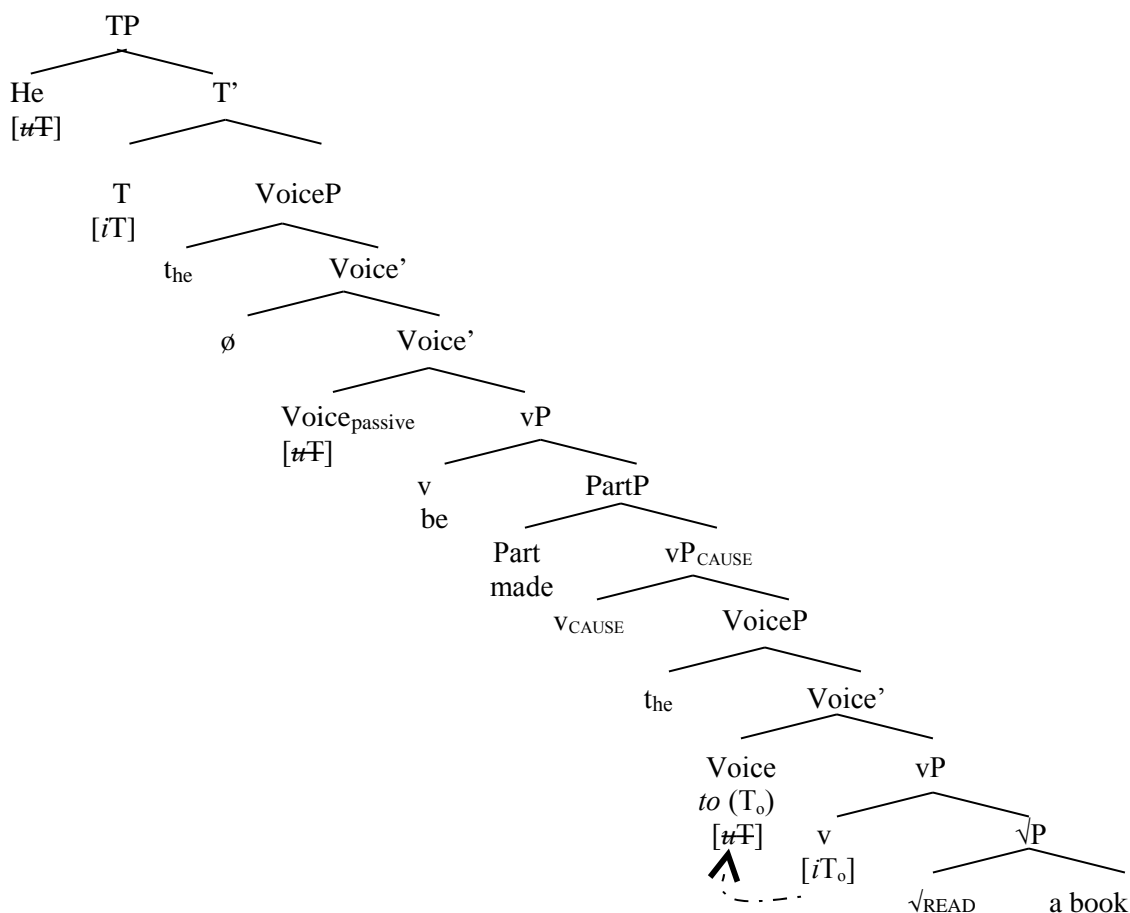
¹⁰¹ I am indebted to Heidi Harley (p.c.) for noticing this asymmetry and providing me with the examples that illustrate it.

4.6. Summary

The structure of passive causatives with *make*, as just explained, is shown in (86).

(86) *passive causatives*

‘He was made to read a book’



The diagram in (86) shows the agreement relations created in a passive causative. It shows that matrix T (finite T), v_{CAUSE} and embedded v all contain iT . Both matrix and embedded Voice heads contain $\#T$. Matrix T establishes an Agree relation with matrix Voice. The structure still contains an unvalued $\#T$, but matrix T is unavailable for probing. The second T in the matrix domain, T_o , is also unavailable for probing

downward, as a consequence of passive syntax.

As a last resort operation, embedded T_o is raised to embedded Voice. Its iT feature values the uT feature on Voice and deletes it. T_o on Voice is morphologically realized as *to*. This is what explains the asymmetry between active and passive causatives: active causatives do not exhibit *to* because uT on Voice is successfully deleted by matrix T_o and embedded T_o does not need to be raised to Voice.

4.7. Passive causatives not containing Voice

Causative *make* does not always take verbal complements. It may take nominal and adjectival complements as well.

(87) *active ‘make’*

a. *nominal complement*

The committee made [_{SC} Mary the department head]

b. *adjectival complement*

The committee made [_{SC} Mary extremely happy]

The complements of *make* in (87) are not verbal so they do not contain Voice. Instead, they are small clauses, as the notation indicates. In (87a), the two members of the SC are the DP *Mary* and the DP *the department head*. In (87b), the SC consists of the DP *Mary* and the AP *extremely happy*. Non-verbal complements of *make* differ from their verbal counterparts in the absence of *to* when *make* appears in the passive form.

(88) *passive ‘be made’*

a. *nominal complement*

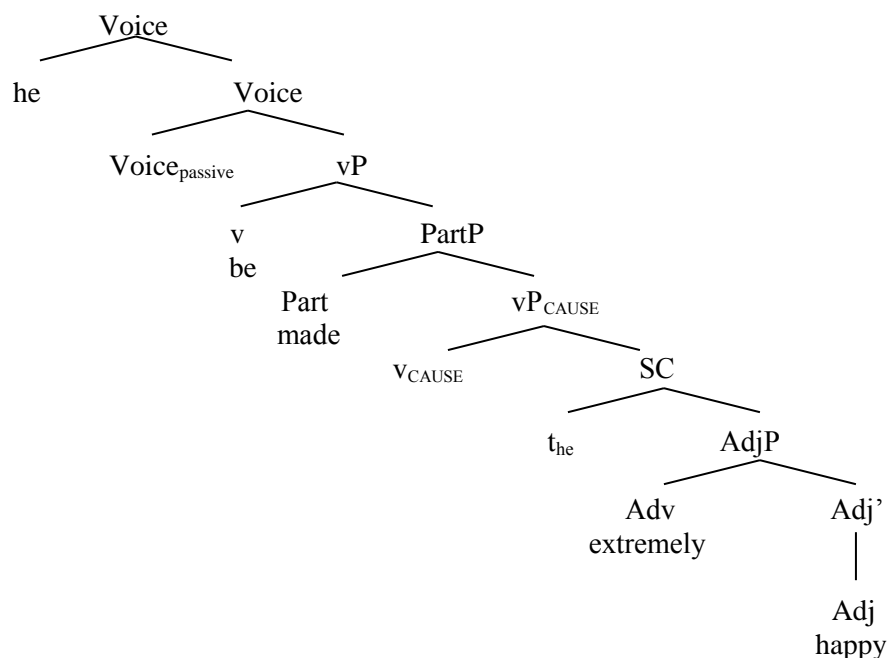
Mary was made (*to) the department head

b. *adjectival complement*

Mary was made (*to) extremely happy

The facts in (88) are consistent with the analysis of *to* developed in this section. Because only verbal complements of *make* contain Voice [*uT*], only verbal complements need the movement of a lower element containing [*iT*] (ie., *T_o*) to be raised to Voice. Because *to* is the morphological realization of *T_o* raised to Voice, it makes sense that this element does not appear in environments in which *make* embeds structures not containing Voice (ie., nominal and adjectival complements (88)). Next I offer the structure of (88b).

(89) *passive ‘make’ takes an adjectival SC as a complement*



In (89) *to* does not appear in the structure embedded by *was made* because this structure does not need to establish the kind of agreement relations required by verbal complements (ie., complements containing Voice).¹⁰²

¹⁰² Note that, throughout this section, all kinds of vPs including stative and passive vPs involve a VoiceP.

This subsection has provided further evidence for the analysis proposed in which *to* is the morphological realization of T_0 raised to Voice. In the last section, I compare the syntax of causative *make* with the syntax of causative *cause*. I argue that, in this case, *cause* has different selectional restrictions than *make*, which causes the appearance of *to* in both active and passive environments.

4.8. *Cause to*

Unlike *make*, the English productive causative *cause* exhibits *to* in both active and passive environments.

(90) *make* vs. *cause*

	(a) active	(b) passive
<i>make</i>	<i>I made Mary (*to) fail</i>	<i>Mary was made to fail</i>
<i>cause</i>	<i>I caused Mary to fail</i>	<i>Mary was caused to fail</i>

I propose that the contrast exhibited in (90) is the consequence of differences in the complements that *make* and *cause* take. While *make* takes Voice complements, *cause* takes CP complements containing a non-finite T. This is shown by the fact that the complement of *cause* allows negative and perfective complements.

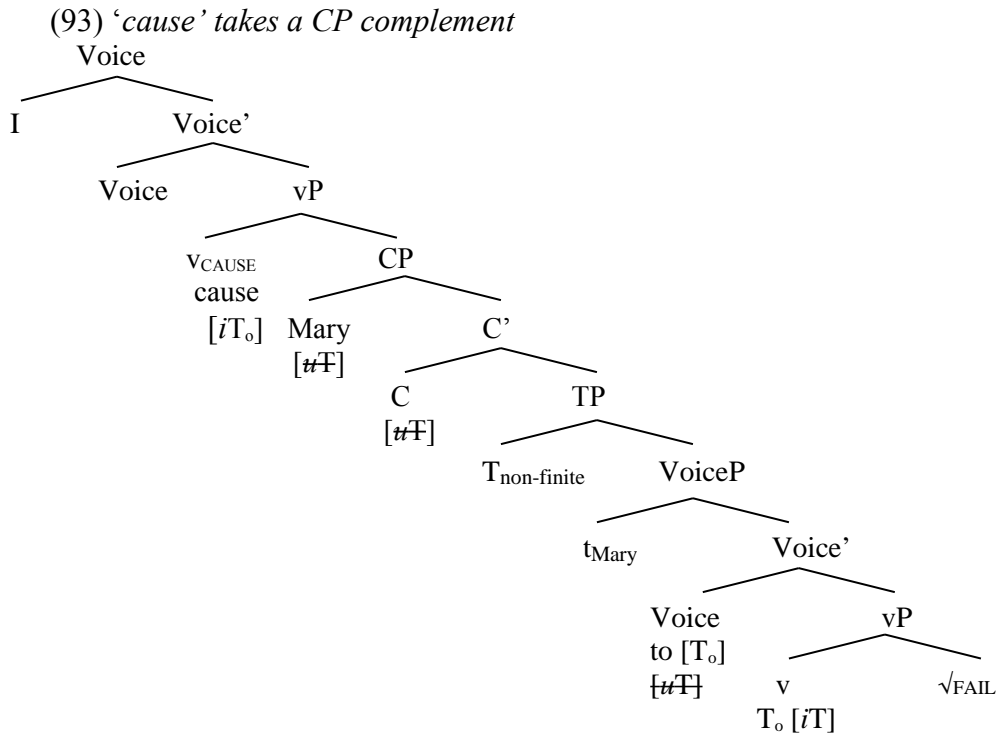
- (91) a. Maryland reports state tests caused eleven students *not* to graduate (google)
 b. This is what caused him to *have been* killed (google)

Compare the sentences in (91) with their *make* counterparts:

- (92) a. *State tests *made* eleven students not graduate
 b. *This is what *made* him have been killed

Recall from previous sections that the inability for *make* to contain negative and

perfective complements is a sign that they are lacking T. TP projections are contained within CP phases. I suggest, then, that if the complement of *cause* contains a TP, as the data in (91) appears to indicate, then the complement of *cause* also contains a CP. I show the structure in (93).



The tree in (93) shows the structure of active *cause*. This productive causative head selects a CP complement that contains non-finite T. This T head contains *iT* but it is not eligible to probe features downward because of its defective nature, as explained above. The T_o contained in v_{cause} values both uT features on the accusative DP *Mary* and the embedded C head. However, the embedded Voice head still needs to have its uT feature valued by some head containing *iT*. It cannot be done by non-finite T, as explained above. As in section 4.5. above, the structure resorts to the raising of embedded T_o to

Voice, that results in the overt realization of *to*, both in active and passive environments.

5. Summary and conclusion

In this chapter I have discussed the syntax of English productive causative *make*. I have argued that the only relevant characteristic that establishes differences between two English productive causatives (*make* and *cause*) and their lexical counterpart (realized by zero morphology) is made in terms of the selectional properties of the causative heads. While English direct productive causatives take phase complements (they are phase-selecting in Pylkkänen's terms) their lexical counterparts take root complements. The two productive causatives *make* and *cause* are distinguished in terms of the kind of phase each embeds. While *make* embeds a VoiceP phase, *cause* embeds a CP phase.

The second half of this chapter has discussed an important element relevant to the syntax of productive causatives of, at least, European languages: the agreement relations created between constituents within clauses. Agreement relations in European languages give way to subject-verb agreement, the movement of constituents and the appearance of elements with functional but not semantic import. I have argued that this is probably what explains the appearance of *to* in certain environments, such as within the complement of passive *make* as well as within the complement of *cause*, as discussed in section 4.

In the following chapter, chapter 5, I will show that productive causatives do not always take phase complements, as is the case of English and Hiaki indirect causatives.

CHAPTER 5

PRODUCTIVE CAUSATIVES: HIAKI

0 Introduction¹⁰³

In this chapter, I examine the syntax of Hiaki productive causatives. Hiaki productive causatives are morphological (ie., suffixal) rather than analytical (ie., periphrastic, like English *make* and Spanish *hacer* ‘make’). In this chapter I show that the different types of Hiaki causatives (ie, lexical, direct and indirect) are contrasted in both a) their morphological realization (ie., different causative types may involve the realization of different suffixes) and b) their complement distribution (ie., each type exhibits different selectional properties). In this sense, Pylkkänen’s (2002, 2008) approach to causatives is clearly reflected in the syntax of Hiaki.

Hiaki causatives coincide with English causatives in their selectional properties but differ from them in their voice-selecting properties:

- a) Lexical causatives in both Hiaki and English are root selecting. Their morphological realization can be null (Ø) in both languages although, in some cases, the suffixes used in lexical causatives may overlap with those used for productive causatives, as we will see. Unlike English, Hiaki lexical causatives show non voice-bundling properties.
- b) Direct productive causatives in both Hiaki and English are phase-selecting, as they embed structures containing Voice. Their morphological realization is the suffix *-tua* (Hiaki) and the functional head *make* (English). Although Hiaki direct

¹⁰³ Most of this chapter is the result of work with Heidi Harley and Jason Haugen, as part of Heidi Harley’s NSF funded project The Morphosyntax of Hiaki Verbs (NSF Project #BCS-0446333). I thank Maria Florez Leyva and Santos Leyva for their generosity and patience sharing with us their native knowledge of the Hiaki language. This chapter has been partially funded by an University of Arizona SBSC dissertation grant to M. Tubino Blanco.

causatives are normally associated with an external argument, they can appear in the absence of it, a property of non voice-bundling causatives.¹⁰⁴

- c) Indirect productive causatives in both Hiaki and English are verb-selecting. They exhibit a causative head that varies from their direct counterparts, the suffix *-tevo* (Hiaki) and the functional head *have* (English).¹⁰⁵

Hiaki and English productive causatives also exhibit formal differences. I will argue that these are the result of typological contrasts between these two languages regarding the need for English (but not Hiaki) T(ense) to be identified (ie., to establish Agree relations) with other clausal elements connected to it.¹⁰⁶

The chapter is divided as follows: In Section 1 I introduce productive causatives in Hiaki; in Section 2 I discuss direct productive and lexical causatives in Hiaki; in section 3 I address indirect productive causatives; in section 4 I discuss the combined direct-indirect causative in Hiaki; in section 5 I conclude that Hiaki productive (and lexical) causatives conform to the typology set up by Pylkkänen.

1. Hiaki productive causatives: The data

1.1. Morphological causatives

Hiaki productive causatives are morphologically formed by the addition of causative suffixes to verbal roots (1)

¹⁰⁴ English productive causatives cannot appear in the absence of an external argument, which would make them pattern with Voice-bundling causatives. Nonetheless the Voice-bundling properties of English productive causatives were not discussed in Chapter 4 as they do not appear to be relevant to the syntax of these constructions.

¹⁰⁵ In this dissertation I do not discuss the syntax of English indirect causatives with *have*. See, for instance, Ritter & Rosen (1993), or Harley (1998) for discussion on this causative type.

¹⁰⁶ This chapter concentrates on causatives in Hiaki. For further details on the syntax of English causatives see chapter 4.

(1) Hiaki productive causatives are suffixal

a. Direct causatives

Maria Santos-ta vuiti-*tua*

Maria Santos-acc run(sg.subj)-cause

'Maria is making Santos run'

b. Indirect causatives

Maria Santos-ta hitto-*tevo*

Maria Santos-acc cure-cause(indir)

'Maria is having Santos cured'

Hiaki exhibits two main forms of productive causatives. In (1a), the suffix *-tua* forms productive direct causatives that translate into English *make*. The causative suffix *-tevo* in (1b) forms indirect causatives, corresponding to English *have* with a passive participle as complement. In the next subsection I introduce the argument structure of each of these causative suffixes.

1.2. Types of verbs embedded by productive causatives

The causativizing suffixes *-tua* and *-tevo* are compatible with verbal roots of several different kinds.

(2) Direct causative

a. Transitive root –*hitto* 'cure'Maria [hitevi-ta uusi-ta *hitto*]-tua-k

Maria [doctor-acc child-acc treat]-cause-perf

'Maria made the doctor treat the child'

b. Unergative root –*vamse* 'hurry'¹⁰⁷aapo [si yee va-*vamih*]-tua

3sg [very people red-hurry]-cause

'He always makes people hurry up'

c. Unaccusative root *yepsa* 'arrive (sg.subj)'Hose [Peo-ta lauti *yevih*]-tua-k

Joe [Pete-acc early arrive(sg.subj)]-cause-perf

'Joe made Pete arrive early'

¹⁰⁷ In Hiaki, verbs typically exhibit two forms, a free form (ie., *vamse* 'hurry up') and a bound form (ie., *vamih*- 'hurry up'). The latter form is the one used along with suffixes (ie., *vamih-tua* 'hurry-cause').

(3) Indirect causative

a. Transitive root *hitto* ‘treat’Maria [uusi-ta *hitto*]-tevo-k

Maria [child-acc treat-cause(ind)]-perf

‘Maria had the child treated’

b. Unergative root *vamse* ‘hurry’aapo hiva [va-*vamih*]-tevo

3sg always [red-hurry]-cause(ind)

‘He always has (people) hurry up’

c. Unaccusative root *yaha* ‘arrive (pl.subj)’Inepo [aman *yahi*]-tevo-k

1sg [there arrive(pl.subj)]-cause(ind)-perf

‘I had some people arrive there’

Neither sentence in (2-3) seems to exhibit any restrictions regarding potential incompatibilities with verb types, regardless of whether they are causativized by *-tua* (2) or *-tevo* (3). Thus, both *-tua* and *-tevo* may embed transitive *hitto*-‘cure, treat’ (2a,3a), unergative *vamih*- ‘hurry’ (2b,3b), and unaccusative stems *yevih*- ‘arrive(sg.subj)’ or *yahi*- ‘arrive(pl.subj)’ (2b,3c). In the next subsection, I show a contrast in the number of arguments licensed by *-tua* and the number of arguments licensed by *-tevo*.

1.3. The arguments of Hiaki productive causatives

1.3.1. A contrast between *-tua* and *-tevo*

Hiaki productive causatives *-tua* and *-tevo* exhibit a contrast in the number of arguments they may license. The sentences in (4) involve the same embedded root, *sua* ‘take care of’. When this root is causativized by *-tua* (4a), the resulting structure exhibits a higher number of arguments than the analogous causative with *-tevo* (4b).

(4) Argument structure of productive causatives

a. <i>-tua</i>	b. <i>-tevo</i>
Nee [Art-ta ne sua]-tua	Inepo [ino sua]-tevo
1sg [Art-acc 1sg take.care]-cause	1sg [1sg(refl) take.care]-cause(ind)
'I'm making Art take care of me'	'I'm having myself taken care of'
	(cf. I'm having somebody guard me)'

The direct causative in (4a) involves three arguments, a) a causer *nee* 'I', b) a causee *Art-ta* 'Art-acc', and c) an embedded object *ne* 'me'. The indirect causative in (4b), in turn, involves two arguments, a) a causer *inepo* 'I', and b) an embedded object, the reflexive *ino* 'myself'.¹⁰⁸

Thus, both *-tua* and *-tevo* license nominative causers. Depending on the nature of the embedded root (ie., if it is transitive, as in the case of (4)), both *-tua* and *-tevo* may exhibit embedded objects. The main contrast exhibited between the two causative heads in Hiaki involves the presence versus the absence of a causee argument. I discuss this in detail in the next subsection.

1.3.2. The causee argument

The two causative suffixes are contrasted in the presence (*-tua*) versus the absence (*-tevo*) of a causee argument.

1.3.2.1. *-tua* requires an explicit causee

Sentences involving *-tua* require an obligatory causee, as the ungrammaticality of the sentence in (5) indicates.

¹⁰⁸ Hiaki pronouns exhibit both stressed and unstressed forms. In the sentences in (4), *nee* is the 1sg unstressed form; *inepo* is its stressed counterpart.

- (5) *Maria [uusi-ta hitto]-tua-k
 Maria [child-acc treat]-cause-perf
 ‘Mary made treat the child’

The sentence in (5) is ungrammatical because the causee argument (ie., the person treating the child) has been syntactically omitted.

1.3.2.2. *-tevo* generally disallows an explicit causee

Indirect causatives with *-tevo* generally disallow a causee argument, as (6) shows.

- (6) Santoh-ta achai [(**aa yoemia-wa*) vachi-ta et]-tevo
 Santos-acc father [(**3sg.acc sons-poss*) corn-acc plant]-cause(ind)
 ‘Santos’ father had the corn planted’ *(by his sons)

The sentence in (6) is ungrammatical if the structure embedded by *-tevo* contains an explicit causee (ie., *aa yoemiawa* ‘his sons’). The only arguments allowed in structures embedded by *-tevo* are internal arguments licensed by the root, as is the case with the embedded object, *vachi-ta* ‘corn-acc’, in (6).

In sentences like (7), in which *-tevo* embeds an intransitive stem (eg. *vamih* ‘hurry’), no embedded argument is allowed, as the ungrammaticality of the overt causee *yee* ‘people’ indicates:

- (7) aapo hiva [(**yee*) va-vamih-]tevo
 3sg always people red-hurry-cause(ind)
 ‘He’s always having (*people) hurry’

The prohibition of explicit causees in indirect causatives just shown in (6) and (7) illustrates the general pattern exhibited by these structures in Hiaki.

1.4. Summary

In this section I have introduced the basic data that illustrates productive causatives in Hiaki. I have shown the two main types, direct productive causatives with *-tua* and indirect productive causatives with *-tevo*. Both causative types share some morphological and syntactic traits. Morphologically, both causatives are verbal suffixes. Syntactically, both causative suffixes involve the introduction of a causer argument to the argument structure of the sentence they participate in. However, they show a crucial contrast: while *-tua* involves overt causers and causees, *-tevo* exhibits overt causers while it is generally incompatible with overt causees. In this chapter I will show that this contrast reflects a difference regarding the selectional properties of each of these causative heads. In the next section I concentrate on the properties of the Hiaki direct causative head *-tua*.

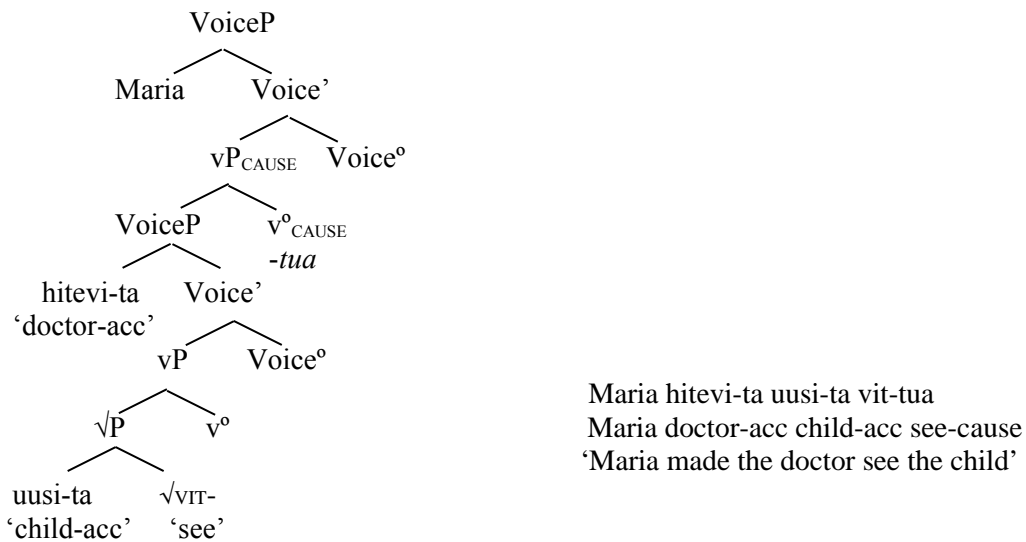
2. The direct causative *-tua*

In this section I discuss the syntax of the direct causative *-tua* in Hiaki. This causative head is used to form both productive and lexical direct causatives in Hiaki. I address the productive causative first.

2.1. Productive *-tua*

2.1.1. The v_{CAUSE} occupied by productive *-tua* selects VoiceP

In the previous section I have shown preliminary examples involving the direct productive causative in Hiaki, *-tua*. In (8) I show an example of *-tua* embedding the transitive root *vicha* ‘see’.

(8) Active direct causative with *-tua* embedding a transitive root

In (8), the direct causative head *-tua* embeds an eventive transitive structure that contains its own external argument, *hitevi-ta* 'doctor-acc'. This means, as shown in previous chapters, that the structure embedded by *-tua* contains VoiceP. In Pylkkänen's framework, this type of causative head is termed Phase-selecting, just like English *make*, discussed in Chapter 4. Nonetheless, the morphological properties of Hiaki verbal stems pose problems for the 'phasal' status of *-tua*.

2.1.2. Is *-tua* phase selecting?

We just saw that *-tua* causatives select VoiceP as their complement. In Pylkkänen's terms, this property makes them qualify as *phase*-selecting. If VoiceP is a phase in Hiaki, and *-tua* selects a (completed) VoiceP phase, then we would predict that no morphological allomorphy may be exhibited by the verbal stems embedded by *-tua*. This is so since, according to phase theory (Chomsky 2000 and subsequent work), the

complement of a phase head is sent out to Spell-Out (ie., to PF and LF) once the phase has been completed.

Nonetheless, this is apparently not borne out in Hiaki. Hiaki exhibits verb-stem allomorphy that becomes apparent after certain suffixes are added to stems. Among these suffixes are *-tua* and *-tevo* (9).

- (9) a. Maria aman *vuite*
 Maria there run(sg.subj)
 ‘Maria is running’
- a’. Santos Maria-ta aman *vuiti-tua*
 S. M.-acc there run(sg.subj)-cause
 ‘Santos is making Maria run’
- b. U hitevi ume uusi-m *vicha-k*
 The doctor det(pl) child-pl see-perf
 ‘The doctor has examined the kids’
- b’. Maria ume uusi-m *vit-tevo-k*
 det(pl) child-pl see-cause(ind)-perf
 ‘Maria had the kids examined’

As shown in (9), both singular forms of the Hiaki verb for ‘run’ *vuite* ‘run(sg.subj)’ and the verb *vicha* ‘see, examine’ exhibit stem allomorphy in the context of the causative suffixes *-tua* (9a) and *-tevo* (9b).

Many other suffixes also trigger stem allomorphy along these lines. Here is a (non-exhaustive) list:

(10) Some Hiaki suffixes that trigger stem allomorphy

-tua (cause)	-wa (pass)	-su (compl)	-se / -vo (go to)	-pea (desid)	-yaate (cess)
-tevo(cause)	-ne (fut)	-la (ppl)	-taite (inch)	-‘ii’aa (desid)	-mahta ‘teach’
-ria (appl)	-tu(become)	-ri (ppl)	-naate (inch)	-hapte (inch)	-sae (dir)

In contrast, aspectual and discursive suffixes do not trigger stem allomorphy. The following chart shows Hiaki suffixes that do not trigger stem allomorphy.

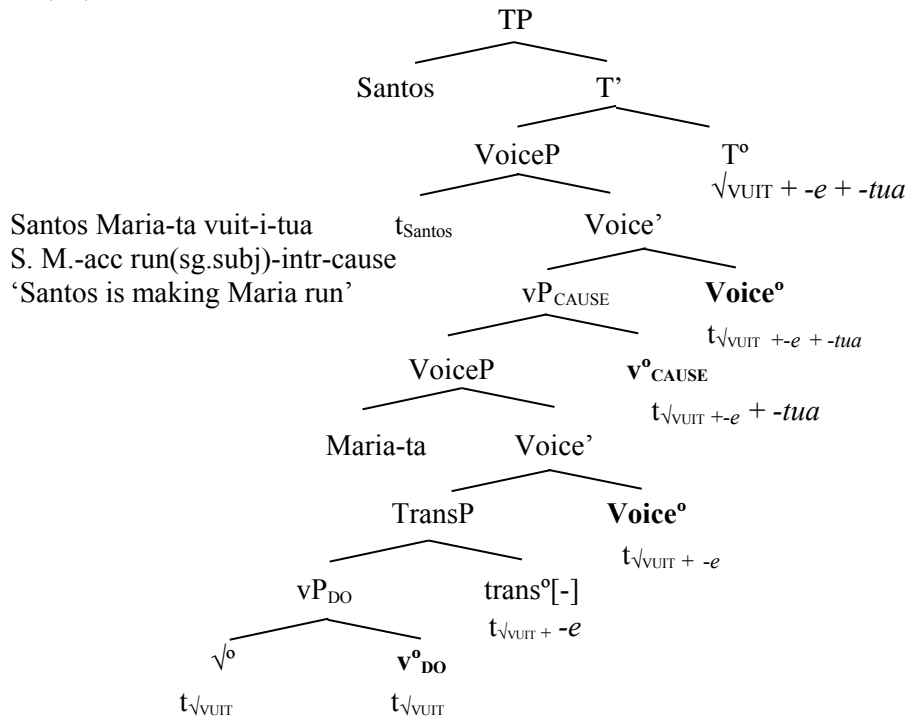
(11) Hiaki suffixes that do not trigger stem allomorphy

-k (perf)	-ka (ppl)	-n (imper)	-tia (disc)	-o (if/when)	-kan (past part)
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The facts in (10) suggest, a priori, that VoiceP should not be a phase in Hiaki because *-tua* or the future suffix *-ne* (among other suffixes) trigger stem changes yet these suffixes need to appear above VoiceP.¹⁰⁹

However, this doesn't have to be the case, if we assume head movement of the verbal roots all the way up to the head of the phase Voice°, as in (12).

(12)



The diagram in (13) shows the Spell-Out of the verb *vuititua* 'make run(sg.subj) at the

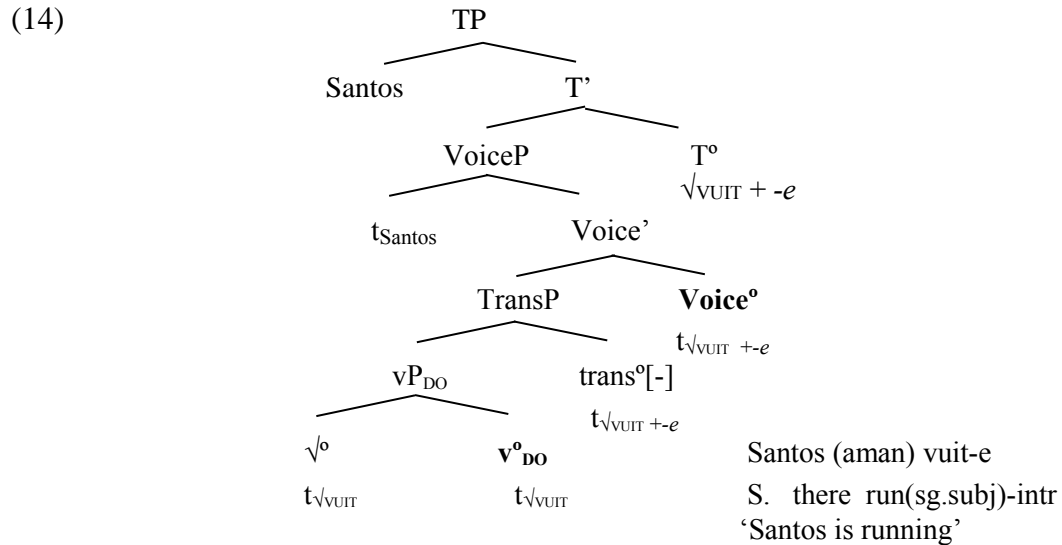
¹⁰⁹ Other suffixes that need to appear above VoiceP are the directive *sae*, the desiderative *'ii'aa* or the instructive *mahta* 'teach' because they require external arguments as their complements (i).

(i) Maria Santos-ta vuiti-'ii'aa
Maria Santos-acc run(sg.subj)-des
'Maria wants Santos to run'

stages of the derivation that appear in bold face in (12).^{110,111}

- (13) a. vP : $[_{vP(do)} [v^o(do) \sqrt{v_{UIT}}] \rightarrow vuit$
 b. VoiceP Phase (under *-tua*): $[_{VoiceP} [_{Voice^o} \sqrt{v_{UIT}} + -e] \rightarrow vuite$
 c. vP_{cause} : $[_{VP(cause)} [v^o(cause) \sqrt{v_{UIT}} + -e + -tua] \rightarrow vuititua$
 d. VoiceP Phase (above *-tua*): $[_{VoiceP} [_{Voice^o} \sqrt{v_{UIT}} + -e + -tua] \rightarrow vuititua$

Compare the derivation in (12) with the derivation of its non-causative counterpart:



The Spell-Out of the verb forms is given in (15):

- (15) a. vP : $[_{vP(do)} [v^o(do) \sqrt{v_{UIT}}] \rightarrow vuit$
 b. VoiceP Phase: $[_{VoiceP} [_{Voice^o} \sqrt{v_{UIT}} + -e] \rightarrow vuite$

¹¹⁰ The verb *vuite* 'run(sg. subj)' is suppletive for number agreement with its subject. In this sense, if the subject is singular the root *vuite* is used. If the subject is plural, the root *tenne* appears, as in (i).

(i) Maria into Santos aman tenne
 Maria and Santos there run(pl.subj)
 'Maria and Santos are running over there'

Harley et al. (2009) argue that number agreement in these verbs is triggered by an underlying object (ie., the subject *Maria into Santos* 'Maria and Santos'), which suggests that verbs such as *vuite/tenne* 'run' are unaccusatives in Hiaki. I assume this classification of intransitive suppletive verbs as unaccusatives rather than unergatives, but I ignore it in (12) for ease of exposition.

¹¹¹ I'm ignoring a $TransP$ projection above vP_{cause} , although it may be assumed. See chapter 3 for further details.

Thus, in a Hiaki derivation, roots (eg., $\sqrt{\text{VUIT}}$) move all the way up to T^0 via head-to-head movement (Travis (1984)). The combination of the raised roots with the functional material that is present in some of these heads (ie., $-e$, present in trans^0 , $-tua$, present in v^0_{CAUSE}) has repercussions on the pronunciation of the roots at different stages of the derivation. Thus, the present account is compatible with an analysis in which the productive causative $v^0_{\text{CAUSE}}(-tua)$ is phase selecting (ie., embeds VoiceP phases). Next, I discuss the non Voice-bundling nature of Hiaki productive causatives.

2.1.3. Direct causative $-tua$ is non Voice-bundling

Hiaki verbal suffixes have been shown to occupy the head position of the phrases they are associated with. In the analysis proposed for $-tua$ causatives in (8) and (12) above, $-tua$ occupies the v^0_{CAUSE} head. Recall that in Pylkkänen's framework, certain types of causative heads form a bundled head with Voice, both appearing in the same syntactic position. Recall that this was the case of English root (zero) causative, discussed in chapter 3.

Hiaki $-tua$ tends to appear along with a causer argument (cf., an external argument base-generated in a Voice^0 position). However, $-tua$ and the syntactic head that introduces the causer argument involve independent projections in Hiaki. Evidence coming from the passivization of causatives in Hiaki supports this idea.

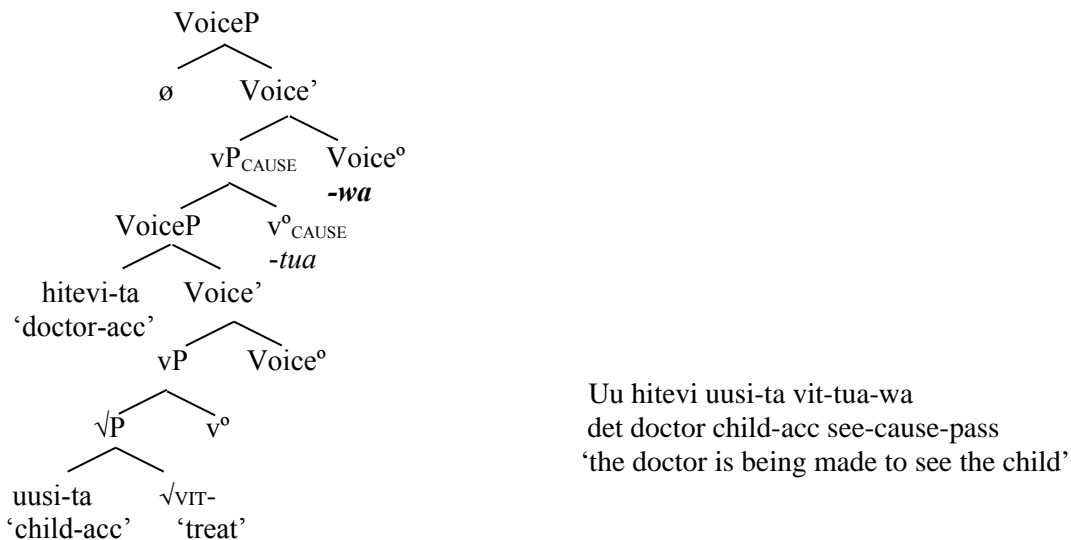
The passive $-wa$ forms passives in Hiaki. Causative sentences with $-tua$ become passive if the suffix $-wa$ is added to them. The example in (16) shows the passivization of the causative sentence analyzed in (8).

(16) Passivized direct causative with *-tua*

Uu hitevi uusi-ta vit-tua-**wa**-k
 det doctor child-acc see-cause-pass-perf
 ‘The doctor was made to see the child’

The passive suffix *-wa* has been argued to appear as the head of VoiceP, whose specifier position is null (\emptyset) (Jelinek (1997), Jelinek & Escalante (1987), Harley (2007)).

According to this, the sentence in (16) may be analyzed as in (17).

(17) *-tua* occupies v°_{CAUSE} / *-wa* occupies Voice $^{\circ}$ 

The diagram in (17) shows the structure of a passivized causative with *-tua* in Hiaki.¹¹²

Each of the verbal suffixes occupies a different head position. Whereas the causative *-tua* appears as the v°_{CAUSE} head, the passive suffix *-wa* occupies the Voice $^{\circ}$ head. The causer typically involved in the syntax of productive causatives is, in turn, syntactically null (\emptyset), as a result of passivization.

¹¹² In this and the following diagrams included in this chapter, the head-to-head movement undergone by Hiaki roots and verbal material is not represented for the sake of simplification. It is nonetheless assumed, as discussed in the previous section, 2.1.2.

The syntax of passive causatives in Hiaki, illustrated in (17), suggests that the kind of v°_{CAUSE} realized by *-tua* cannot be Voice-bundling. This is so since two different syntactic positions, Voice° and v°_{CAUSE} , need to be available in order to host the two verbal suffixes, causative *-tua* and passive *-wa*, both necessary pieces in the passivization of *-tua*.¹¹³ In the next section I show a restriction against passive complements of *-tua*.

2.1.4. *-tua* disallows passive complements

We just saw that direct productive causative *-tua* is non Voice-bundling and phase-selecting. Because phase-selecting causatives embed Voice° , and the passive suffix *-wa* occupies Voice° in this language, it would be natural to think that *-tua* allows passive complements. However, this is not the case, as shown in (18).

(18) *-tua* disallows passive complements¹¹⁴

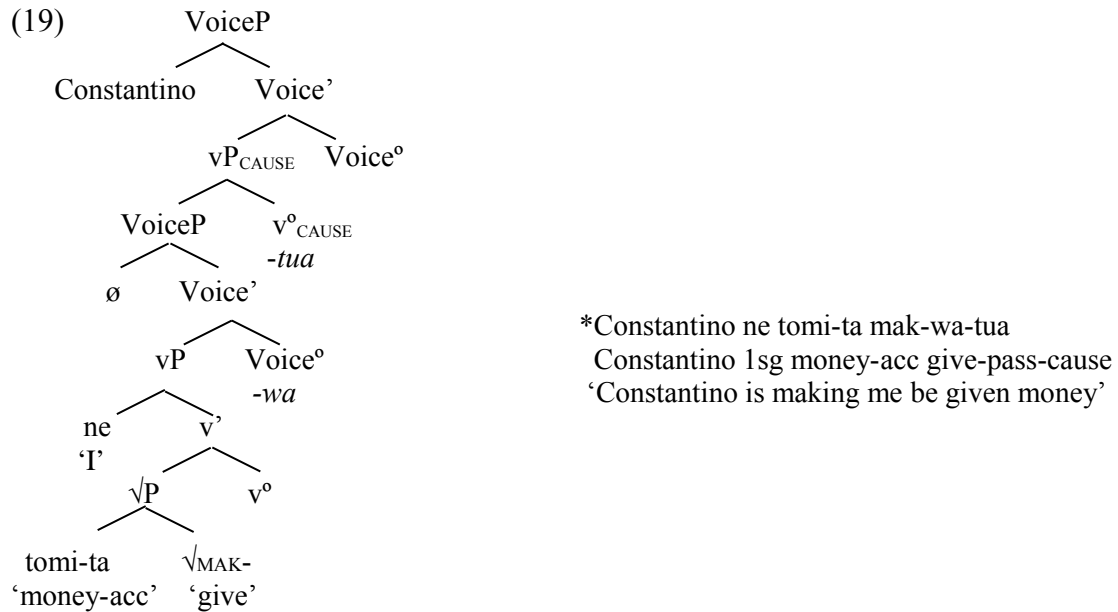
*Constantino [ne tomi-ta mak-wa]-tua-k
 Constantino 1sg money-acc give-pass-cause-perf
 ‘Constantino made me be given money’

The sentence in (18) exhibits the direct causative *-tua* embedding a passive complement.

I show the analysis in (19).

¹¹³ In section 4, below, I offer further evidence in favor of the separation of Voice° and v°_{CAUSE} in Hiaki productive causatives.

¹¹⁴ Thanks to Constantino Martínez (p.c.) for the data in this subsection.



The matrix clause in (18) exhibits its nominative causer, *Constantino*, licensed by the matrix VoiceP projection. The syntax of *-tua* is compatible with a complement containing Voice° (the head in which the suffix *-wa* is licensed). Nonetheless, sentences such as (17) are disallowed in this language.¹¹⁵

Two alternative explanations may account for the facts in (17). A first explanation has to do with a potential syntactic dependence between the passive suffix *-wa* and higher heads such as Mood°. Although the passive suffix *-wa* is base generated in Voice°, this suffix seems to be closely related to Mood°. Evidence of this comes from the phonological realization of the future passive, which, in Hiaki, is realized as the single

¹¹⁵ The embedded root $\sqrt{\text{MAK}}$ - 'give' in (18) licenses two internal arguments. This is the result of the ditransitive nature of this root. In here, I analyze the higher internal argument as the specifier of the light verb v and the lower internal argument as the complement of the root. This analysis is based on the original proposal in Larson (1988). For an analysis of ditransitives in Hiaki see also Estrada (2008) and Jelinek & Carnie (2003).

(portmanteau) suffix *-na*.¹¹⁶

- (20) a. The future passive suffix *-na* ‘pass.fut’
 b. **wa-ne* ‘pass-fut’

The fact that the passive future is realized as a single suffix suggests that the passive suffix *-wa* has some kind of connection with a higher head, probably MoodP, since the future suffix *-ne* is interpreted as irrealis and triggers root allomorphy in the same way as $v^{\circ}_{\text{CAUSE}}-tua$ does.

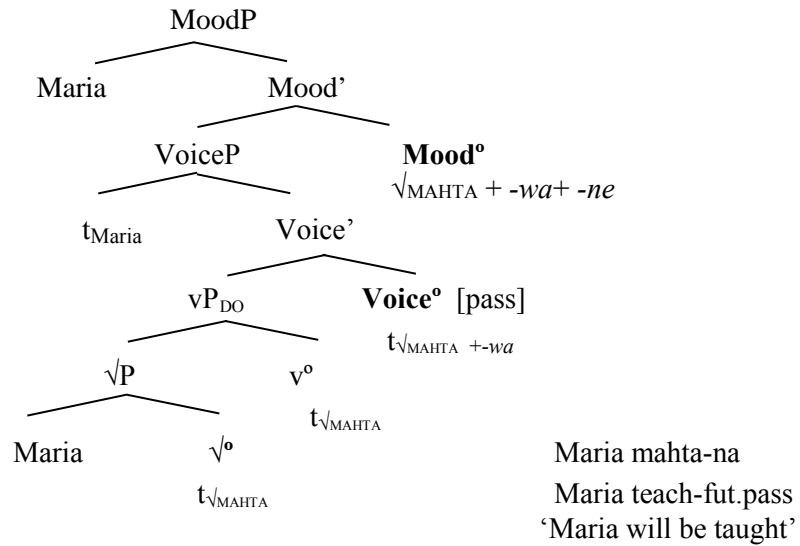
This suggests that *-ne* appears at a derivational stage lower than T° .¹¹⁷ Because of the head movement involved in Hiaki, when the material including the passive suffix *-wa* reaches Mood $^{\circ}$ whereby the future (or irrealis) suffix *-ne* resides, post-syntactic morphological operations combine the two suffixes into the portmanteau form *-na* (fut.pass). I show the structure in (21).¹¹⁸

¹¹⁶ Thanks to Heidi Harley (p.c.) for pointing this out to me.

¹¹⁷ It is important to note, however, that this does *not* mean that the future suffix *-ne* and the causative suffix *-tua* are base-generated in the same projection, because they are not: *-ne* is base-generated in a MoodP projection higher than the causative *-tua* and possibly lower than T° (although this cannot be proven since the future suffix *-ne* does not take T° suffixes such as the past tense suffix *-k*, for which this issue still requires further investigation).

¹¹⁸ In this diagram I ignored (but I assume) both TransP and the double specifier proposed for passive VoiceP.

(21)



In (22) I show the Spell-Out of the derivation at different stages:

- (22) a. VoiceP: $[_{\text{VoiceP}} [_{\text{Voice}^\circ} \sqrt{\text{MAHTA}} + \text{-wa}] \rightarrow \text{mahtawa}$
 b. MoodP: $[_{\text{MoodP}} [_{\text{Mood}^\circ} \sqrt{\text{MAHTA}} + \text{-wa} + \text{-ne}] \rightarrow \text{mahtana}$

Given (22) it is reasonable to think that, regardless of whether Mood° is occupied by *-ne* or not, Mood° immediately embeds VoiceP when its head is passive, maybe due to a restriction associated with passive VoiceP, which, according to Chomsky (2000 and subsequent work), does not constitute a strong phase.¹¹⁹ Because VoiceP is the highest position licensed in the complement of *-tua*, the passive *-wa* would not be properly licensed in this context, given its dependence of the higher head Mood° .

An alternative explanation to the restriction in (23) has a morphological basis. As we saw in the introductory section, Hiaki exhibits the indirect causative suffix *-tevo* in addition to the direct causative suffix *-tua*. The suffix *-tevo* syntactically suppresses the external argument of the structure it embeds, as seen in section 1.3.2.2. above. This is exactly

¹¹⁹ Thanks to Heidi Harley (p.c.) for this idea.

what *-wa* does as the complement of *-tua* in (18), it suppresses the external argument. I show the equivalent of (18) with *-tevo* in (24).

- (24) Constantino ne tomi-ta mak-tevo-k
 Constantino 1sg money-acc give-cause(ind)-perf
 ‘Constantino had somebody give me money’

Because *-tevo* takes complements with no external argument, indirect causatives in Hiaki (24) involve a passive interpretation of the complement of *-tevo*. It is possible, then, that Hiaki bans passive complements of *-tua* (ie., complements of *-tua* in which the external argument has been suppressed) because it has a specialized causative suffix, *-tevo*, that takes complements in which the external argument has been suppressed.¹²⁰ This would be an instance of morphological *blocking*, dictated by the Subset Principle by Halle (1997), as shown in (25).¹²¹

(25) Subset Principle

The phonological exponent of a Vocabulary Item is inserted into a morpheme if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary Item contains features not present in the morpheme. Where several Vocabulary Items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

As in Harley & Noyer (1999: 9)

The description in (25) suggests that, given two Vocabulary Items that compete for insertion in a single syntactic slot, the Vocabulary Item that is the most specific one is chosen over the most poorly specified one. The morphological specifications for *-tua* and *-tevo* along these lines are given in (26).

¹²⁰ The syntax of *-tevo* will be discussed in detail in section 3.

¹²¹ See Kiparsky (1993), Andrews (1990), Halle & Marantz (1993), Halle (1997), Harley & Noyer (1999), Embick & Marantz (2008) for several explanations of morphological blocking.

require two different syntactic positions to be generated in the syntax of the sentences in which they appear. In a configuration in which the causative head occupies a bundled Voice/ v^o_{CAUSE} head, the passive suffix *-wa* would be lacking a syntactic position in which to appear.

I also showed that *-tua* cannot embed passive structures with *-wa* despite the fact that this head embeds Voice o , the head in which *-wa* is base generated. I argued that this restriction is the consequence of a dependency relation between *-wa* and the structurally higher head MoodP, which prevents *-tua* from directly embedding VoiceP. In the next section I show a further use of productive *-tua*.

2.2. Other uses of productive *-tua*

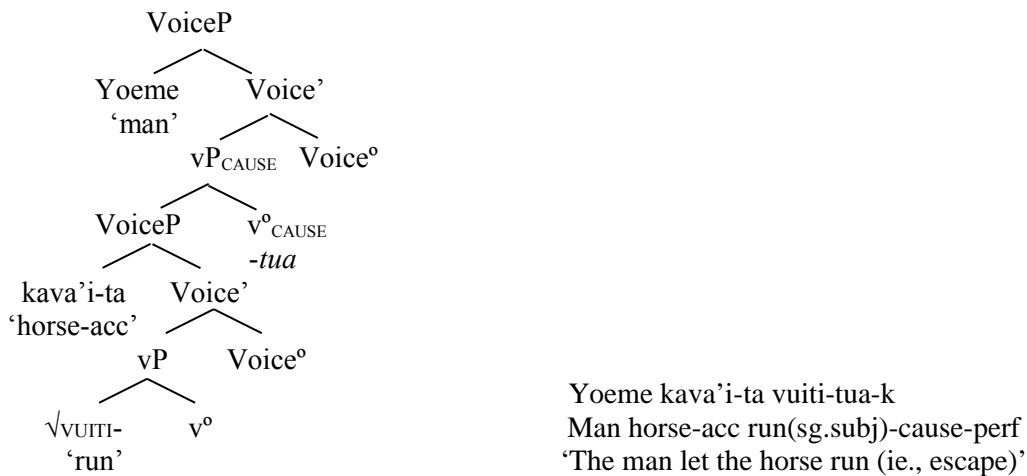
2.2.1. ‘To pretend’

Hiaki direct causatives in which the causer and causee are correferent have the idiomatic meaning ‘to pretend’. This is shown in (27).

- (27) Mercedes_i [au_i kot]-tua
 Mercedes_i [3sg(refl)_i sleep]-cause
 ‘Mercedes is pretending to be asleep,
 lit. Mercedes is making herself sleep’

The sentence in (27) exhibits a direct productive causative with *-tua* in which the causer *Mercedes* and the causee *au* ‘herself’ are correferent. In such cases, the interpretation of the causative is ‘to pretend’.¹²³

¹²³ See chapter 6 for an analogous structure in Spanish.

(29) Analysis of *-tua* with ‘let’ interpretation

The sentence in (29) has the typical structure of a productive causative with *-tua* in Hiaki. The causative *-tua* phase selecting, as it takes as a complement a structure containing Voice°, which introduces the accusative causee *kava'ita* ‘the horse’. The causative head in (29) is also non Voice-bundling, as indicated by the projection of matrix VoiceP as independent from the causative projection.

The causative *-tua* in (29) is then identical to the typical direct productive causative in Hiaki meaning ‘make’. This suffix, however, may appear sometimes as having different selectional properties. In these cases, the causative is interpreted as ‘lexical’. I discuss these cases in the following subsection.

2.3. Nominal and Root complements of *tua*

A class of lexical causatives may be formed by the addition of the suffix *-tua* to both non-verbal and verbal roots. In the next subsection I discuss the syntax of this causative type.

2.3.1. Nominal complements of *-tua*

According to Guerrero (2004), the causative suffix *-tua* may combine with any kind of predicate to form direct causatives, including ‘nouns, stative, intransitive, transitive and even ditransitive verbs’ (p. 165). For instance, the following examples in which *-tua* embeds ‘nouns’ have been taken from Guerrero.

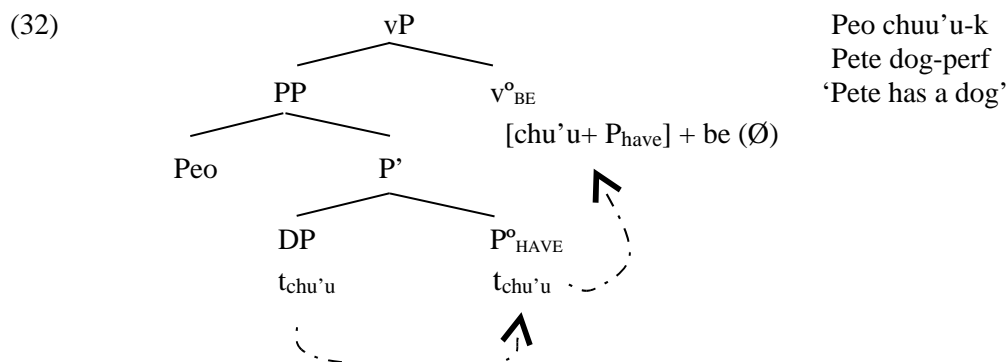
- (30) a. Nim mala yo’owe bwam-ta o’-*on-tua*
 1sg:gen mother old food-acc red-salt-cause
 ‘My grandmother is salting the food’ (lit. causing the food to have salt)
- b. Peo kari-ta *vepaa-tua*-vae
 Pete house-acc roof-cause-des
 ‘Pete wants to roof the house’ (lit. wants to cause the house to have a roof)
 Guerrero (2004: 166[15a, 15c])

In (30), *on-tua* ‘salt-cause, to salt’ and *vepaa-tua* ‘roof-cause’ seem to be nouns directly embedded by the causative *-tua*. In fact, *-tua* appears embedding denominal verbs of the type analyzed by Haugen (2004), shown in (31).¹²⁴

- | | |
|---|--|
| (31) a. Peo chuu’u
Pete dog
‘Pete is a dog’ | b. Peo chuu’u-k
Pete dog-perf
‘Pete has a dog’
Haugen (2004: 230[1a,b]) |
|---|--|

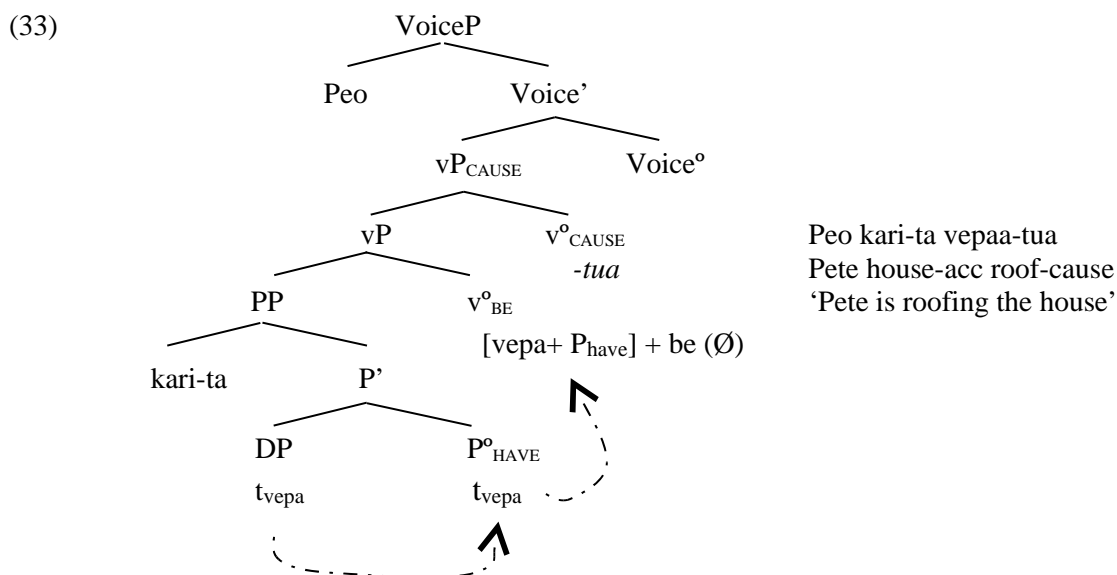
Haugen proposes the analysis in (31) for these verbs, in which the nominal (ie., *chuu’u* ‘dog’) is the complement of a prepositional phrase (PP_{have}) along the lines of Harley (2002). The PP is, in turn, embedded by a stative vP(be). From the position where it has been merged, the nominal undergoes incorporation à la Hale & Keyser (1993) all the way up to the stative vP (32).

¹²⁴ Note that, although the sentence in (31b) has the perfective marker *-k* its interpretation is not past (‘Pete had a dog’). Instead, perfective stative structures of this kind in Hiaki receive the resultative (and possessive) interpretation ‘Peter is dogged’.



Adapted from Haugen (2004: 248[33c])

These structures lack external arguments. The argument *Peo* 'Pete', for instance, is an argument within the prepositional complement of the stative v^o (be). When embedded by the causative head *-tua*, v^o _{CAUSE} directly embeds the stative vP, as shown in (33).



Thus, the structure in (33) shows that, in sentences like those in (30), we are still dealing with the same productive causative *-tua* as we have been discussing so far. The difference is that, in the case of (33), *-tua* embeds a stative structure that is lacking an

external argument (VoiceP).¹²⁵

2.3.2. Root complements of *-tua*

Sometimes, lexical causatives in Hiaki result from combining *-tua* with eventive roots.

This is not a productive operation, as it happens only with a reduced number of roots.

Nonetheless, these lexical causatives may be the result of the grammaticalization of a

once productive operation. The verbs *vit-tua* ‘see-cause (show/send)’ (34a) and

hi’ibwa-tua ‘eat-cause (feed)’ (34b) are typical examples of this phenomenon.

(34) Lexical causatives with *tua*

- | | |
|---|--|
| a. Maria Santos-ta-u uusi-ta <i>vit-tua-k</i>
Maria Santos-acc-to child-acc see-cause-perf
‘Maria sent the child to Santos’ | b. Maria uusi-ta <i>hi’ibwa-tua</i>
Maria child-acc eat-cause
‘Maria is feeding the child’ |
|---|--|

In (34), the causativizing suffix *-tua* combines with the non-causative verbal roots

vit- ‘see’ (34a), and *hi’ibwa-* ‘eat’ (34b), forming lexical causatives with the meanings

‘send’ and ‘feed’ respectively. In the next section I show the analysis.

2.3.3. Analysis

Lexical causatives with *-tua* are exactly like the root causatives discussed in chapter 3 in that they are non Voice-bundling and Root-selecting in Pylkkänen’s (2002, 2008) terms.

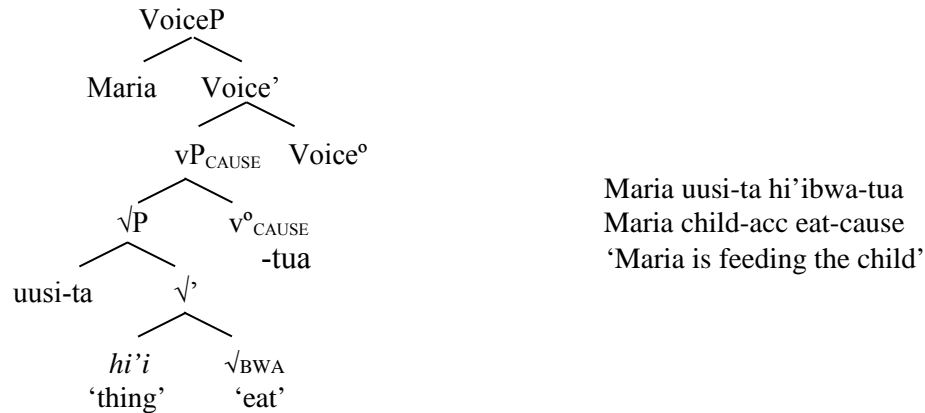
In this sense we can say that *-tua* forms lexical causatives whenever it directly embeds roots rather than events (a structure containing, at least, a vP).

Now, there are some differences between different types of lexical causatives with

¹²⁵ I am indebted to Heidi Harley (p.c.) for ideas and suggestions regarding the analysis in (33).

–*tua* in Hiaki. In (35) I show the –*tua* causativization of the root *hi'ibwa* ‘eat’.

(35) –*tua* may be root selecting



In (35) the causativizing suffix –*tua* directly embeds a root (ie., $\sqrt{\text{HI'IBWA}}$ ‘eat’).¹²⁶

Some comparison between structures such as the one in (35) and (zero) lexical causatives is necessary. I repeat an example of (zero) lexical causative in (36).

(36) Mercedes uusi-ta ropt-a
Mercedes child-trans roll-trans
'Mercedes is rolling up the child'

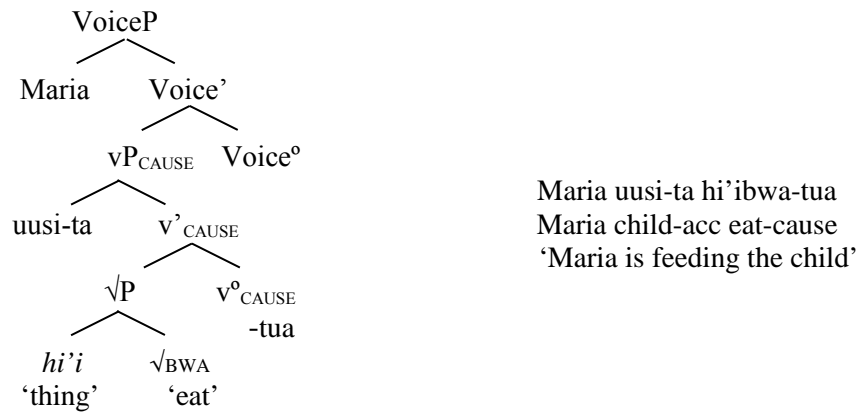
The structure in (35) has an additional argument if compared with the sentence in (36). This is so since, in addition to the Causers *Maria* (35) and *Mercedes* (36), and the objects *uusi-ta* ‘child (35) and *hi'i*- ‘thing’ (36), the sentence in (36) contains a second internal argument, *uusi-ta* ‘the child’. In (36) this argument appears in the specifier position of $\sqrt{\text{P}}$, which I identify with a goal position, reminiscent of Larson’s (1988) analysis of ditransitives.

In Pykkänen’s work, the non Voice-bundling nature of Hiaki –*tua* would make this possible. That is, because Voice° and v°_{CAUSE} appear in separate projections, they

¹²⁶ The root $\sqrt{\text{HI'IBWA}}$ contains an incorporated unspecified object *hi'i*, while the root for ‘eat’ is $\sqrt{\text{BWA}}$.

would allow room for the licensing of independent arguments in their specifier positions. Thus, in the case of (36), the higher internal argument *uusi-ta* ‘child-acc’ would appear in the specifier position of vP_{CAUSE} . This argument would be distinguished from the causer, *Maria*, that would appear as the specifier of Voice° . I show this in (37).

(37) *-tua* as selecting internal arguments in its specifier position



The diagram in (37) represents the structure of the lexical causative *hi'ibwatua* ‘feed’ under Pylkkänen’s analysis. That is, although verbal roots like *hi'ibwa* ‘eat’ are normally associated with external arguments (ie., the person that does the eating, *uusi-ta* ‘the child’ in (37)), this root may be causativized, in Pylkkänen’s account, in languages in which the causative head v°_{CAUSE} is non Voice-bundling, like Japanese (and Hiaki). In (37) v°_{CAUSE} may then introduce an argument that is independent from the external argument (introduced by Voice°).

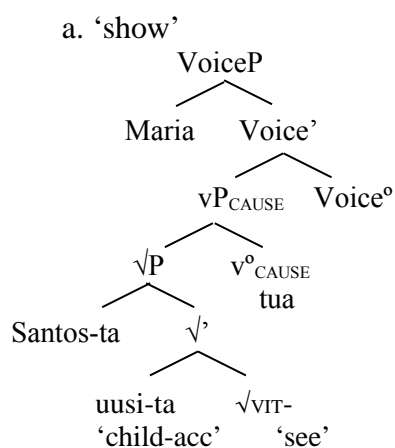
Under this account, Voice-bundling languages like English would not be able to license structures such as (37) because, being Voice-bundling, English v°_{CAUSE} would fail to introduce arguments of its own. Only Voice° could. Nonetheless, the analysis in (37), based on the non Voice-bundling properties of Hiaki (as opposed to English) is

problematic. This is so since English, too, has lexical causatives such as *feed* in which a transitive verb, the suppletive *eat*, has been root causativized along with its two arguments, the internal argument (ie., the food) and the goal argument (ie., the person being given food).¹²⁷

For this reason, an analysis à la Larson (1988) as in (36), whereby the root has two intermediate projections, one for each argument, more adequately accounts for the fact that English and Hiaki may equally exhibit (double object) lexical causatives.

Other transitive lexical causatives with *-tua* exhibit roots that take full complements. This is the case of *vit-tua* ‘see-cause’. This lexical causative is interesting as it derives two idiomatic interpretations, ‘show’ or ‘send’, depending on whether it licenses a higher internal argument or a goal argument. I show both structures in (38).

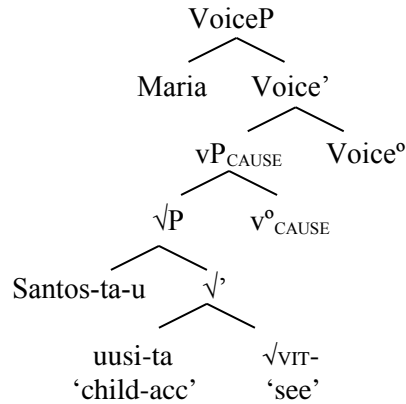
(38) *vit-tua* ‘see-cause’



Maria Santos-ta uusi-ta vit-tua
 Maria Santos-acc child-acc see-cause
 ‘Maria is showing Santos the child’

¹²⁷ Thanks to Heidi Harley (p.c.) for pointing this out to me.

b. ‘send’



Maria Santos-ta-u uusi-ta vit-tua
 Maria Santos-acc-to child-acc see-cause
 ‘Maria is sending the child to Santos’

The diagrams in (38) are distinguished in the nature of the argument licensed as the higher internal argument of \sqrt{P} . In (38a), the DP *Santos-ta* ‘Santos-acc’ occupies this position. This argument is interpreted as an ‘internal’ affected argument and the lexical causative receives the idiomatic interpretation of ‘show’. In (38b), the goal PP *Santos-ta-u* ‘Santos-acc-to’ occupies the higher internal argument position. This argument is interpreted as a goal and the lexical causative receives the idiomatic interpretation of ‘send’.¹²⁸ This is proof that the causatives discussed in this section are lexical.

In the next section I show a second piece of evidence that structures in which *-tua* embeds roots are lexical. The data comes from the productive causativization with *-tua* and *-tevo* of structures such as those in (38).

¹²⁸ In Larson’s (1988) analysis, PP goals were analyzed as lower than the internal arguments of roots. However I analyze the goal PP *Santos-ta-u* ‘Santos-acc-to’ as higher than the internal argument *uusi-ta* ‘child-acc’ as the word order reflects the fact that the internal argument is consistently closer to the root, both in double object constructions (38a) and accusative-goal constructions (38b).

2.4. Lexical causatives with *-tua* may be embedded by productive *-tua*

All the lexical causatives with *-tua* seen in the previous section may be further causativized by productive causatives *-tua* and *-tevo*. In the next example I show the productive causativization with *-tua* of *vit-tua* ‘show’ and *hi’ibwa-tua* ‘feed’.¹²⁹

(39) Productive *-tua* may embed lexical causatives with *-tua*

a. *vit-tua* ‘show’ + *-tua*

Ne [uka uusi-ta Santos-ta hiohtei-ta vit]-tua-k
 1sg det(acc) child-acc Santos-acc letter-acc see-cause-perf
 ‘I made the kid show Santos his homework’

b. *hi’ibwa-tua* ‘feed’ + *-tua*

Uu ye’e mahta-wa-po ya’ut [ume yee mahta-me ume ili uusi-m hi’ibwa]-tua-k
 Det people teach-pass-at leader det(pl) people teach-rel det(pl) little child-pl eat-cause-perf
 ‘The principal made the teachers feed the children’

The sentences in (39) exhibit the productive causativization of lexical causatives *vit-tua* ‘show’ (39a) and *hi’ibwa-tua* ‘feed’ (39b). In the next subsection I compare the argument structure of the causativized lexical causatives in (39) with their non causativized counterparts.

2.4.1. The argument structure

Compare the sentences in (39) with their non causativized counterparts in (40).

¹²⁹ Although only one causative suffix *-tua* is morphologically present in these sentences, the number of arguments present in the structures (the matrix causer *ne* ‘I’, the matrix causee/embedded causer *uka uusi-ta* ‘the child’, the embedded causee *Santos-ta* ‘Santos’, and the embedded internal argument *hiohtei-ta* ‘the letter’ (39a)) suggests that two causative heads participate in the structure of these sentences. In section 2.4.2. below I discuss the apparent morphological prohibition on having *-tua-tua* combinations in Hiaki.

(40) Lexical causatives with *-tua*a. lexical *vit-tua* ‘show’

U uusi Santos-ta hiohtei-ta vit-tua-k
 det child Santos-acc letter-acc see-cause-perf
 ‘The kid showed Santos his homework’

b. lexical *hi’ibwa-tua* ‘feed’

Ume yee mahta-me ume ili uusi-m hi’ibwa-tua-k
 det(pl) people teach-rel det(pl) little child-pl eat-cause-perf
 ‘The teachers fed the children’

If compared with the sentences in (39), the sentences in (40) are missing one argument, the matrix causer introduced by the productive causative *-tua*: the first singular pronoun *ne* ‘I’ (39a) and *Uu ye’e mahta-wa-po ya’ut* ‘the principal (lit. the leader of the place where people are taught, ie., the leader of the school)’ (39b).

Both sentences in (39) and (40) include, in addition, all the arguments licensed by the lexical causative suffix *tua*: the ‘lexical’ causers (ie., *uka uusi-ta* ‘the(acc) child-acc’ (39a) / *u uusi* ‘the child’ (40a)), the ‘lexical’ causees (ie., *Santos-ta* ‘Santos-acc’ (39a, 40a)), and the embedded objects (ie., *hiohtei-ta* ‘chicken-acc’ (29a, 40a)).

It is clear that the sentences in (39) are productive causatives of lexical causatives with *-tua*. Nonetheless, the sentences in (39) seem to be lacking one instance of the causative suffix *-tua*, as they only show one instance of this suffix while too many arguments are being licensed. In the next subsection, I discuss the Hiaki morphological restriction of Hiaki that triggers this ‘anomaly’.

2.4.2. A morphological restriction

Despite the differences regarding the argument structures of the sentences in (39) and (40) just discussed, the verbal morphology exhibited by (39) and (40) is identical: the roots $\sqrt{\text{VIT-}}$ ‘see’ and $\sqrt{\text{HI'IBWA}}$ ‘eat’ are suffixed by just one instance of *-tua* in both cases. I claim that this is due to a morphological restriction that has to do with Hiaki morphology. Such restriction, haplology (Bloomfield (1896)), consists of the elimination of a syllable in the context of an identical syllable. The phenomenon is not exclusive of Hiaki, but it may be found in other languages, such as Japanese or even English (e.g., **the boys's*, as in Jespersen (1954)). In Hiaki, one instance of the phenomenon shows in double causatives with *-tua*, as a double morphological instantiation of the two causative suffixes is prohibited. The ungrammaticality of (41) illustrates this restriction.

(41) **vit-tua-tua*

*Inepo [Maria-ta Peo-ta-u hiotei-ta (a)=vit-tua]-tua-k
 1sg maria-acc pete-acc-to letter-acc (3sg)=see-cause-cause-perf
 ‘I made Maria send a letter to Pete’

The double causative in (41) is ungrammatical, but it becomes grammatical if one instance of *-tua* becomes morphologically silent, everything else (ie., the argument arrangement) remaining the same.¹³⁰

(42) Inepo [Maria-ta Peo-ta-u hiotei-ta (a)=vit]-tua-k
 1sg maria-acc pete-acc-to letter-acc (3sg)=see-cause-cause-perf
 ‘I made Maria send a letter to Pete’

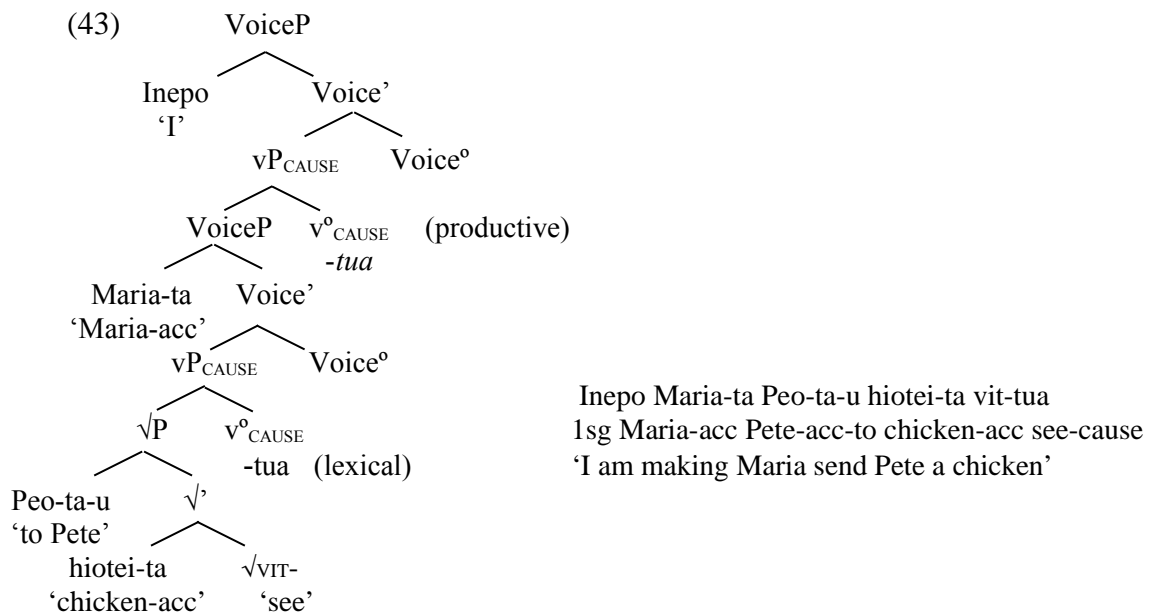
Despite the morphological restriction just illustrated, the sentence in (42) syntactically contains two instances of the causativizing suffix *-tua*, one lexical one productive. I show

¹³⁰ I have not researched whether haplology also applies to double instances of other suffixes but it should be expected, given (42).

the analysis in the next subsection.

2.4.3. Analysis

The structure in (43) shows the productive causativization with *-tua* of *-tua* lexical causatives.



The structure in (43) shows the productive causativization of the lexical causative sentence *Maria Peo-ta-u hiotei-ta vit-tua* 'Maria is sending Pete a chicken'. As the structure shows, the productive causative *-tua* and the lexical causative *-tua* are two distinct causative heads. Each head occupies a different syntactic position: productive *-tua* embeds an eventive structure containing Voice° and the vP_{CAUSE} that contains lexical *-tua* in its head position. Lexical *-tua*, in turn, embeds a root (√_{VIT}- 'see').¹³¹

¹³¹ I assume that each of these causative heads v°_{CAUSE} is of the *-tua* type morphologically speaking (as opposed to zero (Ø) because they are independently realized as *-tua*. That is, the lexical causative *vit-tua* 'send' consistently exhibits the suffix *-tua* (otherwise, the interpretation of the root *vit-* would be 'to see'). Conversely, direct productive causatives are consistently realized by *-tua*, as in *Maria Santos-ta vuiti-tua*

In terms of argument structure, each of the causative heads is responsible for licensing specific material. For instance, the productive causative licenses an external argument, the causer, *inepo* ‘I’, in the specifier position of matrix VoiceP. The lexical causative, in turn, licenses its own external argument, in the specifier of embedded VoiceP as well as the root $\sqrt{\text{VIT}}$ ‘see’ as its complement. From other lexical causative structures seen above, lexical causative roots can license two internal arguments. Thus, $\sqrt{\text{VIT}}$ ‘see’ licenses the goal PP *Peo-ta-u* ‘to Pete’ as well as the internal argument *hiotei-ta* ‘the chicken’. Even though just one overt *-tua* suffix is allowed by Hiaki morphology in double causatives, both causative heads must be present in the syntax of these sentences.

2.5. Lexical causatives with *-tua* embedded by productive causative *-tevo*

The morphological restriction just seen is not observed if the lexical causative appears embedded by a causative head with different morphological realization, such as *-tevo* (44). In such constructions, both causative suffixes are obligatorily overt for the well-formedness of the sentences.

- (44) a. Uu hitevi ume ye’e hi-hito-m ko’oe-m-ta hi’ibwa-*tua-tevo*-k
 Det doctor det(pl) people red-cure-rel pain-rel-acc eat-cause(lex)-cause(ind)-perf
 ‘The doctor had the nurses feed the patients’
- b. *Heidi Art-ta hi’ibwa-tevo-k
 Heidi Art-acc eat-cause(ind)-perf
 ‘Heidi had Art fed yesterday’

‘Maria Santos-acc run(sg.subj)-cause, Maria made Santos run’. For this reason, I assume that each of the positions in (43) involve a ν_{CAUSE} phonologically realized as *-tua* and that the morphological restriction discussed in this section prevents one of these suffixes to receive phonological content at Spell-Out.

In (44a) the productive causative *-tevo* embeds the lexical causative *hi'ibwa-tua* 'feed'.

As in the productive causative cases discussed above, *-tevo* introduces a causer and embeds the event involving the lexical causative with *-tua*. In this case, both causative suffixes *-tua* and *-tevo* are necessarily overt for the structure to be well-formed, as the ungrammaticality of (44b) indicates, where the lexical suffix *-tua* has been omitted.

2.6. Summary

In this section, I have discussed the most salient points concerning the syntax of causatives with *-tua*. First I discussed the syntax of the direct productive causative suffix *-tua*. I showed that this causative type is phase-selecting and non Voice-bundling in Pylkkänen's terms. Its phase-selecting nature was demonstrated in that its complement admits (and normally requires) the presence of an embedded subject or causee. Its non Voice-bundling properties were observed in passive contexts, as the passive and the overt causative suffixes each need to occupy separate heads in the structure. I showed that productive causatives with *-tua* may also receive the meaning 'let' as well as embed non-verbal complements.

In the second part of this section, I focused on lexical causatives with *-tua*. That is, *-tua* may be a type of causative head that is root-selecting. Because this causative is lexical, it may only embed certain roots and the resulting structure receives idiomatic interpretation (ie., 'send' for *vit-tua* 'see-cause'). These roots are normally associated with roots that are able to license more than one internal argument.

In the last part of this section, I have shown combinations involving Hiaki lexical

causatives with *-tua* and productive causatives *-tua* and *-tevo*. I have shown that, despite the morphological restriction in Hiaki against the morphological iteration of the same suffix, the combination of *-tua* productive and *-tua* lexical causatives is possible in the syntax.

The result is a structure that shows an augmented argument structure with respect to non-causative counterparts while the verbal morphology appears to be lacking one of its suffixes. If the causative combination involves suffixes with different morphology, as is the case with the combination *-tua* (lexical) + *-tevo* (productive), both suffixes are obligatorily overt. In the next sections I concentrate on the syntax of indirect causative *-tevo*.

3. The syntax of *-tevo*

3.1. The indirect causative *-tevo* is verb-selecting

The main features of indirect causative *-tevo* were introduced in section 1. This causative suffix is different from its direct counterpart *-tua* in the number of arguments each head embeds. Recall that whereas *-tua* requires an embedded subject or causee, *-tevo* typically prohibits it.

(45) a. Direct causative *-tua*

aapo [si yee va-vamih]-tua
3sg [very people red-hurry]-cause
'He always makes people hurry up'

b. Indirect causative *-tevo*

aapo [hiva va-vamih]-tevo
3sg [always red-hurry-]cause(ind)
'He always has (people) hurry up'

The sentences in (45) exhibit two examples of the productive causativization of events involving the root $\sqrt{\text{VAMIH}}$ 'hurry up'. In (45a) the structure embedded by *-tua* includes

the causee, *si yee* ‘many people’. Its *-tevo* counterpart, in contrast, excludes the causee from the structure it embeds, as (45b) shows.

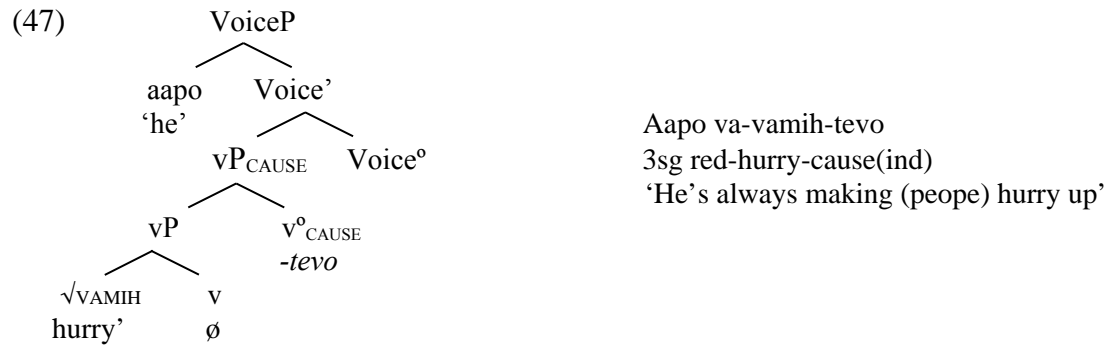
Recall, from section 1, that the presence of a causee argument is generally banned from *-tevo* sentences:

- (46) Aapo hiva [(**yee*) va-vamih-]tevo
 3sg always [people red-hurry-]cause(ind)
 ‘He’s always having (**people*) hurry’

In this section, I argue that the contrast exhibited between *-tua* and *-tevo* is derived from differences in the selectional properties of each of these heads. In section 2, I explained that the obligatory presence of the causee argument with direct causatives with *-tua* is due to the phase-selecting nature of this causative head. That is, the complement of productive causative *-tua* necessarily involves Voice^o, which is the head responsible for introducing external arguments, as discussed throughout this dissertation. In the next subsection, I offer an analysis of sentences involving the indirect causative suffix *-tevo*, based on the facts observed.

3.2. *-tevo*: an analysis

In (47), I show the structure I propose for *-tevo*, based on the analysis proposed in Harley (2007) and in Tubino & Harley (to appear).



The diagram in (47) shows the structure of the sentence in (45b).¹³² I analyze the causative head *-tevo* as non Voice-bundling and verb selecting. I address these two characteristics one at a time.

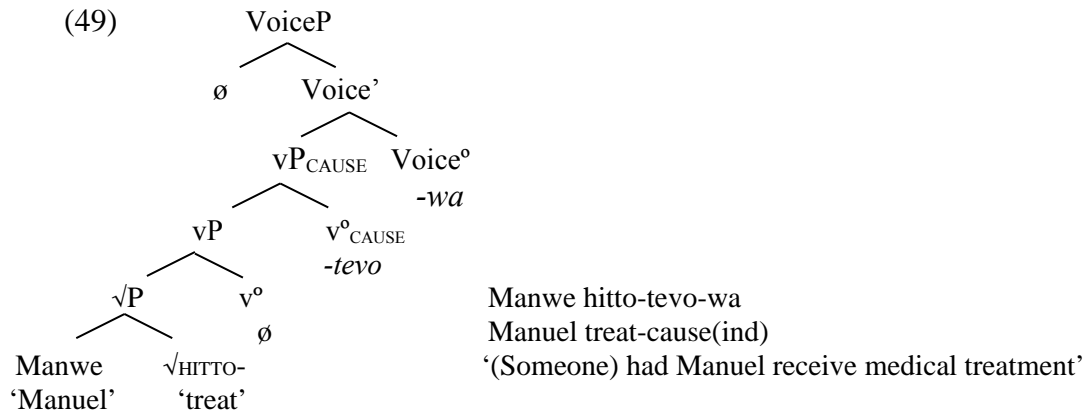
3.2.1. *-tevo* is non Voice-bundling

The indirect causative head *-tevo* is non Voice-bundling, just like *-tua*. Although *-tevo* is non Voice-bundling, a causer argument, *aapo* 'he' in (47), is syntactically present in active indirect causatives in Hiaki (just as is the case with *-tua*). Nonetheless, *-tevo* sentences have passive counterparts that involve the passive suffix *-wa*, just like in the case of the passivization of *-tua*:

- (48) Manwe hitto-*tevo-wa-k*
 Manuel cure-cause(ind)-pass-perf
 'Someone had Manuel receive medical treatment'

The sentence in (48) shows the passivization of an indirect causative with *-tevo*. I show the structure in (49).

¹³² For ease of exposition, I ignore the aspectual components of the sentence, the adverbial *hiva* 'always' as well as the reduplication on the verbal root, which in Hiaki expresses habitual events.



In (49) the passive suffix *-wa* and the indirect causative *-tevo* both need a syntactic position in which to be realized, independent from each other. In a voice-bundling configuration type, two independent Voice° and v°_{CAUSE} positions are not possible. Therefore, *-tevo*, too, must be non voice-bundling.

3.2.2. *-tevo* is verb-selecting

The main contrast between indirect productive causatives with *-tevo* and their direct counterparts with *-tua* is in their complement selecting properties. While *-tua* is phase-selecting (it selects a complement that contains the external-argument-introducing head Voice°), as seen in section 2, the indirect causative head *-tevo* is verb-selecting and its complement lacks Voice° , as shown in (49). This explains why, in most cases, the presence of an overt causee is excluded from Hiaki causative configurations involving *-tevo*. The contrast between *-tua* and *-tevo* regarding their complement properties is seen, for instance, in sentences containing complements that are coreferent with the matrix subjects (the causers).

- (50) a. *tua*
 Nee_i [Art-ta ne_i sua]-tua
 1sg_i [Art-acc 1sg_i take.care]-cause
 ‘I_i’m making Art take care of me_i’
- b. *tevo*
 Inepo_i [ino_i sua]-tevo
 1sg_i [1sg(reflex)_i take.care]-cause(ind)
 ‘I_i’m having myself_i taken care of
 (e.g., I’m having somebody guard me)’

Both sentences in (50) contain coreferent arguments in the matrix and embedded clauses. The subject of *-tua* (the causer *nee* ‘I’) in (50a) is coreferent with the embedded object *ne* ‘me’. This object appears in pronominal form because the coreferent elements are not in the same binding domain. That is, the embedded external argument *Art-ta* ‘Art-acc’ (licensed by embedded Voice) binds the embedded object *ne* ‘I’ and this element is pronominal because these two elements are not coreferent.

The subject of *-tevo* (the causer *inepo* ‘I’) in (50b) is coreferent with the embedded object *ino* ‘myself’. This object appears in reflexive form because it is in the same binding domain as the matrix subject. The binding configuration created in this sentence is the consequence of the absence of an embedded external argument in structures involving *-tevo*. That is, because these constructions lack an embedded subject or causee, the matrix subject or causer is in the same binding domain as the embedded object in sentences with *-tevo*, while this is impossible in sentences with *-tua*, due to the syntactic presence of an embedded subject or causee. In the next section, I offer more evidence in favor of this analysis.

3.3. The causee is excluded from *–tevo* causatives

In this section, I show a few more tests in favor of an analysis in which *–tevo* does not embed external arguments. The tests I offer next are based on two phenomena typical of the syntax of Hiaki: a) the promotion of the object to a passive subject, b) number agreement between suppletive verbs and implicit subjects.

3.3.1. Subjects of causativized passives

When *–tua* causatives are passivized, the active causee (*uu hitevi* ‘the doctor’ in (51a)) becomes the passive subject (51b). This demonstrates that a causee argument is syntactically present in the structure of causatives with *–tua*.

- | | |
|---|--|
| (51) a. <i>–tua</i> (active) | b. <i>–tua</i> (passive) |
| Maria <i>hitevi-ta</i> uusi-ta hitto-tua-k | <i>Uu hitevi</i> uusi-ta hitto-tua- <i>wa</i> -k |
| M. doctor-acc child-acc treat-cause-perf | det doctor child-acc treat-cause-pass-perf |
| ‘Maria made the doctor treat the child’ | ‘The doctor was made to treat the child’ |

As we will see in detail in section 3.4., some *–tevo* causatives exhibit apparent causees (52).

- (52) Maria *hitevi-ta* uusi-ta hitto-tevo-k
 Maria doctor-acc child-acc treat-cause(ind)-perf
 ‘Maria had the doctor treat the child’

In (52) the accusative argument *hitevita* ‘the doctor’ is licensed in an indirect causative with *–tevo*. This argument is interpreted as a causee argument, which could pose a problem for the analysis just proposed, as no apparent position in the structure embedded by *–tevo* is available for the syntactic licensing of this element.

Nonetheless, when *–tevo* causatives are passivized, the active causee never

becomes the passive subject. In the sentence in (53), the embedded object *uu uusi* ‘the child’ becomes the passive subject, even when the embedded stem *hitto-* ‘treat’ is among the set of stems that optionally allow overt ‘causees’.

- (53) *Uu uusi hitto-tevo-wa-k*
 det child treat-cause(ind)-pass-perf
 ‘Somebody had the child treated’

The sentence in (53) indicates that the structure embedded by *-tevo* does not include Voice^o. Were this the case, the embedded external argument would be present and hence promoted to passive subject, just as happens in sentences involving *-tua* (51). The fact that the passivization of sentences with *-tevo* derives structures with no embedded causee, as in (53), means that embedded Voice is lacking in such structures.¹³³

Next, I offer further structural evidence against the optionality of causees in *-tevo* causatives, this time regarding subject-verb agreement.

3.3.2. Number agreement between Causees and intransitive suppletive verbs

In general, Hiaki verbs do not exhibit subject-verb agreement. However, certain intransitive verbs do enter suppletive number agreement with their subjects:

- (54) a. *Uu uusi aman vuite* b. *Ume uusi-m aman {tenne /*vuite}*
 det child(sg) there run(sg.subj) det(pl) child-pl there {run(pl.subj) /*run(sg.subj)}
 ‘The child is running’ ‘The children are running’

The singular and plural forms of the verb *vuite/tenne* ‘run’ exhibit an alternation in (54)

¹³³ In section 3.4. we will see that if *-tevo* embeds certain lexical causatives such as *hitto-* ‘treat’, the embedded structure might include a ‘second’ internal argument that may be licensed in the specifier position of the lexical causative *-tua*. The fact that sentences like (53) are possible in which the ‘second’ internal argument is lacking suggests that this element is not required as part of the argument structure of these verbs, yet its presence is structurally possible.

to show number agreement with the singular subject, *uu uusi* ‘the child’ in (54a), and the plural subject *ume uusim* ‘the children’ (54b). Notice that the sentence in (54b) is ungrammatical due to an agreement clash between the singular form of the verb ‘run’, *vuite*, and the plural subject *ume uusim* ‘the children’.

At the same time, Hiaki allows the passivization of intransitive verbs, resulting in subjectless passive sentences, as (55) shows¹³⁴.

- (55) *pahko-po yi’i-wa-k*
 ceremony-loc dance-pass-perf
 ‘There was dancing at the ceremony’Jelinek 1997: 181[7b]

When intransitive suppletive verbs (ie. (54)) are passivized, they establish ‘default’ agreement with an *implicit* subject, after passivization eliminates the only active argument from the structure. The sentences in (56) show that ‘default’ agreement with *implicit* subjects is always plural (*tenni*), never singular (*vuiti*), in Hiaki.

- (56) *Aman {tenni/*vuiti}-wa*
 there {run(pl.subj)/run(sg.subj)}-pass
 ‘Running is happening there’

Back to causatives, if the suffix *-tua* embeds an intransitive suppletive stem, agreement always occurs with the causee. This is shown in (57), where the singular form of the embedded suppletive verb *vuite* ‘run(sg.subj)’ (57a) agrees with the singular causee (ie, the third person singular clitic *aa*), and a plural causee exhibits plural agreement on the verb (57b).

¹³⁴ It is worth noting that, unlike English, Hiaki disallows overt agents of passives (the equivalent of *by*-phrases), as shown by Escalante (1990).

- (57) a. *Singular causee – singular verb*
 Heidi aman **aa**=vui-**vuiti-tua**
 Heidi there 3sg=red-run(sg.subj)-cause
 ‘Heidi makes him run’
 b. *Plural causee – plural verb*
 Heidi aman **am**=**tenni-tua**
 Heidi there 3pl=run(pl.subj)-cause
 ‘Heidi is making them run’

If this same verb appears embedded to the indirect causative *–tevo*, number agreement is invariably plural (ie., *tenne* ‘run(pl.subj)’). Moreover, if the embedded stem appears in its singular form, *vuiti-*, the sentence becomes ungrammatical. This is shown in (58).¹³⁵

- (58) a. *Plural stem OK*
 Heidi aman te-**tenni-tevo**
 Heidi there red-run(pl.subj)-cause(ind)
 ‘Heidi has people run there’
 b. **Singular stem*
 *Heidi aman **vuiti-tevo**
 Heidi there run(sg.subj)-cause(ind)
 ‘Heidi is having people run there’

The contrast just seen in (58) shows that syntactic causees are excluded from the structure of *–tevo* causatives. Because causees are syntactically absent but semantically implicit in these structures, the verb embedded by *–tevo* exhibits plural agreement, just like implicit external arguments in passive sentences.

In this section, I have shown evidence in favor of the analysis of the indirect causative *–tevo* as a verb-selecting head. In the next section, I discuss the syntax of *–tua-tevo* combinations.

¹³⁵ Notice that the ungrammaticality of the sentence in (58b) has nothing to do with reduplication facts, as the non-reduplicated version of (58a), shown in (i), stays grammatical.

(i) nee aman tenni-tevo
 1sg there run(pl.subj)-cause(ind)
 ‘I’m having (some people) run’

4. The *-tua-tevo* causative

There exists the possibility in Hiaki of combining both causative suffixes *-tua* and *-tevo* in one same clause. In (59) I show one sentence involving the direct causative *-tua* (59a) and its counterpart involving the causative combination *-tua-tevo* (59b).

- | | |
|--|--|
| (59) a. Nee uka avion-ta ni'i-tua
1sg det plane-acc fly-cause
'I'm making the plane fly' | b. Nee uka avion-ta ni'i- <i>-tua-tevo</i>
1sg det plane-acc fly-cause-cause(ind)
'I'm having (somebody) fly the plane' |
|--|--|

[Adapted from Harley (2007)]

The sentences in (59) show the contrast between a simplex direct causative with *-tua* (59a) and a *-tua-tevo* causative complex (59b). The direct causative construction with *-tua*, in (59a), contains both the causer *nee* 'I' (the main subject) and the causee *uka avionta* 'the plane', embedded by *-tua*. In contrast, the combined *-tua-tevo* causative, in (59b), exhibits the same number of arguments as the structure in (59a), despite the presence of two causative heads (rather than just one). This is interesting, since causative heads are traditionally described as valency increasing mechanisms (as opposed, for instance, to passive heads, which typically involve valency reduction). In the next subsection I explain this phenomenon.

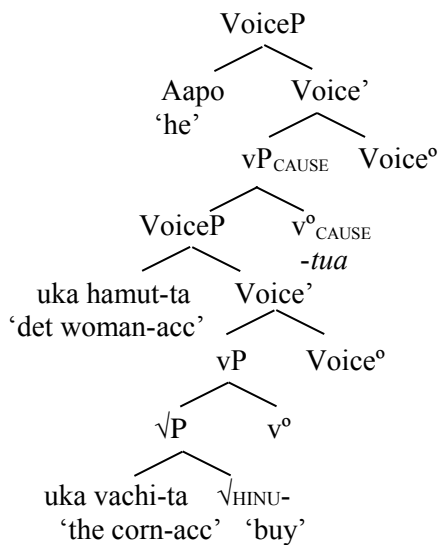
4.1. The elimination of the embedded subject in *-tua-tevo*

In *-tua-tevo* combinations, *-tua* appears embedded by *-tevo*. Because *-tevo* is verb-selecting, the most external argument associated with *-tua* (ie., the person that flies the plane in (59b)) is suppressed from the syntax and remains implicit. That is, *-tevo* embeds *-tua* directly, but it does not embed the VoiceP projection that introduces the external

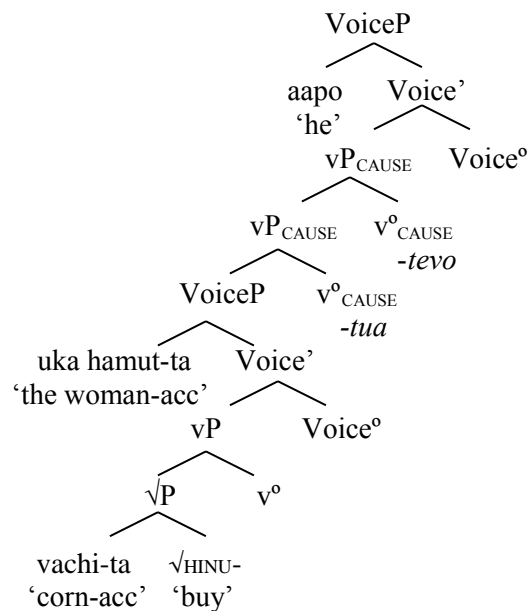
argument associated with *-tua*. In (60), I show the contrasted syntactic structures of a simple causative with *-tua* (60a) with that of the causative complex *-tua-tevo* (60b).

(60) a. *-tua*

Aapo uka hamut-ta uka vachi-ta hinu-tua-k
 3sg det(acc) woman-acc det(acc) corn-acc buy-cause-perf
 'He made the woman buy the corn'



b. *-tua-tevo*



Aapo uka hamut-ta uka vachi-ta hinu-tua-tevo-k
 3sg det(acc) woman-acc det(acc) corn-acc buy-cause-cause(ind)-perf
 'He had the woman made to buy the corn'
 Rude (1996: 505[44])

The simplex *-tua* causative in (60a) introduces both a causer, *aapo* 'he', and an embedded subject or causee, *uka hamut-ta* 'the woman-acc', as the specifiers of each of the two VoiceP projections available in the structure, one just above, one just below *-tua*. This is typical of the syntax of the direct causative *-tua*, since this head is phase-selecting.

The double causative *tua-tevo* in (60b), also contains two VoiceP projections. The

higher VoiceP introduces the main subject of causer, *aapo* ‘I’, which is equally made available in (60a). The lower VoiceP, deeply embedded under *-tua*, introduces the causee to this causative head, in its specifier position.

Recall from the simplex *-tua* sentence shown in (59a) that direct causative constructions typically exhibit both a causee (embedded external argument) and a causer (matrix external argument). However, because *-tua* appears embedded under the causative head *-tevo* in (60b), it has its own causer suppressed by this head, the participant that would correspond to the causer of *-tua*, remaining just semantically implicit (ie., somebody).

As a result, the sentence in (60b) exhibits two overt arguments (ie., a) the causer of *-tevo* and b) the causee of *-tua*) plus one implicit argument (ie., the causer of *-tua* / causee of *-tevo*).

4.2. *-tevo* is verb-selecting and *-tua* is non Voice-bundling

The syntax of sentences involving *-tua-tevo* causative complexes like the one just seen in (60b) supports the proposal made here that *-tevo* is verb-selecting. This is so since the selectional restrictions of *-tevo* exclude any subject from appearing as part of the clause immediately embedded by this causative head, in this case, a direct causative with *-tua*.

As we have seen, this ‘suppressed’ subject corresponds to both the causer of *-tua*, and the causee of *-tevo*. For this reason, *-tua-tevo* combinations contain the same number of arguments as a simplex *-tua* causative, although it also contains an implicit embedded subject, corresponding to the *-tevo* notional causee. The main idea is, however, that this

notional causee can never appear overtly, simply because *-tevo* disallows complements containing external arguments, as demonstrated throughout this chapter.

The syntax of *-tua-tevo* combinations provides further evidence that causative heads in Hiaki, such as the direct causative *-tua*, are non Voice-bundling. Were *-tua* Voice-bundling, *-tevo* could not take it as a complement, as the indirect causative head cannot take complement heads that require external arguments, as would be the case with a bundled head Voice/^oV_{CAUSE}.¹³⁶

In the next section I show cases in which *-tevo* apparently exhibits what could be considered an overt causee, and may pose a problem to the analysis proposed in this chapter for the Hiaki indirect causative. I will argue that many of these cases are, in reality, further examples of *-tua-tevo* combinations, and present an underlying structure identical to the cases just seen.

5. Indirect causatives with seemingly overt causees

The absence of a syntactic causee in sentences with *-tevo* has been proven in sections 3 and 4. In this section, I show a few cases that may pose a problem to this analysis. These are cases of causatives with *-tevo* that nonetheless appear to exhibit overt causees.

5.1. *-tevo*: an apparent optionality

The prohibition of explicit causees in indirect causatives with *-tevo* seems to reflect the general pattern exhibited by these structures in Hiaki. Nonetheless, there exist some rare

¹³⁶ Thanks to Heidi Harley (p.c.) for pointing this out to me.

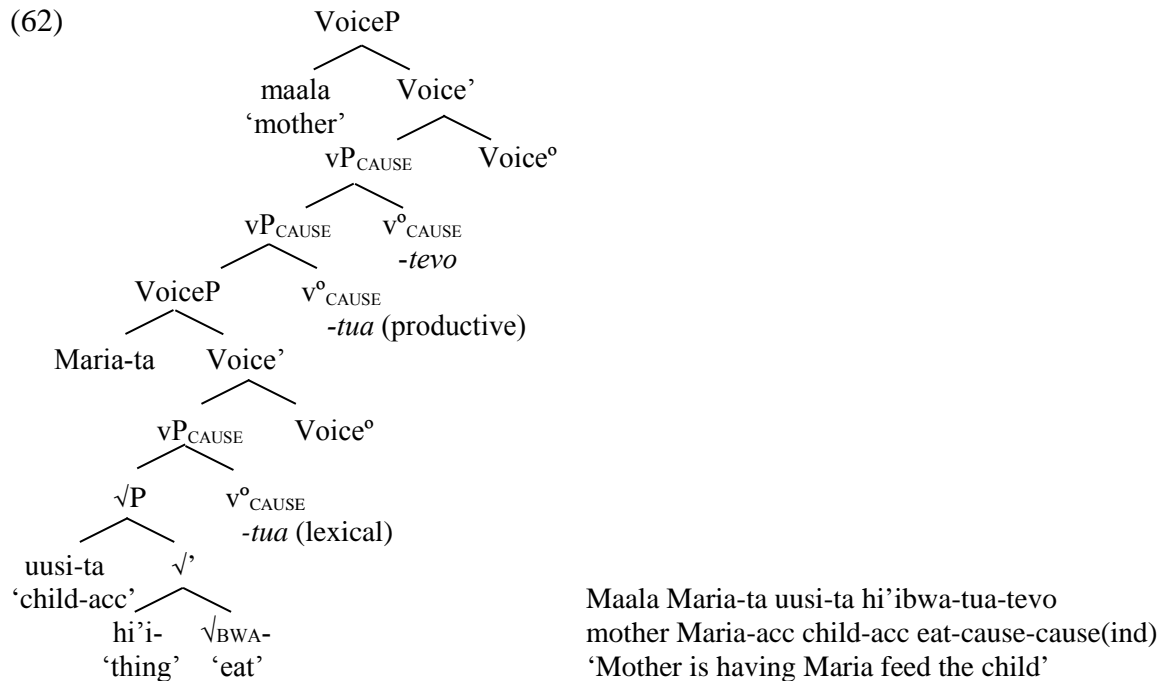
cases involving a reduced set of transitive and unaccusative stems (*hitto*- ‘cure, treat’, *supe-tua* ‘dress’, *hi’ibwa-tua* ‘feed’, *yevih*- ‘arrive(sg.subj)’ and *ne’e* ‘fly’ respectively), which may optionally allow the explicit presence of Causees as they appear embedded by *–tevo*:

- (61) a. Maria [***hitevi-ta*** uusi-ta hitto]-tevo-k
 Maria [doctor-acc child-acc treat]-cause(ind)-perf
 ‘Maria had the child treated (by the doctor)’
 b. Uu hitevi [***ume ye’e hi-hito-me*** uka ko’oke-m-ta supe-tua]-tevo-k
 Det doctor [det(pl) people red-cure-rel det(acc) pain-rel-acc dress-]caus(ind)-perf
 ‘The doctors had the nurses dress the patients’
 c. Uu hitevi [***ume ye’e hi-hito-m*** ko’oe-m-ta hi’ibwa-tua]-tevo-k
 Det doctor [det(pl) people red-cure-rel pain-rel-acc eat-cause-]cause(ind)-perf
 ‘The doctor had the nurses feed the patients’

In (61), the presence of the overt causees (boldfaced) does not result in the ungrammaticality of the indirect causatives with *–tevo*. This is surprising, given the clear restriction seen (in sections 3 and 4) above against the very presence of this element in seemingly identical structures.

One shared characteristic may be observed in the sentences in (61b-c). The indirect causative *–tevo* allows embedded subjects/causees in structures in which the embedded verb is a lexical causative with *–tua*, *hi’ibwa-tua* ‘feed’ (61b) and *supe-tua* ‘dress’ (61c). I claim that what licenses the ‘extra’ argument in these cases is the fact that *–tevo* is, in reality, embedding a productive causative with *–tua* that in turns embeds a lexical causative with *–tua*. That is, these are one more example of the *–tua-tevo* combination discussed in section 4. The difference is that, additionally, the *–tua-tevo* combination embeds a further lexical causative with *–tua*. Nonetheless, just one *–tua* shows overtly, as

a consequence of the case of haplology discussed (in section 2.4.2.) above that prevents the overt morphological realization of *-tua-tua* combinations. In (62) below, I show the analysis of a sentence involving the *-tua* causativization of the embedded lexical causative *hi'ibwa-tua* 'feed', further causativized by *-tevo*.



The diagram in (62) shows the structure of a sentence that exhibits the following causative combination: *hi'ibwa-tua-tua-tevo* 'eat-cause(lexical)-cause(productive)-cause(indirect)'.
~~tua~~

Because *-tevo* is present, the embedded productive causative with *-tua* cannot have a causer (i.e. a matrix subject). Nonetheless, because the higher causative with *-tua* is productive (i.e., phase selecting), it embeds a structure containing VoiceP, that licenses an external argument (i.e., *Maria-ta* 'Maria'). This is the argument that is perceived as the 'causee' of *-tevo*, but it is, in fact, the causee of productive causative *-tua*.

Because the productive causative with *-tua* directly embeds a root (ie., lexical) causative with *-tua* (ie., *hi'ibwatua* 'feed'), only one *-tua* suffix may surface in morphology, an instance of haplology in Hiaki. The rest of the arguments appearing in (62) are licensed as part of the internal structure of the lexical causative with *hi'ibwa-tua* 'eat-cause, feed'.

The structure of (62) may be compared with sentences such as the one in (39b), whereby lexical causative *hi'ibwatua* 'feed' is embedded by productive causative *-tua*. I repeat it in (63).

(63) [Uu ye'e mahta-wa-po ya'ut] [ume yee mahta-me] [ume ili uusi-m] [hi'i]bwa-tua-k
 Det people teach-pass-at leader det(pl) people teach-rel det(pl) little child-pl eat-cause-perf
 'The principal made the teachers feed the children'

The sentence in (63) exhibits a causative with a single *-tua* suffix that appears to license too many arguments (each argument appears in the sentence between brackets): a) the matrix Causer, *uu ye'e mahta-wapo yaut* 'the principal', b) the causee *ume yee mahta-me* 'the teachers'; c) the higher internal argument *ume ili uusim* 'the little kids', associated with the lexical causative *hi'ibwa-tua* 'feed', and d) the incorporated internal argument *hi'i* 'thing'. Typically, a single productive causative with *-tua* licenses three arguments: a) a causer, b) a causee; c) an embedded object. In section 2.4.2., I explained that the arguments in (63) are all properly licensed by two different causative heads with *-tua*, one *-tua* being productive, the other *-tua* being lexical. The sentence in (63) is then a case of a double *-tua* causative that exhibits the morphological realization of just one of the *-tua* causative heads.

The structure in (63) may be further causativized by *-tevo* (as in the cases discussed

in section 4). Because in (63) just one *-tua* suffix surfaces morphologically, *-tua-tevo* combinations based on sentences like (63) will also involve the morphological realization of one rather than two *-tua* suffixes. This is what eliminates any evidence that *-tevo* is indeed causativizing a double causative with *-tua*, consequently giving the illusion that *-tevo* optionally licenses embedded subjects (ie., causees), just like *-tua* does.

Summing up, in sentences such as (63), *-tevo* does not license an embedded subject or causee, but productive *-tua* licenses a causee as part of the structure it embeds.

The sentence in (61a) exhibits a structure in which the verb embedded by *-tevo* is *hitto-* ‘treat’. Even though its morphological form does not transparently exhibit the lexical causative *-tua*, its syntactic realization in (61a) suggests that this form may be a grammaticalization of some lexical causative (e.g., *hi?-tua*) that has evolved into its present form *hitto-*.¹³⁷

In the following subsection, I discuss cases in which indirect causatives with *-tevo* take unaccusative complements, whose embedded subjects are explicit.

5.2. Internal arguments of *yepsa/yevih-/yahi-* ‘arrive’ in *-tevo* causatives

Compare the following sentences exhibiting the verb *yepsa* ‘arrive(suj.sg)’ embedded by *-tevo* in (64a) and by *-tua* in (64b).

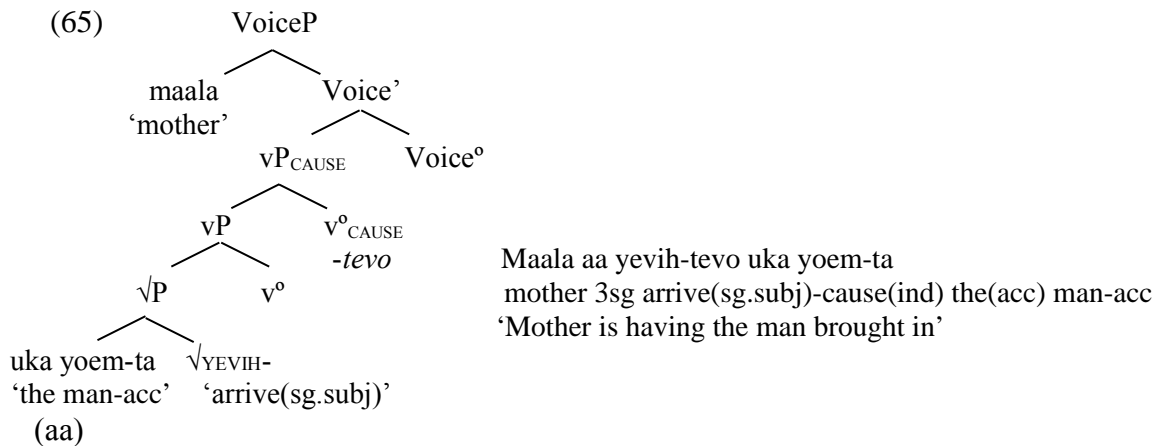
- (64) a. *Maala [aa yevih]-tevo-k uka yoem-ta*
 mother 3sg arrive(sg.subj)-cause(ind)-perf det(acc) man-acc
 ‘Mother had the man brought (lit. arrived) (eg. to the house)’

¹³⁷ This idea is both Heidi Harley’s and mine, although it is just a speculation. Further research on the evolution of Hiaki and Uto-Aztecan needs to be made in order to properly formulate this speculation as a fact.

- b. *Hose* [***Peo-ta*** lauti yevih]-***tua***-k
 Joe Pete-acc early arrive(sg.subj)-cause-perf
 ‘Joe made Pete arrive early’

The indirect causative with *-tevo* in (64a) takes a complement headed by the unaccusative stem *yepsa* ‘arrive’. Unlike other indirect causatives with intransitive verbs as complements, the one in (64a) licenses an ‘extra’ embedded argument, the accusative 3rd singular pronoun *aa*, which is doubled by the accusative DP *uka yoemta* ‘the man’. This configuration looks identical to that in the direct causative sentence with *-tua*, especially regarding the number of arguments it licenses: both sentences in (64) license one embedded argument, the accusative DP *Peota* ‘Pete’.

The potential problem that the *-tevo* sentence in (64a) raises for the analysis proposed here has to do with the overt presence of the embedded subject. This is so since vP complements of *-tevo* should be ‘subjectless’, as seen so far. Nonetheless, the ‘extra’ argument is in fact licit in the structure of (64a), because it has been base-generated as a complement of the root $\sqrt{\text{YEVIIH-}}$ ‘arrive(sg.subj)’ rather than by an embedded VoiceP projection. I illustrate this fact in (65).



In (65), the verb embedded by *-tevo* is the unaccusative *yepsa* ‘arrive(sg.subj)’. The subjects of unaccusative verbs are not introduced as external arguments, by Voice, but they are internal arguments that are introduced as the complements of verbal roots.¹³⁸ Thus, the embedded subject in (65), *aa/ uka yoemta* ‘3sg/the man(acc)’ appears in the syntax as the complement of the embedded root, $\sqrt{\text{YEVIIH-}}$ ‘arrive’. This explains why, in (65), this element is not suppressed by the syntax of *-tevo*, but it appears overtly in the structure.¹³⁹

Then, if direct causative sentences with *-tua* (64b) have the same number of overt arguments as their *-tevo* counterparts (provided their complement involves unaccusative verbs like *yepsa* ‘arrive’), this is because, in both cases, the embedded subjects have been syntactically introduced by the embedded verb.

There is, however, a contrast between the *-tevo* sentence in (64a) and the *-tua* sentence in (64b): the presence of an implicit causee (eg. by somebody) is only available in the case of the indirect causative in (64a). Or inversely, an implicit causee is not accessible from the semantics of the direct causative with *-tua* in (64b). This contrast is easily understood if we assume that, only in the case of (64b), the embedded internal argument may occupy the VoiceP position made available in the structure as part of the complement of *-tua*, while this is impossible in the case of (64a), in which the only

¹³⁸ For further details on the syntax of unaccusative verbs see Perlmutter (1978)

¹³⁹ Notice that, although the internal argument in (65) has been base-generated as the complement of the root, it can still receive accusative case from the embedded vP. This is what happens in other cases in which *-tevo* embeds transitive complements: the embedded objects still receive accusative case, presumably from embedded v^o (i).

(i) *Asuka-ta* tu-tuh-tevo-ka dulse-ta yaa-k
 Sugar-acc red-grind-cause(ind)-ppl sweet-acc make-perf
 ‘Having had the sugar ground, he made candy’

Dedrick & Casad (1999)

available position for the embedded argument is as an internal argument to the vP clause embedded by *-tevo*.

It seems clear that it is the internal structure of the material embedded by *-tevo* that allows the ‘extra’ argument. In here, it is the internal structure of the unaccusative verb *yepsa* ‘arrive’ that is responsible for the presence of the ‘extra’ argument, which is misleadingly perceived as an external argument embedded by *-tevo* (64a). We saw in the previous subsection that a similar explanation accounts for the presence of the perceived ‘extra’ argument in indirect causative clauses embedding productive causatives of *hitto* ‘treat’ or *hi’ibwatua* ‘feed’. It looks, then, that it is the internal structure of the material embedded by *-tevo* that make available multiple internal positions to license internal arguments.

The sentence in (66) presents a potential problem to an account in which causees of causatives of unaccusatives are actually internal arguments of the embedded roots.¹⁴⁰

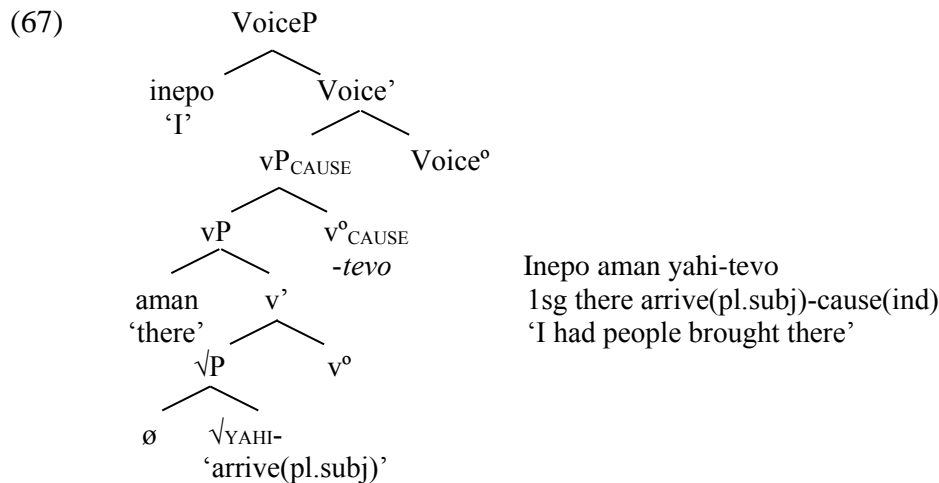
- (66) Inepo aman *yahi*-tevo-k
 1sg there arrive(pl.subj)-cause(ind)-perf
 ‘I had (eg. some people) brought (lit. arrived) there’

The sentence in (66) exhibits only one overt argument, the causer *inepo* ‘I’. Neither the causee (it is implicit, ‘by somebody’) nor the internal argument (also implicit) are overtly expressed. In the case of the causee, we know its absence is due to the syntax of the causative head *-tevo*. In the case of the internal argument of *yahi*- ‘arrive’, its absence

¹⁴⁰ It is not clear whether the adverbial *aman* ‘there’ is an argument or an adjunct in Hiaki sentences, as in many cases it is seen by native speakers as ‘necessary’ for sentences to be fully correct. This particularity of Hiaki is apparently shared by the whole Uto-Aztecan family (Jane Hill (p.c.)). Further research is necessary regarding this issue. For the moment, I will for now treat *aman* as an adjunct rather than an argument.

contradicts the explanation just given to account for its presence in (64a). In this sense, the sentence in (66) behaves just as any other intransitive sentence embedded by *-tevo*, suppressing embedded subjects.

But this cannot be the case. We saw in section 3.3.2. that, in Hiaki, certain verbs such as *yepsa* ‘arrive’ agree in number with their subjects. We saw that if the subject is implicit the agreement in the verb is invariably plural. This is precisely what happens in (66), in which the number on the embedded verb *yahi-* ‘arrive’ is plural, in agreement with an implicit subject, its implicit internal argument (eg. some people). I offer an illustration in (67).



The structure in (67) shows that unaccusative verbs in Hiaki, such as *yepsa/yaha* ‘arrive’ may have syntactically suppressed arguments, but these arguments are semantically implicit internal arguments that trigger number agreement with the verbs that license them.

Yet, certain direct and indirect causative sentences involving *yepsa* ‘arrive(sg.subj)’ exhibit parallel structures in which there does not seem to be any

indication of the presence of any implicit argument in the complement of *–tevo*:

- (68) a. Kaaro-m hiva si vu-vu'uria. Kiali'ikun **vato'o-raa-ta** kaa lauti **yahi-tevo-k**
 car-pl always very red-multiply that.is.why in.baptism-avzr-acc neg early arrive(pl)-
 cause(ind)-perf
 'The heavy traffic had the people arrive late'
- b. Kaaro-m hiva si vu-vu'uria. Kiali'ikun **vato'o-raa-ta** kaa lauti **yahi-tua-k**
 car-pl always very red-multiply that.is.why in.baptism-avzr-acc neg early arrive(pl)-
 cause-perf
 'The heavy traffic made the people arrive late'

In (68), the accusative argument, *vato'oraata* 'the people (lit. the baptized ones)', appears to be the genuine causee of either structure embedded by *–tua* or *–tevo*. In this sense, it seems that *–tevo* (68a) is working in exactly the same way as its direct counterpart *–tua* (68b), which raises a problem for the proposal. In other words, there does not seem to be any implied argument that stands for a syntactically unrealized causee in the case of the sentence with *–tevo* in (68a).

I do not have a clear answer for this problem. It might be the case that unaccusatives that are embedded by causatives may exhibit implicit causees with *–tevo* or even explicit causees with *–tua* just optionally. Then, the argument *vato'oraata* 'the people (lit. the baptized ones)' is base generated as the internal argument of *yepsa* 'arrive' in both sentences in (68), but none of the causative suffixes exhibit a causee argument, including the sentence with *–tua* in (68b), due to the unaccusative nature of the embedded root.

In other cases such as (64) or (66) above, the sentences with *–tevo* allow implicit causees. Since I do not have enough data supporting this hypothesis, especially direct causatives of unaccusatives exhibiting explicit causees in addition to the internal

arguments, I leave this subject for future research.

5.3. The passive interpretation of *ne'e* 'fly' as the complement of *-tevo*

Some intransitive verbs embedded by *-tevo* (eg. *ne'e* 'fly') may receive a passive interpretation when allowing complement DPs:

- (69) a. Uu uusi *am*=ni'i-*tua*-k b. Uu uusi *wikichi-m* ni'i-*tevo*-k
 det child 3pl=fly-cause-perf det child bird-pl fly-cause(ind)-perf
 'The child made them fly' 'The child had the birds fly'
- c. *Wikichi-m* ni'i-*tevo*-k
 bird-pl fly-cause(ind)-perf
 'The birds were allowed to fly'

The sentence in (69a) presents the typical structure of *-tua* causatives of intransitives, where the presence of the causee, the 3rd person plural pronominal clitic *am* 'them', is permitted by the syntax of the direct causative head. The sentence in (69b) shows a *-tevo* causative similar to the problematic cases seen in the previous subsection, in which the overt presence of the embedded subject *wikichim* 'the birds' is allowed.

The sentence in (69c) exhibits an even quirkier structure, since it receives a passive interpretation in the absence of an overt causer (ie, the main subject). What is anomalous in this construction is the absence of the passivizing suffix *-wa* in the structure. Hiaki discourse allows the possibility of omitting arguments that are implicit by context.

Perhaps this is what is involved in (69c), in which the matrix subject (causer) is implicit.¹⁴¹ Still, the overt presence of the embedded argument *wikichim* 'the birds' poses

¹⁴¹ Plural arguments in Hiaki do not show a nominative-accusative distinction, which makes it difficult to tell the case in which the argument *wikichim* 'the birds' appears. Since this argument is plural, it could be either nominative or accusative.

a problem for the analysis proposed here, if the embedded root $\sqrt{\text{NI}}\text{'I-}$ ‘fly’ were, indeed, unergative.

My suggestion at this point is that this root is (or can be) unaccusative in Hiaki, like motion verbs often are in other languages (see eg., Folli & Harley (2004) and references therein). If these verbs are unaccusative rather than unergative, an embedded argument *wikichim* ‘the birds’ would be licensed as an internal argument. This hypothesis needs to be supported with further data for which I will leave this final issue for future research.

5.4. Summary

In this section, I have discussed some data that pose potential problems to the analysis proposed for indirect causatives with *-tevo*, especially regarding the presence of overt causees as embedded by this causative head. I have shown that most cases can be explained by looking at the argument structure of the material embedded by *-tevo*.

The examples seen indicate that if *-tevo* embeds a double causative with *-tua* (ie., *hi'ibwatua(tua)* ‘make feed’), the causee (ie., subject) embedded by productive *-tua* will be interpreted as subject embedded by *-tevo*. The confusion created by these structures is the fact that whereas double causatives with *-tua* exhibit the structure of a double causative, this is not reflected in the morphology (ie., Hiaki disallows *-tua-tua* combinations morphologically although it allows them syntactically).

Unaccusative roots like *yepsa* ‘arrive’ or seemingly unaccusative roots like *ne'e* ‘fly’ license internal arguments that may be interpreted as causees, but that really are a consequence of the unaccusative syntax of their roots. In the next section, I offer the

conclusion to the chapter.

5. Conclusion

In this chapter, I have discussed the syntax of productive causatives in Hiaki. Both direct and indirect causatives in Hiaki provide further illustrations for Pylkkänen's causative classification. The direct productive causative *-tua* has been shown to fit within the phase-selecting group, whereas its indirect counterpart *-tevo* has been shown to classify as verb selecting.

Furthermore, this chapter has illustrated a case in which a causative head with the same phonetic realization (i.e., *-tua*) can be lexical or productive depending on its selectional properties (root selecting and phase selecting respectively). I showed that, because they are causatives of different kind, lexical and productive *-tua* may appear in combination in a single sentence.

In this chapter, I have also shown that both direct causative *-tua* and indirect causative *-tevo* are non Voice-bundling, despite the fact that both heads tend to appear along with an external argument (causer). The common test that proves the non Voice-bundling properties of the Hiaki productive causatives comes from the passivization of these heads, as both the passive suffix *-wa* and the causative heads need separate head in which to be syntactically realized. A further test showing the non Voice-bundling properties comes from the causative complex *-tua-tevo*, as the selectional properties of *-tevo* would prevent it from embedding *-tua* were the direct causative realized in a single Voice/ v_{CAUSE} bundled head.

Although Hiaki is one language that exhibits a non Voice-bundling causative head this language seems to lack unaccusative causatives, as both *-tua* and *-tevo* require causers if they are not further embedded by a further causative head (ie., *tevo*) that disallows external arguments in its embedding domain. In the following chapter, chapter 6, I discuss the syntax of productive causatives in Spanish, a causative type that does allow unaccusative causatives.

CHAPTER 6

SPANISH PRODUCTIVE CAUSATIVES: *HACER*

0. Introduction

In this chapter, I examine the syntax of Spanish productive causatives with *hacer* ‘make’ regarding their selectional and Voice-bundling properties. The Spanish productive causative head *hacer* ‘make’ appears in a larger number of syntactic environments than its English (*make*) and Hiaki (*-tua*) counterparts. I will show that this is the consequence of a) the versatile selection and Voice-bundling properties of this causative and b) the fact that it is compatible with both functional and lexical uses. For a causative head to exhibit multiple selectional frames is not an isolated phenomenon, as the Hiaki direct causative *-tua* also may appear in a different number of configurations, depending on the material it embeds (chapter 5).

An important part of the chapter will be devoted to discussion on whether the causees that appear in constructions with *hacer* are embedded external arguments or matrix applied arguments. After extensive examination, I will conclude that causees behave as external arguments.

The chapter is divided as follows. In section 1, I briefly discuss some of the syntactic properties of *hacer* relevant to this chapter. In section 2, I show that *hacer* comes in two flavors, functional and lexical *hacer*; functional *hacer* will be illustrated with the *hacer-subjunctive* (FQ) construction, whereas lexical *hacer* will be illustrated

with the *hacer-por* (FP) construction. In section 3, I introduce the *hacer-infinitive* (FI) construction, I review the history of the construction and I propose what kind of complement this construction may take. In section 4, I show that causees in FI constructions are external arguments. In section 5, I show that functional *hacer* is Non-Voice-bundling in Pylkkänen's terms. Section 6 is the conclusion.

1. Syntactic properties of *hacer*

Productive causatives with *hacer* have been long investigated after the pioneering work by Bordelois (1974). Relevant proposals on the syntax of this causative type may be found in Cano Aguilar (1977), Bordelois (1988), Zubizarreta (1985), Goodall (1984, 1987), Alsina (1992), Moore (1991), Treviño (1994), Torrego (1998), and more recently, in Ordóñez (2008) and Torrego (2009). In this section, I introduce basic examples of the constructions involving *hacer* that will be relevant to this chapter. Most of them have received different analyses in the aforementioned works.

1.1. FI versus FQ

The Spanish causative *hacer* is compatible with both infinitival and subjunctive complements (1).

(1) a. *infinitival complement*

Juan hizo [cantar a María]
 John made [sing(inf) to Mary]
 'John made Mary sing'

b. *subjunctive complement*

Juan hizo [que María cantara]
 John made [that Mary sang(sub)]
 'John made Mary sing'

The sentences in (1) illustrate two possible complementation frames that are compatible with *hacer*. The complement of *hacer* in both sentences in (1) involves the embedded unergative verb *cantar* ‘sing’. Unergative verbs take external arguments, as seen throughout this dissertation. I will discuss each construction individually.

The sentence in (1a) exhibits a typical *hacer* + *infinitive* construction (FI henceforth). In this construction, the embedded verb appears in infinitival form, *cant-ar* ‘sing-inf’. It tends to immediately follow *hacer* when the embedded subject (‘causee’ henceforth), *a María*, is postinfinitival. This is the external argument associated with the embedded verb and it may also be preinfinitival. It may be doubled by a dative clitic: *Juan (le) hizo cantar a María* ‘John (dat) made(3sg) sing to Mary, John made Mary sing’.¹⁴²

The preinfinitival position of the causee makes Spanish differ from other Romance languages like French and Italian that disallow this position.

(2) *French and Italian disallow preinfinitival causees*

French

*Pierre a fait Jean ouvrir la porte
‘Pierre has made John open the door’

Treviño (1994: 18[1b])

In French, Italian, and some Spanish dialects (e.g., Rio de la Plata in Bordelois (1974)) the case of the causee argument depends on the nature of the embedded verb: transitive embedded verbs trigger dative causees whereas intransitive embedded verbs trigger

¹⁴² Some Spanish dialects are like French and Italian in that they disallow preinfinitival causees (e.g., the Rio de la Plata dialect documented in Bordelois (1974)):

(i) *Hice a Juan comprar cigarillos
Made(1sg) to John buy cigarette
‘I made John buy cigarettes’

Bordelois (1974: 90[8])

accusative causees:

(3) *Dative-causative alternation of the causee*

- | | |
|--|---|
| <p>a. <i>intransitive complement: accusative</i>
 <i>lo</i> hice llorar
 3sg.acc made(1sg) cry
 ‘I made him cry’</p> | <p>b. <i>transitive complement: dative</i>
 <i>le</i> hice leer el libro
 3sg.dat made(1sg) read the book
 ‘I made him read the book’</p> |
|--|---|
- Bordelois (1974: 47[52, 53])

In other dialects (e.g., Mexican Spanish, in Treviño (1994)), the case of the causee depends on its interpretation as more directly or indirectly affected by the causing event, rather than on the transitivity of the complement.

(4) a. *accusative → direct*

Él *la* hizo {confesar / admitir su culpa}
 3sg.nom 3sg.acc made(3sg) {confess / admit his fault}
 ‘He made her {confess / admit his fault}’

b. *dative → indirect*

Él *le* hizo {confesar / admitir su culpa}
 3sg.nom 3sg.dat made(3sg) {confess / admit his fault}
 ‘He made her {confess / admit his fault}’

Treviño (1994: 108[2])

In the dialect I focus on in this chapter (i.e., non *loísta/leísta* standard Peninsular Spanish), dative causees are generally preferred to accusative causees regardless of the nature of the verb complement.

Generally, causees in this dialect are doubled by a dative clitic, although the clitic is not obligatory.

(5) a. *intransitive complement*

(Le) he hecho llorar a Juan
 (3sg.dat) have(1sg) made cry to John
 ‘I made John cry’

b. *transitive complement*

(Le) he hecho vender el coche a Juan
 (3sg.dat) have(1sg) made sell the car to John
 ‘I made John sell the car’

The syntax of FI constructions will be discussed in section 3. Next I introduce the basic properties of *hacer* + *subjunctive* causatives.

The sentence in (1b) illustrates a construction with *hacer* + *subjunctive* (FQ henceforth). In this kind of configuration, the complement of *hacer* is introduced by the complementizer *que* ‘that’. The embedded verb appears in subjunctive form, *cant-ara* ‘3sg-past.subj’, agreeing in person and number with the embedded subject or causee, *María*.

The causee, in turn, always appears in nominative case, and it may precede the embedded verb, as in (1b), follow it, *Juan hizo que cantara María* ‘John made that sang(3sg.sub) Mary’ or be omitted, *Juan hizo que cantara* ‘John made that sang(3sg.sub).¹⁴³

In the dialect treated here, FQ constructions may also appear with a matrix dative. In such cases, the dative must be doubled by a matrix clitic. The embedded clause may contain its own subject, which tends to be coreferent with the dative, although this is not a requirement.

(6) *FQ with a dative causee*

A Juan *(le) hice [que {cantara (él) / (su hijo)}]

To John *(3sg.dat) made [that {sang(3sg) (he) / (his son)}]

‘I caused John / John’s son to sing’

¹⁴³ In FQ constructions, the causee is preverbal in out-of-the-blue statements, regardless of whether the embedded verb is transitive or intransitive (i). In other discursive contexts (ie., contrastive or narrow focus), the causee may be postverbal, regardless of whether the embedded verb is transitive or intransitive (ii).

(i) Juan ha hecho que *María* suspenda el examen (ii) Juan ha hecho que suspenda el examen *María*
(no Antonio)

John has made that Mary fails the exam
‘John made Mary fail the exam’

John has made that fails the exam Mary (not Tony)
‘John made MARY (not Tony) fail the exam’

Notice that, unlike dative causees in FI, if the FQ contains a matrix dative, *a Juan*, it must obligatorily appear doubled by a dative clitic, *le* (3sg.dat). Next, I contrast the two FI and FQ structures regarding their complement.

1.2. The complement of FI versus the complement of FQ

At first glance, both FI and FQ causatives allow all three main types of verb complements (ie., unergatives, transitives, and unaccusatives). Nonetheless, FI causatives are much more restricted than FQ causatives regarding the configurations they allow as their complement.

1.2.1. Both FI and FQ take unergative, transitive and unaccusative complements

Besides unergative verbs, (ie., *cantar* ‘sing’ (1)), both FI and FQ may take transitive (7) and unaccusative (8) verbal complements.

(7) *transitive complements of ‘hacer’*

a. FI

Juan (le) hizo [comer lentejas a María]
J. (3sg.dat) made [eat(Inf) lentils to M.]
‘Juan made Mary eat lentils’

b. FQ

Juan hizo [que María comiera lentejas]
Juan made [that Mary ate(sub) lentils]
‘Juan made Mary eat lentils’

(8) *unaccusative complements of ‘hacer’*

a. FI

Juan (le) hizo [llegar tarde a María]
J (3sg.dat) made [arrive(Inf) late to M]
‘Juan made María arrive late’

b. FQ

Juan hizo [que María llegara tarde]
Juan made [that María arrived(sub) late]
‘Juan made María arrive late’

Both FI and FQ causatives allow unergatives (1), transitives (7), and unaccusatives (8) as complements. In all three cases, the dative causee in FI may be doubled by a clitic.

Nonetheless, there are some restrictions imposed on the complement of FI causatives

only. I discuss them next.

1.2.2. FI is more restricted than FQ

The FI construction appears to impose restrictions on its complement that are absent from FQ counterparts. For instance, according to Bordelois (1974), FI disallows complements with expletive subjects (9a), passive complements (10a) or some psychological verbs with dative experiencers (11a), whereas FQ fully allows them ((b) counterparts).

(9) *Complements with expletive subjects*

- | | |
|---|--|
| a. FI | b. FQ |
| *El mago hizo empezar a llover | El mago hizo que empezara a llover |
| the magician made(3sg) start to rain | The m. made(3sg) that started(3sg.sub) to rain |
| ‘The magician caused the rain to start’ | ‘The magician caused the rain to start’ |
| | Bordelois (1974: 12[27, 26]) |

(10) *Passive complements*

- | | |
|---|--|
| a. FI | b. FQ |
| *He hecho ser devueltos (a) los libros | He hecho que los libros sean devueltos |
| Have(I) made be returned (to) the books | have(I) made that the books be(3sg.sub) returned |
| ‘I had the books returned’ | ‘I had the books returned’ |

(11) *Psychological verbs with dative experiencers and inanimate subjects*

- | | |
|---|---|
| a. FI | b. FQ |
| *Su ironía hizo irritarme (a) su respuesta | Su ironía hizo que su respuesta me irritara |
| his irony made(3sg) irritate=me (to) his answer | his irony made that his answer 3sg.acc irritate |
| ‘e.g., The irony in his answer irritated me’ | ‘e.g., The irony in his answer irritated me’ |
| | Bordelois (1974: 12[23, 22]) |

All restrictions in the (a) examples of (9-11) have to do with the fact that the complement of the FI causatives is lacking an animate causee. The restriction in (10a) and (11a), for instance, disappears if the causee becomes animate:

(12) *Non restriction on animate causee*

- a. Tu ironía *le* hizo enfadarse *a Juan*
 your irony 3sg.dat made(3sg) irritate=3sg.refl to John
 ‘Your irony caused John to become irritated’
- b. Su falta de cuidado *le* hizo ser descubierto
 His lack of care 3sg.dat made(3sg) be discovered
 ‘His careless behavior caused him to be discovered’
- c. ?Juan *le* ha hecho enfadarse
 John 3sg.dat has made irritate=3sg.refl
 ‘John caused him to become irritated’
- d. ?María *le* hizo ser descubierto
 Mary 3sg.dat made be discovered
 ‘Mary caused him to be discovered’

The sentences in (12a) and (12b) exhibit a psych predicate and a passive, respectively, as complements of *hacer* in an FI construction (just as (10a) and (11a) above). The difference between (12a-12b) and (10-11) is the fact that only the former cases exhibit animate causees, *a Juan* (12a) and the dative clitic *le* (3sg, 12b). Unlike (10a) and (11a), the sentences in (12a) and (12b) are grammatical. Interestingly, this seems to be the case if the causer is non-animate/non-volitional (e.g., *tu ironía* ‘your irony’ (12a)).

If the causer is also animate/volitional (e.g., *Juan/María* (12c-d)), the sentences appear to be slightly degraded. I am not sure why this is the case. Perhaps it is due to pragmatic reasons. That is, the embedded structures are lacking an agent. This means that the caused argument cannot be ‘obliged’ by a volitional causer (e.g., *María* (12d)). The only context in which structures such as (12) may be acceptable is that in which the causee inevitably experiences/suffers the consequences of the actions by a non-volitional cause (12a-b).

In section 3, I will treat the restrictions in (11) as possibly associated with an obligation (combined with an animacy) requirement on the dative causee (first discussed by Folli & Harley 2003, 2007). Next I show the basic contrast between the two constructions in Spanish that involve *hacer* + infinitive (FI) and *hacer* + *por* (FP).

1.3. FI versus FP

The combination of *hacer* + infinitive occurs in two different configurations that are contrasted in the presence versus the absence of a dative causee. This distinction has received extensive attention in the literature of Romance causatives (ie., Kayne (1975), Burzio (1986), Treviño (1994), Folli & Harley (2003, 2007), Torrego (1998, 2009)).

When the causee is present, the FI construction is obtained. Because of the presence of the dative causee, the FI construction is interpreted as expressing direct causation (13a). When it is absent, we obtain the *hacer-por* construction (FP henceforth). The absence of the causee renders the interpretation of this construction as indirect causation (13b).

(13) a. FI: *direct causation*

Juan (*le*) hizo [recoger el paquete] *a Pepe*
 John (3sg.dat) made [pick up the package] to Joe
 ‘John made Joe pick up the package’

b. FP: *indirect causation*

Juan hizo [recoger el paquete (*por uno de sus empleados*)]
 John made [pick up the package (by one of his employees)]
 ‘John had the package picked up (by one of his employees)’

Although the FP construction lacks a causee, this argument tends to be semantically implicit (and recoverable) by means of a *by*-phrase (ie., *por uno de sus empleados* ‘by

one of his employees’, in (13b)). I describe the syntax of FP in section 2.

1.4. Non-verbal complements of *hacer*

In addition to verbal complements, Spanish causative *hacer* may also embed non-verbal structures, such as adjectival phrases (14) or nominals (15).

(14) *adjectival phrases*

- | | |
|---|---|
| <p>a. Este vestido hace a María muy delgada
 This dress makes to Mary very thin
 ‘This dress makes Mary (look) very thin’</p> | <p>b. Este vestido hace muy delgada a María
 This dress makes very thin to Mary
 ‘This dress makes Mary (look) very thin’</p> |
|---|---|

(15) *nominals*

- | | |
|--|--|
| <p>a. La fama ha hecho a Juan un imbécil
 the fame has made to John an imbecile
 ‘Fame turned John into an imbecile’</p> | <p>b. La fama ha hecho un imbécil a Juan
 the fame has made an imbecile to John
 ‘Fame turned John into an imbecile’</p> |
|--|--|

Bare nominals (verbalizations)

- c. Esa peli le/*lo hace a Juan mucha gracia
 that movie 3sg.dat/*3sg.dat makes to J. much grace.
 ‘John finds that movie very funny’
- d. Esa peli le/lo hace mucha gracia a Juan
 that movie 3sg.dat/*3sg.acc much grace to J
 ‘John finds that movie very funny’

All sentences in (14) and (15) behave like typical FI causatives in the position of the embedded subject (ie., *a María* in (14)) which may precede or follow the adjectival or nominal predicate (ie., *muy delgada* ‘very thin’ in (14)).

These constructions differ from FI in the case of the causee. Whereas the case of the embedded subjects may be dative or accusative in (16a,b), it is obligatorily a dative in (16c), which suggests differences in their syntactic structure.

- (16) a. Este vestido la/le hace muy delgada
 This dress 3sg.acc/3sg.dat make(3sg) very thin
 ‘This dress makes her very thin’
 b. La popularidad lo/le hizo un imbécil
 The popularity 3sg.acc/3sg.dat made(3sg) an imbecile
 ‘Popularity turned him into an imbecile’
 c. Esa peli le/*lo hace mucha gracia
 That movie 3sg.dat/*3sg.acc makes much grace
 ‘He finds that movie very funny’

In section 5 I will show that non-verbal *hacer* constructions (FN, henceforth) involve a variety of configurations that result in different interpretations and restrictions associated with them.

1.5. Unaccusative *hacer*

The causative *hacer* generally appears with matrix external arguments or causers, but this is not a requirement. The following sentence (16) exhibits an FI construction in which the causative verb is used unaccusatively. When this happens, the sentence receives a desiderative interpretation (ie., ‘feel like’).

- (17) A María no {le/*la} hace salir hoy
 to Mary neg {3sg.dat/3sg.acc} makes go.out today
 ‘Mary does not feel like going out today’

The sentence in (17) exhibits a construction with *hacer*, which takes an infinitive complement (ie., *salir hoy* ‘go.out today’). The causative *hacer* invariably shows 3sg (ie., ‘default’) agreement, *hace*. Unlike other FI constructions, the construction in (17) disallows accusative ‘causees’.

The FQ construction may also be used unaccusatively (18).

- (18) No te hace que {salgamos/*salgas} hoy?
 Neg 2sg.dat makes that {go.out(1pl.sub)/*go.out(2sg)} today?
 ‘Do you feel like we should go out today?’

In the desiderative FQ construction, the dative *te* ‘2sg.dat’ cannot be coreferent with the embedded subject (ie., **salgas* (2sg)). This contrasts with other FQ constructions in which coreference between the dative and the embedded subject is not only allowed, but frequent, as seen in (5) above. In section 5 this will be used as evidence in favor of the different configuration of the sentences in which both datives appear.

Although these constructions normally appear with a dative, it is possible to find unaccusative FI constructions with no overt causee. In such cases, the reference for the causee is understood as arbitrary or generic (19).

- (19) Hoy no hace salir
 today neg make(3sg) go.out
 ‘One doesn’t feel like going out today’
 (ie., today is one of these days in which one / people doesn’t feel like going out)’

While not possible if the complement is an adjective (ie., **Hace caliente* ‘make(3sg) hot’), unaccusative *hacer* is also possible if combined with some nouns. The resulting structures are idiomatic:¹⁴⁴

- | | |
|--|--|
| <p>(20) a. <i>weather</i>
 Hoy hace mucho frío
 Today makes(3sg) much cold
 ‘It’s very cold today’</p> | <p>b. <i>time</i>
 Hace años que no te veo
 makes(3sg) years that neg 2sg.acc see(1sg)
 ‘It’s been years since I last saw you’</p> |
|--|--|

Like in the examples in (17-19), the verb *hacer* in (20) is missing an external argument,

¹⁴⁴ Although some weather expressions with *hacer* are possible in which an adjective appears in the embedded domain.

(i) Hace {bonito / feo / malo / bueno}
 Makes {pretty / ugly / bad / good}
 ‘The weather is {beautiful / ugly / bad / good}’

as a consequence of which it exhibits ‘default’ agreement (ie., *hace* ‘3sg’). I will discuss these constructions in section 5.

1.6. Summary

In this section, I have shown the relevant Spanish data involving causatives with *hacer* ‘make’ that I will analyze in this chapter. I have shown that *hacer* is compatible with both infinitival and subjunctive complements introduced by the complementizer *que* ‘that’.

Although both complements are available for *hacer* ‘make’, there are restrictions associated with constructions such as *hacer*-inf (FI), especially regarding the animacy of the causee. Within the causatives with *hacer* that select infinitival complements, there is a further division. There is the *hacer*-inf (FI) construction that selects complements with an embedded subject (causee) and the *hacer*-par (FP) construction that selects complements lacking an embedded subject.

I also showed examples in which the complement of *hacer* ‘make’ is a non-verbal predicate, such as an adjective or a nominal that nonetheless select an embedded subject (causee). I showed that these sentences differ from FI constructions in that they sometimes restrict the case on the causee (ie., it cannot be realized as accusative).

Finally, I showed examples in which *hacer* ‘make’ is unaccusative (ie. it lacks an external argument or causer). In such situations, the construction is interpreted as desiderative, if *hacer* takes a verbal complement (infinitival or subjunctive) that includes a causee. If it takes a non-verbal complement, that does not include a causee, the constructions are used to refer to the weather or as temporal expressions in which all

referents are expletives. In section 2, I start the formal study of these constructions by reviewing Folli & Harley's (2003, 2007) distinction of Romance productive causatives as functional or lexical, since it will be relevant throughout this chapter.

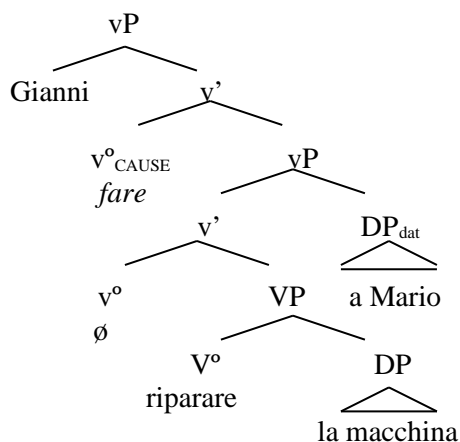
2. *Hacer* may be functional or lexical

2.1. Italian *fare*: Folli & Harley (2003, 2007)

Folli & Harley (2003, 2007) show that the Italian causative *fare* 'make' comes in two flavors. The causative *fare* may be the morphological realization of a functional v°_{CAUSE} head (ie., the familiar causative head discussed throughout this dissertation), but it may also be the realization of a lexical, agentive v°_{DO} .

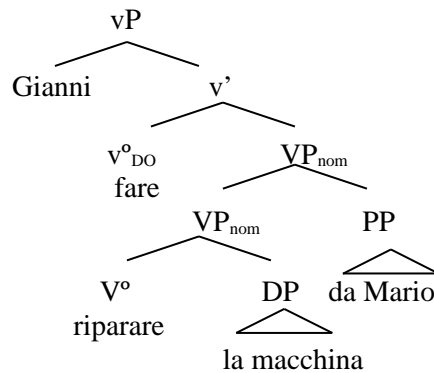
Folli & Harley discuss different restrictions associated with each of these verbal heads. For instance, they argue that, in Italian, the kind of *fare* that appears in FI constructions is v°_{CAUSE} (21a), which is contrasted with the kind of *fare* that appears in FP constructions is v°_{DO} (21b).

(21) a. Folli & Harley's analysis of FI



Gianni ha fatto riparare la macchina a Mario
Gianni has made repair the car to Mario
'Gianni made Mario repair the car'

Folli & Harley (2007: 207[16a])

b. *Folli & Harley's analysis of FP*

Gianni ha fatto riparare la macchina da Mario
 Gianni has made repair the car by Mario
 'Gianni had the car repaired by Mario'

Folli & Harley (2007: 208[16b])

The Italian FI and FP constructions share some similarities with their Spanish counterparts. One contrast is, for instance, that whereas the causee appears as a dative (or accusative) argument in FI (*a Mario*, 21a) it can only be expressed as an adjunct in FP (*da Mario* 'by Mario').^{145,146} Folli & Harley argue that in the FI construction (21a), *fare*, as a functional head, does not impose selectional restrictions on its external argument. For this reason, causers (ie., *Gianni*) may be both causes and agents. The FP construction (21b), as a lexical verb, only allows agents as causers (22).

- (22) *La rabbia fece rompere il tavolo {a/*par} Gianni*
 The rage made break the table {to/*by} Gianni
 'Rage made Gianni break the table'

Folli & Harley (2007: 217[27a])

The sentence in (22) exhibits a cause, *la rabbia* 'rage', as its subject/causer. Its incompatibility with an adjunct causee (*par Gianni* 'by John') indicates that FP causatives where *fare* is v_{DO} may only take agents as their causers. Functional *fare* does

¹⁴⁵ In Italian, transitive complements of FI trigger dative causees whereas intransitive complements of FI trigger accusative causees.

¹⁴⁶ In this section, I will concentrate on differences regarding the functional versus lexical nature of *fare/hacer*. The nature and position of causees of FI, for instance, will be discussed in section 3.

not show this restriction, as the compatibility of the causer *la rabbia* ‘rage’ with the dative causee *a Gianni* ‘to John’ indicates.

Folli & Harley also contrast the two structures in terms of their complement. Whereas FI causatives (21a) take an agentive event (vP) as their complement, FP causatives (21b) take a nominalized VP as their complement. Because the nominalized VP is lacking its eventive layer (ie., vP), the complement of FP lacks its own external argument (hence it may only be expressed as an adjunct *by*-phrase as just seen).

This contrast is reflected in several differences exhibited by the two constructions. For instance, Folli & Harley argue that only FP allows passivization (23).

(23) a. FP

Il pacchetto fu fatto arrivare (da Gianni)
The package was made arrive (by Gianni)
‘The package was made to arrive (by Gianni)’

b. FI

*Maria fu fatta mandare un pacchetto (da Gianni)
Maria was made send a package (by Gianni)
‘Maria was made send a package (by Gianni)’

Folli & Harley (2007: 225[43b,c])

Folli & Harley explain that the restriction in (23b) is the direct consequence of the functional nature of *fare* in FI causatives. According to these authors, when *fare* passivizes it necessarily forms part of a FP construction, simply because only lexical verbs (ie. V^o_{DO}) have a participial form.¹⁴⁷ The passivization of FI in (23b) is impossible, according to these authors, because functional verbs lack passives.¹⁴⁸

¹⁴⁷ In the sentence in (23a), the complement verb is unaccusative, *arrivare* ‘arrive’. This verb may form part of a FP construction even though unaccusative verbs typically lack an external argument. The passive subject *il pacchetto* ‘the package’ is the original embedded verb, not the causee.

¹⁴⁸ In Italian, passives of seemingly FI constructions are grammatical if the embedded object rather than the causee becomes the passive subject:

Thus, not all causatives formed with Italian *fare* involve the functional v°_{CAUSE} , as some constructions with this causative actually involve a lexical verbal head V°_{DO} . Spanish *hacer* also seems to be the morphological realization of two different verbal heads, v°_{CAUSE} and V°_{DO} . In this section, I will concentrate on the FQ construction as an instance of the former and the FP construction as an instance of the latter.¹⁴⁹

2.2. Lexical *hacer*: the FP construction

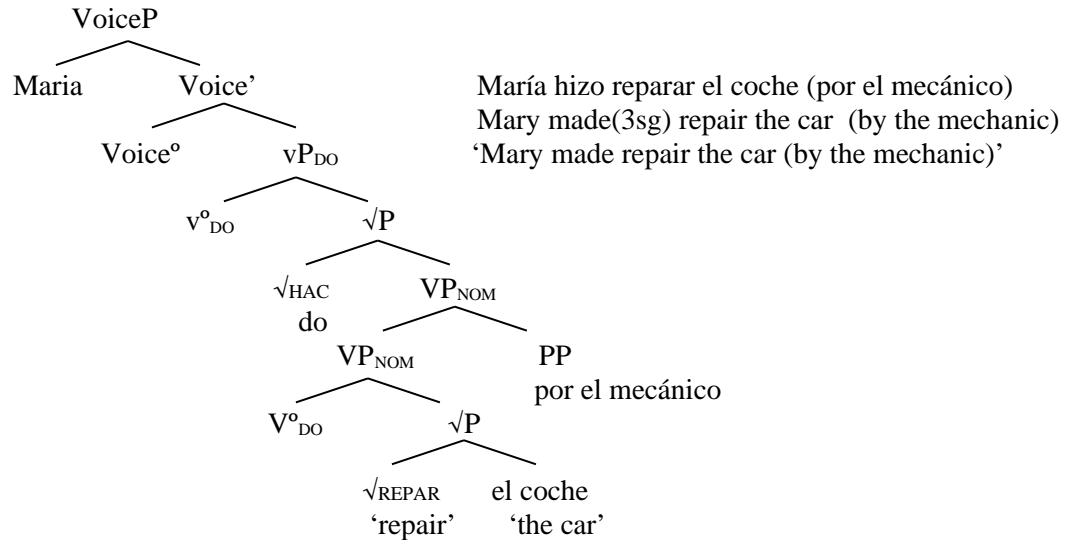
2.2.1. *hacer* in FP is V°_{DO}

I adopt the analysis of FP proposed by Folli & Harley (2003, 2007) in (21b) for the Spanish FP construction. In this sense, the Spanish FP construction also involves lexical *hacer* that occupies a V_{DO} position. My analysis varies from Folli & Harley's in that I assume VoiceP as the external-argument-introducing head rather than $v\text{P}$, as discussed throughout this dissertation. I show the structure in (24).

-
- (i) Il libro fu fatto leggere a Mario (da Gianni)
 the book was made read to Mario (by Gianni)
 'Mario was made to read the book (by Gianni)' Folli & Harley (2007:225[43a])
 Folli & Harley argue that this passive is in fact the passive of FP that happens to also exhibit a benefactive rather than a causee dative. Evidence of this is the fact that the *by* phrase cannot be realized by a cause:
- (ii) È stato fatto rompere il tavolo (a Marco) {da Maria / *dalla rabbia}
 Is been made break the table (to Marco) {by Maria / *by.the rage}
 'A table was made to break (on Marco) {by Maria / *by the rage}'
 Folli & Harley (2007: 234[52])

¹⁴⁹ We will see, in section 3, that the FI construction also involves functional v°_{CAUSE} .

(24) FP in Spanish



In (24), the matrix light verb is the agentive v°_{DO} rather than the causative v°_{CAUSE} . In this sense, *hacer* 'do' is a lexical verb, associated with a root \sqrt{HAC} - 'do' that takes a nominalized VP *reparar el coche* 'repair the car' as a complement. It is crucial that this embedded VP has been nominalized before taking a subject (via an embedded VoiceP). For this reason, the complement of *hacer* 'do' in FP lacks a subject (ie., causee), although it may be recovered via an adjunct *por* (by)-phrase.

Evidence for the analysis of *hacer* in FP constructions as lexical is the fact that, like its Italian counterpart, this head disallows causes as its external argument (25).

- (25) {Juan / *su enfado} hizo castigar al niño (por el profesor)
 {John / *his rage} made punish to.the child (by the teacher)
 ' {John / *his rage} had the child punished (by the teacher)'

In (25) only the agent *Juan* is possible in the FP construction. This shows that the causative *hacer* that participates in these constructions is lexical *hacer*, realized in the

syntax as the complement of agentive v_{DO} .¹⁵⁰

As in Italian, dative causees are absent from the FP construction in Spanish, unless they are interpreted as possessors or, also perhaps, benefactees (26).¹⁵¹

- (26) Maria le hizo reparar el coche a Pepe
 Mary 3sg.dat made repair the car to Joe
 ‘Mary had the car repaired for Joe’

Just as in the Italian cases discussed by Folli & Harley (2007), if the sentence in (26) is to be understood as FP, the dative *a Pepe* ‘to Joe’ is a beneficiary or a possessor (i.e., an applicative), but not a causee (i.e., an external argument). If the dative in (26) is interpreted as a causee (i.e., as an agent), then the sentence would be analyzed as a typical FI construction. I show the structure, based on a modification of Folli & Harley (2007), in (27).

¹⁵⁰ If the *by* phrase is not included, causes may be allowed in similar constructions

- (i) La lluvia hizo suspender el evento (*por las autoridades)
 The rain made cancel the event (*by the authorities)
 ‘The event was cancelled because of the rain’

Such sentences do not allow passivization (**el evento ha sido hecho suspender* ‘the event was made to be cancelled’). Perhaps this is not a FP construction, but a HI construction in which the causee is present but realized by a null element (i.e. pro^{arb}), as in *Suspendieron el evento (a causa de la lluvia)* ‘ pro^{arb} cancelled(3pl) the event (because of the rain)’.

¹⁵¹ Torrego (2009) discusses a further construction involving V_{DO} *hacer*. In this construction, a dative causee appears in a preinfinitival position in the absence of a doubling clitic (i).

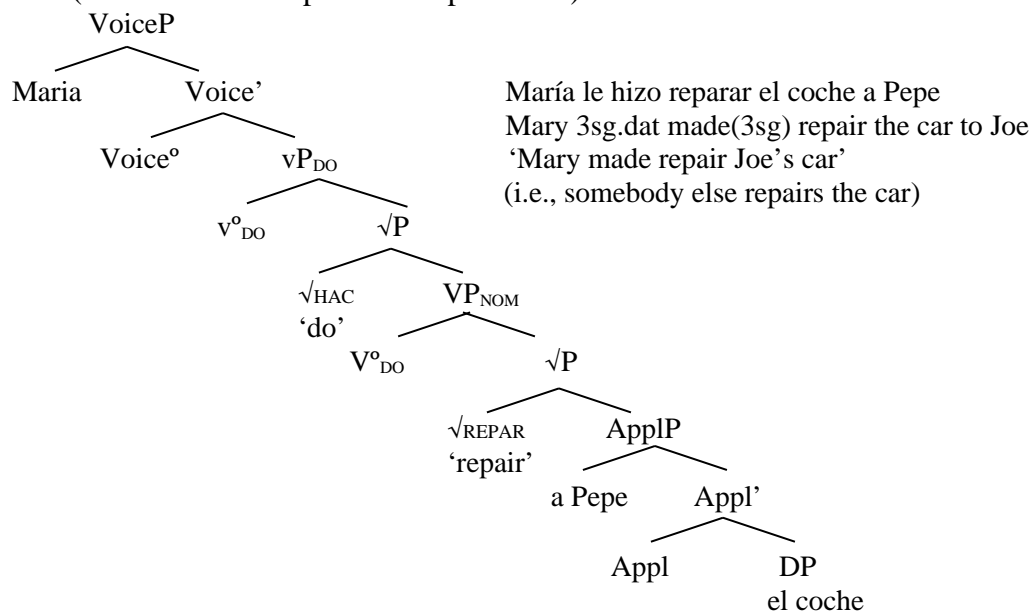
- (i) La entrenadora hizo *al atleta* repetir el ejercicio
 The trainer made to.the athlete repeat the exercise
 ‘The trainer made the athlete repeat the exercise’

Torrego (2009: 7[3])

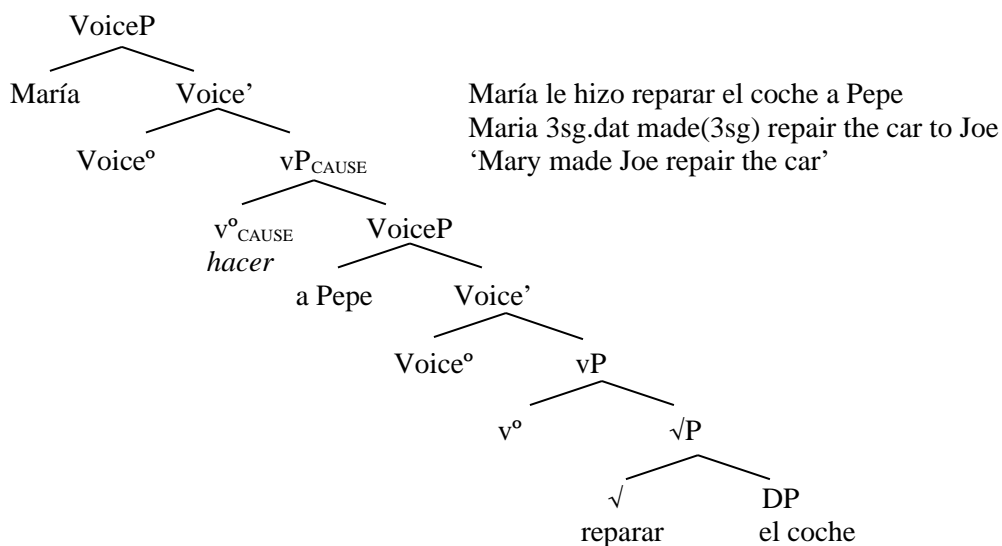
She analyzes these sentences as involving an applicative head, which is selected by *hacer*. The applicative licenses the dative and embeds an agentive vP that may contain an external argument. In this dissertation all causatives containing dative causees are analyzed as instances of FI rather than FP, as the dialect I analyze here does not distinguish between dative causes that are doubled by a clitic from dative causees that are not clitic-doubled. In section 3 I revisit this issue.

(27) FP with a dative

a. FP (the dative is interpreted as a possessor)



b. FI (the dative is interpreted as a causee)



The sentences analyzed in (27) have an identical surface appearance. Nonetheless, their structural differences are obvious in the diagram. In (27a), the root $\sqrt{\text{HAC}}$ 'do' embedded by a lexical v°_{DO} further embeds a nominalized VP whose root takes a low applicative as

a complement. It is this low applicative that introduces the possessor dative *a Pepe*. In (27b), in contrast, a FI causative embeds a dative causee, *a Pepe* ‘Joe’. It is clear that, although datives may appear in FP causatives, they are never interpreted as causees, because the presence of a dative causee is possible in FI causatives only.

Because the type of *hacer* ‘do’ that appears in FP constructions is lexical (ie., is syntactically realized by a root rather than by a functional light verb), only FP allows passivization. This was one of the claims in Folli & Harley (2007) for Italian. Next I show that this is also borne out in Spanish.

2.2.2. Passives of causatives

Recall from the examples in section 2.1 that Italian only allows passivization of FP constructions. The passivization of causatives is rather restricted in Spanish, although different authors arrive at different conclusions. Treviño (1994) claims that Spanish causatives generally disallow passivization, although she shows an example of passive *hacer* with an unaccusative complement.

- (28) Juan fue hecho venir (por Pedro)
 John was made come (by Pete)
 ‘John was made to come (by Pete)’ Treviño (1994: 21[10b])

Torrego (1998), based on data from Bonet Farran (1990), argues that *hacer* is allowed in passive environments with transitive complements, but only if the embedded verb is *construir* ‘build’.

- (29) Este palacio fue hecho construir por el rey
 this palace was made build by the king
 ‘The king had this palace built’ Torrego (1998: 97[31b])

Closer inspection on passive causatives leads to similar conclusions as those reached by Folli & Harley (2007): the passive of *hacer* is only allowed in the FP construction, although the construction is more restricted in Spanish than in Italian.

Crucially, the passive subject cannot be interpreted as the external argument of its active counterpart.¹⁵²

- (30) a. *Juan fue hecho correr el maratón
 John was made run the marathon
 ‘John was asked to run the marathon’
- b. ?Este coche ha sido hecho reparar en un taller
 This car has been made repair in an autoshop
 ‘This car has been made repair in an autoshop’
- c. ?Juan ha sido hecho pasar a la sala
 John has been made pass to the room
 ‘John was made to enter the room’

The common characteristic of the sentences in (30) is the fact that the possible passive subjects of causatives can only be internal arguments of the structure embedded by *hacer* (ie., *este coche* ‘this car’ (30b) and *Juan* (30c)). Agents (*Juan* (30a)) cannot become passive subjects. The passivized sentences in (30), including the unaccusative (30c) are FP.

Evidence of this is the fact that the adjunct external argument can only be an agent, not a cause, because the *v*^o involved in FP is agentive, so it only allows agents as subjects, even if these are implicit (31).

- (31) Juan fue hecho venir { *por el fuego/por su hijo }
 John was made come { *by the fire/by his son }
 ‘John was made to come { *by the fire / by his son }

¹⁵² These sentences are the result of a survey among native speakers of different origins. Mixed results are marked with a ? sign.

The passive of the causative in (31) is only possible if the prepositional external argument is agentive (*por su hijo* ‘by his son’). This supports Folli & Harley’s proposal that passive *hacer* is lexical, as well as the fact that unaccusatives may appear as complements of FP constructions.¹⁵³

The adjunct external argument in passives of FP may name the causer or the causee:

- (32) El edificio será hecho construir {por el rey /por los obreros}
 The building will.be made build {by the king /by the workers}
 ‘The building will be made to be built {by the king/by the workers}’

This does not necessarily support the argument that only lexical *hacer* passivizes. If the causee does not appear in active FP constructions, it is not clear how it can appear in their passivized version. I take it here that *por*-phrases naming the causee (ie., *por los obreros* ‘by the workers’) are possible in passives of FP constructions because the *por*-phrase is already available in the active FP construction, (ie., *El rey hizo construir el edificio por los obreros* ‘The king had the building built by the workers’).¹⁵⁴

Notice that passive FP are contrasted with active FP in that they disallow datives in their embedded structure even if these are interpreted as possessors or benefactees (33).

- (33) *El coche le fue hecho reparar a Juan
 The car 3pl.dat was made repair to John
 ‘Intended: John’s car was made to be repaired’

¹⁵³ We will see, in section 3, that unaccusatives may appear as complements of FI in Spanish.

¹⁵⁴ Some speakers disallow *por*-phrases with the FP construction, but the *por* phrase is generally accepted with the periphrastic passive construction (ie., *La casa ha sido desalojada por las autoridades* ‘The house has been vacated by the authorities’). If passives of causatives are in fact passives of FP, these same speakers that disallow *por*-phrases with FP should also not allow *por*-phrases naming the causee in passives of causatives. The only *por*-phrases allowed for these speakers should only name the causer because this would be the only available argument in the corresponding FP construction. I have not found robust support on this, so I leave the issue open for future investigation.

The restriction on a dative possessor / benefactee *a Juan* ‘to John’ in passive FP constructions (33) may be related to the fact that complements of low applicatives cannot become passive subjects. Compare with (34).

- (34) a. Le han robado el coche a Juan b. *Le ha sido robado el coche *a Juan*
 3sg.dat have(3pl) stolen the car to J. 3sg.dat has been robbed the car to J.
 ‘Somebody stole John’s car’ ‘John’s car has been stolen’

In the absence of a possessor dative, the sentence in (34a) can be perfectly passivized.

- (35) El coche ha sido robado
 the car has been stolen
 ‘The car was stolen’

Thus, if there is a restriction associated with the presence of datives in passives of FP constructions, this is because of a general restriction on complements of low applicatives as passive subjects rather than a restriction directly related with the syntax of FP.

Next, I discuss a further contrast between FP and FI. This time, it involves restructuring contexts.

2.2.3. Restructuring and FP

The phenomenon of restructuring or clitic-climbing has been long studied for Spanish causatives (see, for instance, Bordelois (1974), Zubizarreta (1985) or Treviño (1994)). In previous accounts, clitic climbing facts have supported more or less convincingly complex predicate proposals for Spanish causatives (ie., Zubizarreta (1985)).

Here, I show that contrasts involving clitic climbing indicate the presence or absence of functional elements in the complement of *hacer*. Causatives in which *hacer* takes a transitive complement exhibit restructuring. That is, the accusative clitic may

appear as a clitic of the complement verb or as a clitic of *hacer* in the FI construction.¹⁵⁵

- (36) María le hizo [leer el libro a Juan] (FI)
 Mary 3sg.dat made read the book to John
 ‘Mary made John read the book’

- (37) a. María le hizo [leer**lo** a Juan] b. María se **lo** hizo [leer a Juan]
 M. 3sg.dat made [read=3sg.acc to J.] M. 3sg.dat 3sg.acc made [read to J.]
 ‘Mary made John read it’ ‘Mary made John read it’¹⁵⁶

A particularity of the FP construction is that the accusative clitic corresponding to the embedded object of the complement of *hacer* must appear with *hacer*. Placing the clitic on the embedded verb renders marginal results (39a).

- (38) He hecho [reparar el coche] (por mi mecánico) (FP)
 Have(1sg) made [repair the car] (by my mechanic)
 ‘I had the car repaired (by the mechanic)’

- (39) a. *He hecho [reparar**lo**] (por mi mecánico)
 Have(1sg) made [repair=3sg.acc] (by my mechanic)
 ‘I had it repaired (by my mechanic)’

- b. **Lo** he hecho [reparar] (por mi mecánico)
 3sg.acc have(1sg) made [repair] (by my mechanic)
 ‘I had it repaired (by my mechanic)’

In (39a), the embedded objects of the FP construction necessarily needs to cliticize to *hacer*. This is contrasted with FI counterparts (37) that freely allow embedded objects to cliticize to the embedded verb or to *hacer*. I argue that the contrast between (37) and (39) suggests that, in FP constructions, the structure embedded by *hacer* is lacking the

¹⁵⁵ Note that the dative clitic, in contrast, cannot be part of the embedded structure if it is the causee. If the dative appears in the embedded domain, it can only receive a benefactive reading:

- (i) María hizo [leerle el libro a Juan]
 Mary made [read=3sg.dat the book to John]
 a. ‘Mary made John read the book for him’
 b. *‘Mary made John read the book’

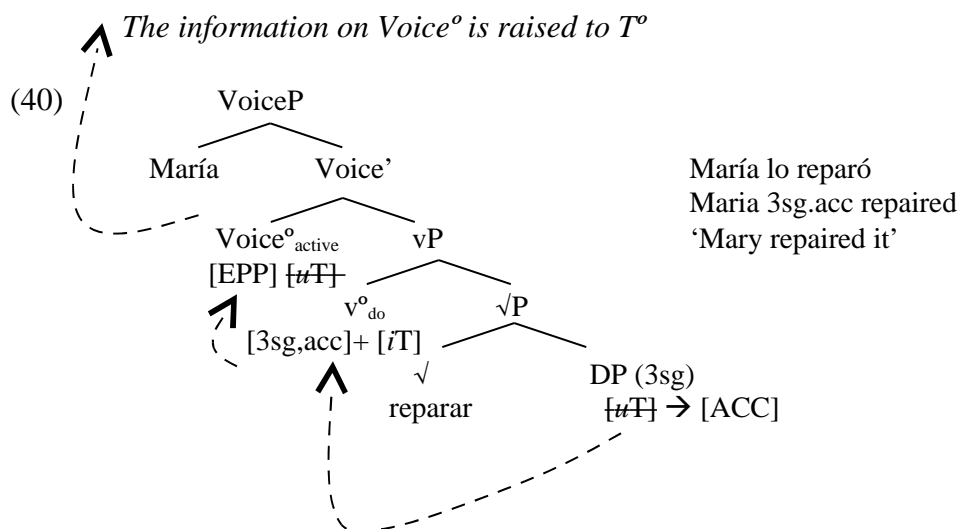
¹⁵⁶ The *se* that appears in this sentence is not reflexive ‘se’ but a 3sg dative clitic that appears as *se* whenever it forms a cluster with an accusative clitic.

functional support needed to host the accusative clitic, unlike the complement of *hacer* in FI constructions that does have the functional material necessary to host the clitic (37b). This may be due to the nominal character of the complement of FP claimed Folli & Harley (2003, 2007), as Heidi Harley (p.c.) suggests. I implement this idea with an Agree account of the facts.

I base my claim on recent theory on Agree that proposes that case is the morphological realization of Agree on relevant heads (Platzack (2006), Pesetsky & Torrego (2001) and Tubino Blanco (2007)), which supports proposals such as Strozer (1976), Jaeggli (1986), Suñer (1988) and Franco (2000) that argued that, in cases of clitic doubling, the clitic is the real structural argument.

I follow Tubino Blanco (2007) in claiming that clitics, like case, are the morphological realization of Agree on different heads. In this dissertation, the functional head responsible for theta-marking ‘subjects’ (ie., external arguments) is Voice^o, but the functional verb that assigns accusative is v^o. I still assume that accusative case is the result of valuation of [*u*T] on D^o, as in Pesetsky & Torrego (2001 and subsequent work).¹⁵⁷ I follow these authors in assuming that [*i*T] is present on v^o. I propose that accusative clitics are the morphological realization of [*u*T] on v^o by [*i*T] with incorporated D features. They are later raised to Voice^o because this head has an [EPP] feature in Spanish. They may be spelled out there or raised to T^o, if T^o directly embeds Voice^o. In (40) I show the valuation of accusative, where accusative is a clitic, and the raising of all material on v^o to Voice^o.

¹⁵⁷ See chapter 4 for an extended description of this framework.

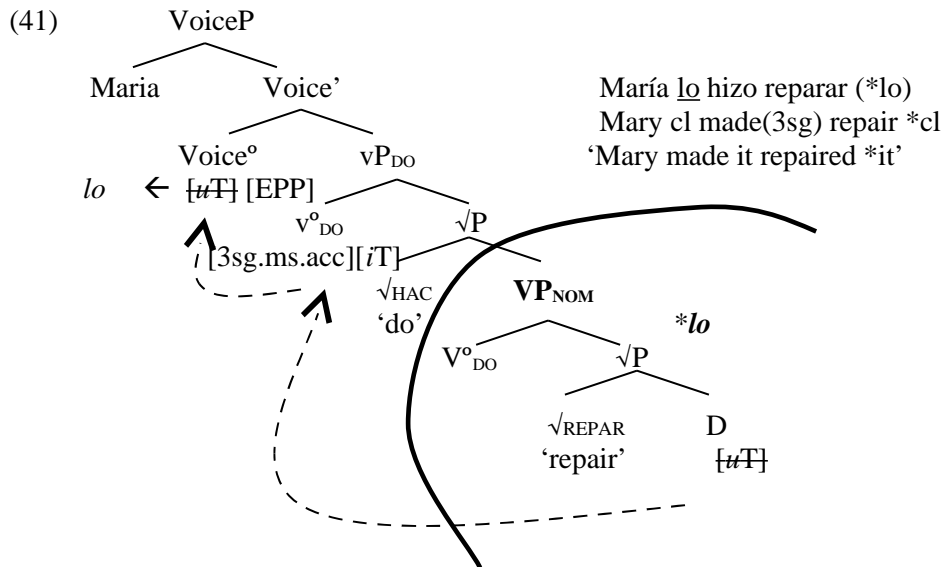


In Spanish, I assume the idea then that object clitics are case markers incorporated on a verbal head, as in (40). In the case of object clitics, they tend to appear whenever the D^o that agrees with v^o is not related to a root (ie., whenever it is just associated with features).¹⁵⁸

Following Pesetsky & Torrego's (2001 and later work) conclusion that case is the valuation of [*uT*] on D, I assume that D values its [*uT*] feature against v^o. Because D is not associated with a (nominal) root (i.e., it is not a full-fledged DP with an NP contained in it), the features on D are incorporated to v^o. Above v^o is Voice^o that contains [*uT*]. In Spanish, active Voice^o has an [EPP] feature that attracts the features on *all* the v's^o it embeds, on their way to T^o. Because the v^o under Voice^o contains the incorporated D features, all material is raised, being pronounced as an object clitic at Spell-Out, after being raised to T^o.

¹⁵⁸ This also applies to cases of clitic doubling, in agreement with Strozer (1976), Suñer (1988) and related work that propose that only the clitic is part of the core structure of the sentence whereas the full-fledged DPs are peripheral.

The failure of clitics to appear as part of the complement of FP is derived from the fact that this complement does not contain functional v^o , but it rather contains a nominalized VP (i.e., a nominalized verbal root). Because of this, a higher v^o needs to value the features on D. If there is a clitic, these features incorporate to the higher v^o (i.e., *hacer* ‘do’), and from there they are raised to Voice o , where they are sent to Spell-Out. I show the structure in (41).



Thus, because the complement of FP lacks a functional v^o with [iT], a higher v^o needs to value the [uT] feature on D. Because it is a clitic, the features incorporate to this v^o . From there, they are raised to matrix Voice o because of the [EPP] feature on the phase edge. The features are later raised to T o (because T o directly embeds matrix Voice o) and they are sent to Spell-Out from there. Because the complement of FI does contain v^o and Voice o , accusative clitics are allowed under *hacer* ‘make’ in these contexts.¹⁵⁹

¹⁵⁹ An alternative explanation for the contrast between the complement of FI and FP regarding the presence of clitics is to assume that clitics are pronounced in T o (eg., Zagana (1982), (1988)) and that the complement of FI but not FP contains TP. However, I will argue later, in section 3, against the presence of

In causatives with unaccusative complements, the clitic corresponding to the unaccusative internal argument necessarily appears with *hacer*, which, once again, suggests that *hacer* plus unaccusative causatives are FP in Spanish.

- (42) a. Juan hizo venir a María
 John made(3sg) come to Mary
 ‘John made Mary come’
- b. Juan {*la/le*} hizo venir
 John {3sg.acc/3sg.dat} made come
 ‘John made her come’
- c. *Juan hizo venir{*la/le*}
 John made come={3sg.acc/3sg.dat}
 ‘John made her come’

The facts in this subsection support the structure for FP causatives proposed by Folli & Harley (and adopted here), in which the complement of lexical *hacer* is lacking functional v^0 as well as Voice^0 . It also supports their analysis of *hacer* constructions with unaccusative complements as FP constructions.¹⁶⁰

Reflexive clitics, also, always appear with *hacer* in FP causatives.

- (43) a. Juan_i *se_i* hizo examinar(**se*) por un buen medico
 John 3sg.refl made examine=(*3sg.refl) by a good doctor
 ‘John had himself examined by a good doctor’
- b. Juan_i *se_i* hizo enviar(**se*) el paquete por el servicio postal más efectivo
 J. 3sg.refl made send(*3sg.refl) the package by the service postal most effective
 ‘John had the most effective postal service send him the package’

In (43a), the reflexive is the embedded object of *examinar* ‘examine’, whereas in (43b) the reflexive is the recipient of *enviar* ‘send’. In both cases, the reflexives are bound by

TP in the complement of FI.

¹⁶⁰ The facts shown in this subsection are also evidence contra Torrego’s (2009) proposal that the structure embedded by lexical *hacer* contains vP , at least, in the dialect analyzed in this chapter.

the matrix subject or causer *Juan*, which indicates that both reflexive and causer are in the same binding domain. Now compare the structures in (43) with the following data on ditransitive in which the theme is coreferent with the subject.

- (44) Juan_i {*se*/**lo*}_i entregó a la policía
 John {3sg.refl/*3sg} gave to the police
 ‘John turned himself in (to the police)’

The sentence in (44) is clearly monoclausal (i.e., it contains only one *v*^o projection).

When the theme is coreferent with the matrix subject, it appears as a reflexive (*se*), not as a pronoun (*lo*). This is because the subject *Juan* and the theme are in the same binding domain, proving the monoclausality of the sentence, just as the FP examples in (43) above.¹⁶¹

Now compare the sentences in (43-44) with their FI counterparts.

- | | |
|---|---|
| <p>(45) a. Juan (le_i) hizo a Pedro_i operarse_i
 J. (3sg.refl)_i made to P_i operate=3sg.refl_i
 ‘John made Pete have an operation’</p> | <p>b. *Juan_i se_i hizo operar a Pedro
 J_i 3sg.refl_i made operate to P
 ‘John made himself operate on Pete’</p> |
| <p>c. Juan_i (le_j) hizo a Pedro_j operarle_i
 J_i 3sg.dat_j made to P_j operate=3sg.dat_i
 ‘John made Pete operate on him’</p> | <p>d. Juan_i le_j hizo a Pedro_j operarlo_i/*_j
 J_i 3sg.dat_j made to P_j operate=3sg.acc_i
 ‘John made Pete operate on him’</p> |

The sentences in (45) exhibit structures of FI. Because of the presence of the causee, *a Pedro*, the matrix subject *Juan* cannot bind reflexives, even if the reflexive is coreferent with the causee (45b).¹⁶² In FI, if the reflexive is coreferent with any of the embedded

¹⁶¹ Thanks to Heidi Harley (p.c.) for suggesting this example to me.

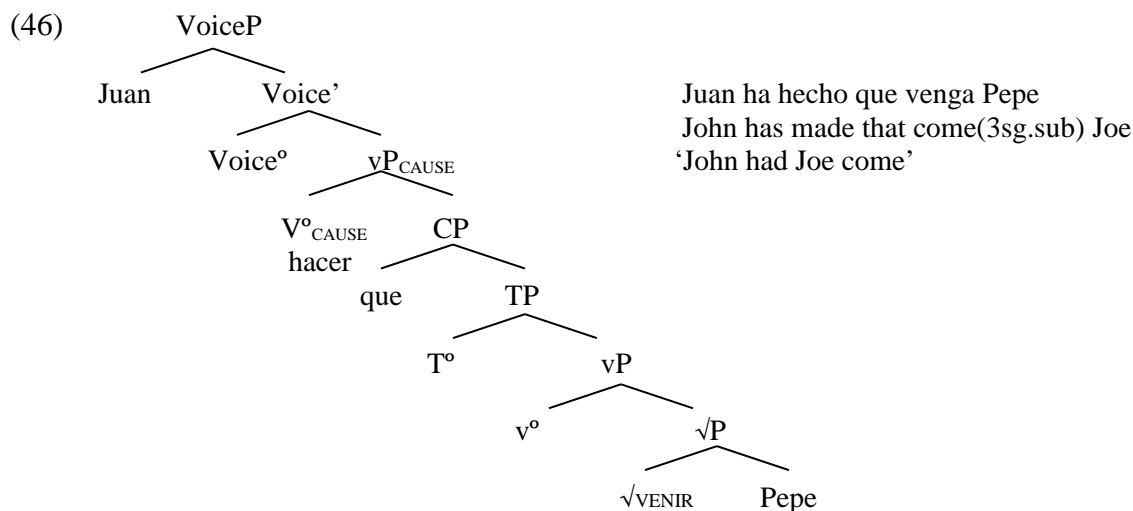
¹⁶² The restriction here applies to the fact that the matrix subject and the causee cannot be coreferent regardless of whether the clitic is reflexive or pronominal, although the intuition is that if this were a possibility, the clitic would be reflexive rather than pronominal. Perhaps the restriction has to do with the fact that *hacer* in FI is functional rather than lexical. It does not pattern with other lexical verbs with close meaning to *hacer* ‘make’ such as *obligar* ‘force’.

(i) Juan se obligó a estudiar
 John 3sg.refl forced to study
 ‘John forced himself to study’

arguments (45a), it is the causee, *a Pedro* that does the binding. If the matrix subject *Juan* binds the embedded object, this is obligatorily pronominal (45c). It is clear, then, that causees of FI are real external arguments. In section 3, I further examine the syntax involved in the complement of FI.

2.3. Functional *hacer*: FQ

In this section, I argue that the type of *hacer* that appears in the FQ construction is functional *hacer* or v°_{CAUSE} . It is distinguished from FI in the type of complement each one selects. While FI selects a Voice-phase complement, as we will see in section 3, FQ selects a CP complement, as shown in (46).



Evidence that *hacer* in FQ constructions is functional v°_{CAUSE} is the fact that its causer may be non volitional (i.e., a cause) (*la pelea* ‘the fight’) in addition to volitional (i.e., an

When *hacer* is lexical, with a clear meaning ‘create’, coreference is possible between causer and causee.

- (ii) Juan se hizo daño
 John 3sg.refl made pain
 ‘John hurt himself’

Once again, this patterns with *hacer* in FP and differs from *hacer* in FI, supporting Folli & Harley’s distinction.

agent) (47).

- (47) {Juan / la pelea} hizo que el maestro castigara a los niños
 {John / the fight} made that the teacher punished(3sg) to the kids
 ‘{John / the fight} caused the teacher to punish the kids’

FQ constructions disallow passivization, further evidence that the *hacer* in these constructions is functional:

- (48) *Ha sido hecho que el maestro castigue a los niños
 Has(3sg) been made that the teacher punish(3sg) to the kids
 ‘Somebody had the kids punished by the teacher’

Lexical verbs such as *prohibir* ‘forbid’ in similar configurations are allowed under passivization.

- (49) a. Los padres han prohibido que los niños fumen en casa
 The parents have prohibited that the kids smoke(3pl) in home
 ‘The parents prohibited that the kids smoke at home’
 b. Ha sido prohibido que los niños fumen en casa
 Has been prohibited that the kids smoke(3pl) in home
 ‘That the kids smoke at home has been prohibited’

The contrast between (48) and (49) confirms that *hacer* in these constructions is functional rather than lexical.

Another contrast between these two verbs, already noticed in Bordelois (1974) and Treviño (1994), is the fact that lexical verbs like *prohibir* ‘forbid’ may be part of a short answer, but functional verbs like *hacer* may not, which confirms, once again, the functional character of *hacer* in these constructions.¹⁶³

¹⁶³ The causative *hacer* used in here should not be mistaken with the verb *hacer* ‘do’ used for general replies, as this verb may be used to ‘replace’ any predicate, originally involving the verb *hacer* or not.

(i) A. ¡Ah! Tú me has tirado la revista
 ah! You 1sg.dat have(2sg) tossed the magazine
 ‘Ah! It was you that tossed my magazine’
 B. No, yo no lo he hecho (=tirado la revista)

(50) a. *hacer* (as a short answer to (47))

*Juan lo ha hecho [que el maestro castigue a los niños]
 John 3sg.acc has made [that the teacher punishes to the kids]
 ‘John made it [to have the teacher punish the kids]’

b. *prohibir* [as a short answer to (50)]

Los padres lo han prohibido [que los niños fumen en la casa]
 The parents 3sg.acc have(3pl) prohibited [that the kids smoke(3pl) in the house]
 ‘The parents prohibited it [to have the kids smoking at home]’

Because *hacer* in this construction selects for a whole CP no selectional restrictions are imposed on the elements within this CP (51a). This is contrasted with *hacer* in *hacer-infinitive* constructions (51b), which disallows expletive causees.

(51) a. El calor ha hecho que llueva (FQ) b. *El calor ha hecho llover (FI)
 the heat has made that rain(3sg) the heat has made rain
 ‘The heat has caused it to rain’ ‘The heat has caused it to rain’

We will see, in section 3, that this is directly related to the kind of configuration selected by this causative head (ie., a phase containing an external argument that necessarily needs to meet an ‘obligation’ requirement imposed by the causing event).

The sentences in this section have shown that if the lexical/functional distinction applies to Spanish *hacer*, the *hacer* that appears in the FP construction patterns with lexical *hacer*, whereas the *hacer* that appears in the FQ construction patterns with functional *hacer*. In section 3, I will compare the FQ construction with another construction that patterns with functional *hacer*: the FI construction.

No, I neg 3sg.acc have(1sg) done (=tossed the magazine)
 ‘No, I haven’t done that’

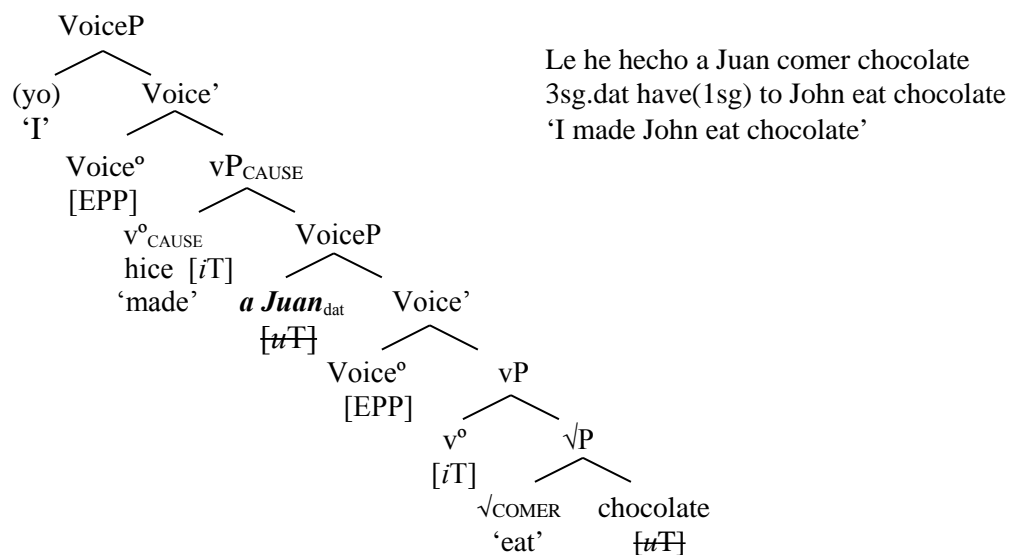
3. Spanish FI

In this section I concentrate on the kind of verbal head and complement involved in constructions with FI in Spanish. I will show that, like Italian *fare*, Spanish *hacer* in FI constructions involves a functional v°_{CAUSE} . I will also show that this causative head is phase-selecting, using Pylkkänen's terminology, because it embeds Voice° . In most of this section, I will look at evidence to see whether the complement of *hacer* is a CP phase, a VoiceP phase (as in Folli & Harley (2007)) or an ApplP phase (as in Torrego (2009)). I will conclude that functional *hacer* in FI is Voice-selecting.

3.1. Proposal

I propose the following structure for FI in Spanish:

(52) FI



In (52), the functional head v°_{CAUSE} takes a VoiceP phase as a complement that licenses the dative causee *a Juan* in its specifier position. This argument is probed by v°_{CAUSE} that

Before discussing the predictions made by this analysis, I discuss some previous analyses.

3.2. Some previous accounts

Since the transformational analysis put forward by Bordelois (1974), many different accounts have been proposed for the *hacer* causative in Spanish. Many proposals on Romance causatives have placed their attention on the properties of *hacer*. Most work on Romance causatives coincide in proposing a complement of *hacer* smaller than CP or TP.

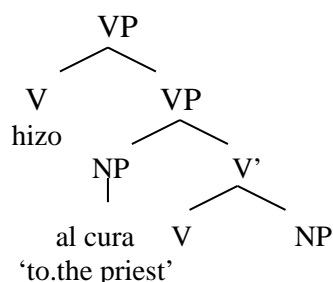
Different influential works approach the subject from different perspectives. For instance, both Zubizarreta (1985) and Guasti (1992, 1996, 1997) find similarities between the behavior of Romance causatives and the behavior of affixal causatives in languages like Japanese and Hiaki. They give different treatments to the structure. While Zubizarreta argues that *hacer* (and *faire*) behave as syntactic affixes, which explains their similarities with monoclausal structures, Guasti proposes an incorporation account of causatives à la Baker (1988).

As seen in section 3.1., I do not adopt any of these approaches that assume the incorporation of the root to v°_{CAUSE} , because it is incompatible with the fact that preverbal datives are possible (and sometimes preferred) in Spanish. An incorporation account would not be consistent with this fact. Next, I review Treviño's (1994) approach.

3.2.1. Treviño (1994)

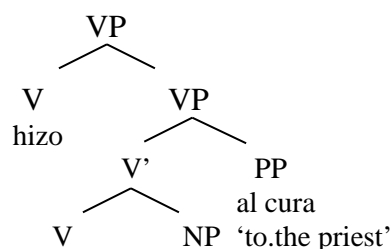
Treviño (1994) proposes that the complement of *hacer* is a bare VP, as opposed to a TP, for economical reasons. She argues that a TP lacking any tense specification (as is the case in the *hacer*-inf construction) is more costly than a bare VP as the complement of *hacer*. She proposes two structures, one for complements of *hacer* with preinfinitival causees, one for complements of *hacer* exhibiting postinfinitival causees

(55) a. *preinfinitival causees*



a. Juan hizo al cura aceptar la limosna
 J. made to.the priest accept the donation'
 'John made the priest accept the

b. *postinfinitival causes*



b. Juan hizo aceptar la limosna al cura
 J. made accept the donation to.the priest
 'John made the priest accept the donation'

In Treviño's analysis, preinfinitival causees (55a) are treated as NPs that are base generated as the specifiers of V. According to Treviño, this is the canonical position of causees in Spanish causatives and their corresponding clitics appear in accusative (ie., *lo* and *la* for 3rd person singular).¹⁶⁵ Treviño treats postinfinitival causees as PPs, base generated as adjut VP. Their corresponding clitics are datives (ie., *le* for 3rd person singular).

According to Treviño, the pre- and postinfinitival positions of the causees derive

¹⁶⁵ Torrego (2009) also associates the non-doubled preinfinitival position of the causee with the realization of accusative morphology on their corresponding clitics.

two causative configurations, one that expresses direct causation (ie., the preinfinitival configuration that gives way to accusative clitics), one that expresses indirect causation (ie., the postinfinitival configuration that corresponds to dative clitics). She compares the two constructions with the direct and indirect affected readings that are typical of some Spanish psychological verbs like *molestar* ‘disturb’, as in (56).

- | | |
|---------------------------------------|------------------------------------|
| (56) a. El perro lo molesta (a Pedro) | b. El perro le molesta (a Pedro) |
| The dog 3sg.acc disturbs (to Pete) | The dog 3sg.dat disturbs (to Pete) |
| ‘The dog is disturbing Pete’ | ‘Pete is disturbed by the dog’ |
| | Treviño (1994: 91[39]) |

In (56), the sentence with the accusative clitic (56a) implies that the dog (ie. *el perro*) is causing some disturbance to Pete by doing something to him (e.g., the dog is licking Pete). The sentence with the dative clitic (56b) implies that Pete is disturbed by the dog, irrespective of what the dog is doing. This reading implies that Pete dislikes dogs in general so its mere presence disturbs him. This distinction, however, is irrelevant to causatives in the dialect treated here, because, in this dialect, structural dative is the result of the valuation of [*uT*] on a position that is not the complement of roots, as discussed in section 3.1. For this reason, only the accusative on (56a) would be analyzed as structural case. The dative on (56b), in contrast, would be analyzed as *inherent* case, assigned by an applicative head, as I show in (57).

- (57) (*inherent*) dat → [_{ApplP} ____ [_{Appl}°]]

Treviño argues against the existence of TP in the complement of *hacer*, despite the fact that the Spanish causative, unlike causatives in other Romance languages, allows negation as part of its complement.

(58) a. *Spanish allows negation*

Le han hecho a María no comprar el vestido
 3sg.dat have(3pl) made to Mary neg buy the dress
 ‘They made Mary not to buy the dress’

b. *Italian doesn’t allow negation*

*Ciò fa non leggere mai molti fumetti a Gianni
 this makes neg read never many comic strips to Gianni
 ‘This makes Gianni never to read many comic strips’

Guasti (1997:133[30])

Treviño argues that the appearance of Neg in (58a) does not necessarily suggest the existence of a Functional Phrase (ie., TP) as part of the complement of *hacer*. She explains the occurrence of negation in the complement of *hacer* by adopting the proposal on negation made in Zanuttini (1990) in which negation is base generated as a head that projects into a NegP.

She adapts Zanuttini’s proposal to Spanish as this language appears to behave differently than other Romance languages in terms of negation. Treviño proposes that while Neg takes a Functional Phrase as a complement in other Romance languages like Italian, Neg in Spanish may take a VP as a complement. Thus, in infinitival complements Neg occupies a position in which it takes scope over the embedded VP, as in (59).

(59) ... V [NegP *no* [VP ...]]

Treviño (1994: 159[29])

Treviño also claims that the NegP that takes the VP as a complement acts as a barrier for other X° elements, such as clitics. This seems to be the case, as restructuring or climbing of the accusative clitic corresponding to the embedded object is prohibited if the complement of *hacer* is negative.

(60) *Affirmative complement allows restructuring*

- a. Me lo hizo escribir
 1sg.dat 3sg.acc made(3sg) write
 ‘He made me write it’

*Negative complement: *restructuring*

- b. *Me lo hizo no escribir
 1sg.dat 3sg.acc made(3sg) neg write
 ‘He made me not write it’

- c. Me hizo no escribirlo
 1sg.dat made(3sg) neg write=3sg.acc
 ‘He made me not write it’

Treviño (1994)

Were TP included in the complement of *hacer*, restructuring would be disallowed irrespective of negation, as clitics would climb no further than the embedded TP. This is compatible with my account in which TP is not part of the structure embedded by *hacer* ‘make’ and the featural information that triggers the pronunciation of valued nominal features as clitics may stay in v^0 or be raised all the way to T^0 .^{166,167} In this chapter, I will assume then, with Treviño, that the complement of *hacer* in FI does not embed a CP (or a TP).

Treviño’s account, however, cannot be fully applied to the dialect studied here. First, the analysis of postinfinitival causees as PPs does not apply to this dialect. As Ordóñez (2008) points out, dative causees must be DPs since they can be doubled by a clitic.

¹⁶⁶ Although present accounts such as Torrego (2009) suggest that negation in the complement of *hacer*-inf is evidence that this complement is a defective CP, and defective phases do not act as barriers.

¹⁶⁷ I have to assume, however, that constituent negation also prevents the features on v^0 from being raised to Voice⁰.

- (61) *dative causees can be doubled by a clitic*
Le hice a Juan enviar una carta a Barcelona
 3sg.dat made(3sg) to John send a letter to Barcelona
 ‘I made John send a letter to Barcelona’

Goal PPs, in contrast, are never doubled, as discussed by Cuervo (2003)

- | | |
|--|--|
| <p>(62) a. <i>Datives can be doubled</i>
 <i>Le envié una carta a Juan</i>
 3sg.dat sent(1sg) a letter to J.
 ‘I sent John a letter’</p> | <p>b. <i>Goal phrases cannot be doubled</i>
 (*le) envié una carta a Barcelona
 (*3sg.dat) sent(1sg) a letter to Barcelona
 ‘I sent a letter to Barcelona’</p> |
|--|--|

The contrast between the datives in (61) and (62a) and the goal phrase in (62b) is evidence that the dative causee that appears in Spanish causatives is a DP rather than a PP.

All in all, I do assume Treviño’s account regarding the lack of a TP under causative *hacer* ‘make’, although I do not assume Treviño’s analysis of postinfinitival causees as PPs, at least, in the dialect treated here, since these causees are consistently doubled by dative clitics, which is not typical of other Spanish PPs. Next, I review recent proposals on the syntax of Spanish *hacer* ‘make’, that mostly concentrate on the nature of the dative causee.

3.2.2. Recent proposals: The syntax of the causee and the functional nature of *hacer*

Recent proposals on causatives (Villalba (1992), Ippolito (2000), Folli & Harley (2003, 2007), Ordóñez (2008), Torrego (1998, 2009)) have been mostly concerned with (i) the syntactic status of the causee argument, and (ii) the functional versus lexical nature of the causative verb (*hacer*).

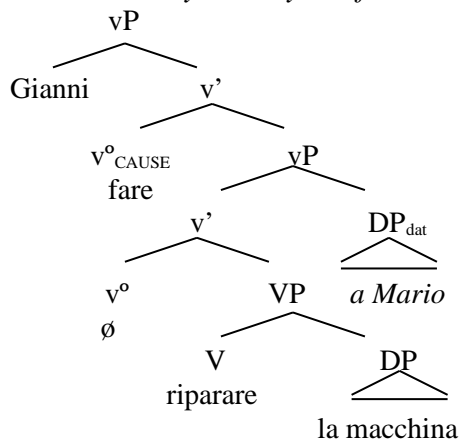
Not much controversy surrounds the functional nature of *hacer* in FI constructions.¹⁶⁸ Regarding the syntax of the causee argument, they are divided into two fronts. One front (ie., Villalba, Folli & Harley) analyzes the causee as an embedded external argument. The other front (ie., Ippolito, Ordóñez, Torrego) argues that the causee in FI is in fact an applicative. In this chapter, I will offer evidence in favor of an analysis of the causee as an embedded external argument. In the next section, I review some important ideas argued for in Folli & Harley (2003, 2007) that I will adopt for the analysis of FI in Spanish.

3.3. FI in Italian: Folli & Harley (2003, 2007)

3.3.1. Basic analysis

For Folli & Harley (2003, 2007), *fare* in FI is a functional vP_{CAUSE} that selects a complement headed by an agentive vP. The complement vP contains an external argument, base generated in its specifier position. This is the causee argument. I show the structure in (63).

¹⁶⁸ Although Torrego (2009) proposes for one class of FI in Spanish an account in which *hacer* is lexical rather than functional.

(63) *Folli & Harley's analysis of FI*

Gianni ha fatto riparare la macchina a Mario
 Gianni has made repair the car to Mario
 'Gianni made Mario repair the car'

Folli & Harley (2007: 207[16a])

In their analysis, the causee *a Mario* appears to the right of the vP head that selects it as a specifier, which accounts for the surface position of embedded subjects in Italian and other Romance languages (this is reminiscent of Guasti).

In Folli & Harley's analysis, because functional *fare* contains agentive vP as part of its complement, the causee argument can be licensed. In their paper this is contrasted with lexical *fare* in FP that is lacking a causee, simply because its complement lacks agentive vP.¹⁶⁹

One of the contrasts explained by this analysis is the presence of a causee DP in the case of FI (63) as opposed to its absence in the case of FP (See section 2). Whereas the vP structure embedded by functional *fare* (63) contains an external argument (the causee *a Mario*), the nominalized VP embedded by lexical *fare* (section 2) lacks a real causee.

The contrasted structures involving the two types of *fare* in Italian naturally predict numerous contrasts long observed between the two constructions. For instance, they

¹⁶⁹ This picture gets complicated in Torrego's (2009) analysis, as she proposes a structure for lexical *hacer* that contains a dative complement. I do not address this here as it is offered as the analysis of *hacer* in a dialect not studied in this dissertation. Nonetheless, I will show later a structure involving lexical *hacer* that selects a complement CP containing its own external argument.

predict that the ‘obligation effect’, exhibited by FI only, is a direct consequence of the fact that functional v°_{CAUSE} necessarily selects a configuration that includes an agentive vP. For this reason, all causees of FI need to be intentional agents and, as they put it, “the only way to cause an agent to intentionally do something is to oblige it to” (p. 212).

The requirement that the complement of v°_{CAUSE} in FI contain intentional agents is not always met in Spanish, as this language does allow derived subjects as causees.

Nonetheless, the derived subject must be animate, as (64) shows.

- (64) a. La mala suerte le hizo *a Juan* ser arrestado t_{Juan}
 The bad luck 3sg.dat made(3sg) to John be arrested
 ‘Bad luck made John be arrested’
- b. *Juan hizo ser devueltos *los cuadros* al museo
 John made be returned the paintings to.the museum
 ‘John had the paintings returned to the museum’

In (64) there is no ‘obligation’ *per se* imposed on the actions of the causee. Nonetheless, the obligation requirement discussed in Folli & Harley (2003, 2007) still bans inanimate causees from appearing in the structure (64b) and entails the inevitability entailed in ‘John being arrested’. I suggest that the ‘obligation effect’ is still a consequence of the fact that VoiceP (i.e., an external argument) is included in the complement of FI, even if the real agent is syntactically implicit, as it is in the case of passives. In cases in which this occurs, the events will be understood as ‘inevitable’, normally caused by nature or providence, rather than by an agent.

- (65) ?Juan le hizo a Pepe ser arrestado
 John 3sg.dat made to Joe be arrested
 ‘John made Joe be arrested’

Next, I discuss the nature of the dative causee.

3.3.2. The dative causee

Folli & Harley (2003, 2007) argue against accounts like Ippolito's (2000) in which the complement of the causative head *fare* 'make' contains an Applicative projection that introduces the causee plus a VP lacking an external argument altogether.

In Ippolito's analysis, the causee introduced by the Applicative head receives inherent dative case, typical of applied arguments. Folli & Harley argue that Ippolito's account cannot be right for Italian, as causatives in this language exhibit a contrast involving the case marking of their causees: they are in effect dative, but only if the embedded verb is transitive (66a). If the verb embedded by the causative head is intransitive, causees are case-marked accusative in Italian (66b).

(66) *Italian causee is dative when the embedded verb is transitive*

- | | |
|---|--|
| a. Gianni ha fatto riparare la macchina a Mario
John has made repair the car to Mario(dat)
'John made Mario repair the car' | b. Gianni ha fatto correre Maria
John has made run Mary(acc)
'John made Mary run'
Folli & Harley (2007:221[37]) |
|---|--|

In Spanish, the picture is not as clear as it is in Italian. As Treviño (1994) and Torrego (2009) argue, and as seen throughout this chapter, the case of the causee in the Spanish dialect treated here is not dictated by the transitivity of the complement of *hacer* in all dialects. The dialect analyzed here invariably exhibits dative causees, that normally appear doubled with a clitic, *le*:

- | | |
|---|---|
| (67) a. Juan <i>le</i> hizo leer un libro a Pepe
John 3sg.dat made read a book to Joe
'John made Joe read a book' | b. Juan <i>le</i> hizo reír a Pepe
John 3sg.dat made laugh to Joe
'John made Joe laugh' |
|---|---|

This leads authors like Ordóñez (2008) and Torrego (2009) to suggest an applicative analysis, along the lines of Ippolito (2000) for causees in Spanish. I will show, however, that regardless of their dative case, causees syntactically and semantically behave like external arguments. First, I will explain the syntax of applicatives in Spanish.

3.4. Spanish applicatives

3.4.1. Cuervo's (2003) affected applicative

Applicatives, as discussed by Pylkkänen (2002, 2008) and Cuervo (2003), have different semantics than external arguments. Among their possible meanings are possession, benefactive/malefactive, affected, ethical, etc. Dative causees are arguments affected by the causative event but their role in the caused event is that of external arguments. Observe the sentence in (68), offered by Cuervo to illustrate an affected applicative in a Spanish lexical causative.

- (68) Juan *le* abrió la puerta *a* María
 John 3sg.dat opened the door to Mary
 'John opened the door for Mary'

In this sentence, the dative *a* María 'to Mary', doubled by the clitic *le*, is affected by the causing event, whereas the dative itself does not exhibit the behavior of an external argument in the caused event. This is due to the fact that the caused event lacks an external argument. In (69) I show the semantics of affected applicatives as given by Cuervo.

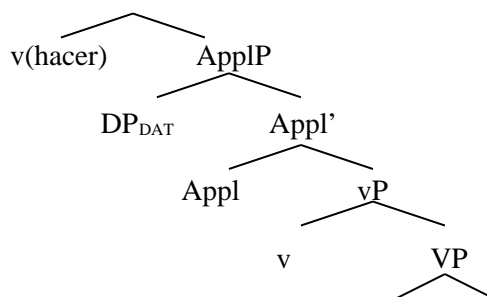
- (69) $\lambda x. \lambda e_s. \text{Affected}(e_s, x)$
 Cuervo (2003: 98[37])

According to Cuervo, the dative is “indirectly related to the external argument and the causing event; the external argument indirectly affects the applied argument by causing the radio to be broken (in, for instance, *Pablo le rompió la radio a Valeria* ‘Paul broke the radio on Valeria’)” (p. 98). Cuervo adds that it is the position between two eventualities that derives the meaning of affectedness. So affected applicatives are ‘affected’ by the causing event in causatives. In lexical causatives (68) they receive the result of the caused event.

3.4.2. Productive *hacer* and applicative causees

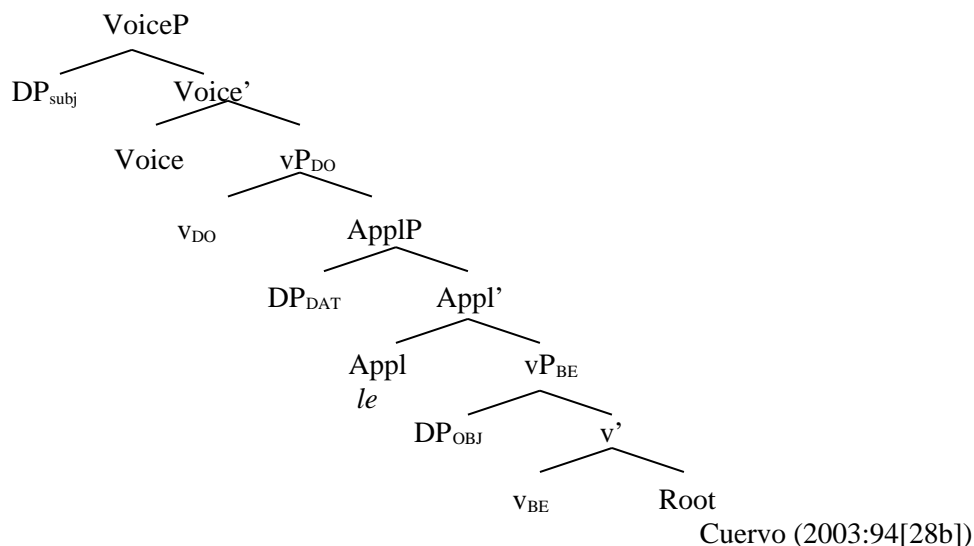
Ippolito (2000), Ordóñez (2008) and Torrego (2009) suggest that Spanish productive causatives with *hacer* involve an applicative. This applicative is analogous to the one proposed by Cuervo as *affected*, given its position in the tree, between the causing and caused events.

(70) *Torrego’s analysis of functional ‘hacer’*



Torrego (2009:37[39])

Now compare with the analysis of affected applicatives proposed by Cuervo (2003).

(71) *Cuervo's affected applicatives*

The diagram in (71) shows the structure proposed by Cuervo (2003) for affected applicatives of lexical causatives. In Cuervo's analysis, lexical causatives involve v^o_{DO} (the causative part) that takes a stative v^o_{BE} as a complement.¹⁷⁰ Affected applicatives are base generated as complements of the causative v^o_{DO} and take the stative v^o_{BE} as their complement. In the case of productive causatives, v^o_{DO} would correspond to our v^o_{CAUSE} , since it has been demonstrated that this causative type allows both agents and causers in its external argument position.

In the proposals on productive causatives in which the causee is analyzed as an applied argument (70) the causee is selected by v^o_{CAUSE} . The difference with (71) is in the complement of ApplP, since it would be an event of the type v^o_{DO} (agentive activities) or v^o_{GO} (non-agentive change of states) in Cuervo's terminology. Suppose the applicative

¹⁷⁰ In Cuervo's analysis, causatives are always obtained from the conjunction of two verbal heads, the higher one always involving v^o_{DO} and the lower one varying depending on the type of causative (ie., lexical or productive). The v^o_{DO} as opposed to v^o_{CAUSE} distinction proposed by Folli & Harley (2003, 2007) and adopted in Torrego (2009) is absent in Cuervo's work.

embeds agentive v^o_{DO} . The applied argument (the dative) may be interpreted as ‘affected’ by the causing event. Something that is not clear is what is responsible for the agentive interpretation of this applicative if it selects v^o_{DO} as a complement.

The interpretation of the dative causee is that of the external argument (i.e., the *doer*) of the embedded event. It is possible, in some cases, to add an intermediary (i.e., a ‘helper’) via a prepositional phrase just like in the FP construction, but only the FP construction allows for this phrase to be a *by*-phrase.

(72) a. FI

Juan le hizo a Pepe mandarle una carta a Pedro (por *(medio de) María)
 John 3sg.dat made to Joe send=3sg.dat a letter to Pete (by *(means of) Mary)
 ‘John made Joe send a letter to Pete (by means of Mary)’ (i.e., M. delivers the letter)

b. FP

Juan hizo mandar una carta (por (medio de) María)
 John made send a letter (by (means of) Mary)
 ‘John had a letter sent (by (means of) Mary)’

If the dative causee in (72a) is an applied argument, it seems to also receive an external argument interpretation, perhaps by virtue of directly embedding the agentive head v^o_{DO} , which necessarily requires an agent.

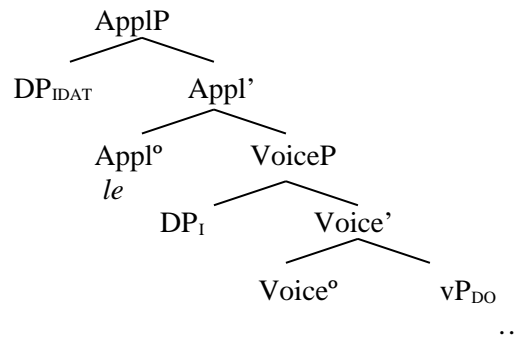
The contrast with FP constructions that allow the addition of an external argument only semantically (by the addition of a *by*-phrase) may be the consequence of the fact that the complements of *hacer*, in these cases, are lacking the little v^o_{DO} , and hence do not require the structural presence of an external argument.

The problem with an approach in which the applied argument receives an external argument interpretation is the fact that external arguments and applied arguments are introduced by their own functional heads, VoiceP and ApplP respectively, as proven by

Pylkkänen, and it is the functional heads themselves that are responsible for their semantics. Thus, Voice^o assigns external argument semantics to the arguments it introduces. Applicative heads, in contrast, assign different kinds of semantics to the arguments they introduce, as already discussed.

If Pylkkänen, Kratzer (1994), and the rest of the proponents of Voice^o as the head responsible for external argument semantics are right, a proposal in which Voice^o is absent and in which ApplP introduces an applied argument, whose interpretation is both that of an affected argument and that of an external argument is problematic. A tentative solution would be to propose that the vP embedded by ApplP does introduce an external argument, but that this external argument is null and coreferent with the applicative.

(73)



This structure would be similar to, for instance, *permitir* ‘to allow’ or *prohibir* ‘to forbid’, which are dative object control verbs.

- (74) a. Le permití correr a Juan b. Le prohibí correr a Juan
 3sg.dat allowed(1sg) run to John 3sg.dat prohibited(1sg) run to John
 ‘I allowed John to run’ ‘I forbade John to run’

There is a contrast, however, between these structures and *hacer*. For instance, as shown in section 2 above, both *permitir* ‘allow’ and *prohibir* ‘forbid’ are lexical verbs, as they

can be used in the absence of the embedded event. Functional *hacer* cannot be used in isolation.

- (75) a. Se lo {permiti/prohibi} (hacer)
 3sg.dat 3sg.acc {allowed/forbade(1sg)} (do)
 ‘I {allowed/forbade} him to (do it)’
 b. Se lo hice *(hacer)
 3sg.dat 3sg.acc made(1sg) *(do)
 ‘I made him *(do it)’

In section 2, I already discussed the fact that whereas the matrix subject of *permitir* ‘allow’ and *prohibir* ‘forbid’ may bind into a reflexive embedded dative, functional *hacer* cannot.

- (76) a. Juan se {permitió/prohibió} suspender
 John 3sg.refl {allowed/forbade} fail
 ‘John {allowed/forbade} himself to fail’
 b. *Juan se hizo suspender
 John 3sg.refl made fail
 ‘John made himself fail’

The difference in (76) is evident: whereas the dative (ie. *se*) in (76a) are licensed in an ApplP in the matrix clause, hence are in the same binding domain as the subject *Juan*, the dative in (76b) is in a different binding domain as the matrix subject (ie., it is base generated in embedded [Spec, VoiceP], and binding is not possible.

This clearly suggests that the structure involved by verbs such as *prohibir* ‘forbid’ and *permitir* ‘allow’ is different from the one involved in FI: whereas *permitir* ‘allow’ and *prohibir* ‘forbid’ do involve high applicatives, *hacer* does not.

Further evidence of this is offered by the sentences in (77). Although the dialect studied here generally exhibits dative causees, it still allows accusative causees. This is contrasted with *permitir* ‘allow’ and *prohibir* ‘forbid’ as none of these verbs license accusative complements.^{171,172}

¹⁷¹ In case accusative causees are licensed, I will assume Folli & Harley’s (2003, 2007) case checking analysis in which the dative case of the causee is dependent on the presence of an additional accusative argument in the structure.

¹⁷² In so-called *loísta* dialects, the sentence in (77a) is grammatical.

- (77) a. *Juan la {permitió/prohibió} suspender b. Juan la hizo suspender
 John 3sg.acc {allowed/forbade} fail John 3sg.acc made fail
 ‘John {allowed/forbade} her to fail’ ‘John made her fail’

While not very commonly used, sentences like (77b) are accepted in *non-loísta* dialects, whereas this is not possible in the case of (77a). I take this to be an indication that whereas *permitir* ‘allow’ and *prohibir* ‘forbid’ do involve ApplP, *hacer* in FI does not, because only the datives that appear in (77a) would be assigned their case inherently, as seen in section 3.2.1. above. The fact that (77b) is acceptable suggests that datives in FI causatives are assigned case structurally.

The facts so far indicate that Spanish dative causees are base generated as external arguments of the vP complement of functional *hacer*. Next I argue that the datives that may appear in FQ are inherent datives, introduced by ApplP.

3.4.3. Datives with FQ

One argument in favor of an applicative analysis of dative causees comes from data involving functional *hacer* with CP complements. Some varieties of Spanish (including the variety treated here) allow dative arguments in the matrix domain (78).

- (78) a. Hice que viniera Juan b. *Le* hice *a Juan* que viniera
 made(1sg) that come(past.sub) J.(nom) 3sg.dat made(1sg) to J. that come(1sg.sub)
 ‘I had John come’ ‘I had John come’

Since FQ constructions already contain an external argument as part of the CP complement, the dative that appears in (78b) would necessarily need to be analyzed as an applicative independent from the CP complement.

If *hacer* can select applicatives in FQ constructions, it should be able to also select

applicatives in the FI construction. After all, both are functional *hacer*. This was shown for FQ in section 2, as it does not impose any restrictions on its causer (e.g., it may be a causer or an agent).

- (79) El viento hizo que se volaran mis papeles
 The wind made that inch fly(3pl.sub) my papers
 ‘The wind caused my papers to be blown away’

There is an important difference, however, between the datives in the FQ construction, and the datives in FI. FQ-datives cannot be inanimate:

- (80) a. *El viento les hizo a los papeles que se volaran
 The wind 3pl.dat made to the papers that inch fly(3pl)
 ‘The wind caused the papers to be blown away’
 b. *Le* he hecho dar un portazo *a la puerta*
 3sg.dat have(1sg) give a bang to the door
 ‘lit. I made the door give a bang’

This behavior is consistent with an analysis in which the datives receive a different analysis: whereas the dative in (80a) is base-generated as an applicative, the dative in (80b) is not.

Although the referent of the dative in FQ-dative constructions tends to be correferent with the external argument of the complement CP, this is not strictly required:

- (81) a. *Me_i* has hecho que me expuls*en_j*
 1sg.dat have(2sg) made that 1sg.acc expel(3pl) (from school)
 ‘You made me be expelled (from school)’
 b. Soy capaz de hacerte_i que un sueño se vuelva_j realidad (Google)
 be(1sg) able of make=2sg.dat that a dream inch turn(3sg) reality
 ‘I can make your dream come true’

In (81) the datives that appear associated with *hacer* (*me* (1sg) and *te* (2sg)) are not correferent with the embedded external argument ((3pl) and (3sg) respectively).

The dative that appears in structures with FQ seems to be an affected applicative, base generated as the complement of *hacer*, since the CP already contains its own external argument.

Torrego (1998) discusses some examples involving FI that exhibit overt nominative subjects of the embedded clause in addition to the dative element. In this case, however, dative and nominative need to be coreferent, which suggests that (i) the nominative is an extra-argumental emphatic element whereas the dative is the real external argument and (ii) that the dative in these structures is different than the dative in FQ-dative.

- | | |
|--|--|
| (82) a. Me _i ha hecho pedir yo _i
1sg.dat _i have(3sg) made sing I _i
'He made me order myself' | b. *Me ha hecho pedir ellos
1sg.dat _i has made order them _k
'He made me for them to order' |
|--|--|

The contrasts shown so far suggest that, despite appearances, FQ-dative involves an affected applicative that may be coreferent with the embedded external argument or not. The kind of dative that appears in FI seems to be different than the applicative present in FQ. I showed that FQ-dative does not require coreference between the dative and the embedded external argument, whereas FI does. In addition, I showed that the dative that appears in FQ needs to be animate, unlike the dative that appears in FI. Let us next review other (related) arguments suggested in the past as evidence in favor of an applicative analysis of the causee.

3.5. The animacy of the causee

One of the arguments offered by Torrego (2009) in favor of the applicative analysis of the datives in FI constructions is the fact that it excludes inanimates.

- (83) *Hizo (a) la radio funcionar a base de golpes
 made(3sg) (to) the radio work on base of hits
 ‘He made the radio work by hitting it’ Torrego (2009: 14[14b])

I claim that the ungrammaticality of (83) is due to the absence of the dative clitic. That is, in the absence of a dative clitic, this sentence cannot have preverbal causees, simply because they have a different structure, similar to FP (84).

- (84) Hizo funcionar *la radio* a base de golpes
 Had(3sg) made work the radio on base of hits
 ‘He had the radio work by hitting it’

In the presence of a dative clitic, inanimate causees are grammatical (86).

- (85) a. Le he hecho a la mesa dar un buen porrazo
 3sg.dat have(1sg) to the table give a good bang
 ‘I made the table bang strongly’
 b. Le he hecho a la radio emitir programas día y noche
 3sg.dat have(1sg) to the radio broadcast shows day and night
 ‘I made the radio broadcast shows day and night’
 c. Le hace correr muchísimo al coche
 3sg.dat makes speed very.much to.the car
 ‘He really makes the car speed’

All of the sentences in (85), exhibit inanimate dative causees. As I mentioned above, inanimate causees tend to favor a postverbal position (??*le hace al coche correr muchísimo* (cf. 85c)). However, this must be due to pragmatic reasons: given the right context, preverbal inanimate causees are possible (e.g., 85a-b), and these sentences are not FP, given that, as discussed in Folli & Harley (2007), unergatives are disallowed in the FP construction since they do not involve embedded objects (86).

- (86) *Juan hace correr mucho *el coche*
 John makes run much the car
 ‘John makes the car speed a lot’

It seems then that, at least in some dialects, inanimates are not excluded as causees in FI constructions in which the embedded verb requires an external argument. Of course, inanimates that appear as causees are interpreted as ‘more animate’.

This is a consequence of their dative marking (ie, *le* and *a*), as well as (problaby) the ‘obligation’ requirement on the causee, discussed by Folli & Harley, in which the semantics of *hacer* ‘require’ that the external argument actively brings about the event described by the embedded verb.

In any case, if inanimates are banned from FIs in Spanish (and we have seen that they are not), this restriction is not sheer evidence that the argument has been licensed by an applicative, as applied arguments may also be inanimates (87).

- (87) No *le* he podido abrir la puerta *al coche*
 neg 3sg.dat have(1sg) be.able open the door to.the car
 ‘I couldn’t open the car’s door’

The difference between inanimate applied arguments *al coche* (87) and inanimate causees (85) is the fact that, whereas inanimate applied arguments are always interpreted as possessors, inanimate causees are not. This suggests that they are, in fact, introduced by different functional heads, and the one responsible for introducing causees is VoiceP.

3.6. The clitic doubling of the dative causee

As mentioned above, Ordóñez (2008) argues that dative causees in Spanish are true datives (as opposed to goal phrases) because they tend to appear doubled by a dative clitic.

- (88) a. No *le* ha hecho reír *a nadie*
 neg 3sg.dat has made laugh to no.one
 'He made no one laugh'
- b. *A las chicas les* he hecho reír
 to the girls 3sg.dat have(1sg) made laugh
 'I made the girls laugh'
- Ordóñez (2008: 3[18a, 19a])

Ordóñez compares the clitic doubling of these sentences with the impossibility of doubling the dative in non-causative contexts for a negative polarity item (88a, 89a) and for a feminine plural (88b, 89b).

- (89) a. *No *le* ha visto *a nadie*
 neg 3sg.dat has seen to no.one
 'He saw no one'
- b. **A las chicas les* vi
 to the girls 3sg.dat saw
 'I saw the girls'
- Ordóñez (2008: 3[18b, 19b])

The examples above illustrate impossible cases of *leísmo*, which is observed in some Spanish dialects when structural accusative arguments are realized with dative clitics.

- (90) a. *leísta dialect*
A Juan le vi ayer
 To J. 3sg.dat saw(1sg) yesterday
 'I saw John yesterday'
- b. *non-leísta dialect*
A Juan lo vi ayer
 To J. 3sg.acc saw(1sg) yesterday
 'I saw John yesterday'

The sentences offered by Ordóñez in (88) and (89) show that if the examples in (88) were cases of *leísmo*, they would be ungrammatical, just like (89) are. I agree with this analysis. The datives that appear in causative structures are not 'masked' accusatives, but they are real datives.

I argue, however, that this does not necessarily make them applicatives, as suggested by Torrego (2009). In Spanish, structural dative or accusative is assigned to arguments as a default mechanism, as proposed by Villalba (1992), and as described in section 3.1. This is also argued by Folli & Harley for Italian causatives.

Some Spanish dialects assign dative when accusative has been already assigned

(the Rio de la Plata dialect discussed in Bordelois (1974), see section 1), some other dialects structurally assign dative or accusative depending on semantic matters (e.g., the Mexican Spanish discussed in Treviño (1994)), and other dialects (e.g., the dialect studied here) structurally assign dative as default, to arguments other than structural subjects (which are assigned nominative by T) and structural objects (that are assigned accusative as complements of roots).

The external arguments that form part of the complement of v°_{CAUSE} are not assigned nominative by T° nor selected as the complements of lexical roots. For this reason, they are assigned ‘default’ structural dative. The clitic appears in this dialect simply because this is a dialect in which all datives are clitic doubled (ie., see Correa (2002) for a technical account in favor of the obligatory nature of the doubling clitic with datives in this dialect).

Next, I show some further arguments in favor of the external-argument analysis of the causee in Spanish FI construction.

3.7. Agent-oriented verbal modifiers

Pylkkänen shows that phase-selecting causatives embedding Voice allow agent-oriented verbal modifiers. The Spanish productive causative *hacer* in FI allows agentive modification. This is shown in (91) in which the agent-oriented modifier *a propósito* ‘on purpose’ allows ambiguous scope.

(91) *Verbal modification (agentive)*

El director de la obra le hizo al actor llorar *a propósito*

The director of the play 3sg.dat made to.the actor cry on purpose

- a. The director of the play, on purpose, made the actor cry (high attachment)
- b. the director of the play made the actor [cry on purpose] (low attachment)

High or affected applicatives, in turn resist agentive modification in Spanish.

(92) a. *High applicative*

Su mejor corredor *le* corrió fatal *a Juan a propósito*

His best runner 3sg.dat ran(3sg) very.bad to John on purpose

- i. ‘His best runner, on purpose, ran very badly on John’ (*on purpose* modifies the external argument)
- ii. #‘His best runner ran very badly on John (i.e., and John did this on purpose)’

b. *Affected applicative*

Juan *le* cerró la puerta *a Manuel a propósito*

John 3sg.dat closed the door to Manuel on purpose

- i. John, on purpose, closed the door on Manuel (high attachment)
- ii. #John closed the door on Manuel, who did it on purpose (low attachment)

In (92), none of the applied arguments can be modified by agentive modification. This is contrasted with the dative causee in (91) that clearly accepts it. Next I show another test in favor of the dative causee as an external argument.

3.8. External arguments and depictives

Pylkkänen shows that only high applicatives and external arguments can be modified by a depictive. Dative causees easily allow depictive modification:

(93) Juan le hizo a María_i conducir borracha_i

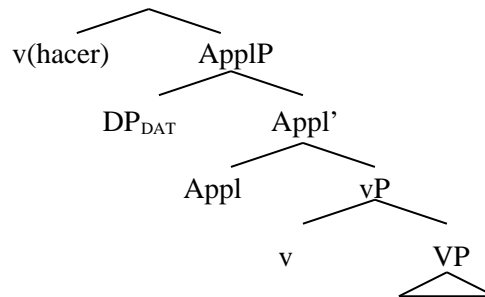
John 3sg.dat made to Mary drive drunk

‘John made Mary drive while drunk’

The kind of applicative proposed by Ippolito (and adopted in Torrego (2009)) for dative causees is affected, not high. That is, this applicative is not embedded by VoiceP, like

high applicatives, but it is rather embedded by v°_{CAUSE} . I repeat the structure here:

(94)



Torrego (2009:37[39])

Recall that this is the same applicative proposed by Cuervo for affected applicatives.

Affected applicatives, however, cannot be modified by a depictive:

- (95) *Juan le cerró la puerta a María borracha
 John dat closed the door to Mary drunk
 ‘John closed the door for Mary when she was drunk’

Spanish high applicatives (96) have a tendency to resist depictives. The high applicative that appears with *parecer* ‘seem’ marginally accepts them but the high ‘ethical’ applicative rejects it.

- (96) *ethical*
 *Su mejor corredora le corrió fatal borracho
 his best runner(fem) 3sg.dat ran(3sg) bad drunk(masc)
 ‘His best female runner ran very bad on him when he was drunk’

Once again, dative causees pattern with external arguments, but not with Spanish applicatives.

3.9. FI does not allow agentless complements

Further evidence that the complement of FI contains external arguments is illustrated by the following contrasts:

- (97) a. *Los vecinos hicieron cerrársele el prostíbulo
 The neighbors made(3pl) close=*se*(impers/pass)=3sg.dat the brothel
- b. Los vecinos han hecho que se le cierre el prostíbulo
 The neighbors have(3pl) made that *se*(impers/pass) 3sg.dat close(3sg) the brothel
- c. Los vecinos le han hecho que se le cierre el prostíbulo
 The neighbors 3sg.dat have(3pl) made that *se*(imper/pass) 3sg.dat close the brothel
 ‘The neighbors had the brothel close on him’

In (97a) the FI sentence is ungrammatical as it lacks an intentional agentive causee. The FQ sentence in (97b) is grammatical as v°_{CAUSE} now selects a CP with no ‘obligation’ restriction applying on the embedded external argument. In the case of the FQ-dative in (97c), the applicative dative *le* is in both matrix and embedded clause but, crucially, this applicative is not the external argument. In (97c), the datives are affected applicatives. The embedded clause, is still agentless. Once again, the only restriction on the agentiveness of the structure embedded by v°_{CAUSE} exists in the FI construction, which supports an analysis in which v°_{CAUSE} selects VoiceP.

Finally, some typically unaccusative verbs pattern with unergatives in Spanish in that they seem to be compatible with FI but not with FP. Their subjects are interpreted as ‘agentive’:

- (98) a. El tráfico *le* ha hecho llegar tarde *a Juan*
 The traffic 3sg.dat has made arrive late to John
 ‘The traffic made John arrive late’
- b. La piedra *le* ha hecho caer(se) *a Juan*
 The stone 3sg.dat has made fall(se) to John
 ‘The stone made John fall (down)’

As FI constructions, the sentences in (98) may have a cause as their causer and they may

not be passivized (typical of FP). Compare with the FP sentence in (99a):

- (99) a. Juan fue hecho {venir/pasar} por Pedro (FP)
 John was made {come/go.in} by Pete
- b. *Juan fue hecho {llegar tarde/caer(se)} por Pedro (FI)
 John was made {arrive late/fall(down)} by Pete

This suggests that some Spanish unaccusatives (99a) form FP causatives, whereas other Spanish unaccusatives (99b) pattern with unergatives in that they form FI causatives. The datives that appear in these sentences are not applicatives, but causees.

3.10. The dative causee may be a derived subject

Applicatives can never become derived subjects, as seen in (100).

- | | |
|--|---|
| (100) a. Applicatives: Active
María <i>le</i> envió una carta <i>a Juan</i>
Mary 3sg.dat sent a letter to John
‘Mary sent a letter to John’ | b. Applicatives: Passive
*Juan fue enviado una carta
John was sent a letter
‘John was sent a letter’ |
|--|---|

Dative causees, in contrast, may become derive subjects, which, once again, suggests that they are structural rather than inherent datives.¹⁷³

(101) *Causees may become derived subjects*

- a. El desprestigio de su gobierno *le* hizo ser fuertemente cuestionado
 The bad.reputation of his government 3sg.dat made(3sg) be severely questioned
 ‘His government’s bad reputation made him be severely questioned’
- b. Este poema *le* hizo ser admirado y estudiado
 This poem 3sg.dat made(3sg) be admired and studied
 ‘This poem made him be both admired and studied’

¹⁷³ The case differences of the derived subject between ((100), nominative) and ((101), dative) are the result of the contrasted positions of the passive subjects with respect with the matrix verbs. Whereas the derived subject in (100b) is nominative because it establishes an agreement relation with the matrix verb, the derived subject in (101b) is dative because it is in the complement position of *hacer* ‘make’.

Once again, the differences between applicatives and dative causees have been proven.

Dative causees (101) may become passive subjects because they are structural arguments.

Applicatives (100), in turn, cannot because they are not structural arguments. Before moving on, I provide a summary of the section.

3.11. Summary

In this section, I have argued that, a) FI causatives in Spanish involve causative v^o_{CAUSE} with a VoiceP phase as a complement, and b) the dative causee is introduced in the specifier position of embedded VoiceP, not in the specifier of an ApplP.

Different tests have supported my claims. For instance, I have shown that dative causees are unlike other applicatives in structures such as *prohibir* ‘forbid’ and *permitir* ‘allow’ because, for example, causees cannot be reflexives corefering with the causer. This restriction is not observed in the context of *prohibir* or *permitir*.

I showed that dative causees are different from datives appearing in FQ because, for instance, datives in FQ cannot be inanimate. This restriction is not observed in dative causees. Agent-oriented verbal modifiers (ie., *a propósito* ‘on purpose’) cannot be predicated of applicatives but they can be predicated of dative causees. Similar results were obtained with depictives (ie., *borracha* ‘drunk’) that may be predicated of dative causees but not of Spanish applicatives, even if these are considered high applicatives. Finally, I showed that whereas applicatives cannot become passive subjects in Spanish, dative causees can.

All these tests then support the proposal here that v^o_{CAUSE} in Spanish selects

complements with external arguments and that dative causees *are* the external arguments within the complement of Spanish causative *hacer* ‘make’. In the next section, I discuss non-verbal complements of *hacer*.

4. FN: *hacer* with non-verbal complements

The Spanish productive causative *hacer* may embed adjectival (102a) and nominal (102b, 102c) complements.

(102) a. *adjectival complement*

Las vacaciones no {lo/le} hacen [feliz]
 The(fem.pl) holidays neg {3sg.acc/3sg.dat} make(3pl) [happy(sg)]
 ‘Holidays don’t make him happy’

b. *DP complement*

La experiencia {lo/le} hizo [un buen maestro]
 The(fem.sg) experience {3sg.acc/3sg.dat} made(3sg) [a good teacher]
 ‘Experience made him a good teacher’

c. *Nominal complement*

La universidad {lo/le} hizo [doctor]
 The(fem.sg) {3sg.acc/3sg.dat} university made(3sg) [doctor]
 ‘The university made him a doctor’

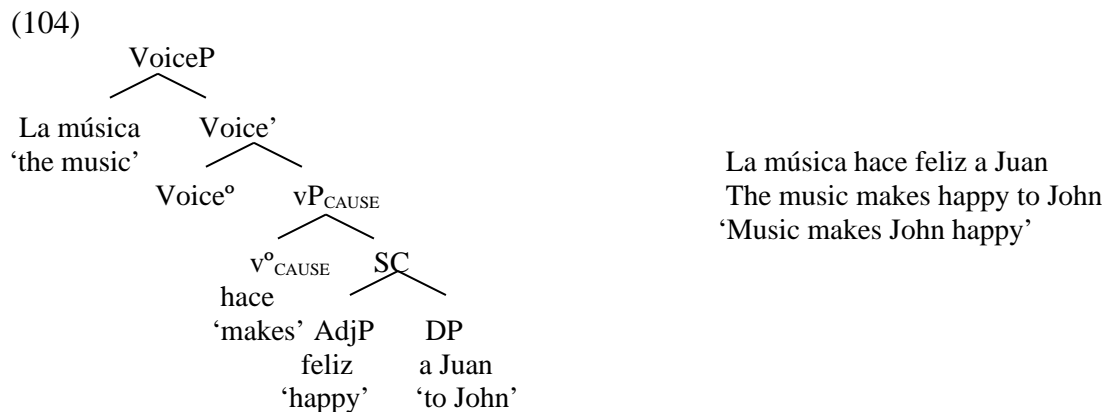
The sentences in (102) illustrate two cases in which *hacer* takes non-verbal complementation. In all cases in (102), the combination of *hacer* with the non-verbal predicates results in the meaning ‘make (causee) become + predicate’. Notice that the causers, *las vacaciones* ‘vacation’ (102a), *la experiencia* ‘experience’ (88b) and *la universidad* ‘the university’ (102c), are all causes rather than agents, which patterns with FI.

In all cases, the embedded argument appears as an accusative clitic, *lo*, or as a dative clitic, *le*. This patterns with the FI construction, since causees are normally datives, yet they may be accusative, when the embedded verb is intransitive.

- (103) El tren le/lo hizo tener que correr
 The train 3sg.dat/3sg.acc made have to run
 ‘The train made him have to run’

I suggest that the FN structure is then equivalent to FI, whereby *hacer* is v^o_{CAUSE} that takes a Small Clause (SC) as a complement. The SC contains two members, a subject, *a Juan*, and a predicate, *feliz* ‘happy’. I follow Folli & Harley (2003, 2007) in the position of the subject of the SC as right branching.

I show the structure of FN in (104):



As the causee in FI causatives, the subject of the SC in FN causatives receives structural accusative or dative case, depending on the availability of these cases, by the main configuration of the structures in which they appear.

The following sentence shows an interesting piece of data regarding this issue. In (102), both accusative and dative are available possibilities for the case of the subject of

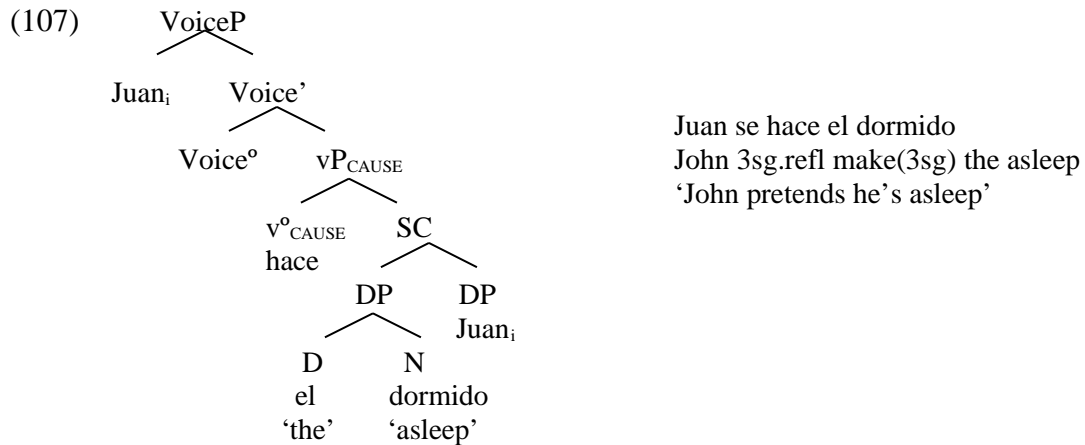
the SC. If the sentences in (102) are passivized via *se*, the only clitic allowed is the dative, never the accusative. This is probably due to the fact that clitic causees obligatorily appear in the matrix clause and the matrix passivization of the sentence excludes accusative from being structurally assigned in the matrix clause, hence only dative clitics are a possibility.

- (105) Se le/*lo ha hecho {muy feliz/doctor/comer espinacas/tener que correr}
 _{SE(pass) 3sg.dat/*3sg.acc} has made {very happy/a doctor/eat spinach/have to run}
 ‘He has been made {very happy/a doctor/eat spinach/have to run}’

Related to the sentences just seen exists a construction in Spanish in which *hacer* receives the idiomatic meaning ‘to pretend’. Recall that this meaning is also available in Hiaki causatives (chapter 5) with a specific configuration in which the direct causative –*tua* ‘make’ participates. In Spanish, the construction involves the combination *hacer* + definite DP in which the noun is a nominalized adjective. As in Hiaki, this type of causative configuration with *hacer* in Spanish is frequently reflexive. The interpretation of these structures may be more or less idiomatic.

- (106) a. *less idiomatic*
 Juan se ha hecho el dormido
 John 3sg.refl has made the(mas.sg) asleep
 ‘John is pretending to be asleep’
 b. *more idiomatic*
 Juan me vio y se hizo el loco
 John 3sg.acc saw(3sg) and 3sg.refl made(3sg) the(mas.sg) nuts(mas.sg)
 ‘John saw me and pretended he didn’t see me (lit. pretended he was nuts)’

I show the structure of these sentences in (107).



The structure of the sentence in (107) is parallel to the one in (105). It is interesting to note that FI constructions are contrasted with FN (106) in that the causer cannot reflexively bind the causee in the former construction (e.g., **Juan se hizo estudiar* 'John refl made(3sg) study') but it can in the latter (106). In this sense, FN patterns with FP (e.g., *Juan se hizo enviar un paquete* 'John refl made(3sg) send a package').

This suggests, once again, that the restriction against the reflexive binding of the causee by the causer in FI is related to the fact that FI embeds a VoiceP phase that creates a binding domain. If the embedded subject in FN may be reflexively bound by the matrix subject, it is because matrix and embedded subjects are in the same binding domain, perhaps because of the absence of VoiceP. This is exactly what happens in the case of FP, as seen in section 2.

As for the source of the idiomatic reading of *hacer*, it could be the reflexive nature of the sentence itself, as well as (perhaps) the specific nature of the predicate DP in the small clause (i.e., a definite DP combined with a nominalized adjective/past participle).

In this short section I have argued that causative *hacer* 'make' may take non-verbal

complements. In some instances (e.g., when the embedded subject is reflexively bound by the matrix subject), idiomatic readings may surface. Nonetheless, it is interesting that this same construction (i.e., reflexive (Sp) *hacer* / (Hk) *-tua* ‘make’ with non-verbal complements) in two unrelated languages (e.g., Hiaki and Spanish) derive the same idiomatic interpretation ‘to pretend’. In the next section, I discuss unaccusative *hacer* ‘make’, that derives a seemingly idiomatic (desiderative) interpretation, just like unaccusative causatives do in Finnish, as seen in sections 1 and 2.

5. Unaccusative *hacer*

Pylkkänen shows that languages/structures that form unaccusative causatives are indication that the causative head involved is non Voice-bundling. For instance, the Finnish causative *-tta* is of this type. For this reason, it can form sentences like (108) containing the causative head in the absence of an external argument.

- (108) Maija-a laula-tta-a
 Maija-part sing-cause-3sg
 ‘Maija feels like singing’
 Pylkkänen (2008: 95[32a])

Because the external argument of the causative is lacking in (108), the structure receives a desiderative interpretation (i.e., something causes on Maija the desire to sing).

Pylkkänen claims that structures such as (108) are possible thanks to the split between the head that introduces a causative event, v^o_{CAUSE} , and the functional head that introduces external arguments, Voice. According to her, structures such as (108) illustrate a configuration whereby v^o_{CAUSE} is present to the absence of Voice.

In this section I show that Spanish *hacer* is also non Voice-bundling, precisely because it allows structures lacking an external argument that also have a desiderative interpretation.¹⁷⁴

(109) *unaccusative 'hacer'*

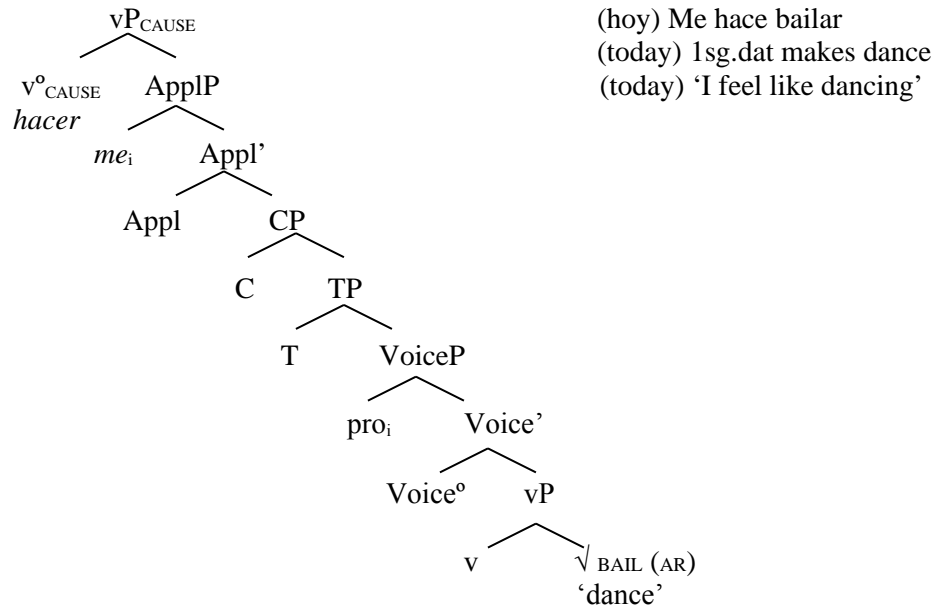
Hoy no me hace mucho salir
 Today neg 1sg.dat make(3sg) much go.out
 'I feel like going out too much'

The sentence in (109) shows an instance of a Spanish FI in which the external argument is an expletive. This is shown by the fact that the verb *hacer* is in 3rd person singular, typical of Spanish sentences with expletives. I will argue, however, that this structure is unlike the FI seen in section 3. The dative argument is rather an applicative, whereas the embedded structure is always a CP phase that may be finite (i.e., subjunctive) or non-finite (i.e., infinitive). I show the structure in (110).

¹⁷⁴ The adverbial *hoy* 'today' is not obligatory in this sentence (i) but it is sometimes better, perhaps due to pragmatic reasons. Other elements may occupy the preverbal position, for instance, a speaker-oriented adverb *por desgracia* 'unfortunately'

(i) Por desgracia, no me hace mucho salir
 For disgrace, neg 1sg.dat make(3sg) much go.out
 'Unfortunately, I don't feel like going out very much'

(110) *unaccusative causative with hacer*



In (110), v^o_{CAUSE} appears in the absence of an external argument (ie., matrix VoiceP). The complement of v^o_{CAUSE} includes (i) an affected applicative, and (ii) a CP complement. The affected applicative gives reference to the null DP (*pro*) in [Spec, VoiceP], via coindexing. This structure is reminiscent of Cuervo's (2003) analysis for affected applicatives and Torrego's (2009) treatment of FI causatives.

My account of the desiderative causative construction in Spanish differs from Pylkkänen's analysis for its Finnish counterpart since, in Finnish, the only arguments of desiderative causatives (e.g., *Maija-a* 'Maija-part' (108)) are derived subjects.

She opposes these subjects to external arguments as, she argues, prototypical external arguments in Finnish are nominative. Both desiderative causative objects and passive subjects, in contrast, are partitive, which stresses the parallel between them.

The dative arguments of Spanish desiderative causatives, however, are

applicatives, base-generated as such, although they could be interpreted as behaving like external arguments. I will argue next that this is because the dative applicatives are coreferent with the embedded external argument. The consequence is that, even though they are affected applied arguments, they will also pass external argument tests, unlike other Spanish applicatives.

Recall, from section 3, that Spanish applicatives cannot be predicated by a depictive (111a), but only subjects or external arguments can. Unlike other affected applicatives, the datives in Spanish unaccusative causatives pass this test (111b). This could (misleadingly) lead to the conclusion that they are embedded external arguments.

- (111) a. El corredor_i le_j corrió *borracho*_{i/*j} b. No me_i hace salir *borracha*_i
 The runner 3sg.dat ran drunk Neg 1sg.dat make(3sg) go.out drunk
 ‘The runner ran while drunk’ ‘I don’t feel like going out while drunk’

Nonetheless, I suggest that the depictive test in (111) is passed by the applicative in the desiderative causative construction in (111b) because of its coreference with the embedded external argument. I show evidence for this next.

5.1. The complement of the unaccusative causative may be a finite CP

The complement of unaccusative causatives may be a finite CP (112).

- (112) ¿Te hace [que salgamos]?
 2sg.dat make(3sg) [that go.out(1pl)]
 Do you feel like we should go out?’

If we apply the depictive test here, we can see clearly that it does not work with the dative, but just the embedded subject (113).

- (113) ¿Te hace que salgamos {*borrachas* / **borracha*}?
 2sg.dat make(3SG) that go.out(1PL) {drunk(fem.PL) / *drunk(fem.SG)}
 ‘Do you feel like we should go out drunk?’

In (113), the dative *te* (2sg) is singular, whereas embedded subject agreement is plural. A depictive, *borrachas* ‘drunk(pl)’, may be predicated of the construction, but only if it is plural, which clearly suggests that only external arguments may be predicated of depictives in Spanish. The facts in (113) also show that, if the applicative in (111b) can be modified by a depictive, it is only because it is coreferent with the embedded external argument, which supports the analysis in (110).

Notice that, even though the 1st person agreement on *salgamos* ‘go.out’ is inclusive (ie., it includes the dative *te* ‘2sg’ in its reference), the referent of the dative is just a subset of the entities denoted by subject agreement (i.e., it also refers to somebody else, such as the addressee). One interesting thing to note here is that, unlike FQ causatives ((114b), also seen in section 2), the applicative in desiderative causatives with finite complements (114a) cannot be coreferent with the entity that triggers agreement with the embedded verb, but the embedded external argument does. The ungrammaticality of (114a) demonstrates this.

- | | |
|---|--|
| (114) a. *¿Te _i hace [que salgas _i]?
2sg make(3sg) [that go.out:2sg]
‘Do you feel like going out?’ | b. ¿Te _i han hecho que vengas _i ? (FQ-dat)
2sg have(3pl) made [that come(2sg)]
‘Did they make you come?’ |
|---|--|

The contrast in (114) is evident: the dative in FQ-dat is also an applicative. However, the reference of the embedded external argument in FQ-dat is totally independent from the dative (114b). In unaccusative causatives, in contrast, the reference of the embedded external argument is dependent on the applicative. That is, the finite or non-finite nature

of the structure embedded by *make* depends on whether the dative is coreferent or not with the embedded external argument. If it is coreferent, the embedded structure is non-finite. If it is not coreferent, the embedded structure is finite (115).

- (115) a. ¿Te_i hace salir_i? b. ¿Te_i hace que salgamos_{*i}?
 2sg.dat make(3sg) go.out 2sg.dat make(3sg) that go.out(1pl)
 ‘Do you feel like going out?’ ‘Do you feel like we should go out?’

This phenomenon is also found in other controlled structures in Spanish, such as *querer* ‘want’, as seen in (116).

- (116) a. ¿Quieres [salir]? b. ¿Quieres [que {salgamos/*salgas}]?
 Want(2sg) go.out Want(2sg) [that {go.out(1pl) / *go.out(2sg)}]
 ‘Do you want to go out?’ ‘Do you want for us to go out?’

The contrast in (116) regarding finite and non-finite complementation is identical to the contrast exhibited by unaccusative *hacer* in this section. In (116) it is the coreference between the main and embedded subjects that ‘controls’ the finite/non-finite nature of the embedded clause. In unaccusative *hacer* constructions, the applicative does the controlling. Everything else is identical.

For the reasons just described, I suggest that the structure of unaccusative *hacer* differs from that of FI causatives in that only the former structures take an applicative dative. Next, I discuss further properties of this construction.

5.2. The matrix verb exhibits default (3sg) agreement

A piece of evidence in favor of the unaccusative nature of causative *hacer* ‘make’ (i.e., the absence of matrix VoiceP) in the constructions discussed in this section is the fact that the desiderative causative construction in Spanish obligatorily exhibits default (3sg)

agreement. If the verb *hacer* shows non default agreement, then the desiderative construction becomes ungrammatical (117).

- (117) *Hoy no me hacen mucho salir
 Today neg 1sg.dat hacer(3pl) much go.out
 intended: 'I don't feel like going out today'

The sentence in (117) exhibits the verb *hacer* in 3rd person plural. Expletives exhibit default person and number (3rd person singular) only. What makes the sentence ungrammatical is the fact that, because 3rd person plural cannot be interpreted as an expletive, the desiderative interpretation is unavailable.

5.3. Only datives are allowed in this construction

A further piece of evidence in support of the applicative nature of the dative in these constructions is the fact that, unlike other causatives with *hacer* such as FI, these only allow dative arguments.

- (118) *No lo hace salir
 Neg 3sg.acc make(3sg) go.out
 'He doesn't feel like going out'

Thus, the unaccusative *hacer* construction shown here exhibits an affected applicative embedded by *hacer* that is coreferent with the external argument of the infinitive complement; if the complement is finite, then the applicative cannot be coreferent with the embedded subject. Proof that these datives are applicatives is the fact that, unlike dative causees in FI, they can never be used as accusatives. The absence of the external argument in these constructions comes from the invariable default agreement exhibited by verb *hacer*. Next, I discuss other constructions in which *hacer* is used unaccusatively.

5.4. *Hacer* in weather / time constructions

Serratos (2008) offers further evidence that external-argument-less causatives are not an isolated phenomenon of just a few languages, such as Finnish or Japanese (e.g., Pylkkänen (2002, 2008)) or Spanish (this section)). She shows data from the Uto-Aztecan language Chemehuevi in which v°_{CAUSE} may exist in the absence of a causer.

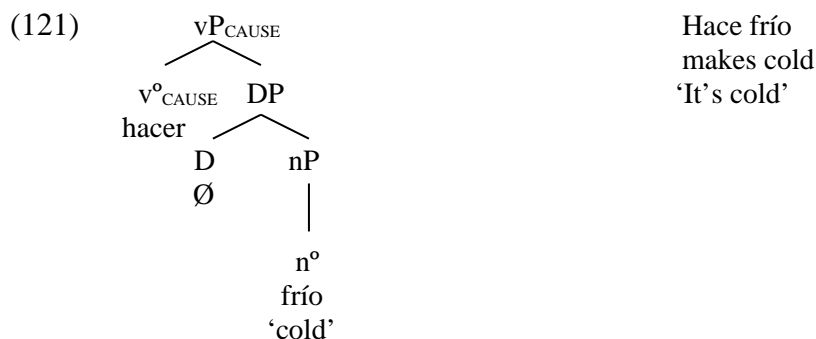
(119) *Chemehuevi causatives*

- | | |
|--|--|
| <p>a. Iva asi-huvi-tu-wa
 Here salt-song-cause-pres
 ‘Salt song is going on’</p> | <p>b. tüvi-pü-a tügü-tu’i-kwa’i-kya
 Earth-noun.marker-obl hungry-cause-away-perf
 ‘When it was hungry times on earth’</p> |
|--|--|
- Serratos (2008:239[1,2])

In the Chemehuevi sentences in (119), the causer is interpreted as expletives would in English. This is because the causative head v°_{CAUSE} , *tu* (119a) and *tu’i* (119b) is part of the structure, but an external argument (Voice^o) is not. Spanish also exhibits sentences that include the presence of *hacer* ‘make’ in the absence of an external argument. This time, the embedded element tends to be a noun and, unlike desiderative causatives, no embedded dative is present. The external argument in these sentences is interpreted as an expletive. They are typically weather or temporal expressions (120).

- (120) a. Hace mucho frío hoy b. Hace mucho (tiempo) que no te veo
 make(3sg) much cold today make(3sg) much (time) that neg 2sg.acc see(1sg)
 ‘It’s very cold today’ ‘It’s been ages since I last saw you’

I show the structure in (121).



The sentences in (120) exhibit instances of *hacer* that are (i) lacking an external argument and (ii) take nominals (e.g., *frío* 'cold') as complements. Because of this, despite the presence of v^o_{CAUSE} , the interpretation of the sentences does not appear to have any resemblance with other conventional causatives that both contain external arguments and compose with events.

When a v^o_{CAUSE} lacking an external argument is combined with a phrase containing Voice^o, as in (110), the interpretation is stative and desiderative. When an unaccusative v^o_{CAUSE} composes with nominals, as in (120), the interpretation of the construction is stative and denotes natural phenomena, such as time or weather. The stative interpretation of these sentences has to do with the configuration in which the causative appears: no external argument. Literally, the sentence in (120a) means that 'it(expletive) makes the weather cold' and the one in (120b) means that 'it(expletive) makes the time go by without me not seeing you'. Next, I discuss other instances in which *hacer* 'make' appears with no external argument.

5.5. Other instances of *hacer* with no external argument

Inchoative counterparts of Spanish causative verbs that participate in the causative-inchoative alternation typically exhibit the inchoative clitic *se*. Their meaning frequently involves ‘become’. Causative *hacer* also has an inchoative counterpart that exhibits the inchoative clitic *se*. The meaning of the structure is ‘become’, as (122) shows.

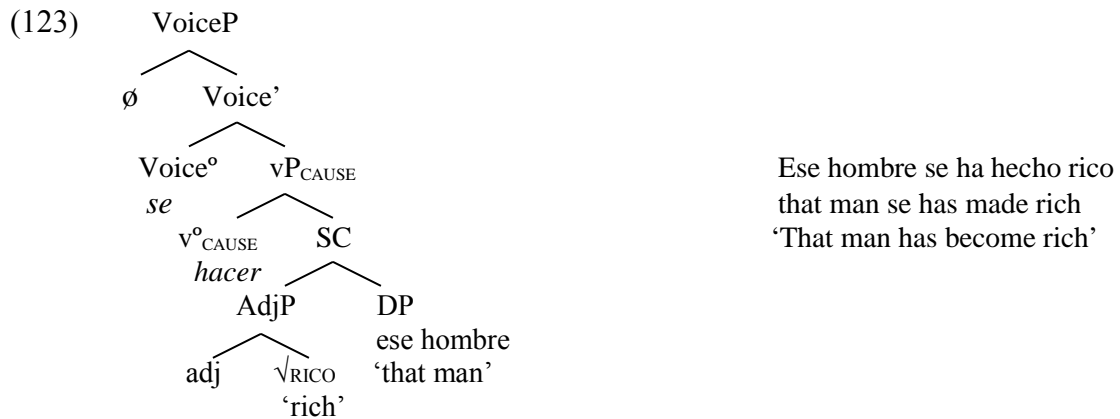
- (122) Este hombre se está haciendo rico
 This man se is making rich
 ‘This man is becoming rich’

Once again, the inchoative *hacerse* ‘become’ involves the type of *hacer* that lacks an external argument. The clitic *se* is not interpreted as a reflexive (i.e., the man is not making himself rich), but it is rather interpreted as inchoative *se*, frequently seen in other inchoative sentences such as *El barco se hundió* ‘the ship se(inch) sank(3sg)’. The complement of *hacer* in these sentences is either a DP, *este niño se ha hecho un hombre* ‘this kid has become a man’ or an adjective, (ie., *rico* ‘rich’).

The latter examples may be viewed as periphrastic forms of lexical causatives in which the verbalizing head is null \emptyset , as seen in chapter 3. More precisely, the form *hacerse rico* ‘to become older’ is a periphrastic deadjectival verb, equivalent to *enriquecerse* ‘become rich’. That is, it is an adjective that composes with a causative verbal head, *hacer* in the absence of an external argument.¹⁷⁵ The structure here is lacking an external argument as a result of an operation of ‘anticausativization’, along the lines of

¹⁷⁵ Lexical counterparts of periphrastic deadjectivals with *hacer* are *enrojecer* ‘redden’, *engordar* ‘fatten’, *alargar* ‘lengthen’, derived from the adjectives *rojo* ‘red’, *gordo* ‘fat’ and *largo* ‘long’. It could be argued that these are equivalent to deadjectivals with *hacer* except for the morphophonological realization of the causative verbs, *hacer* in this case, null (\emptyset) in the case of the lexical deadjectivals. I won’t discuss this type here, as it is reserved for structures in Spanish with *hacer*. For discussion on lexical causatives see chapter 3.

Levin & Rappaport-Hovav (1995).



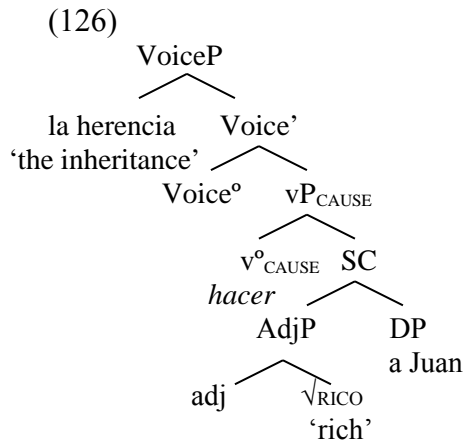
Notice that the sentence in (123) has a causative counterpart. Incidentally, the only surface addition to this sentence is an external argument (causer). The argument affected by the causing event becomes accusative or dative.

- (124) La herencia {le/lo} hizo rico
 The inheritance {3sg.dat/3sg.acc} makes(3sg) rich
 'The inheritance made him rich'

Once again, only a dative clitic is possible if the matrix sentence is passivized:

- (125) Se {le/*lo} ha hecho rico
 SE(pass) {3sg.dat/*3sg.acc} has made rich
 'He was turn into a rich man'

I propose the following analysis for the sentence in (124). Basically, it is the same analysis offered in (123) with the addition of an external argument.



La herencia hizo rico a Juan
 The inheritance made rich to John
 'The inheritance made John rich'

The analysis in (126) is identical to the one offered for FN in section 4, which in turn patterns with FI. The similar syntactic behavior of all these constructions supports an analysis in which the FN and the FI shown here involve the same type of (functional) *hacer*, the type of causative head that also allows other operations such as unaccusative *hacer* (ie., *hacer* lacking VoiceP), anticausative and passive *hacer* (ie., *hacer* in which Voice is realized by different flavors of *se*), and causative *hacer* (ie., *hacer* that appears along with an active VoiceP).

6. Conclusion

In this chapter, I have discussed the syntax of causatives with *hacer* in Spanish. I have shown that, despite the differences, the basic structure of FI sentences is fairly similar in Spanish, Hiaki and English. Basically, the causative in all three languages is generally non Voice-bundling and phase selecting. In all three cases, the kind of phase selected by v°_{CAUSE} is VoiceP. In the case of Spanish *hacer*, its non Voice-bundling potential has been demonstrated by the fact that the FI construction allows unaccusative causatives that

derive a desiderative interpretation. These constructions, never analyzed before in Spanish, are parallel to the ones described by Pylkkänen for Finnish, with certain structural differences. As a consequence of this analysis, other parallels have been established between causatives in Hiaki and Spanish, as both languages exhibit a reflexive productive causative construction with the meaning ‘to pretend’. This should not be seen as a coincidence, but as a natural outcome in the search for the natural ways of language. In the next chapter, I offer general concluding remarks to this dissertation.

CHAPTER 7

CONCLUDING REMARKS

This project started with a series of research questions, which I repeat here.

(1) Research questions

- (a) What are the ‘pieces’ of causation?
- (b) Are the ‘pieces’ of causation the same in all languages?
- (c) How are different types of causatives (ie., lexical vs. productive) syntactically encoded? Do they involve the same ‘pieces’?
- (d) How does the general internal architecture of languages contribute to the linguistic expression of causation?
- (e) What determines crosslinguistic variation in the expression of causation? Are the ‘pieces’ of causation encoded differently across languages or are they constant while variation is contributed by elements external to causation itself?

I will discuss next how these questions can be answered, taking into account the results presented in the body of this dissertation.

According to the investigation reported in this dissertation, the real ‘piece’ of causation seems to be one, and it involves a predicate: the causative light verb (v_{CAUSE}) that comes to form part of a given syntactic configuration. This was already reported by Pykkänen (2002, 2008). Of course, because the concept of causation denoted by this predicate is semantically ‘picked up’ by the external argument that composes on top of the causative phrase, the presence of a Causer reinforces the causation semantics. Nonetheless, this dissertation has provided additional data supporting Pykkänen’s proposal that causation may exist in the absence of an external argument.

The basic piece of causation (the causative predicate) does exist in all languages studied (and probably in all languages), since it represents a basic human concept.

However, as Pylkkänen already noted, the causative predicate does not behave identically in all languages, and this is a main source of syntactic variation. For instance, the ability of the causative predicate to appear in syntactic structures in the absence of an external argument seems to be a property of some languages, but not all languages (e.g., English). The results of this investigation, however, are not clear in whether the reason behind this lack of linguistic parallelism is the syntactic bundling of the Voice^o and Cause^o heads, as suggested by Pylkkänen. The languages studied here do not seem to follow the predictions made by Pylkkänen regarding the ability of non Voice-bundling Cause^o to embed transitives and unergatives. In Hiaki, for instance, this is not the case. Further investigation remains to be done regarding this topic.

Pylkkänen originally placed the lexical/productive distinction on the different properties of Cause^o heads. Her research was originally oriented to predict crosslinguistic differences. However, the different selection properties of Cause^o within the same languages can also be derived from this distinction. This investigation has shown that one same language may contain a range of contrasted causative heads, sometimes phonetically contrasted, sometimes identical in form, that nonetheless exhibit a whole range of possibilities regarding the kind of complementation they select. Lexical causatives have been identified here with causative heads that select verbal roots and their complements. Because roots do not contain external arguments, unergatives and transitives have been excluded here. Only unergatives that exhibit unaccusative syntax may be causativized, even in non Voice-bundling languages.

This dissertation has shown, in addition, that main differences exhibited by

causative constructions across languages are not a direct consequence of the internal properties of the causative predicate. For the sake of argument-referent identification, argument identification with respect to the predicate, and other language-internal requirements, languages impose different limitations on the syntactic realization of causative structures. Particularly, languages such as English and, especially, Spanish heavily rely on Agreement relations among their constituents. The consequence of this is that it is difficult in these languages to discern what elements really are part of causation and what elements are not. In the case of Spanish, because its functional heads (e.g., T°, Appl°, Voice°) tend to be null, it is hard to see whether they are part of causatives or not. The structure I proposed for Spanish productive causatives was based on comparative tests (e.g., to see, for instance, the behavior of applicatives versus external arguments in Spanish). Morphologically, however, the Spanish sentence structure is quite obscure, making the process probably my hardest task in this investigation.

The study of more morphologically transparent languages like Hiaki is not an easy task, either. All languages have their own intricacies. Nonetheless, they are good sources to see how differently, at times, and how similarly, at other times, a same cognitive concept such as causation may be conveyed. It would be interesting, in the future, to extend the results of this investigation to other languages typologically similar to the languages studied here but, especially, to languages typologically different. This way, we will probably still miss pieces here and there, but we will gain much more knowledge on the linguistic expression of causation.

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