SELECTING ARGUMENT STRUCTURE:
A PURELY SYNTACTIC APPROACH TO NATURAL REFLEXIVES, CAUSATIVES, AND PASSIVES

by

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LIST OF ABBREVIATIONS

ACC	accusative
ADN	adnominalizer
AUX	auxiliary
CAUS	causative
CL	clitic, classifier
COMP	complementizer
CONN	connective
COP	copula
DAT	dative
DECL	declarative
DEF	definite
DO	direct object
DOM	differential object marker
F	feminine
FUT	future
GEN	genitive
HON	honorific
INS	instrumental
LOC	locative
M	masculine
NEG	negation
NMZ	nominalizer
NOM	nominative
PASS	passive
PL	plural
PRF	perfect
PRS	present
PRT	particle
PST	past
Q	question particle
REFL	reflexive
SG	singular
TOP	topic

ABSTRACT

This dissertation proposes a purely syntactic approach to argument structure and argument structure alternation and provides comprehensive analyses of natural reflexives in French, causatives in Korean, and passives in Japanese. It is argued that there are a few functional elements available in natural language which encode essential conceptual notions into the linguistic representation such as *Refl(exive)*, *Caus(e)*, and *Pass(ive)*, and that rigidity and flexibility of argument structure alternation such as reflexivization, causativization, and passivization, are attributed to the different selectional properties of the functional elements as well as the lexical predicates. Specifically, natural reflexives in French are claimed to be more productive in various ways than those in English because Refl in French selects for an element bigger than Refl in English does. In the same vein, causatives in Korean are claimed to be found on all classes of predicates unlike those in English because Caus in Korean selects for an element bigger than Caus in English. And passives in Japanese are claimed to be more productive than those in Korean or English, because Pass in Japanese is underspecified such that it selects for any VoiceP as the complement, whereas Pass in Korean or English is specified to select for initiative VoiceP only and that Japanese makes use of an additional functional element, *Aff(ect)*, which selects for PassP, whereas Korean or English does not. The discussion in this dissertation, accordingly, demonstrates that the grammar of argument structure can be modeled in a parsimonious way in which everything is reduced to the basic structure-building operation of merge.

Chapter 1

INTRODUCTION

1.1 Preliminaries

Eventualities entail the existence of a certain number and types of participants. For instance, an arriving event entails that there is an entity that arrives, a killing event entails that there are an entity that kills and another entity that is killed, and a thinking event entails that there are an entity that thinks and a proposition that is thought, and so on. The entailment relationship as such appears to reflect how we conceptualize eventualities, in that it is impossible to think of a killing event, for instance, if there is nothing that kills or is killed. The conceptual representation of eventualities as such are reflected in the linguistic representation: predicates are required to be accompanied by a certain number and types of grammatical categories which represent the participants in the eventualities that the predicates denote. Some examples are shown in (1a–e).

(1) a. [The train] arrived.

b. [The rabbit] ran.

c. [John] killed [the bug].

d. [John] sent [Mary] [a book].

e. [John] thought [he heard a scream].

The grammatical categories required for predicates in the linguistic representation are referred to as *arguments*; and the constellation of the arguments of a given predicate is referred to as the *argument structure* of the predicate.

In (1a–e) above, if any of the arguments that are conceptually necessary is missing, the linguistic representation becomes ungrammatical. An illustration of this for the example in (1c) is given below.

(2) a. * Killed the bug.

b. * John killed.

But the conceptual and linguistic representations do not always go together. In some cases, an argument of a predicate may not be overtly realized even though the corresponding participant is entailed by the eventuality that the predicate denotes. One such example would be the agent argument in the passive. The active in (1c) and the passive in (3) represent the same killing event that entails the same number and types of participants; yet in the former, the argument which initiates the killing event is obligatorily realized as indicated by the ungrammaticality of (2a), but in the latter, it is optional as illustrated in (3). Also notable are the facts that when it is overtly realized, the agent argument is expressed as NP in the active while it is expressed as PP in the passive and that the theme argument that undergoes the killing event is expressed as the direct object in the active while it is expressed as the subject in the passive.

(3) The bug was killed (by John).

The active-passive alternation exemplifies that the conceptual representation of an eventuality may have more than one corresponding linguistic representation that the speaker may choose from.

Sometimes what is conceptually necessary may be prevented entirely from being realized as a certain type of argument. For instance, even though the donating event or the reporting event entails a goal participant to whom something is donated or reported, the goal participant cannot be realized as an indirect object in the double object construction as shown in the ungrammaticality of (4a) and (5a).

(4) a. * John donated the library a book.

b. John donated a book to the library.

(5) a. * Mary reported her boss the news.

b. Mary reported the news to her boss.

On the other hand, predicates like *give* and *tell* allow a goal participant to be realized as an indirect object in the double object construction as shown in (6a) and (7a) below, even though

these predicates denote the eventualities of the similar kind with *donate* (which involves transfer of possession) and *report* (which involves transfer of information), respectively.

(6) a. John gave Mary a book.

b. John gave a book to Mary.

(7) a. John told everyone the news.

b. John told the news to everyone.

Interestingly, even predicates like *hire*, *melt*, and *wash*, which represent eventualities that do not entail a goal participant, allow a goal participant to be realized as the indirect object.

(8) a. John hired (me) a lawyer.

b. John melted (me) the ice.

c. John washed (me) an apple.

It seems that having a goal participant to be realized as the indirect object is quite a productive process in English: it can be done whether the eventuality of a predicate entails a goal participant (*give*, *tell*) or not (*hire*, *melt*, *wash*), or whether the predicate can undergo the causative alternation (*melt*; see (9a–b)), the reflexive alternation (*wash*; see (10a–b)), or neither (*hire*). Given this, the fact that the appearance of a goal indirect object is banned for predicates like *donate* and *report*, even though the eventualities that these predicates represent entail a goal participant, is quite puzzling from a purely conceptual perspective. It appears that there must be some constraints in the grammar proper which block those predicates from occurring in the double object construction, independently of the conceptual representation in which the predicates are involved.

Moreover, certain predicates may have more than one argument structure, while the eventualities denoted by the predicates more or less stay the same.[1,2]

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[1] See footnote 6 for brief remarks on the difference between the argument structure alternations shown in (8) and in (9)–(10).

[2] There may be some speaker variation in exactly what predicates are allowed to participate in the reflexive alternation, as some speakers find the example in (10a) rather unnatural when compared to verbs like *bathe* and *shave*. In this dissertation, I will abstract away from the interspeaker variation within a language and assume

(9) a. The ice melted.

b. John melted the ice.

(10) a. Mary washed.

b. Mary washed an apple.

Again, the alternations like those in (9a–b) and (10a–b) are not unrestricted in grammar. Predicates like *destroy* and *comb*, which appear to have the similar semantic profile with *melt* (which involves change of state) and *wash* (which may involve reflexivity), respectively, are yet prohibited from being used intransitively as shown in (11a) and (12a).

(11) a. * The city destroyed.

b. The barbarians destroyed the city.

(12) a. * Mary combed.

b. Mary combed the sheep.

This again suggests that the linguistic representation of eventualities may be divorced from their conceptual representation.

The cases illustrated so far indicate that we need a linguistic theory of argument structure which may interact with but is not constrained entirely by the conceptual representation.[3] The goal of this dissertation is to suggest one such theory, with specific analyses of some of the important phenomena involving argument structure and argument structure alternations.

Argument structure is one of the most extensively studied topics in linguistics, but there are still many important issues that have not been fully resolved, which I hope to shed some light on in this dissertation. One of the issues that has long been in dispute involves the question of where the argument structure of a predicate is represented in grammar. Some have claimed or assumed that it is represented in the lexicon as part of the inherent properties

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that the speakers in the same language allow the same set of predicates to participate in the reflexive alternation. Thanks to Darrell Larsen for pointing this out.

[3] Researchers like Marantz (1997), Harley (1995), Borer (2005b), etc. claim that argument structure flexibility is due to the real world knowledge that the speakers have. The patterns shown in (4)–(12) suggest that it is not necessarily the case.

of the predicate (Fillmore 1968; Chomsky 1970; Jackendoff 1972, 1975; Dowty 1991; Levin and Rappaport Hovav 1995, 2005; Reinhart 2002; etc.), while others have suggested that it is represented in the syntax (Baker 1988; Hale and Keyser 1993, 2002; Marantz 1997; Harley and Noyer 2000; Pylkkänen 2002, 2008; Borer 2005a, 2005b; Ramchand 2008; Lohndal 2014; etc.). The two approaches have different implications about the way in which grammar operates. The lexicalist approach must allow generative processes such as valence-changing operations to take place in the lexicon, whereas the syntactic approach may not. The view that the lexicon is not merely the repository of memorized information but rather is a domain of grammar in which productive processes can occur may face the issue of redundancy. This is because in order to properly constrain the generative processes in the lexicon, one might need to introduce into the lexicon the same rules and principles that are employed in the syntax (Harley 2011; Ramchand 2013). In terms of the overall architecture of grammar, too, it may be modeled in a more parsimonious way if only one generative component is assumed to be at work in grammar than two (Bruening 2018b). But these are only conceptual reasons to favor the syntactic approach over the lexicalist one, and there is no a priori reason why grammar should not have two generative components. It may be just the way in which grammar happens to work. One might also be able to circumvent the architectural redundancy by saying that both the lexicon and the syntax are generative in nature but responsible for grammatical processes exclusive to one another: for example, the lexicon may be assumed to be responsible for valence-changing processes and the syntax for syntactic binding, displacement of syntactic elements, and so on. If so, the model of grammar with two generative components might not be as redundant as it appears to be at first.[4]

That being said, researchers have been providing empirical evidence in favor of the model of grammar with a single generative component (i.e, the syntax) (Sadock 1980; Baker 1985, 1988; Sproat 1985; Lieber 1992; Hale and Keyser 1993; Halle and Marantz 1993;

[4] Note, however, that such assumptions do not seem to be tenable, since as Reinhart and Siloni (2005) and Horvath and Siloni (2011) observe, there are cases where the same valence-changing processes exhibit the properties of lexical as well as syntactic processes within and across languages. It appears that if one adopts the generative lexicon, at least some of the valence-changing processes must still be assumed to apply in the syntax, which brings back the issue of architectural redundancy.

Marantz 1997; Borer 2005a, 2005b; Bruening 2014b, 2018b, 2018c; etc.), some of which involve discussion of argument structure and others of which do not. Given that conceptual reasoning alone is not sufficient enough to determine conclusively which of the two models of grammar is more adequate than the other, the decision must be reached on both conceptual and empirical grounds. In this dissertation, I argue for the model of grammar with a single generative component, by showing that argument structure alternations would be analyzed in more economical and empirically adequate ways if argument structure were represented in the syntax altogether. The general view that the dissertation adopts is the following. In the lexicon, lexical predicates as well as functional elements are specified such that they must merge with certain elements in the syntax. But since the merger operation is strictly local, and since argument structures of given predicates may involve arguments that are not local to the predicates in the syntax, the specified information must not represent the argument structures of the predicates themselves. Instead, the argument structures are viewed to emerge as consequences of a series of merger operations driven by local selectional requirements on lexical predicates and relevant functional elements.

Another issue that has long been discussed other than the debate over the locus of argument structure representations is how argument structure flexibility can be generalized and captured in a principled way. Perhaps the issue may be best illustrated with examples like (13)–(14) below.

(13) a. The storm sank the ship.

b. The ship sank.

(14) a. John kicked the ball.

b. * The ball kicked.

The predicates *sink* and *kick* can both be used transitively by taking two arguments as in (13a) and (14a); but only *sink* but not *kick* can be used intransitively by having the theme argument as its subject as shown in (13b) and (14b). One suggestion that has been offered to capture the cross-predicate variation is that the speakers' knowledge of the world along with linguistic convention limits the usage of predicates (Marantz 1997; Harley 1995; Borer 2005b). That

is, *sink* can, but *kick* cannot, be used intransitively because to our knowledge of the world, a sinking event may take place without an entity that brings about the event, but a kicking event can never take place without an entity that brings about the event. In other words, an entity may undergo sinking by itself but no entity can undergo kicking by itself.

However, as noted in (2)–(12), there are many instances where the linguistic behaviors of predicates are detached from the real world events denoted by the predicates. The followings are some more examples from Ramchand (2008).

(15) a. * John slept the baby.

b. * John watched Mary bored/to boredom.

(Ramchand 2008:10, (13a–b))

As Ramchand points out, the ungrammaticality of examples like (15a–b) show that argument structure flexibility is not as general as the world knowledge would allow. The idea of causing some individual to sleep or watching some individual to the point of being bored is completely conceivable, and thus is compatible with the world knowledge. Yet, the causative use of *sleep* and the use of *bored/to boredom* as a resultative secondary predicate for *watch* are not permitted in English.

Moreover, crosslinguistic consideration suggests that there are language-specific constraints involved in argument structure flexibility independently of the real world knowledge. For instance, the verb for 'sleep' cannot be used causatively in English, but it can in a language like Korean as in (16).

(16) Swuni-ka aki-lul cay-wu-ess-ta.
Swuni-NOM baby-ACC sleep-CAUS-PST-DECL
'Swuni made the baby sleep.'

And in a language like Mandarin, a resultative secondary predicate can be added to the verb for 'watch', being predicated of the subject of 'watch'.

(17) Zhangsan kan-ni-le haizi.
Zhangsan watch-fed.up-PRF child
'Zhangsan watched the child to the point of being fed up with it.'

(Modified from Zhang 2003:168, (9a))

Assuming that Korean and Mandarin speakers share the world knowledge with English speakers, the contrast between Korean and English in (16) and (15a) or between Chinese and English in (17) and (15b) must be due to some factors other than the world knowledge.

One might say that the crosslinguistic differences have arisen because the respective linguistic communities have conventionalized the uses of predicates differently. This may be true to a certain extent, but the crosslinguistic differences should not be attributed entirely to linguistic convention. If they were, the generalization might be missed about the potential correlation between the productivity of the causative and the existence of an overt causativizing morpheme, or between the existence of V-V compounding and the possibility of a resultative secondary predicate being predicated of the clausal subject. This is because convention typically implies arbitrariness. In fact, in Mandarin, a resultative secondary predicate may also appear as an independent constituent just as that in English does; in this case, the resultative secondary predicate is disallowed to be predicated of the clausal subject as exemplified in (18). Here, the sentence is ungrammatical, according to Zhang (2003), because the resultative secondary predicate *ni* 'get fed up' must be associated with the direct object *na pan luxiang* 'that video', which is not an entity that can be 'fed up'.

(18) * Baoyu kan-de na pan luxiang dou ni le.
Baoyu watch-DE that CL video even fed.up PRF
Intended: 'Baoyu watched the video to the point of being fed up with it.'
(Zhang 2003:168, (9b))

The contrast between (17) and (18) in Mandarin and the similarity between (18) in Mandarin and (15b) in English suggest that argument structure flexibility must be determined within the grammar proper rather than by the real world knowledge or linguistic convention. There appears to be a close correlation between the possibility of a secondary predicate being predicated of the clausal subject and the grammatical process of V-V compounding.

The problem, then, remains as to why a verb like *sink* can be used intransitively but a verb like *kick* cannot as illustrated in (13a–b) and (14a–b). This dissertation claims that an answer can be given in terms of selection. In particular, I suggest that lexical items are stored in the lexicon with their selectional properties specified along the lines of Harley

and Noyer (2000), Adger (2003), Ramchand (2008), and Bruening (2013), among others, and that it is these selectional properties that are responsible for the argument structure possibilities of predicates. The discussion will proceed under the assumption that there are a few functional elements available in natural language which encode essential conceptual notions into the linguistic representation (Chomsky 2000; Kayne 2005), such as Kratzer's (1996) *Voice*, Marantz's (1993) *Appl(icative)*, Pylkkänen's (2002, 2008) *Caus(e)*, Tomioka and Sim's (2005) *Aff(ect)*, Bruening's (2013) *Pass(ive)*, and so forth.[5] The language-internal variability of argument structure will then be attributed to the different selectional properties of the lexical items including functional elements as well as lexical predicates. For instance, a verb like *kick* may be seen to select for a functional element which introduces an external argument, while a verb like *sink* be seen not to do so. And it may be analyzed that this brings about the difference between the two verbal predicates in the possibility of participating in the causative alternation. The opposite is also a possibility (which must not be mutually exclusive with the one just mentioned): the variability may arise because the respective functional elements select only for certain types of predicates.

Even though functional elements and lexical predicates shared by different languages may represent more or less the same conceptual notions, their syntactic properties need not be the same across languages. In this regard, the crosslinguistic variation of argument structure can be attributed to different selectional requirements of the lexical items in different languages (cf. Borer 1984; Kayne 2005; Baker 2008). The causative, for instance, is formed only from a certain class of predicates in English (hence, the ungrammaticality of (15a)); but it can be found on all classes of predicates in Korean (hence, the grammaticality of (16)). The difference between English and Korean may be taken to arise because the element introducing causation selects for a certain class of predicates in English, whereas it selects for any class of predicates in Korean.

[5] I am using the term "functional" to mean 'not lexically contentful', regardless of the grammatical categories that the "functional elements" may belong to. For instance, Caus can be of category V (i.e., it can be V_{caus}; cf. Harley 2013:50, footnote 23; Wood and Marantz 2017), but still is taken to be a functional element since it does not have any lexical content unlike verbs like *make*, *force*, *let*, etc. Thanks to Hee-Don Ahn for bringing my attention to this issue.

In some cases, different languages may have 'packaged' relevant semantic components into a functional element in different ways (cf. Pylkkänen 2002, 2008). An instrument subject, for instance, is generally prohibited in a language like Korean as in (19a), whereas it is allowed in a language like English as in (19b) (e.g., J. Yeon 2008; Wolff *et al.* 2009).

(19) a. Emeni/*Khal-i/ka ppang-ul calu-ess-ta.
mother/*knife-NOM bread-ACC cut-PST-DECL

b. The mother/The knife cut the bread.

The contrast in (19a–b) can be regarded to reflect that in the two languages, different semantic components have been packaged into the functional element, initiative Voice, which introduces an external argument into the structure (Kratzer 1996). Such differences between languages can be seen as linguistic convention in that there is no principled reason why this has to be the case, just as there is no principled reason for why in Germanic languages the manner component tends to be encoded into verbal predicates as illustrated in (20), whereas in Romance languages the path component does as illustrated in (21a–c).

(20) The rock **slid/rolled/bounced** down the hill.

(Talmy 1985:62, (5c))

(21) a. La botella entró a la cueva (flotando). Spanish
the bottle **moved.in** to the cave (floating)
'The bottle floated into the cave.'

b. La botella salió de la cueva (flotando).
the bottle **moved.out** from the cave (floating)
'The bottle floated out of the cave.'

c. La botella pasó por la piedra (flotando).
the bottle **moved.by** past the rock (floating)
'The bottle floated past the rock.'

(Talmy 1985:69, (15a–c))

The choice between packaging motion and manner, on the one hand, and packaging motion and path, on the other, into lexical items appears to be entirely arbitrary rather than grammatically motivated. English speakers have no problem in using path verbs like *exit*, *ascend*, *enter*, etc., and Spanish speakers have no problem in using manner verbs like *andar*

'walk', *gatear* 'crawl', *saltar* 'hop', etc. The view that I will assume in the dissertation is that functional elements like Voice, Appl, Caus, etc. might as well have been conventionalized in different ways in different languages, resulting in the variation such as the one in (19a–b).

To summarize, throughout the dissertation, I intend to shed some light on the two long-standing issues in the literature of argument structure: the debate over the locus of argument structure representations as well as the language-internal and crosslinguistic discrepancies in argument structure flexibility. The goal of the dissertation is by no means to resolve these issues once and for all; it is just to provide some clues that might help resolve these issues by analyzing the specific cases under the view sketched here. Developing the sketched view into a more systematic system is another goal that I would like to achieve in the dissertation.

1.2 A brief review of the previous approaches

In this section, I review some of the previous studies on argument structure that have exerted much influence in the literature. Given the enormous amount of the literature on argument structure, it would be barely possible to review the previous studies in detail, even when the scope is limited to the most influential ones. So, rather than reviewing each theory in any detail, I sketch the past trend of the research in a semi-chronological way.

1.2.1 Subcategorization frame and theta-grid

In the framework of Government and Binding (GB) theory, it has been commonly thought that the argument structure of a predicate is specified in the lexical entry as its "subcategorization frame" and "θ-grid". An example lexical entry for the verb *kick* is shown in (22). In (22), only one NP is specified in the subcategorization frame of *kick*, while its θ-grid specifies two θ-roles. What this means is that a transitive verb like *kick* is not viewed to be syntactically responsible for introducing the subject; what introduces the subject in the syntax is some other syntactic element such as I(nfl) or T(ense), while the θ-role of the subject (i.e., the underlined θ-role in the θ-grid) is assigned non-locally by the lexical verb.

(22) **The lexical entry for *kick***
Phonology: /kɪk/

Subcategorization frame: [___$_V$ NP]
θ-*grid*: [agent, theme]
+ some encyclopedic/conceptual notion of what 'kick' means

Under this view, the argument structure of a predicate needs to be projected by the predicate in accordance with the information specified in its lexical entry; accordingly, the view is often categorized as an instance of the *projectionist* approach to argument structure.

The acceptability of a linguistic representation, then, is determined based on two principles in grammar: the Projection Principle and the θ-Criterion. The Projection Principle ensures that lexical information such as the subcategorization frame and the θ-grid is fully represented in the syntax. And the θ-Criterion requires that an argument be assigned only one θ-role, and a θ-role be assigned to only one argument. According to this view, examples like (2a–b), repeated below, are ruled out, either because the lexical information on argument structure is not properly represented in the syntax (in violation of the Projection Principle) or because an argument bears more than one θ-role (in violation of the θ-Criterion), or both, according to the intended interpretation.

(23) a. * Kicked the ball.

b. * John kicked.

Also, an example like (24) below is ruled out because there is an extra argument, say *John*, which is not specified in the lexical entry for *kick*.

(24) * [John] [Mary] kicked [the ball].

The example in (24) inevitably leads to the violation of the θ-Criterion, for there is one too many argument in the sentence: as a transitive verb, *kick* assigns two θ-roles according to its lexical entry in (22), yet there are three arguments in the sentence that need to be assigned a θ-role. Interestingly, if the "extra" argument is added in a different position with a different θ-role, the sentence will be saved as shown in (25).

(25) [Mary] kicked [John] [a ball].

John in (25) is assigned a goal θ-role and is realized as an indirect object of the sentence. A question that immediately arises regarding (25) is how the extra argument can be added to

the sentence when it is not specified in the θ-grid of *kick*. This issue may be easily addressed with the assumption that an optional goal argument is specified in the lexical entry as in (26).

(26) *Subcategorization frame*: [___$_V$ (NP) NP]
θ-*grid*: [agent, (goal), theme]

However, even if such an assumption is made, there arises another issue regarding the contrast between (24) and (25): why can't *John* in (24) assume the goal θ-role, fixing the ungrammaticality of the sentence by circumventing the Projection Principle and the θ-Criterion as it does in (25)? It appears that there is a constraint in grammar which allows a goal participant to be realized as an indirect object and prohibits it from being realized as a subject. The same must be the case for the other θ-roles and grammatical functions. In the simple transitive, for instance, the participant with an agent θ-role must always be expressed as the subject and the participant with a theme θ-role as the direct object as in (27a). If this requirement is not met, the sentence becomes ungrammatical as illustrated in (27b).

(27) a. John$_{agent}$ kicked the ball$_{theme}$.

b. * The ball$_{theme}$ kicked John$_{agent}$.

The regularities of the mapping between the types of participants (i.e., arguments with certain θ-roles) and the grammatical functions as such must be addressed in the theory of argument structure. The task of accounting for the mapping regularities is often called the "linking problem" (Perlmutter and Postal 1984; Baker 1988, 1997; Dowty 1991; Tenny 1992; Levin and Rappaport Hovav 1995; see Section 1.2.3).

As noted in Section 1.1, a single predicate sometimes has more than one argument structure. There are two options for the traditional projectionist view to account for the alternating argument structures. It may be said either that more than one argument structure can be specified in a lexical entry, or that there are grammatical processes which alter the argument structure of a lexical item. The latter option is clearly the better one of the two considering that the alternations of argument structure are productively available for a wide range of predicates. For instance, the causative alternation in (9a–b), repeated below in (28a–b), may be analyzed to involve a single grammatical operation, namely, either

causativization in (29a), which targets inchoative verbs and turns them into causatives (Davis and Demirdache 2000; Harley 1995, 2008; Pylkkänen 2002, Pylkkänen 2008; Ramchand 2008), or *decausativization* in (29b), which targets causative verbs and turns them into inchoatives (Levin and Rappaport Hovav 1995; Chierchia 2004; Reinhart and Siloni 2004; Koontz-Garboden 2009).[6] Such an analysis would offer a simpler and more straightforward generalization than saying that the two argument structures are specified in every single one of the verbs that participate in the causative-inchoative alternation.

(28) a. The ice melted.

b. John melted the ice.

(29) a. Causativization: [theme] → [causer, theme]

b. Decausativization: [causer, theme] → [theme]

Similarly, the reflexive alternation in (10a–b), repeated below in (30a–b), may be said to involve the grammatical operation of *reflexivization* that changes a transitive verb into a reflexive verb along the lines of (31) (Reinhart 2002; Chierchia 2004; Reinhart and Siloni 2004, 2005).

(30) a. Mary washed.

b. Mary washed an apple.

(31) Reflexivization: [agent, theme] → [agent-theme]

Under the GB theory, the valence-changing operations like (de)causativization and reflexivization must apply in the lexicon, leading to the assumption that the lexicon is a computationally active component in grammar rather than merely is a mental dictionary where the idiosyncratic information is stored (Levin and Rappaport Hovav 1995; Reinhart 2002; Chierchia 2004; Reinhart and Siloni 2004, 2005; Horvath and Siloni 2011; etc.). This is because of the Projection Principle, which requires the lexical information to be fully

[6] This case can be distinguished from the optional addition of a goal argument to the existing structure discussed around (25) in the text, in the sense that it involves different realizations of the same θ-role: e.g., in the causative alternation, the same theme argument may be realized as the subject in one and as the direct object in the other.

represented in the syntax, and accordingly prohibits any syntactic operation from altering the information specified in the lexicon. Alternatively, the valence-changing operations may be analyzed to be done in the syntax with the assumption that the syntax is the only component in grammar in which generative processes take place (Baker 1988; Travis 2000; Borer 2005a, 2005b; Folli and Harley 2007; Harley 2008; Labelle 2008; Pylkkänen 2002, 2008; Ramchand 2008; etc.). In the more recent framework of Minimalist Program, a descendant of the GB theory, it is also assumed that the syntax does not alter any information represented in the lexicon.[7] This assumption along with the view that valence-changing operations apply in the syntax leads to the logical conclusion that argument structure itself is also represented in the syntax after all. If argument structure were represented in the lexicon, the valence-changing operations would not apply in the syntax at all because the operations in the syntax cannot alter the information present in the lexicon.[8]

1.2.2 Lexical decomposition and event structure

Levin and Rappaport Hovav (1995, 2005) suggest that the lexical entry of a predicate contains information on argument structure that is qualitatively different from the one typically assumed in the GB tradition. As discussed in the preceding subsection, the argument structure of a predicate is represented in terms of subcategorization frame and θ-grid in the traditional GB theory, making use of the grammatical primitives "θ-roles". Under Levin and Rappaport Hovav's approach, the θ-grid is replaced by a representation that encodes the event structure of a predicate along with the minimal syntactic information associated with it.

Specifically, Levin and Rappaport Hovav claim that verbal predicates have complex event structures and can be decomposed into event structure primitives. For instance, the causative verb *break* has the internal event structure which may be paraphrased as 'x causes y to become broken' and is lexically decomposed as illustrated in (32). In (32), the italicized element represents the idiosyncratic meaning of the predicate.

---

[7] *No-Tempering Condition* (NTC): Merge of X and Y leaves the two S[yntactic] O[bject]s unchanged (Chomsky 2008:138).

[8] See Harley (2011) for detailed discussion on argument structure from a Minimalist perspective.

(32) [[x DO-SOMETHING] CAUSE [y BECOME *BROKEN*]]

And the event structure in (32) maps to the lexical syntactic information (i.e., lexical information about the syntactic realization of an event structure) in (33) through linking rules.

(33) < x < y >>

Consequently, variable x is projected as the external argument of the predicate, and variable y is projected as the internal argument of the predicate in the syntax. An example lexical entry for *break* under this view is shown below.[9]

(34) **The lexical entry for *break***
Phonology: /bɹeɪk/
Subcategorization frame: [___V NP]
Event structure: [[x DO-SOMETHING] CAUSE [y BECOME *BROKEN*]]
(which maps to < x < y >> via linking rules)
+ some encyclopedic/conceptual notion of what 'break' means

According to Levin and Rappaport Hovav, an event structure like (32) is a lexical 'semantic' representation, or LSR. The LSR is realized as an argument structure in the syntax through the window of the lexical 'syntactic' representation exemplified in (33). So, the lexical entry for *break* in (34) implies that the default structure in which the verb *break* occurs is the transitive as in (35).

(35) Pat broke the window.

But the verb may also be decausativized and appear in the intransitive structure as in (36).

(36) The window broke.

Levin and Rappaport Hovav suggest that the intransitive use of *break* in (36) is derived through the process of *lexical binding*. That is, variable x of the LSR in (32) may be bound as

[9] Levin and Rappaport Hovav's system still requires the subcategorization frame to be present in the lexical entry because the grammatical category of the variables in event structure must be determined in one way or another. For instance, it needs to be made sure that variable y in (34) is projected as NP rather than PP, CP, etc. The subcategorization frame may be dispensed with if some other grammatical constraints are taken to be responsible for the categorial realizations of the variables: e.g., the Case Filter and/or the Canonical Structural Realization Principle (Grimshaw 1979; Chomsky 1986b; Pesetsky 1995).

in $x \rightarrow \emptyset$ in the lexicon, resulting in the LSR mapping to the lexical syntactic representation < y > rather than < x < y >>. This process prevents the external argument of *break* from being projected onto the syntax, yielding the argument structure of an intransitive.

The evidence that supports the view that the external argument of a verb like *break* is bound at the level of LSR when used intransitively comes from the contrast between the passive and the inchoative, according to Levin and Rappaport Hovav. Specifically, in both the passive and the inchoative, the external causer argument cannot be directly expressed as shown in (37a–b).

(37) a. * The window was broken $\text{Pat}_{\text{causer}}$.

b. * The window broke $\text{Pat}_{\text{causer}}$.

But the two constructions differ from each other in the possibilities of licensing *by*-phrases and purpose clauses (Manzini 1983; Roeper 1987). The passive allows *by*-phrases and purpose clauses to appear as in (38a–b), whereas the inchoative does not as in (39a–b).

(38) a. The window was broken by Pat.

b. The window was broken to rescue the child.

(Levin and Rappaport Hovav 1995:109, (63a–b))

(39) a. * The window broke by Pat.

b. * The window broke to rescue the child.

(Levin and Rappaport Hovav 1995:109, (65a–b))

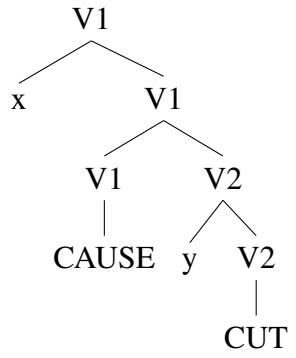
Levin and Rappaport Hovav interpret the contrast between (38a–b) and (39a–b) as evidence which shows that the external argument is still present in the argument structure of the passive, while it is not in the argument structure of the inchoative. In particular, they suggest that the external argument of the passive is bound at the level of lexical 'syntactic' representation, contrary to that of the inchoative which is bound at the level of lexical 'semantic' representation, or LSR, as noted above. According to this view, the causer argument is not entirely absent in the argument structure of the passive, because its presence is still encoded at the level of LSR, or to put it another way, because the external argument is

still present in the event structure of the passive verb. Hence, the grammaticality of (38a–b). On the other hand, the causer argument is entirely absent in the argument structure of the inchoative, as the ungrammaticality of (39a–b) indicates, because it is bound at the level of LSR, and accordingly, the event structure of the verb itself does not encode the presence of an external argument.

Baker (1997) claims that the lexical syntactic representation, to which the LSR maps via linking rules and from which argument structure is projected in the syntax, is not necessary because argument structure can easily be assumed to be projected directly from the LSR onto the syntax. For instance, the LSR of *cut* in (40a) may be projected onto the syntax along the lines of (40b) without the mediation of a lexical syntactic representation like < x < y >>. In (40b), CUT has the semantics of 'be linearly-separated'.

(40) a. [x cause [y be linearly-separated]]

b.



(from Baker 1997:124, (78a))

Baker suggests, adopting Larson's (1988) proposal of VP shells, that agent is the specifier of the higher VP in a Larsonian structure (variable x in (40); see also Koopman and Sportiche 1991 for the VP-internal subject hypothesis), theme is the specifier of the lower VP (variable y in (40)), and goal, path, or location is the complement of the lower VP (Baker 1997:120–121, (76i–iii)).

Baker's proposal appears to be quite similar to the configurational analysis of Hale and Keyser (1993, 2002) that will be discussed in Section 1.2.4, in the sense that they both take argument structure to be represented in the syntax rather than in the lexicon. But the two approaches are distinct in a non-trivial way: Baker's approach still assumes the projectionist

	Projectionist	*Constructivist*
Lexicalist	Levin & Rappaport Hovav (1995), etc.	Goldberg (1995), etc.
Syntactic	Baker (1997), etc.	Hale & Keyser (1993), etc.

Table 1.1: Conflicting views of argument structure

view of argument structure as the analysis in the traditional GB theory or that suggested by Levin and Rappaport Hovav does; on the other hand, Hale and Keyser's approach assumes the *constructivist* view of argument structure, which claims that θ-roles are read off directly from the structure rather than projected from the lexical entry. It needs to be noted that the constructivist view of Hale and Keyser is distinct from the constructivist view of the Construction Grammar such as the one suggested by Goldberg (1995). In Hale and Keyser's approach, the structure from which θ-roles are read off is created in a generative module of grammar. On the other hand, in Goldberg's approach, no generative system is assumed to exist in grammar; instead, specific constructions themselves are viewed to be meaningful grammatical primitives that are stored in the lexicon. The conflicting views of argument structure that has been noted in this section are summarized in Table 1.1.

1.2.3 The linking problem

As noted in Section 1.2.1, there are strong mapping regularities between the types of participants in eventualities (or "θ-roles" such as agent, theme, goal, etc.) and the grammatical functions that the participants assume in the linguistic structure (such as subject, direct object, indirect object, etc.). The most obvious case would be one involving dyadic verbs which denote events with agent and theme participants. As Baker (1997:76) points out, every verb in this class expresses agent of the event as its subject and theme of the event as its direct object, and there exist no verbs that show the opposite pattern. This is illustrated in (41a–b).

(41) a. John hit/built/found/pushed/bought/cleaned/broke/described the table.

b. * The table plit/puilt/vound/fushed/pought/bleaned/proke/tescribed John.

(Baker 1997:76, (2a–b))

The pattern shown in English in (41a–b) appears to hold crosslinguistically, perhaps with the exception of so-called "deep ergative" languages like Dyirbal (Dixon 1994), although the analysis of these languages is highly controversial (Williams 2015:234).

There have been various proposals to capture such crosslinguistic regularities. One of the proposals is Perlmutter and Postal's (1984) *Universal Alignment Hypothesis* in (42) suggested in the framework of Relational Grammar; another is Baker's (1985, 1988) *Universal Theta Assignment Hypothesis* in (43) suggested in the framework of GB theory.

(42) **Universal Alignment Hypothesis** (UAH; Perlmutter and Postal 1984:97, (51))
There exist principles of universal grammar which predict the initial relation borne by each nominal in a given clause from the meaning of the clause.

(43) **Universal Theta Assignment Hypothesis** (UTAH; Baker 1988:46, (30))
Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

Both UAH and UTAH capture the regularities in a simple and straightforward way. But as Ramchand (2013:274) points out, they may not themselves be considered as theories of linking but instead must be considered as the statements of the actual existence of such regularities. This is because these hypotheses do not offer any account of the mechanism behind the mapping regularities (Tenny 1992:2; see also Baker 1997:74–75).

One early attempt to provide an algorithm by which the mapping regularities are realized is made by Fillmore (1968). According to Fillmore, there is a "preferred" or "unmarked" subject choice, and the unmarked subject choice is in general done by the following rule:

(44) If there is an A[gent], it becomes the subject; otherwise, if there is an I[nstrument], it becomes the subject; otherwise, the subject is O[bjective (= theme/patient)].
(Fillmore 1968:33, (54))

What the rule essentially says is that among the arguments of a verb, the one that bears the highest-ranked θ-role in the *thematic hierarchy* in (45) becomes the subject.

(45) agent > instrument > theme/patient

Fillmore's proposal works under the assumption that there is a single thematic hierarchy like the one in (45). Levin and Rappaport Hovav (2005), however, argue that this is not the case. In particular, Levin and Rappaport Hovav (2005:162–163) show that different researchers had formulated sixteen distinct thematic hierarchies, and that some of those hierarchies even have conflicting rankings with each other. This indicates that the regularities in the mapping between the types of participants and the grammatical functions may not be properly accounted for in terms of thematic hierarchies. Moreover, any linking theory assuming a strict thematic hierarchy may suffer from an empirical problem when it comes to the so-called psych verbs, which appear to denote the same eventualities but show the opposite linking patterns as in (46)–(48) (The examples are from Baker 1997:77, (5a–b)).[10]

(46) a. John likes long novels.

b. Long novels please John.

(47) a. John fears dogs.

b. Dogs frighten John.

(48) a. John worries about the ozone layer.

b. The ozone layer worries John.

It is not clear under the approach with a thematic hierarchy why 'John', for example, is expressed as the subject in (46a) but as the direct object in (46b), whereas 'long novels' is expressed as the direct object in (46a) but as the subject in (46b). The θ-roles of these arguments appear to stay the same in both sentences (i.e., 'John' = experiencer; 'long novels' = theme).

Dowty's (1991) *proto-role theory*, another attempt to account for the mapping regularities, offers a potential explanation for why psych verbs behave as illustrated in (46)–(48). According to Dowty, participants in the eventuality denoted by a predicate entail certain properties, which can be divided into agent-like or patient-like properties shown in (49a–e)

[10] See Belletti and Rizzi (1988) and other work in the framework of Relational Grammar for the view that the arguments with the same θ-role in (46)–(48) initially have the same relation with the verbs but later surface differently through some syntactic derivations. See also Pesetsky (1995, Chapter 2) for the possibility that the arguments with an apparently same θ-role actually have different θ-roles.

and (50a–e), respectively. The mapping then takes place according to the *Argument Selection Principle* in (51), which requires that the participant that entails more agent-like properties should map to the subject and the one that entails more patient-like properties should map to the direct object.

(49) **Contributing properties for the agent proto-role** (Dowty 1991:572, (27a–e))

a. volitional involvement in the event or state

b. sent[i]ence (and/or perception)

c. causing an event or change of state in another participant

d. movement (relative to the position of another participant)

e. exists independently of the event named by the verb

(50) **Contributing properties for the patient proto-role** (Dowty 1991:572, (28a–e))

a. undergoes change of state

b. incremental theme

c. causally affected by another participant

d. stationary relative to movement of another participant

e. does not exist independently of the event, or not at all

(51) **Argument Selection Principle** (Dowty 1991:576, (31))

In predicates with grammatical subject and object, the argument for which the predicate entails the greatest number of proto-agent properties will be lexicalized as the subject of the predicate; the argument having the greatest number of proto-patient entailments will be lexicalized as the direct object.

Importantly, if two arguments of a predicate entail the same number of agent-like and patient-like properties, their association with the grammatical functions can be either way. This is the case of psych verbs in (46)–(48). That is, 'John' and 'long novels' in (46a–b), for instance, do not differ much in their number of agent-like and patient-like properties; consequently, the Argument Selection Principle in (51) does not determine which argument should be realized

as which grammatical function. Hence, the variability. Note that this does not mean that ungrammatical examples like the following should be allowed under the proto-role theory.

(52) a. * Long novels like John.

b. * John pleases Long novels.

All that the proto-role theory predicts is that there can be instances where the mapping is not strictly determined even when the arguments involved are traditionally labeled with different θ-roles (e.g., 'experiencer' and 'theme' in the case of psych verbs). It does not guarantee the grammaticality of examples like (52a–b).

The last proposal that will be reviewed regarding the linking problem is Tenny's (1992, 1994) *Aspectual Interface Hypothesis* in (53).

(53) **Aspectual Interface Hypothesis** (AIH; Tenny 1994:115, (219))

The universal principles of mapping between thematic structure and syntactic argument structure are governed by aspectual properties relating to measure-out. Constraints on the aspectual properties associated with direct internal arguments, indirect internal arguments, and external arguments in syntactic structure constrain the kinds of event participants that can occupy these positions. Only the aspectual part of thematic structure is visible to the universal linking principles.

The central idea behind the AIH is that the syntax need not refer to θ-roles for its operations; all that the syntax sees is certain aspectual structures that θ-roles are associated with. In particular, Tenny suggests that only the argument of a predicate that 'measures out' the event denoted by the predicate maps to its direct object. In this sense, Tenny's theory is about object selection contrary to Fillmore's (1968) proposal which attempts to account for the mechanism of subject selection. The constraint that Tenny suggests is stated in (54).

(54) The internal argument of a simple verb is constrained so that it either undergoes no change or motion, or it undergoes change or motion which "measures out the event" over time. (Tenny 1992:3, (1))

A relatively clear example that shows Tenny's point is the locative alternation shown in (55)–(57) (The examples are from Tenny 1992:14, (24a–f)).

(55) a. load hay on the wagon

b. load the wagon with hay

(56) a. clear dishes from the table

b. clear the table of dishes

(57) a. cram pencils into the jar

b. cram the jar with pencils

The semantic judgment of these examples is that when the material is in the direct object position as in (55a), (56a), and (57a), the events that the examples describe are considered to be complete when all of the material is removed or applied to the surface or container expressed by PP. On the other hand, when the surface or container is in the direct object position as in (55b), (56b), and (57b), the events are considered to be complete when the surface or container is completely loaded or emptied regardless of whether or not the material inside PP is entirely consumed. Crucially, Tenny shows that the locative alternation is impossible when instrument is substituted for material as illustrated below.

(58) a. spray the wall with water$_{\text{material}}$

b. spray the wall with a hose$_{\text{instrument}}$

(Tenny 1992:15, (28a–b))

(59) a. spray water$_{\text{material}}$ on the wall

b. * spray a hose$_{\text{instrument}}$ on the wall

(Tenny 1992:16, (29a–b)

According to Tenny, the contrast between (59a) and (59b) arises because a material can be consumed gradually until it is gone and thus can measure out the event, but an instrument cannot be consumed in such a way and thus cannot measure out the event. The contrast appears to suggest that there are correlations between the possibility of object selection and the target argument's ability to measure out an event over time.

Note, however, that Ramchand (2008, 2013) claims that Tenny's view of object selection is too strong because examples can easily be found that do not conform to the constraint stated in (54). Some of the examples are shown below.

(60) a. John pushed the cart.

b. John broke the stick.

(Ramchand 2013:295, (45a–b))

'The cart' in (60a) and 'the stick' in (60b) undergo motion or change but do not measure out the event over time; and yet, they can be expressed as a direct object in violation of the constraint in (54). For this reason, Ramchand (2013:295) argues that "while undergoer of a change and the achievement of a definite change often go together on a direct object, the two notions are logically separable"; and she suggests that the direct object must be "either part of the description of the path/scale of change itself or is the undergoer of that change". Ramchand's view is illustrated in (61a–d).

(61) a. John rolled the cart. (undergoer of change)

b. John rolled the cart over. (undergoer-resultee of change)

c. John walked the West Highland Way. (path of change)

d. John passed two pleasant hours in Mary's company last night. (scale of change)

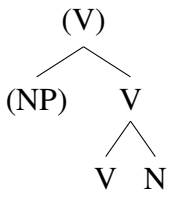
(Ramchand 2013:296, (49a–d))

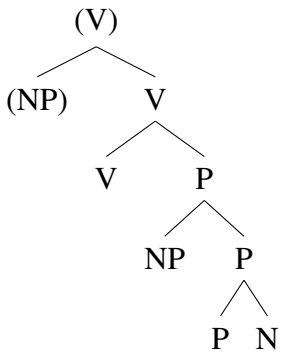
So, 'the cart' can be used as the direct object in (61a) and (61b) because it is the undergoer and the undergoer-resultee of change, respectively; and 'the West Highland Way' and 'two pleasant hours' can be used as the direct object in (61c) and (61d) because they describe the path and the scale of change, respectively. The examples in (61a–b) may not be easily accounted for under Tenny's view of object selection: 'the cart' undergoes motion without measuring out the event over time, yet it is used as the direct object.

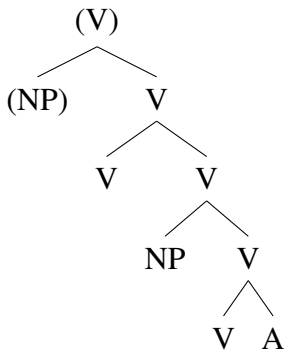
1.2.4 Meaningful Structures

The approaches to argument structure that have been reviewed so far are projectionist in nature in the sense that arguments are taken to be projected in the syntax according to

the information specified on the lexical items involved in the derivation. An alternative to the projectionist account of argument structure is, as briefly mentioned in Section 1.2.2 for comparison purposes, the constructivist account. The central idea underlying the constructivist account is that argument structure is encoded in the structure rather than specified in the lexicon. One of the most influential works of the constructivist approach in the generative framework would be the configurational analysis proposed by Hale and Keyser (1993, 2002). Hale and Keyser suggest that the argument structure of a predicate is determined according to the structural configuration that the predicate assumes at the level of "l(exical)-syntax". The potential structural configurations that Hale and Keyser suggest a predicate may assume are shown in (62a–c), where the parenthesized nodes indicate that the l-syntactic structures can be augmented by the external argument added to the specifier of (higher) V.

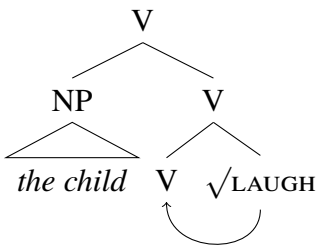
(62) a. 

b. 

c. 

To be specific, the configuration in (62a) is argued to be the representation of the argument structure of an unergative verb like *laugh* as shown below.

(63) The child laughed.

(64) 

In (64), the nominal root √LAUGH is merged as the complement of V, which then is incorporated into the head V, forming the verbal predicate *laugh*. When the l-syntactic structure is augmented by taking an external argument at Spec,V, the example in (63) is derived.

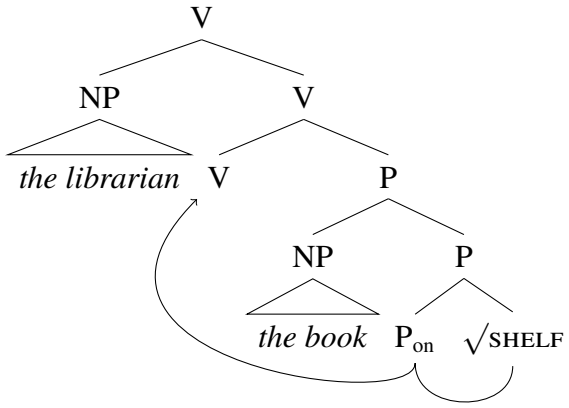
An example for (62b) is a location verb like *shelve* or a locatum verb like *saddle* exemplified in (65a) and (65b), respectively.

(65) a. The librarian shelved the book.

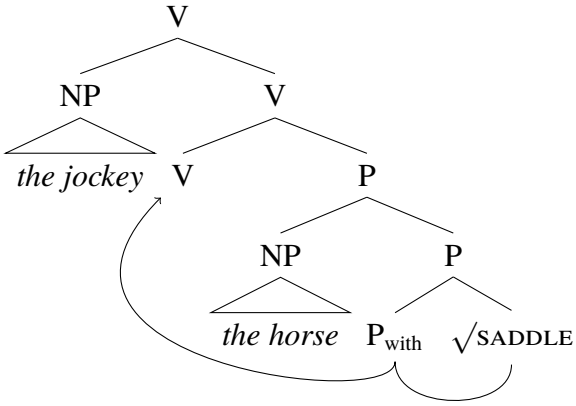
b. The jockey saddled the horse.

In this case, the nominal root $\sqrt{\text{SHELF}}$ or $\sqrt{\text{SADDLE}}$ is introduced in the complement position of P, and the direct object NP like *the book* or *the horse* in the specifier position of P. When the nominal root is incorporated into P and then into V, the transitive verb phrase *shelve the book* or *saddle the horse* is derived. The subject is again introduced at Spec,V, deriving the examples in (65a–b). This is illustrated in (66a–b).

(66) a.



b.

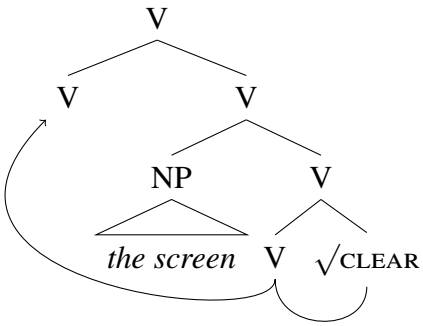


The last configuration in (62c) can be exemplified by a verb like *clear* which alternates as shown in (67a–b). The derivations of (67a) and (67b) are illustrated in (68a) and (68b), respectively.

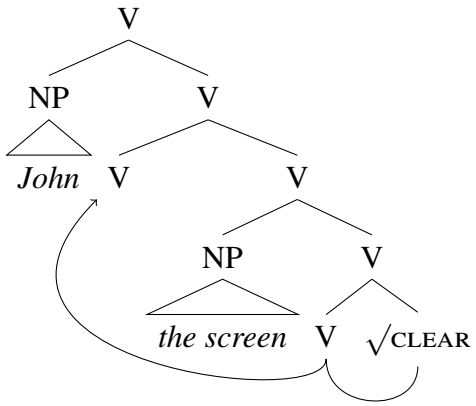
(67) a. The screen cleared.

b. John cleared the screen.

(68) a.



b.



Here, the specifier of lower V is occupied by the NP *the screen* and the complement of lower V is occupied by the adjectival root $\sqrt{\text{CLEAR}}$. When the higher V in (62c) does not take a specifier after a series of incorporation of $\sqrt{\text{CLEAR}}$ as in (68a), the unaccusative in (67a) is derived; and when the higher V takes a specifier as in (68b), the transitive in (67b) is derived. As for the word order of (68a), the expected order will be obtained once *the screen* moves out of the l-syntax for independent reasons, e.g., to satisfy the [EPP] on T.

One of the advantages of the configurational approach is that it offers an explanation for the difference observed in English between unaccusative and unergative verbs regarding causativization. Compare (67a–b) above with (69a–b):

(69) a. The child laughed.

b. * John laughed the child.

In the case of the unaccusative in (67a), the sole argument is at the specifier of lower V leaving the specifier of higher V available; accordingly, an external argument like *John* may be introduced to the structure in the specifier of higher V, deriving the transitive in (67b). On the other hand, in the case of the unergative in (69a), the complement of V is already occupied by a nominal root $\sqrt{\text{LAUGH}}$ as shown in (64), which means that the sole argument of the unergative is an external argument at Spec,V. Therefore, additional external argument cannot be introduced into the structure, resulting in the ungrammaticality of an example like (69b). Notice that the analysis is based on the assumptions that an event-denoting nominal root like $\sqrt{\text{LAUGH}}$ can only be the complement of 'higher' V (in other words, it cannot be

introduced as the complement of lower V in the VP-shell configuration), and that a head is allowed to take one specifier and one complement at most (at least at the level of l-syntax).

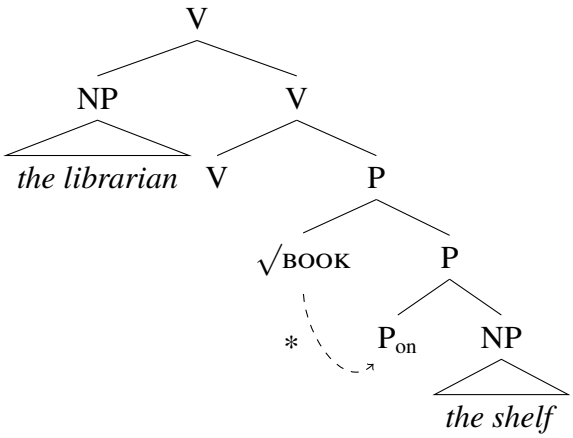
Another claimed advantage of Hale and Keyser's system is that the ungrammaticality of examples like (70a–b) follows from the general assumption that the complement can, but the specifier cannot, be incorporated into a head (Baker 1988).

(70) a. * The librarian booked the shelf.

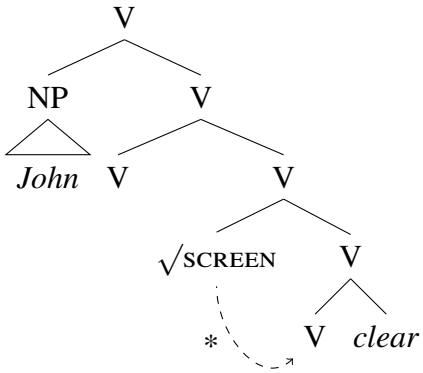
b. * John screened clear.

In the examples above, the nominal roots that provide the base for the derived verbs *booked* and *screened* occupy the specifier position of P or lower V as in (71a) and (71b), respectively. Since specifier-head incorporation is disallowed, examples like (70a–b) cannot be derived.

(71) a.

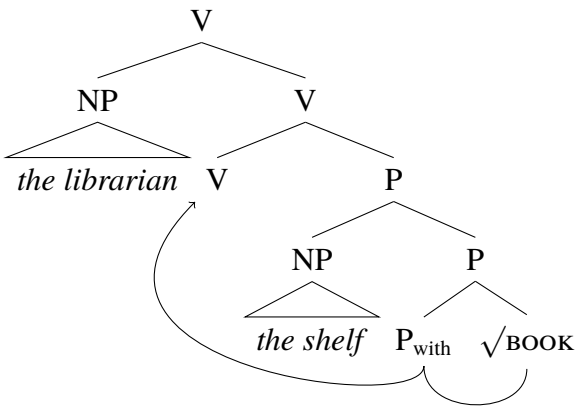


b.



Notice, however, that it is not immediately clear why the ungrammatical example in (70a) cannot be derived as illustrated in (72) under Hale and Keyser's framework.

(72)



There is no apparent difference between the derivations in (66b) and (72). So, if the derivation in (66b) is allowed, it appears that the derivation in (72) must also be allowed. But if the derivation in (72) is possible, the example in (70a) will be predicted to be grammatical (with the interpretation like 'The librarian caused the shelf to be with books'), contrary to fact.

Hale and Keyser's view of argument structure is purely configurational, in that the θ-roles, which are viewed to be specified in the lexical entry under the projectionist approach, are read off directly from the structure itself. If an argument appears at the specifier of higher V, it is interpreted as agent, and if an argument appears at the specifier of P or lower V, it is interpreted as theme, etc. A theoretical advantage of such an analysis, in addition to the empirical ones introduced above, is that it offers an explanation for why grammar makes use of so few θ-roles. The explanation that can be offered by Hale and Keyser's system is that it is because there are only a limited number of argument positions in the l-syntax from which θ-roles can be read off (Harley 2011:436).

Although the configurational approach has advantages such as those illustrated above, it also has some limitations. For instance, according to the configurational approach, the difference in the possibility of causativization between unaccusative and unergative verbs is due to the different configurations that the two classes of verbs assume. Such a view faces some challenges when the typology of causativization is taken into account. A language like Hungarian, for instance, shows the opposite patterns of English: the verbs that accompany an external argument (i.e., transitives and unergatives) can be causativized as in (73a–b), but

those that do not accompany an external argument (i.e., unaccusatives) cannot as in (73c).[11]

(73) a. János el olvas-tat-ta a könyv-et Mari-val. Hungarian
János PRT read-CAUS-3SG.PST the book-ACC Mary-INS
'János made Mary read the book.'

b. Az edző ugrál-tat-ja Mari-t.
the coach jump-CAUS-PRS.DEF.DO Mari-ACC
'The coach makes Mari jump.'

c. * Anna olvad-tat-ja a jeg-et.
Anna melt-CAUS-PRS.DEF.DO the ice-ACC
'Anna made the ice melt.'

Also, in a language like Korean, any class of verbs can be used causatively.

(74) a. Cheli-ka aki-eykey chayk-ul ilk-hi-ess-ta. Korean
Cheli-NOM baby-DAT book-ACC read-CAUS-PST-DECL
'Cheli made the baby read the book.'

b. Cheli-ka Swuni-lul wul-li-ess-ta.
Cheli-NOM Swuni-ACC cry-CAUS-PST-DECL
'Cheli made Swuni cry.'

c. Cheli-ka elum-ul nok-i-ess-ta.
Cheli-NOM ice-ACC melt-CAUS-PST-DECL
'Cheli made the ice melt.'

It appears that the crosslinguistic differences of causativization as such are hard to be given a straightforward account from the purely configurational perspective.

Moreover, it is not quite clear from the purely configurational perspective why certain transitive verbs participate in the causative alternation, while others do not in a language. For instance, the location/locatum verbs can only be used transitively as in (65a–b) above; when they are used intransitively, the sentences become ungrammatical as shown below.

(75) a. * The book shelved.

b. * The horse saddled.

[11] One might think that 'lexical' causatives of a language like English and 'morphological' causatives of a language like Hungarian must be treated separately, but as Ramchand (2008:13) implies, this might be a mistake because the same structural organization can be detected whether a language uses morphologically simplex or morphologically complex words to express causative verbal meaning.

The ungrammaticality of (75a–b) suggests that even though the specifier of (higher) V can be left empty in a structure like (62c) (hence, the grammaticality of a sentence like *The screen cleared*), this is not a possible option for a structure like (62b). It is not clear how to account for such a difference in terms of configuration. The same is true for a case like (14a–b) repeated below.

(76) a. John kicked the ball.

b. * The ball kicked.

A purely configurational perspective does not seem to provide any straightforward account of why a verb like *break* or *sink* can undergo the causative alternation, while a verb like *kick* or *push* cannot.

Potential solutions to these problems may be found under the approach adopted by Larson (1988), Marantz (1993), Kratzer (1996), Baker (1997), Alexiadou (2010), Pylkkänen (2008), and Ramchand (2008), among many others. These authors share their view with Hale and Keyser that argument structure is represented in the hierarchical structure. The difference of their view from the configurational approach is that argument structure is not viewed to be read off directly from the structure, instead, it is taken to be projected by multiple lexical items involved in the derivation of the structure. In the sense that arguments are projected by lexical items, their view is similar to the classical projectionist approach. But it differs from the classical projectionist approach in that it does not take an argument structure to be projected by a single predicate as a whole. Instead, it considers argument structure as a structured group of arguments, where each argument is projected by an independent lexical item. I adopt this view for the analyses in this dissertation.

1.3 The current system

The approach that I adopt in the dissertation is the projectionist-syntactic one, which takes arguments to be projected by lexical items and argument structure to be represented in the syntax. Under this approach, each argument that constitutes an argument structure is considered to be projected by a distinct lexical item in the syntax. For instance, the two

arguments, initiator and theme, of an agentive transitive verb like *hire* are not both projected by the verb, but instead are projected by the functional element, initiative Voice, and the lexical element, *hire*, respectively.[12] A natural question that arises regarding such a view is how the argument structure is determined for a given predicate. Since it is assumed that argument structure is represented in the syntax, the information about the required number and types of arguments, by assumption, cannot be specified in the lexical entry unlike the classical GB theory or Levin and Rappaport Hovav (1995, 2005). Also, since arguments are assumed to be projected by lexical items, the information of argument structure cannot be determined configurationally unlike Hale and Keyser (1993, 2002). As an answer to the question, this dissertation hypothesizes that argument structure and argument structure variability are regulated by local selectional properties of lexical items. Below I introduce the system that I adopt to entertain this hypothesis.

As noted in Section 1.1, I assume that natural language is equipped with a few functional elements that encode essential conceptual notions into the linguistic representation such as initiative Voice (Kratzer 1996), Appl (Marantz 1993), Caus (Pylkkänen 2002, 2008), and so on (Chomsky 2000; Kayne 2005). These functional elements have certain selectional properties (which may vary across languages as will be clearer in later chapters). Initiative Voice, for instance, which introduces an initiator argument for an unergative or transitive verb, is required to take a verbal element as the complement and a nominal element as the specifier in the syntax. Following Bruening's (2013) notation, I represent the syntactic properties of initiative Voice as the selectional features [S:V; S:N], which means that the element with these features is required to merge with an element of category V and an element of category N, in that order (Bruening 2013:21). I assume that these selectional features must be checked off in a phase (see Section 1.4 for some discussion of the consequences of this assumption); and I assume, again adopting Bruening's (2013) feature checking system, that (i) a selectional

[12] From now on, I will use the term "initiator" as a cover term that refers to the external argument θ-roles including agent and holder (Kratzer 1996), among others (Ramchand 2008; cf. "effector" of Van Valin and Wilkins 1996, "originator" of Borer 2005b). Below and in the later chapters, I assume the existence of a semantically vacuous Voice head (Labelle 2008; Schäfer 2008; Wood 2012, 2015; Alexiadou *et al.* 2015). To distinguish between semantically vacuous Voice and initiator-introducing Voice, I will call the former expletive Voice, or $\text{Voice}_{\text{expl}}$, and the latter initiative Voice, or $\text{Voice}_{\text{init}}$.

feature projects to the dominating node unless it is checked off, and that (ii) checking off a selectional feature means that the selectional feature stops projecting. The feature checking principles that Bruening suggests are shown below.

(77) A selectional feature [S:X] on node Y projects to a dominating node Z unless

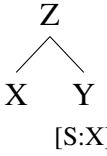
i. the daughters of Z are Y[S:X] and X, or

ii. the daughters of Z are Y[S:X] and W[S:Y(S:X)].

(Bruening 2013:22, (85a–b))

The two cases in (77i) and (77ii), where a selectional feature [S:X] on some element Y is checked off, are illustrated in (78a) and (78b), respectively.

(78) a.



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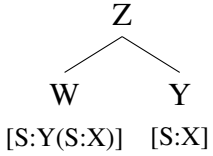


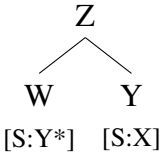
In (78a), the selectional feature [S:X] on Y does not project to the dominating node Z because Y merges with X; and in (78b), the selectional feature [S:X] on Y does not project to Z because Y merges with an element which requires Y with the unchecked selectional feature [S:X]. Hence, the feature [S:X] on Y is "checked off" in both cases.

In addition to the principles in (77), I assume that the following feature checking principle is available in the system.

(79) A selectional feature [S:X] on node Y projects to a dominating node Z unless the daughters of Z are Y[S:X] and W[S:Y*].

The selectional feature with an asterisk in (79) indicates that if there is an unchecked selectional feature on the selected element, it can be checked off by the selecting element. The feature checking procedure is illustrated below.

(80)



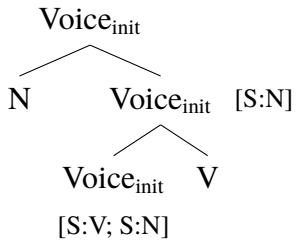
In (80), the selectional feature [S:X] on Y does not project to the dominating node Z because Y merges with an element which requires Y and checks off a residual selectional feature on Y. The difference between the principles in (77ii) and in (79) is that in the former, the selecting head merges only with an element with an unchecked selectional feature, whereas in the latter, the selecting head merges with an element specified by the feature whether or not there is an unchecked selectional feature on the selected element.

The principle in (79) is adopted to formally represent the idea that a head may select for an element specified by the selectional feature as long as the selected element satisfies the semantic requirement of the selecting head. For instance, I will argue in Chapter 2 that a reflexive head in French selects for an open predicate of category Voice, which under the proposed approach will be either initiative VoiceP whose specifier is not projected or expletive VoiceP. A complication here is that initiative VoiceP without a specifier has an unchecked feature [S:N], whereas expletive VoiceP does not. If the reflexive head had the selectional feature [S:Voice], it would not be able to merge with specifierless initiative VoiceP with the unchecked feature [S:N]. And if the reflexive head had the selectional feature [S:Voice(S:N)], then it would not be able to merge with expletive VoiceP. One way to represent the proposed selectional requirement of the reflexive head would be to assume that it has a selectional feature with optional components as in, e.g., [S:{Voice/Voice(S:N)}]. The feature with an asterisk [S:Voice*] does the same work with the feature with optional components insofar as the material discussed in this dissertation is concerned. I adopt the principle in (79) rather than the feature with optional components primarily for notational simplicity. The feature [S:Y*] also represents the idea of 'selecting any element of category Y (as long as the semantics is right)' in a more straightforward manner than a feature like [S:{Y/Y(S:X)}].

Note that a selectional feature on a lexical item is allowed to project to the next dominating node as long as it is checked off before the phase containing it is completed. It is not the case that all selectional features on a lexical item have to be checked off immediately as the lexical item undergoes initial merge; instead, more than one selectional features on a single lexical item constitute an ordered set of features. If a lexical item has two selectional features [S:X; S:Y], for instance, then the feature [S:X] will be checked off when the lexical

item merges with an element of category X. The unchecked feature [S:Y] will project to the next dominating node, and it will be checked off when the node merges with an element of category Y. This is illustrated with initiative Voice below.

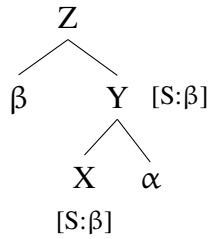
(81)



In (81), the feature [S:V] on Voice$_{init}$ is checked off when Voice$_{init}$ merges with V. The unchecked feature [S:N] on Voice$_{init}$, then, projects to the next dominating node and is checked off when the node merges with N. Even though one of the features on Voice$_{init}$ is not checked off immediately when Voice$_{init}$ merges with V, it does not result in a derivational crash since the feature is checked off at the next stage in the derivation within a phase.

I assume that structure building is driven in the syntax by the selectional features on lexical items. In other words, a merge operation between two syntactic elements takes place because at least one of the elements is required to combine with the other element and thus *has to* combine with it. What this means is that a derivation like the following should be ruled out by the principle of Last Resort.[13]

(82)



In (82), the selectional feature [S:β] on X is not checked off when X undergoes initial merge with α; instead, it projects to the next dominating node Y and is checked off when Y merges with β. Projection of a feature itself is allowed under the feature checking mechanism as

[13] I use the term "Last Resort" to refer to the global economy condition in grammar which dictates that a grammatical operation (e.g., movement) should apply when it has to (e.g., to satisfy visibility, or to check off an uninterpretable feature, etc.) (Chomsky 1995). The Last Resort requirement as an economy condition should be distinguished from a last resort operation like *do*-support which applies to save an otherwise ill-formed derivation.

illustrated in (81). However, the derivation is still ill-formed because merge between X and α is not motivated in violation of the Last Resort principle.

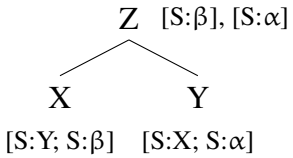
Projection of an unchecked selectional feature to the next dominating node is permitted in principle but only with a certain condition. The condition is introduced below.

(83) **Condition on feature projection**

A mother node may carry unchecked selectional feature(s) projected from a single daughter node at most.

The condition in (83) prevents feature projection from taking place in the following context.

(84)

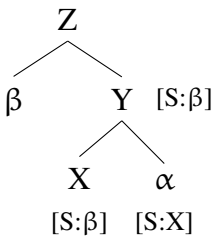


In (84), X and Y are specified to merge with each other; accordingly, merge between X and Y takes place checking off the features [S:Y] on X and [S:X] on Y. The unchecked features [S:β] on X and [S:α] on Y, then, project to the dominating node Z. Since the merge between X and Y are driven by the selectional features unlike (82) and the unchecked features project to the next dominating node like (81), the derivational step shown in (84) may seem to be grammatical. But this is problematic because under the current system, more than one selectional features on a single lexical item constitute an *ordered* set of features. To elaborate with (84), X is required to merge with Y and β *in that order*, and Y is required to merge with X and α *in that order*. Since the first selectional requirements of X and Y are satisfied through the merge between themselves, their second requirements are deferred to the next dominating node Z. The problem here is that now, the second requirements of both X and Y have to be satisfied simultaneously on Z. According to the feature specifications of X and Y, X is required to merge with β on Z, and Y is required to merge with α on Z. So, if Z merges with β, the requirement of Y is not satisfied; and if Z merges with α, the requirement of X is not satisfied. Assuming the binary branching hypothesis, there is no way for the requirements of X and Y to be satisfied on Z. Hence, the condition in (83). Note in passing that the system must not be allowed to integrate the two residual features on Z in (84) into a single ordered

set of features, because such a process would alter the information specified in the lexical entry of either X or Y in the syntax, leading to the violation of the No-Tempering Condition (Chomsky 2008).

The view of selectional features on an item as an ordered set would rule out the following derivation as well.

(85)



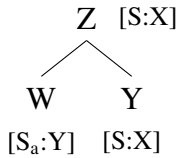
In the above derivation, the merge between X and α is licensed because α is specified to merge with X. And the unchecked feature on X projects to the next dominating node Y, which is in principle allowed in the system. Yet, the derivation is still illicit because the selectional feature of X is not satisfied when X merges with α: it is required to merge with β, but instead it merges with α. An unchecked feature on some element X may project to the next dominating node, but it is permitted only when the feature is not supposed to be checked off when X undergoes initial merge.

There is a way for the unchecked feature [S:β] on X in (85) to project to the next dominating node Y: when α *adjoins* to X, i.e., when α is a structurally dispensable element that modifies X. The feature checking principle in the adjunction environment is shown below.

(86) A selectional feature [S:X] on node Y projects to a dominating node Z if the daughters of Z are Y[S:X] and W[S_a:Y]. (modified from Bruening 2013:24, (89))

The principle in (86) is illustrated below.

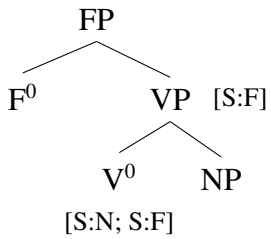
(87)



In (87), the unchecked selectional feature [S:X] on Y is allowed to project to the dominating node Z even though Y is specified to merge with X not W, because W with the selectional feature [S_a:Y] is an adjunct element that adjoins to Y.

The feature checking system introduced so far is silent about whether the head with a certain selectional feature should take an element specified by the feature as the complement or the specifier. All that is indicated is that the head with the selectional feature must merge with an element specified by that feature.[14] Given that the selectional feature is blind to the head-phrase distinction, a head may be specified to select for another head that takes as its complement (the projection of) the selecting head. There is nothing in the system that prevents it. So, under the present system, a lexical verb may as well be specified to select for a certain functional element that appears above it in the structure. This is illustrated below, in which I adopt the X'-notation for clarity of exposition.

(88)



The selectional features [S:N; S:F] means that the element with these features is required to merge with an element of category N and an element of category F in that order. So, in (88), V^0 takes an NP as the complement checking off [S:N]; and the unchecked feature [S:F] projects to the next dominating node VP. The feature [S:F] on VP, then, is checked off when 'F^0 takes VP as the complement'. In this dissertation, I will refer to the former, more typical, type of selection as *downward selection* and the latter type of selection as *upward selection*.[15]

[14] In the sense that it does not recognize the special structural statuses of "specifier" and "complement", the current feature checking system is in line with the idea of bare phrase structure proposed by Chomsky (1995). For convenience, however, I will keep using the terms "specifier" and "complement", and will notate each syntactic node with a syntactic category in this chapter and use the notation of X'-theory in later chapters.

[15] The notion of upward selection might seem quite non-standard at first, but similar assumptions have been repeatedly made, either explicitly or implicitly, in the literature. For instance, Folli and Harley (2005:100) proposes that "verbs can select for different flavors of v". Marelj and Reuland (2016:184) states that verbs "*actively* determine how the syntactic frame in which they are inserted will project [emphasis theirs]". In a similar vein, Harley and Noyer (2000) and Ramchand (2008) assume that the feature licensing system restricts predicates to appear in specific syntactic configurations. Horvath and Siloni (2011:684) and Rappaport Hovav and Levin (2012:173) also separately suggest a condition that is similar to upward selection (although their conditions hold at the conceptual level rather than in grammar). The specific frameworks in which these assumptions have been made may differ, but the essential idea stays the same: an element may determine what can combine with it or its projection above in the structure.

Note however that "downward selection" and "upward selection" are just labels given for convenience; under the current system, there is no theoretically significant difference at all between the two.[16]

The last point to note about the feature checking system concerns labeling of the constituent that is formed through merge between two syntactic elements. Labeling is an issue closely related to selection, for it is commonly assumed that when an element requires another element to merge with it, the requiring element determines the label of the resulting constituent. The feature checking system illustrated so far remains silent about how the label of a newly formed constituent is determined. In this dissertation, I will assume that the label of a newly formed constituent is determined according to the conditions in (89), leaving to future research the investigation of specific issues concerning the labeling process (see, e.g., Chomsky 2013 and Carstens *et al.* 2015, among others).

(89) A node Z dominating X and Y is labeled X if

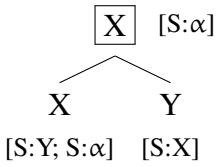
i. a selectional feature on X projects to Z, or

ii. Y does not have the selectional feature [S:X], or

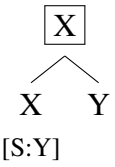
iii. Y has the selectional feature [S_a:X].

The three conditions in (89i-iii) are exemplified below.

(90) a.



b.



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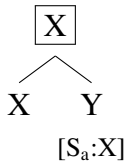


The case in (90a) exemplifies the condition in (89i). Here, the node dominating X and Y is labeled X because the unchecked feature [S:α] on X projects to the dominating node. The

[16] Also, the terms "upward" and "downward" must be understood figuratively, in that a head selecting NP as the specifier is an instance of downward selection regardless of the relative structural positions between the selecting head and the selected NP. The descriptions of upward and downward selection are provided below for clarification purposes.

(i) **Upward selection**
X upward selects Y if and only if X requires Y to take (the projection of) X.

(ii) **Downward selection**
X downward selects Y if and only if X is required to take (the projection of) Y.

case in (90b) exemplifies the condition in (89ii). Here, the node dominating X and Y is labeled X because Y does not select X. The condition in (89ii) corresponds to the commonly assumed labeling mechanism according to which a selecting element determines the label of the resulting constituent. Lastly, the case in (90c) exemplifies the condition in (89iii). In (90c), Y selects X, but Y combines with X through adjunction; in other words, Y adjoins to X. Therefore, the selected element determines the label of the resulting constituent.

I have assumed above that initiative Voice has the selectional features [S:V; S:N], and accordingly takes a verbal element as the complement. Being specified to merge with an element of category V as such must not mean that initiative Voice can combine with any verbal element, because not all verbal elements can have an external argument as in **The conductor arrived the train*. In order to capture such argument structure rigidity, I first assume that any clause must contain a Voice projection and that there exists a semantically vacuous counterpart of initiative Voice called expletive Voice with the selectional feature [S:V] which occurs in non-agentive intransitives (Labelle 2008; Schäfer 2008; Wood 2012, 2015; Alexiadou *et al.* 2015). Based on these assumptions, I suggest that each type of Voice is semantically selective about the verbal elements that they take as the complement. Initiative Voice selects for agentive transitive verbs like *hire*, *kiss*, *chase*, *throw* and unergative verbs like *sleep*, *talk*, *resign*, whereas expletive Voice selects for change-of-state verbs like *break*, *drop*, *sink*, *blossom*, *wilt*, *die* and change-of-location verbs like *arrive*, *disappear*, *remain*.

There may be conceptual motivations for why initiative and expletive Voice must combine with certain classes of verbs. Agentive transitive verbs and unergative verbs denote eventualities that entail the existence of an initiator participant. It is impossible to think of a hiring event, for instance, if there does not exist someone who hires (or someone who is hired, for that matter), and it is impossible to think of a jumping event if there does not exist someone who jumps. If initiative Voice combines with these verbs, the conceptually entailed participant can be expressed as an argument in the linguistic representation. On the other hand, if expletive Voice combines with these verbs, the entailed participant of the events denoted by the verbs cannot be expressed. Therefore, agentive transitive verbs and unergative verbs are taken by initiative Voice and not by expletive Voice. As for change-of-state verbs

and change-of-location verbs, they denote eventualities which only entail the existence of a theme participant. A sinking event, for instance, requires an entity that sinks and nothing more. I interpret this to mean that by default, the event denoted by a change-of-state/location verb can involve at most one argument in the linguistic representation. In the case of *sink*, since the event denoted by the verb only requires a single participant, no more than one participant can be introduced into the event: i.e., a semantic representation like λe[sink(e,the ship) & initiator(e,the storm)], where two participants are associated with the sinking event itself, is assumed to be uninterpretable. Accordingly, only expletive Voice and not initiative Voice can combine with change-of-state/location verbs.

The matter is not as simple as just described, however, for argument structure is flexible as well. It has been claimed that change-of-state verbs like *break*, *drop*, *sink* can only be taken by expletive Voice for conceptual reasons. But these verbs can be used not only in the intransitive but also in the transitive. The transitive-intransitive alternation of change-of-state verbs are often called the causative alternation in particular, exemplified below.

(91) a. The ship sank.

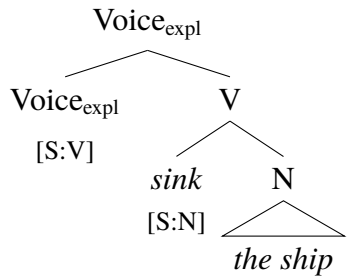
b. The storm sank the ship.

If the event denoted by a change-of-state verb like *sink* allows a single argument at most, it is quite puzzling why it can be used in the transitive having an external argument as in (91b).

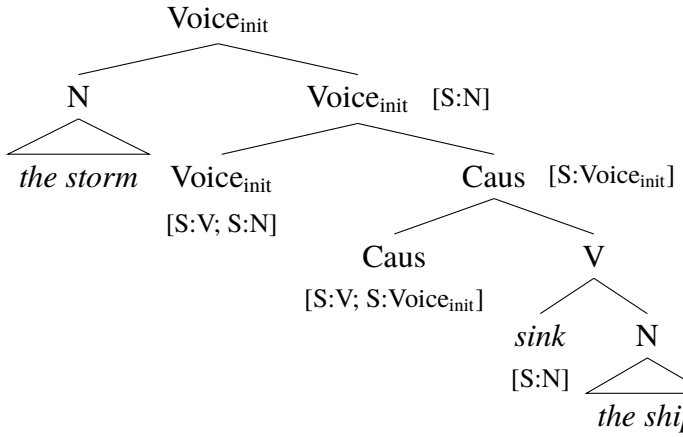
I suggest that the change-of-state verb can have an external argument as exemplified above, because the external argument here is not a participant of the event denoted by the verb itself but is the participant of a causing event that brings about the verbal event. For a specific analysis of the causative alternation, I first assume following Pylkkänen (2002, 2008) that the causing event in the causative variant of the alternation is introduced by a causative element, *Caus(e)*, and that the causer argument is introduced by initiative Voice above the projection of Caus. I also assume that the heads which project extended verbal projections such as Caus and Appl are of category V; that is, Caus and Appl are actually V_{caus} and V_{appl}, respectively, the notations that I do not adopt for readability reasons. Finally, I assume that Caus in English has the selectional features [S:V; S:$Voice_{init}$] and that change-of-state verbs

have the selectional feature [S:N]. Then, the examples shown in (91a) and (91b) will be derived along the lines of (92a) and (92b), respectively.[17]

(92) a.



b.



Both the derivations in (92a) and (92b) successfully check off all the selectional features, and they generate the semantic representations λe[sink(e,the ship)] and λe∃e'[sink(e',the ship) & cause(e,e') & initiator(e,the storm)], respectively. Just as in the semantic representation of (92a), the sinking event in the semantic representation of (92b) does not involve more than one participant; therefore, *sink* can be used transitively having an external argument.[18]

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[17] The derivations illustrated in (92a–b) are similar to those in Categorial Grammar (e.g., Oehrle *et al.* 1988), in that lexical items are taken to be like "functions" that combine with other "argument" lexical items and that the structure-building process in the syntax is viewed to reflect (to some extent) the way in which semantic composition proceeds. The current approach, however, differs from at least some versions of Categorial Grammar as it adopts movement operations and empty categories as primitives of grammar (cf. Jacobson 1990; Szabolcsi 1992).

[18] Pylkkänen (2002, 2008) distinguishes root-selecting Caus from verb-selecting Caus and suggests that English has root-selecting Caus. Her analysis is supported by the fact that a VP-adjoining manner adverb cannot target the embedded event in the causative in English as shown below.

(i) a. Bill awoke grumpily.
b. John awoke Bill grumpily. (false if John wasn't grumpy)
(Pylkkänen 2002:92, (181a–b))

Recall from above that agentive verbs which entail the existence of an initiator participant must be combined with initiative Voice for conceptual reasons. This means that Caus, which introduces a causing event independent of a verbal event, is not allowed to merge with (the projection of) an agentive verb: if it did, it would not ever be possible for the entailed initiator participant of the verbal event to be expressed in the linguistic representation. Consequently, an example like *John kissed Mary* cannot mean 'John made Mary be kissed', the interpretation that would be attained if Caus took [$_{VP}$ *kiss Mary*] as the complement. For this reason, Caus must be compatible only with non-agentive verbs such as change-of-state verbs or change-of-location verbs. As in the cases of initiative and expletive Voice, the restriction imposed on Caus as such may be stated as it semantically selects for non-agentive verbs.

A question that immediately arises regarding the above view is why change-of-location verbs cannot be used in the causative as illustrated below.[19]

(93) a. * The conductor arrived the train earlier than scheduled.

b. * The magician disappeared a rabbit.

Change-of-location verbs like *arrive* and *disappear*, just as change-of-state verbs like *break* and *sink*, do not entail the existence of an initiator participant, and thus must be available

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That is, *grumpily* in (ib) can modify John's causing event but not Bill's awaking event because the awaking event is represented by an acategorial root projection, not by a projection of category V, in the syntax, and thus cannot be targeted by a VP-adjoining manner adverb. Pylkkänen shows that a degree adverb, on the other hand, can modify the embedded event in the causative as in *John closed the door partway* (Pylkkänen 2002:101), based on which she suggests that a degree adverb may modify a root projection. The present account in the text may easily accommodate the adverbial facts by assuming that Caus in English has the selectional features [S:$\sqrt{\text{ROOT}}$; S:Voice$_{\text{init}}$] instead of [S:V; S:Voice$_{\text{init}}$]. However, things might not be as simple as that, for the opposite patterns are observed in the causative in Korean: a degree adverb always modifies the causing event, whereas a manner adverb can modify the embedded event (see Chapter 3 for examples and discussion). For now, I will assume that Caus in English selects for an element of category V, while recognizing the possibility that the adverbial facts may be due to the different positions in which different types of adverbs must appear (Jackendoff 1972; Alexiadou 1997; Cinque 1999) and/or that the structures of the inchoative and the causative in English may be more subtle than those in (92a–b). The main purpose of the analyses presented in this section is just to provide illustrations of how the proposed feature checking system works; see Chapter 3 for a comprehensive analysis of the causative in Korean.

[19] The verb *disappear* may be used causatively (often in passive voice) in certain, mostly political, contexts as in *Many journalists have been disappeared by the regime*. I assume that *disappear* in this use is stored in the lexicon separately with the selectional features [S:N; S:Caus], after the usual *disappear* has undergone semantic shift. Thanks to Michael Donovan for bringing my attention to this issue. See footnote 21 for a similar case.

as the complement of Caus under the current view. But this is not the case as indicated by the ungrammaticality of (93a–b). I will capture the inability of change-of-location verbs participating in the causative alternation by assuming that these verbs have the selectional features [S:N; S:Voice$_{expl}$] and thus upward select expletive Voice. That is, since change-of-location verbs upward select expletive Voice, no element other than expletive Voice can take their projection as the complement, having the verbs incapable of being used in the causative.

Another question that arises regarding the current view is why verbs like *destroy*, *dump*, *bury*, etc. cannot participate in the causative alternation as exemplified below, even though the events denoted by these verbs have similar semantic profiles with change-of-state verbs like *break*, *drop*, *sink*, etc.

(94) a. The earthquake destroyed the city.

b. * The city destroyed.

The impossibility of a verb like *destroy* being used in the intransitive as in (94b) may be addressed in the same way as the case of change-of-location verbs, i.e., by assuming that the verb has the selectional features [S:N; S:Caus] and thus upward selects Caus. Due to the selectional features that it has, the verb *destroy* has to merge with Caus after it first merges with a nominal element; if it does not, the selectional feature [S:Caus] will not be checked off leading to a derivational crash. Note that it is hard to give an explanation for why a verb like *destroy* has to upward select Caus unlike a verb like *break*. I will assume for now that the feature specification of a verb like *destroy* is an idiosyncratic property of the verb stored in the lexicon.[20]

The impossibility of an unergative verb participating in the causative alternation exemplified below can be given an account in terms of selection as well.

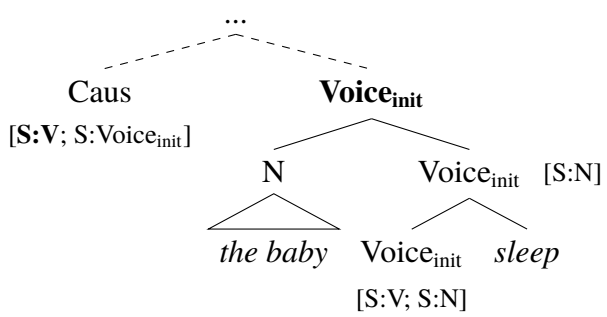
(95) a. The baby slept.

[20] Reinhart (2002:234, footnote 4) notes that the verb for 'destroy' can be used in the unaccusative in languages like Hebrew (*neheras*) and French (*se detruire*), which suggests that the inability of *destroy* being used in the unaccusative is an idiosyncratic property of the verb in English as suggested in the text rather than is due to some intrinsic semantic property of the verb. Note also that the verb for 'arrive' can be used in the causative in a language like Hindi (*pahũch-aa-na*; Bhatt and Embick 2003), suggesting that the inability of *arrive* being used in the causative may also be an idiosyncratic property of the verb in English.

b. * The mother slept the baby.

Since the sole argument of *sleep* is an initiator, it has to be introduced by initiative Voice. So, the only option to causativize the unergative in (95a) would be for Caus to merge with the projection of initiative Voice. However, since Caus selects an element of category V, Caus merging with the projection of initiative Voice will not be allowed as illustrated below.

(96)



Therefore, an example like (95b) cannot be generated even though the mother causing the baby to sleep is a conceptually possible event.[21]

Agentive transitive verbs may participate in the transitive-intransitive alternation by having the internal argument unprojected in the syntax as illustrated below (Levin 1999; Rappaport Hovav and Levin 2001; Mittwoch 2005).

(97) a. Leslie swept the floor this morning.

b. Leslie swept this morning.

The transitive-intransitive alternation involving an unspecified internal argument in (97a–b) calls for an independent account in that omission of an internal argument is not freely

[21] A problem for the present account comes from verbs like *burp* and *hide* which appear to be unergative and yet participate in the causative alternation as in *The baby burped* ∼ *The nurse burped the baby* (Levin and Rappaport Hovav 1995:115, (84a–b); originally from Smith 1970) and *The child hid in the closet* ∼ *The mother hid the child in the closet*. Leaving to future research the investigation of a potential derivational relation between the causative and non-causative variants of these verbs, I will assume for now that the two variants of these verbs are stored separately in the lexicon. In fact, the two variants of the verbs do not impose the same selectional restrictions on the argument of the verbal event: *The doctor burped* ∼ **The nurse burped the doctor* (Levin and Rappaport Hovav 1995:115, (85a–b); originally from Smith 1970); **The wallet hid in the closet* ∼ *The mother hid the wallet in the closet*. This suggests that the causative variant is not a construction in which the causative components are simply added to the material of the non-causative variant. Thanks to Darrell Larsen for bringing my attention to this issue.

available. The internal argument of a change-of-state verb like *break*, for instance, cannot be unprojected as shown below.

(98) a. John broke the window last night.

b. * John broke last night.

Rappaport Hovav and Levin (2001) suggests that the contrast in (97)–(98) is attributable to a well-formedness condition on the mapping from event structure to syntax shown below.

(99) **Argument-per-Subevent Condition** (Rappaport Hovav and Levin 2001:779, (36))
There must be at least one argument XP in the syntax per subevent in the event structure.

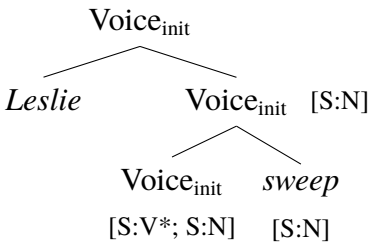
According to Rappaport Hovav and Levin, a verb like *sweep* can omit the internal argument because it has a simplex event structure involving two arguments, and thus having the internal argument unprojected in the syntax does not lead to the violation of (99). On the other hand, a verb like *break* has a complex event structure with two subevents, one the causing subevent and the other the caused subevent. The external argument of *break* is the argument of the causing subevent, and the internal argument is the argument of the caused subevent. Therefore, having the internal argument omitted will make the caused subevent not have "at least one argument XP in the syntax" in violation of (99); hence, it is not allowed as in (98b).

Rappaport Hovav and Levin's account of the contrast in (97)–(98) is based on the lexicalist-projectionist account, which this dissertation does not adopt. In addition, it is not immediately clear under the condition in (99) why *sweep* and *break* do not behave differently when the external argument is omitted; and it seems that the condition is not readily applicable to the so-called zero-place predicates like *rain* and *snow*.[22] Under the current approach, the contrast may be given an alternative account in terms of selection, with the assumption that initiative Voice has the selectional features [S:V*; S:N], instead of [S:V; S:N] that have been assumed so far. As suggested above, an element that has a selectional feature with an asterisk can check off an unchecked selectional feature of the selected element; and I have claimed

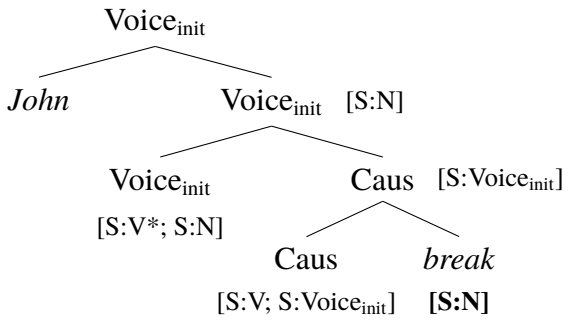
[22] Thanks to Benjamin Bruening for pointing this out.

that initiative Voice merges with an agentive transitive verb directly in the syntax. What this means is that if initiative Voice has the features [S:V*; S:N], the internal argument of the verb does not have to be projected in the syntax. In the case of a change-of-state verb, on the other hand, initiative Voice does not merge with the verb directly; the verb is first taken by Caus, and then the projection of Caus is taken by initiative Voice. This means that the feature [S:V*] on initiative Voice cannot check off the unchecked feature of the verb buried below the Caus layer. Accordingly, the internal argument of a change-of-state verb has to be projected in the syntax; if it does not, the derivation will crash for failing to check off the selectional feature [S:N] on the verb. The derivations of (97b) and (98b) are illustrated below.

(100) a.



b.



In (100a), the unchecked feature on *sweep* is checked off by initiative Voice; but in (100b), the unchecked feature on *break* cannot be checked off by initiative Voice because of the intervening Caus layer. Consequently, *sweep* can have the internal argument unprojected in the syntax as in (97b), whereas *break* cannot as in (98b).[23,24]

The last argument structure alternation that will be considered in this chapter is the

[23] The issues involved in object drop are more complicated than described in the text. See Mittwoch (2005) for discussion of various cases in which the internal argument of a transitive verb can be implicit.

[24] The internal argument of a change-of-state verb may become implicit in certain contexts as exemplified in (i) but not in a "minimal context" (Mittwoch 2005:241) as shown in (ii).

(i) He only breaks, he never fixes.
(Mittwoch 2005:252, (61a))

(ii) A: What is he doing?
B: He is reading / cooking / *breaking / *opening.

Mittwoch (2005) suggests that the internal argument of *break* in (i) is contextually backgrounded and is projected in the syntax as a phonologically null pro-NP (which is incapable of introducing a discourse referent). The present account is compatible with Mittwoch's view.

transitive-ditransitive alternation. As noted earlier, a simple transitive may have an optional goal argument as exemplified below.

(101) a. John hired a lawyer.

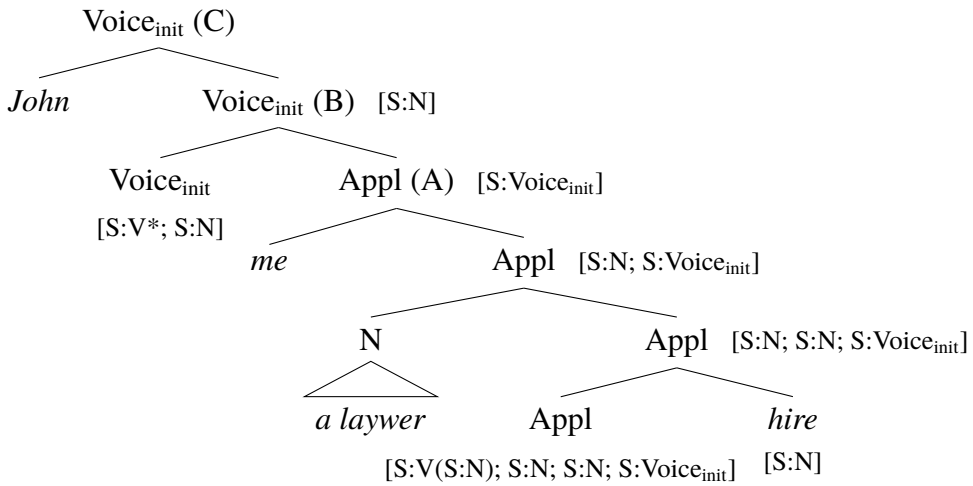
b. John hired me a lawyer.

Bruening (2010a, 2018a) argues that a goal argument in the ditransitive is introduced by Appl above VP (cf. Pylkkänen 2002, 2008). Assuming this, I suggest that Appl in English has the selectional features [S:V(S:N); S:N; S:N; S:$\text{Voice}_{\text{init}}$]. Semantically, Appl takes an open predicate of type ⟨e,st⟩ as the complement, projects the unsaturated argument of the complement in the specifier, introduces a possessor argument in the outer specifier, and relates the two arguments in a having eventuality while encoding the semantics that the verbal event causes the having eventuality (cf. Harley 1997, Pylkkänen 2002, 2008; Bruening 2010a). The denotation of Appl in this view is shown below.

(102) $[\![\textbf{Appl}]\!] = \lambda P_{\langle e,st\rangle}\lambda x\lambda y\lambda e\exists e'[P(e,x)$ & have(e',x) & possessor(e',y) & cause(e,e')]

The derivation of (101b) then will proceed along the lines of (103).

(103)



The denotation of the highest projection of Appl is shown in (104i). When initiative Voice in (104ii) combines with the highest projection of Appl through Kratzer's (1996) Event Identification in (105), the denotation of the intermediate projection of initiative Voice is attained as in (104iii). Lastly, when *John* is composed with the intermediate projection of initiative Voice, the denotation in (104iv) is attained.

(104) i. $[\![\textbf{(A)}]\!] = \lambda e \exists e'$[hire(e,a lawyer) & have(e',a lawyer) & possessor(e',me) & cause(e,e')]

ii. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e''$[initiator(e'',x)]

iii. $[\![\textbf{(B)}]\!] = \lambda x \lambda e \exists e'$[hire(e,a lawyer) & have(e',a lawyer) & possessor(e',me) & cause(e,e') & initiator(e,x)]

iv. $[\![\textbf{(C)}]\!] = \lambda e \exists e'$[hire(e,a lawyer) & have(e',a lawyer) & possessor(e',me) & cause(e,e') & initiator(e,John)]

(105) **Event Identification**

EI ($\lambda x \lambda e$[P(e,x)], $\lambda e'$[Q(e')]) $\rightarrow \lambda x \lambda e$[P(e,x) & Q(e)]

The denotation in (104iv) can be roughly paraphrased as 'John's hiring a lawyer causes me to have the lawyer', or 'John hires me a lawyer'.[25] Since all the selectional features can be checked off when the goal components (namely, Appl and a goal NP) are additionally involved in the derivation of an otherwise transitive construction, a goal argument can occur optionally with a transitive verb like *hire*. As for ditransitive verbs like *give*, *send*, etc., which require a goal indirect object or a goal PP, it may be said that they have to be selected by Appl or PP for conceptual reasons, analogous to agentive transitive verbs which are required to be selected by initiative Voice discussed above. That is, a goal argument has to be expressed for a ditransitive verb, because the event denoted by the verb entails a goal participant. As for the case of *report* and *donate*, where a goal participant cannot be realized as an indirect object, it may be said that Appl has been conventionalized in English such that it only selects for a verbal element of Germanic origin. Both *report* and *donate* are French-origin verbs introduced into English in the early 1400s (Oxford English Dictionary Online). Accordingly, they can only appear with a goal PP.

I have introduced so far the system that I adopt in the dissertation. The approach sketched here offers a more economical account of argument structure and argument structure

[25] It appears that not all applied arguments in English have to involve transfer of possession as in *I'm gonna play me some games!*, *Can you open me that door?*, etc. Examples like these indicate that Appl in (102) may not be the only applicative head that English makes use of. See Tomioka and Kim (2017) for discussion of similar constructions in Japanese and Korean, in which it is argued that the applied arguments in these constructions are possessors and their 'beneficiary' interpretation is derived through pragmatic inference. Thanks to Darrell Larsen for bringing my attention to this issue.

flexibility than the previous approaches, as it does not require supplementary assumptions such as the Projection Principle and the θ-Criterion of the classical GB theory, or linking rules and the lexical syntactic representation (LSR) of Levin and Rappaport Hovav (1995, 2005), etc. All that needs to be assumed is the feature specifications that drive a series of merge operations, which is necessary for the syntax to build a structure anyway. The current approach may also be considered better than the purely configurational analysis of Hale and Keyser (1993, 2002), in that it offers an opportunity to capture the crosslinguistic variation along the lines of Harley (2008) and Pylkkänen (2002, 2008), among others, by giving different selectional features on the relevant lexical items in different languages. One might wonder if the current approach can capture the generalizations about argument structure such as the one which states that the class of verbs that is subject to the grammatical operation of (de)causativization is externally caused ones. If the generalization is true (see Rappaport Hovav 2014 for criticism), it can be captured with the simple assumption that the causative head semantically selects for the class of verbs which involve external causation. The generalization is not lost, and it can even be captured without assuming the presence of an independent (de)causativization operation in grammar; everything can be reduced to the basic structure-building operation of merge (Fukui 1986; Speas 1986, 1990; Chomsky 1995).

1.4 Remarks on the current system

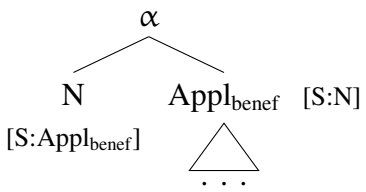
A characteristic feature of the current system is that it allows what I call "upward selection", i.e., a head is allowed to select for another head that takes as the complement the projection of the selecting head. If selectional features are ultimately idiosyncratic information specified in the lexical entries (although they may reflect to some extent how semantic composition proceeds and how the world is perceived), the current system may be thought to permit highly non-local selection as long as there exist lexical items specified as such. For instance, one might be able to imagine a lexical item of category V, which has the selectional features [S:Caus; S:Voice; S:Asp; S:T; S:C] such that the verb always appears in the causative with a specific aspect, tense, and force. However, the current system is not as permissive as it may initially appear, and the verb with selectional features like [S:Caus;

S:Voice; S:Asp; S:T; S:C] cannot generate a grammatical derivation.

First, selectional features are required to be checked off in a phase. More specifically, I assume that selectional features must all be checked off at a phase node, where a phase node is the highest syntactic node projected by N, $\text{Voice}_{\text{init}}$, or C (namely, NP, initiative VoiceP, or CP), before the head of the phase node spells out its complement as suggested by the Phase-Impenetrability Condition.[26] What this means is that a lexical item cannot be specified to select for elements outside of the phase that it belongs to. Accordingly, a lexical verb that appears in the VoiceP phase, in general, cannot select for an element that appears in the CP phase, making a hypothetical verb with selectional features like [S:Caus; S:Voice; S:Asp; S:T; S:C] implausible.

The phase-based feature checking system constrains other logically possible selectional possibilities as well. The typical view on selection is that a head can only select for its complement and its specifier. If the special statuses of "complement" and "specifier" are not recognized as in the current system, what is traditionally treated as a complement or a specifier may be viewed to select a specific head that it should occur with. This is true to a certain extent, because the head of a projection is after all allowed to select for a specific head that takes the projection as the complement. However, this is not allowed freely, and a nominal, for instance, cannot be specified to select for a specific class of verbs that it can be an argument of. This is because a nominal constitutes a phase node in which selectional features must be completely checked off. As a phase node, a nominal cannot have an unchecked selectional feature, and thus it is systematically prohibited from selecting any element. Consider the following hypothetical derivations:

(106) a.



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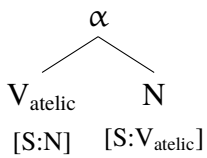
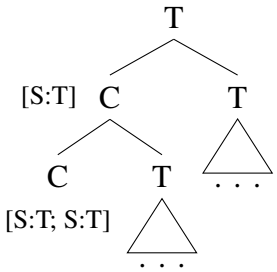


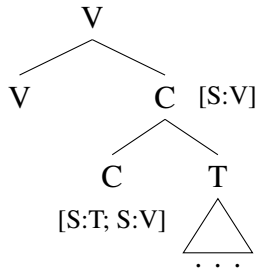
[26] *Phase-Impenetrability Condition* (PIC): In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations (Chomsky 2000:108, (21)).

Note first that in order for N to be a "specifier" or a "complement" in the traditional sense, it has to be the highest node projected by N. This means that α in (106a) and (106b) should be labeled as $\text{Appl}_{\text{benef}}$ and V_{atelic}, respectively; otherwise, N will be a head, while $\text{Appl}_{\text{benef}}$ and V_{atelic} will be a complement or a specifier of N. But given the selectional features indicated in (106a–b), the label of α cannot be determined because no selectional feature projects to α, the daughter nodes select each other, and no daughter node is an adjunct. This is the first problem of the derivations. But even if α is labeled properly in some way (e.g., $\text{Appl}_{\text{benef}}$ and V_{atelic} have the features [S:N; $\text{S:Voice}_{\text{init}}$] instead, so that they upward select initiative Voice), the derivations are still ill-formed because a phase node, N, has to be spelled out but has a selectional feature left unchecked. For the same reason, an embedded C is not allowed to select for a head that appears in the matrix clause.

(107) a.



b.

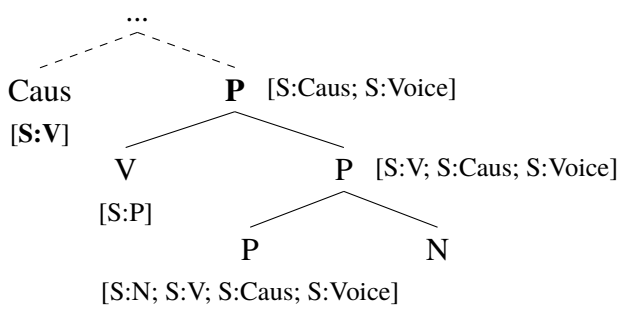


Both the derivations above are ill-formed because a phase node, the highest C, is spelled out without checking off all the selectional features.

It is not the case that upward selection is freely available within the same phase, either. Recall that selectional features are what drive the merge operations in the syntax. This means that most (if not all) lexical items should have their own set of selectional features. The fact that most lexical items have their own set of selectional features, along with the labeling conditions assumed in the preceding section, constrains the system so that a lexical item cannot upward select all the elements that would appear above it in the structure. For instance, Caus in English can occur with a verbal predicate but not with an adjectival predicate, indicating that Caus in English has the selectional feature [S:V]. Now, suppose that there is a preposition which has the selectional features [S:N; S:V; S:Caus; S:Voice], and thus must appear with a specific class of verbs in the causative. The derivation involving the hypothetical preposition will not proceed any further at the point when Caus has to combine

with the structure constructed thus far because of feature mismatch between Caus and the constructed structure. This is illustrated below.

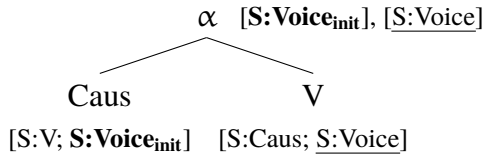
(108)



Since the features on P keep projecting to the next dominating node in (108), the newly formed constituents keep being labeled as P according to the labeling conditions in (89). As a result, Caus, which is specified to merge with an element of category V, cannot merge with the constructed structure.

I have assumed in (108) that Caus does not upward select initiative Voice (maybe like Caus in Finnish; cf. Pylkkänen 2002, 2008). But the causative always has an external argument in English, which means that Caus in English upward selects initiative Voice under the current system. A consequence of this is that an element that appears below Caus cannot upward select any element that appears above Caus. Consider the following derivation:

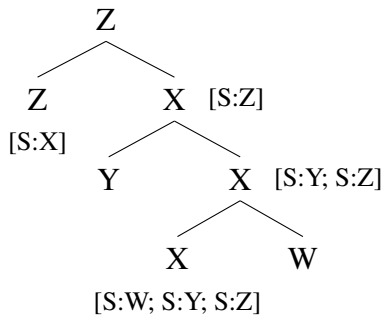
(109)



In (109), the bold-faced feature projects to α from Caus, while the underlined feature projects to α from V. Such feature percolation is prohibited by the condition on feature projection in (83), which requires a mother node not to carry unchecked selectional features projected from more than one daughter node. Therefore, Caus in (109) blocks any element below it from upward selecting anything beyond Caus, exemplifying yet another locality constraint imposed on upward selection. Recall that the condition on feature projection can be derived from the very view that the selectional features on a lexical item constitute an ordered set of features; hence, no additional assumption is necessary to prevent a derivation like (109).

To summarize, upward selection is restricted in such a way that it appears to be allowed only between structurally adjacent heads within a phase. But non-local upward selection is not entirely prohibited in the current system. Non-local upward selection would be allowed if the intervening element did not have any selectional feature to project to the next dominating node as shown below.

(110)



In (110), X non-locally upward selects Z crucially because the intervening element Y does not have any unchecked feature to project to a dominating node. There may exist a few lexical items with no selectional feature like Y, which presumably contribute something to the semantics of the selecting elements (e.g., elements that contribute to the lexical aspect of a predicate without projecting a specifier; cf. *Proc(ess)*, *Res(ult)*, etc. in Ramchand 2008). However, the type of lexical items may as well be considered to be part of the selecting element in the first place (unless they have identifiable morphological realizations; in such a case, it would be better to analyze them as independent heads, at least from a purely syntactic perspective that this dissertation adopts). So, upward selection is in general permitted only between structurally adjacent heads even though the feature checking principles by themselves allow non-local upward selection.

I have sketched so far how non-local upward selection is restricted in various ways (Non-local downward selection is impossible in the first place under the assumption that the derivation proceeds in a bottom-up fashion). It is also necessary to note that the analyses sketched in the previous section and proposed in the following chapters may have alternatives that do not have major empirical consequences. To begin with, I have been using upward selection to capture the seemingly idiosyncratic behavior of verbs like *destroy*, *dump*, and *bury*, which contrasts with the behavior of verbs like *break*, *drop*, and *sink*. The idiosyncrasy

of the former may as well be captured only with downward selection by stating that "expletive Voice in English takes change-of-state/location verbs as the complement except *destroy*, *dump*, and *bury*" As far as I can tell, there is no significant empirical consequence that would arise if only downward selection were used instead of both downward selection and upward selection. Upward selection was adopted for the idiosyncratic cases so that the properties of each lexical item can be generalized as much as possible. Importantly, the feature checking system adopted in this dissertation does allow upward selection; one would have to provide a proper motivation or make a stipulation to rule out the possibility of upward selection.

Secondly, this dissertation does not provide concrete reasons for why expletive Voice has to exist and why the element introducing a causer argument is severed from the element introducing a causing event. The derivation of a non-agentive intransitive might as well not involve expletive Voice. And the causative components might as well be "bundled" into a single element $\text{Voice}_{\text{caus}}$ (Pylkkänen 2002, 2008), or there may exist a lexical item Caus of category V which introduces a causer argument as well as a causing event. The assumptions are made because they offer an opportunity to give consistent analyses of the phenomena addressed in the dissertation from the perspective of selection. Without expletive Voice, for instance, it would have to be said that Caus in Korean and Pass in Japanese select for either Voice or V rather than consistently select for Voice. If $\text{Voice}_{\text{init}}$ and Caus were bundled into $\text{Voice}_{\text{caus}}$, it would have to be said that $\text{Voice}_{\text{caus}}$, a type of Voice, selects for an element of its own category in Korean; and if there exists Caus of category V that introduces both a causer argument and a causing event, Pass would have to be said to select for an element of category Voice or V in English. Similar issues would arise for the reflexive as well if $\text{Voice}_{\text{init}}$ that introduces an external argument and Refl that encodes reflexivity were assumed to be bundled into $\text{Voice}_{\text{refl}}$ (Labelle 2008), or if there exists Refl of category V which both introduces an external argument and encodes reflexivity.

The aim of this dissertation is to give a principled account of the rigidity and flexibility of argument structure from a purely syntactic perspective based on the inventory of lexical items that have been proposed on independent grounds. In the sense that the variation of argument structure is attributed to differences in the selectional properties of lexical items

while the grammatical processes involved in the variation are kept minimal, the present study is in line with the works which intend to demonstrate what Baker (2008) calls the Borer-Chomsky Conjecture.

(111) **The Borer-Chomsky Conjecture** (Baker 2008:353, (1))

All parameters of variation are attributable to differences in the features of particular items (e.g., the functional heads) in the lexicon.

In particular, as it attempts to show that minimal differences in the selectional properties of the same functional elements bring about clusters of different properties of the same constructions across languages, the current work may be considered to be an extension of Pylkkänen (2002, 2008), where "Voice bundling" is substituted by upward selection.

1.5 Overview of the dissertation

In the remainder of this dissertation, I discuss some of the argument structure alternations in different languages based on the system introduced in Section 1.3.

In Chapter 2, I discuss the reflexive alternation and offer a purely syntactic account of the typology of reflexives. The reflexive alternation is brought about by a valance-reducing process called reflexivization through which the activity denoted by a predicate becomes interpreted to be applied to the initiator of the activity itself. An example of the reflexive alternation is shown below.

(112) a. John washed a baby.

b. John washed.

The example in (112a) is a simple transitive which describes a washing event initiated by John and applied to a baby. The example in (112b) is the reflexive counterpart of (112a) which describes a washing event that is both initiated by and applied to John. Languages show different behaviors with respect to the productivity of reflexivization, the possibilities of ECM and dative reflexivization, reflexive nominalization, and proxy interpretation. In this chapter, I propose that reflexivity of the reflexive is encoded through a reflexivizing head, *Refl(exive)*, and argue that the crosslinguistic variation of reflexivization is ascribed to

different selectional properties of Refl. More specifically, it is claimed that Refl comes in two variants, verb-selecting Refl and Voice-selecting Refl, and that languages differ as to which variant of Refl they employ to derive the reflexive. English-type languages are argued to employ verb-selecting Refl, and French-type languages are argued to employ Voice-selecting Refl. I show that the difference in the selectional properties of Refl successfully accounts for the variation without resorting to the lexicon-syntax distinction suggested by Reinhart and Siloni (2005) and Marelj and Reuland (2016). In the chapter, I also address the long-standing unergative-unaccusative paradox of French reflexives and argue that the paradox can be resolved under the proposed account.

Chapter 3 discusses the causative alternation in Korean exemplified in (113a–b), where the example in (113a) is an unaccusative and the example in (113b) is its causative counterpart.

(113) a. Swuken-i mal-lass-ta.
towel-NOM dry-PST-DECL
'The towel dried.'

b. Apeci-ka swuken-ul mal-li-ess-ta.
father-NOM towel-ACC dry-CAUS-PST-DECL
'The father dried the towel.'

Some of the characteristic properties of the causative alternation in Korean is that the alternation can be found on all classes of predicates and that the causative variant is morphologically marked. In the chapter, I argue that the former is because the causativizing head, *Caus(e)*, in Korean selects for an element of category Voice, and the latter is because the suffix that appears in the causative variant is the realization of the Voice head whose projection is selected by Caus. The chapter also addresses the conflicting behaviors of the causative in Korean concerning the number of predicates that it might involve. With respect to the possibility of coordination and the scopes of short-form negation and an adverb of degree, the causative behaves as if it involves a single predicate which occupies a single terminal node in the syntax. And with respect to the Condition B effect and the scopes of an adverb of manner and the adverbial for 'again', the causative behaves as if it involves two predicates which project their own phrases that respectively represent the embedded event and the causing event. I show

that the conflicting behaviors of the causative as such can be successfully accounted for under the proposed structure derived through Caus selecting an element of category Voice. I also discuss the apparent correlations between the causative and the passive in Korean, arguing that the correlations are only superficial ones and that the two constructions have derivational histories that are distinct from each other.

In Chapter 4, I move on to the passive alternation in Japanese exemplified below, where the example in (114a) is a simple transitive and the example in (114b) is the passive counterpart of (114a).

(114) a. Neko-ga inu-o oikake-ta.
cat-NOM dog-ACC chase-PST
'A cat chased a dog.'

b. Inu-ga (neko-ni) oikake-rare-ta.
dog-NOM (cat-by) chase-PASS-PST
'A dog was chased (by a cat).'

As exemplified in (114a–b), the passive alternation typically applies to a transitive, and demotes (or syntactically removes) the external argument while promoting the internal argument to the structural subject position. Japanese has constructions which do not show the canonical properties of the passive and yet marked with the passive suffix *-(r)are*, which I will refer to as RARE-constructions for convenience. I argue that despite the apparently varying characteristics of the RARE-constructions, they are all genuinely passives in the sense that they involve demotion of an argument. In particular, I claim that the RARE-constructions all involve the passivizing head, *Pass(ive)*, whose primary function is to demote an argument of the predicate that it takes as the complement. And I propose that Pass in Japanese selects for an element of category Voice, and this makes it possible for passivization to apply to any class of predicates in the language. The RARE-constructions in Japanese are generally categorized into "direct" and "indirect" as well as into "gapped" and "gapless" ones. I demonstrate that the constant and variable properties across different types of RARE-constructions are attributed to the interactions of Pass with the other elements involved in their derivations such as *Aff(ect)* and *T(ense)*.

Finally, Chapter 5 concludes the dissertation claiming that argument structure is represented in the syntax and that the rigidity and flexibility of argument structure within and across languages can be successfully accounted for in terms of selection.

Chapter 2

NATURAL REFLEXIVES

2.1 Introduction

Natural language expresses reflexivity in a few different ways (Reuland 2011; Reuland 2018).[1] The most productive one of those, which can be found in most languages, is to use a reflexive pronoun and have it syntactically bound by an antecedent as in *John loves himself*. Another way of expressing reflexivity, quite restricted in various ways in many languages, is to mark a predicate with the reflexivizing affix for 'self-' as in *self-love*. What these two strategies have in common is that reflexivity is encoded overtly by a (more or less) productive reflexivizing element, allowing canonically non-reflexive predicates to be used reflexively. Certain predicates for 'wash', 'shave', 'dress', etc., on the other hand, can be used reflexively in many languages without a reflexive pronoun or a reflexivizing affix as exemplified in (115)–(117).[2]

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[1] Previous versions of the material discussed in this chapter were presented at the 19th Seoul International Conference on Generative Grammar (SICOGG 19) and the 93rd Annual Meeting of the Linguistic Society of America (LSA 93).

[2] Note that the reflexive morpheme *-(i)n* in (116) is different in nature from a reflexivizing affix like *self-* in English, in that *-(i)n* can only be used with a small number of grooming verbs like *yıka* 'wash', *giy* 'dress', or *tara* 'comb', and it can never be used with canonically non-reflexive predicates like *sev* 'love' as shown in the ungrammaticality of (i).

(i) * Ali sev-n-dı. Turkish
Ali love-REFL-PST
Intended: 'Ali loved himself.'

One might also wonder if *se* in (117) is a type of reflexive pronoun that originates in the object position of the verb and moves to its surface position through clitic climbing. But the behaviors of *se* distinct from that of a pronominal object clitic suggest that this is not the case (Kayne 1975; Grimshaw 1982; Wehrli 1986). For instance, in the causative construction with *faire*, the subject of the lexical verb embedded under *faire* is not introduced by *à* 'to' when the verb is associated with *se* as in (iia), but it is introduced by *à* when the verb is associated with a pronominal object clitic as in (iib).

(115) John washed. ('John washed himself')

(116) Ali yıka-n-dı. Turkish
Ali wash-REFL-PST
'Ali washed himself.'

(117) Jean se lave. French
Jean SE washes
'Jean is washing himself.'

The above examples have a reflexive interpretation without any of the two reflexivizing elements, where the activity denoted by the verb applies to the initiator of the activity itself.

Natural reflexives like those in (115)–(117) have been traditionally given a lexicalist account, according to which the reflexive is derived through the operation of *reflexivization* in the lexicon that takes a transitive verb and turns it into an intransitive verb whose sole

(ii) a. Je ferai se laver Paul. French
I make.FUT SE wash Paul
'I will make Paul wash himself.'
b. Je le ferai laver à Paul.
I him make.FUT wash to Paul
'I will make Paul wash him.'
(Reinhart and Siloni 2005:393, (8a–b))

The pattern above indicates that *se* does not, whereas a pronominal object clitic does, originate in the object position of a verb, because the subject of the verb embedded under *faire* must not be introduced by *à* if the verb does not have a direct object as in (iiia), whereas it must if the verb has a direct object as in (iiib).

(iii) a. Jean a fait manger (*à) Marie. French
Jean has made eat (*to) Marie
'John made Mary eat.'
b. Jean a fait manger la soupe *(à) Marie.
Jean has made eat the soup *(to) Marie
'John made Mary eat the soup.'
(from Dobrovie-Sorin 2017:3656, (48))

Also, as Labelle (2008) points out, *se* is still required when the verb is attached by *auto-* 'self-' and thereby turns into an intransitive verb. This again shows that *se* must not originate in the object position of a verb.

(iii) Jean *(s') auto-analyse. French
Jean *(SE) self-analyzes
'Jean is analyzing himself.'
(Labelle 2008:841, (24))

In short, the patterns above indicate that *se* is not a thematic element that can occupy the object position of a verb, and therefore, must not be a reflexive pronoun (see Doron and Rappaport Hovav 2007, 2009 for a view that *se* is a reflexive pronoun and Marelj and Reuland 2016 for a view that *se* is a [ϕ]-deficient clitic that may occupy a thematic position in certain cases).

argument is interpreted to have two θ-roles along the lines of (118) (Grimshaw 1982; Wehrli 1986; Chierchia 2004).[3]

(118) $\lambda y \lambda x[V(y)(x)] \rightarrow \lambda x[V(x)(x)]$

One of the potential problems of the lexicalist approach to the reflexive is that there are cases where the two θ-roles that the sole argument is interpreted to bear are not from a single lexical item. For instance, Marantz (1984) points out that Icelandic allows reflexivization of an ECM verb as shown in (119).

(119) Hann tel-st vera sterkur. Icelandic
he believe-REFL to.be strong
'He believes himself to be strong.'

(Marantz 1984:164, (4.76))

In (119), the surface subject *hann* 'he' bears two θ-roles, one from *tel* 'believe' and the other from *sterkur* 'strong'. If reflexivization were a lexical operation, an example like (119) would not be allowed, given the common assumption that lexical operations cannot target more than one lexical item at a time. That is, a lexical operation like (118) can hardly be responsible for an ECM reflexive like (119).

An alternative approach suggested in the literature claims that the reflexive is instead derived through a movement operation in the syntax (Marantz 1984; Pesetsky 1995; Sportiche 1998). According to the movement account, a "reflexive morpheme" like *se* in French or *-st* in Icelandic absorbs the external θ-role of the verb, and the internal argument moves to the surface subject position. The reflexive interpretation then is attained through the binding relation between the surface subject and the reflexive morpheme. In this view, the French example in (117) will be derived as in (120), where movement is indicated by Arabic numerals, and the binding relation by lowercase letters.

(120) $\text{Jean}_{1/i}$ se_i lave t_1.

[3] Following Alexiadou and Schäfer's (2014) terminology, I will refer to the class of predicates as "naturally reflexive predicates" that participate in the transitive-intransitive alternation where the intransitive variant has a reflexive interpretation. I will also refer to the intransitive with a naturally reflexive predicate as a "natural reflexive" or simply "the reflexive".

The movement account can give a straightforward account of the ECM reflexive in (119): the reflexive morpheme *-st* absorbs the external θ-role of *tel* 'believe', and the embedded subject *hann* 'he' moves to the matrix subject position thereby binding *-st*. This is shown in (121).

(121) $\text{Hann}_{1/i}$ tel-st_i t_1 vera sterkur.

One problem of the movement account, however, is that there is much evidence which indicates that the surface subject of the reflexive is an external, rather than an internal, argument (Alboiu *et al.* 2004; Reinhart and Siloni 2004, 2005; Labelle 2008; Alexiadou and Schäfer 2014; Sportiche 2014; Marelj and Reuland 2016). Also, it is not entirely clear under this approach why ECM reflexives are not allowed in certain languages like English, Hebrew, Turkish, Russian, etc. (Reinhart and Siloni 2005), regardless of whether or not they employ a morpheme corresponding to *-st* in Icelandic.

The problems of the lexicalist and the syntactic approaches briefly noted above have motivated the split-lexicalist approach, which claims that reflexivization takes place in the lexicon in some cases and in the syntax in others. The distinction between lexical and syntactic reflexivization may be due to a setting of the "lexicon-syntax parameter" in (122) (Reinhart and Siloni 2005) or due to the presence or absence of a [ϕ]-deficient clitic (Marelj and Reuland 2016) in each language.

(122) **The lexicon-syntax parameter** (Reinhart and Siloni 2005:391, (4))
Universal Grammar allows thematic arity operations to apply in the lexicon or in the syntax.

Under this approach, ECM reflexives are not allowed in a language like English, because reflexivization is a lexical operation and thus cannot target more than one lexical item simultaneously; whereas, they are allowed in a language like Icelandic, because reflexivization is, or can be, a syntactic operation and hence is not subject to such a restriction. A potential problem of the split-lexicalist approach is that English still allows reflexivization of a phrase as illustrated in (123)–(125).[4]

[4] Thanks to Satoshi Tomioka for pointing out this possibility.

(123) a. Mary *put makeup on* Susan at the wedding.

b. Mary *put makeup on* at the wedding.

(124) a. Bill *threw some clothes on* his infant son and started to make coffee.

b. Bill *threw some clothes on* and started to make coffee.

(125) a. Alice did not want to *stick eyelashes on* Emily.

b. Alice did not want to *stick eyelashes on*.

According to the split-lexicalist approach, reflexivization is a lexical operation in English either because the lexicon-syntax parameter is set to 'lexicon' or because it lacks a [ϕ]-deficient clitic. If reflexivization were a lexical operation in English, however, phrases should not be allowed to reflexivize, for the same reason that ECM verbs are not allowed to reflexivize: the two θ-roles that the subject has in (123)–(125) come from different lexical items, one from *put* and the other from *on*, for instance. The examples in (123)–(125) demonstrate that this is not the case. Note that in these examples, an object NP is intervening between the verb and the preposition, suggesting that the view can hardly be maintained in which the preposition is lexically incorporated into the verb, and the resulting complex predicate is targeted by a lexical operation. Moreover, the preposition in the reflexive in (123)–(125) can have a modifier while the reflexive interpretation is maintained as in, e.g., *Alice did not want to stick eyelashes* ***right*** *on*. The fact that the preposition can be modified by an independent lexical item like *right* shows that it is not an element that is lexically incorporated into the verb but is an element that projects its own phrase in the syntax (Larsen 2014).[5]

Seemingly, the previous discussion of natural reflexives has led to a paradoxical situation: the reflexive appears to be formed both in the lexicon and in the syntax not only across languages (hence, the inadequacy of the lexicalist and the movement accounts) but also within a single language that lacks a reflexive clitic (hence, the inadequacy of the split-lexicalist accounts). In this chapter, I suggest, building on Labelle (2008) and Pylkkänen (2002, 2008), that the paradox can be successfully resolved by a version of the syntactic

[5] Thanks to Darrell Larsen for pointing this out.

approach other than the movement account briefly introduced above. Specifically, I first suggest that reflexivity of natural reflexives is attained through a universal reflexive element, *Refl(exive)*, shown in (126).

(126) $[\![\textbf{Refl}]\!] = \lambda P_{\langle e,st\rangle} \lambda Q_{\langle e,st\rangle} \lambda x \lambda e[P(e,x)\ \&\ Q(e,x)]$

The function of Refl is to take two open predicates of type ⟨e,st⟩ and return a predicate of the same type, while associating the two open variables with each other. The reflexive head does basically the same work as Labelle's (2008) reflexive Voice, with the essential differences being that (i) Refl does not introduce the initiator variable and an external argument by itself and (ii) it projects its own phrase and has its own syntactic and semantic requirements independent of Voice.

I assume along the lines of Pylkkänen (2002, 2008) that even though an external argument is necessarily involved in the reflexive (or, reflexivization is "agent-oriented"; Labelle 2008; Reinhart and Siloni 2005; Marelj and Reuland 2016; Dobrovie-Sorin 2017), it is still not introduced by Refl itself. The function of Refl is limited to associating two open variables of its selected predicates with each other, thereby encoding reflexivity in the linguistic representation. Instead, I will argue that the necessary involvement of an external argument in the reflexive is because Refl upward selects initiative Voice (Kratzer 1996); that is, Refl always takes initiative Voice as its second argument, which in effect means that the predicate Q in (126) is always $\lambda x \lambda e$[initiator(e,x)]. As for the first argument of Refl, I suggest that languages can be categorized into two classes: one that has Refl selecting an element of category V ("verb-selecting Refl"), and the other that has Refl selecting an element of category Voice ("Voice-selecting Refl") (Pylkkänen 2002, 2008; Harley 2008). In Section 2.2, I elaborate this proposal, and present the analyses of the basic form of the reflexive (i.e., the reflexive of a transitive verb) in each class of languages. Then in Section 2.3, I move on to the crosslinguistic variation of the reflexive that has motivated the split-lexicalist account, and show that not only the proposed account can successfully capture the variation, but also it can do so in a more economical and empirically adequate way than the split-lexicalist approach. I show that the different patterns between languages with respect to the productivity

of reflexivization, the possibilities of ECM reflexivization, dative reflexivization, reflexive nominalization, and proxy interpretation follow from the simple fact that Refl in different languages selects for a complement of different syntactic categories.

In Section 2.4, I discuss the well-known paradoxical behaviors of the reflexive in French, which may extend to the other Romance languages (Alsina 1996; Alboiu *et al.* 2004; Dobrovie-Sorin 2017). The surface subject in the French reflexive behaves like an external argument in that *en*-extraction is prohibited in the *il*-impersonal with a post-verbal subject (Sportiche 1998), and that the focus particle *seul* 'only' can only be associated with the surface subject as an external argument not as any argument below it (Sportiche 2014). Yet, the construction also exhibits the unaccusative-like properties with respect to auxiliary selection and participle agreement: it selects 'be' as a perfect auxiliary, and when it does, the participle verb agrees with the surface subject. I show that the apparently paradoxical behavior of the French reflexive can be resolved within the proposed approach. In particular, I argue that the non-unaccusative properties are simply because the surface subject is indeed an external argument that is based-generated at Spec,VoiceP, and the unaccusative properties are because the derivation involves movement of Op which is generated in the object position.

Finally, in Section 2.5, I provide a brief summary of the chapter, along with the conclusion that the current study eliminates the need to resort to a lexical operation for analysis of reflexivization, claiming that the typology of the reflexive offers a support for the purely syntactic view of grammar.

2.2 Proposal

At first sight, it appears that phrasal reflexives like *Mary put makeup on* noted in (123)–(125) can be given an account along the lines of Alexiadou *et al*. (2013) and Alexiadou and Schäfer (2014), according to which natural reflexives involve unspecified argument drop analogous to the object drop construction like *Mary drinks*. That is, it may be claimed that a phrase like *put makeup on* as well as a verb like *wash* can "drop" an argument as a verb like *drink* can, and when they do, they are interpreted reflexively because of the high expectation that the subject and the missing argument refer to the same individual. However, natural

reflexives show distinct properties from the object drop construction, and therefore, should not be treated in the same way. To begin with, the expected interpretation of the object drop construction can be explicitly denied as in (127a), but the reflexive interpretation of natural reflexives cannot as in (127b).

(127) a. Mary {drank/read} yesterday, although it was not {an alcoholic beverage/a book} that she {drank/read}.

b. # Mary {washed/put makeup on} yesterday, although it was not herself that she {washed/put makeup on}.

When the object of a verb like *drink* or *read* is dropped, the missing object is expected to be an alcoholic beverage or a book, respectively. Yet, these expectations do not necessarily have to be met as in (127a). The same pattern should be observed if the interpretation of natural reflexives were attained merely through the expectation that the missing argument refers to the same individual with the subject. The example in (127b) shows that this is not the case.

Another difference between the object drop construction and the reflexive is that the former can be followed by a sluiced clause as in (128a), whereas the latter cannot as in (128b).

(128) a. Mary drinks every day, but I don't know what.

b. # Mary {washes/puts makeup on} every day, but I don't know who.

According to Chung *et al.* (1995), the inner antecedent of a sluiced wh-phrase must be indefinite. The above contrast then indicates that in the out-of-the-blue context, the missing object in (128a) can be indefinite, whereas the missing argument in (128b) cannot.[6] If the interpretations of the object drop construction and the reflexive were both determined through the world knowledge, it is not clear why the contrast between (128a) and (128b) would arise.

One might think that the missing argument of the reflexive is an instance of what Fillmore (1986) calls the "definite null complement", namely, the definite counterpart of the

[6] As Benjamin Bruening (p.c.) points out, the example in (128b) may be felicitous if it is not interpreted reflexively in the context which involves a habitual activity. For instance, if Mary works at a day care center, and one of her daily tasks is to wash a few children that she is responsible for, then the speaker may say the example in (128b) when he knows that Mary washes a few children every day but does not know specifically who Mary washes. See Mittwoch (2005) for discussion of the contexts in which the object of a transitive verb can be implicit.

dropped object of a verb like *drink*. In fact, the definite null complement appears to show the similar patterns with the missing object in the reflexive as shown in the case of *find out* below: the clause containing a definite null complement cannot be explicitly denied as in (129a), nor can it be followed by a sluiced clause as in (129b).

(129) John found out yesterday, ...

a. # although it was not what we expected him to find out.

b. # but I don't know what.

However, the missing argument of the reflexive can still be distinguished from the definite null complement in terms of the definiteness. In the case of the reflexive, a sluiced clause may follow the construction so long as the potential referent of the missing argument is not definite as in (130), contrary to the example in (128b) noted earlier. In (130), the presence or absence of an overt object does not affect the acceptability of the sentence.

(130) Either John or Bill {washed/put makeup on} (himself), but I don't know who.

But this is not the case for the construction with a definite null complement. A sluiced clause cannot follow the clause containing a definite null complement as in (131a) even if the context is given so that the potential referent of the missing object can be indefinite. If its referent is indefinite, the object of *find out* cannot be omitted, and it must be overtly stated that it is not definite as in (131b).

(131) *Context*: Mary wanted to find out whether John had gone swimming or stayed at home.

a. # Mary found out, but I don't know which.

b. Mary found out whether John had gone swimming or stayed at home, but I don't know which.

The infelicity of (131a) suggests that the definite null complement should always have a definite referent, contrary to the missing argument of the reflexive which refers to the surface subject whether or not it is definite.

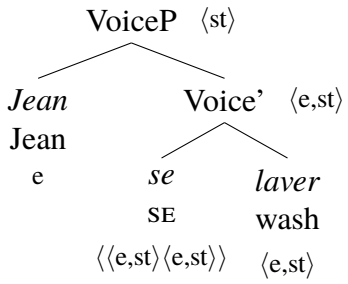
The patterns of the reflexive indicate that its missing argument is mechanically associated with whatever is in the subject position regardless of the context or world knowledge. Based on this, I conclude that the interpretation of the reflexive is generated by grammar.

Labelle (2008), adopting Bruening's (2006) view on verbal reciprocals, suggests that the interpretation of the natural reflexive in French is grammatically encoded in the syntax through a variant of Voice head that is morphologically realized as *se*.[7] The basic denotation of *se* that Labelle suggests is presented in (132).[8]

(132) $[\![\textbf{se}]\!] = \lambda P_{\langle e,st\rangle} \lambda x \lambda e[P(e,x) \,\&\, \text{initiator}(e,x)]$ (Labelle 2008:838, (12))

The functions of *se*, according to Labelle, is to (i) take an open VP predicate of type ⟨e,st⟩, (ii) introduce an initiator variable and associate with it the unsaturated variable of the open VP predicate, and (iii) introduce an NP that saturates the associated variables simultaneously. According to this account, the reflexive *Jean se lave* in French will be derived as follows.

(133)



i. $[\![\textbf{laver}]\!] = \lambda x \lambda e[\text{wash}(e,x)]$

ii. $[\![\textbf{se}]\!] = \lambda P_{\langle e,st\rangle} \lambda y \lambda e'[P(e',y) \,\&\, \text{initiator}(e',y)]$

iii. $[\![\textbf{Voice'}]\!] = \lambda y \lambda e'[\text{wash}(e',y) \,\&\, \text{initiator}(e',y)]$

iv. $[\![\textbf{VoiceP}]\!] = \lambda e'[\text{wash}(e',\text{Jean}) \,\&\, \text{initiator}(e',\text{Jean})]$

[7] See also Doron (2003) and Doron and Rappaport Hovav (2007, 2009) for a similar but not exactly the same view on the reflexive.

[8] The denotation in (132) is the simplified version of (i).

(i) $[\![\textbf{se}]\!] = \lambda P_{\langle e,st\rangle} \lambda x \lambda y \lambda e[P(e,y) \,\&\, \text{initiator}(e,x) \,\&\, y=f(x)]$ (Labelle 2008:854, (59))

In this section, I introduce the simplified version to avoid issues that are tangential to the current discussion. The complete version of the denotation is discussed in Sections 2.3.5 and 2.3.6.

In (133), the reflexive semantics of the resulting VoiceP is due entirely to the special function of *se*: because of *se*, the NP *Jean* saturates both the initiator variable introduced by *se* itself and the theme variable introduced by the verb *laver* 'wash'; consequently, it is interpreted both as the initiator and the theme of the washing event.

In this chapter, I adopt Labelle's view and takes the interpretation of the reflexive to come from a reflexivizing functional head. Departing from Labelle, however, I suggest that the functional head is independent of Voice, and projects its own phrase in accordance with its own syntactic and semantic requirements. The denotation of the proposed reflexivizing head is shown in (134), repeated from (126).

(134) $[\![\textbf{Refl}]\!] = \lambda P_{\langle e,st\rangle} \lambda Q_{\langle e,st\rangle} \lambda x \lambda e[P(e,x) \,\&\, Q(e,x)]$

Just as Labelle's *se*, Refl in (134) makes it possible for a single NP to saturate two variables simultaneously, although it does so in a slightly different manner: Refl, as a higher-order predicate, takes two open predicates of type $\langle e,st\rangle$ and returns a predicate of the same type, while associating the two open variables with each other.

As noted in Section 2.1, the external argument in the reflexive is viewed to be severed from Refl and introduced by initiative Voice that Refl upward selects as its second argument (that is, Q in (134) is always $\lambda x \lambda e[\text{initiator}(e,x)]$). So, when an NP is introduced by initiative Voice upward selected by Refl, it saturates both the initiator variable of the Voice head and the open variable of the complement of Refl, giving the desired reflexive interpretation. As for the reason why Refl upward selects initiative Voice, I suggest that this is because it is the only option for conceptual and compositional reasons.

First, a lexical predicate of type $\langle e,st\rangle$ cannot be upward selected by Refl because if it were, the resulting constituent would lead to an eventuality involving two lexical predicates, which must not be allowed for conceptual reasons. For instance, if Refl downward selects *wash* and upward selects *clean*, then the denotation of the resulting constituent will be $\lambda x \lambda e[\text{wash}(e,x) \,\&\, \text{clean}(e,x)]$. The denotation is not a conceptual possibility: washing and cleaning are two independent events with their own identities. Being engaged in washing is a different matter from being engaged in cleaning; washing something may also mean cleaning

it, but cleaning something does not necessarily mean washing it. So, the identity of an event cannot be established if the event is associated with two lexical predicates (see also footnote 16). Hence, Refl is disallowed to upward select a lexical predicate of type ⟨e,st⟩.

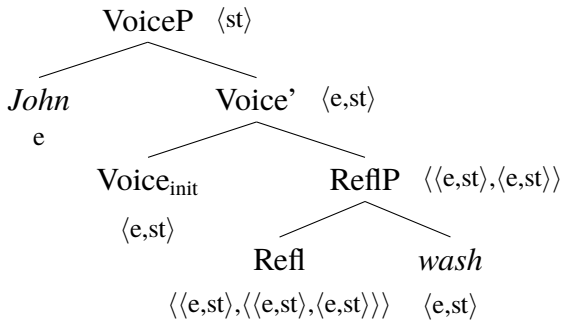
Second, a functional head other than initiative Voice cannot be upward selected by Refl because it most likely leads to type mismatch. A functional head usually imposes its own selectional restrictions on its arguments. $\text{Appl}_{\text{goal}}$, for instance, may combine only with a verb which projects a theme argument (Pylkkänen 2002, 2008; Bruening 2010a). The specific analysis of $\text{Appl}_{\text{goal}}$ may differ, but it must not be an element of type ⟨e,st⟩ which composes with its sister predicate through Event Identification: if it were, the requirement of $\text{Appl}_{\text{goal}}$ would not be captured that it combine only with a verb that projects a theme argument. And if it is not of type ⟨e,st⟩, it simply cannot be taken by Refl as the second argument. As for $\text{Appl}_{\text{benef}}$, which is suggested to be of type ⟨e,st⟩ by Pylkkänen as in $\lambda x \lambda e$[benefactive(e,x)], it appears that the denotation of $\text{Appl}_{\text{benef}}$ needs to be more complicated than that, since a beneficiary argument is more like an argument of an experiencing event rather than an argument of the verbal event itself (see, e.g., Tomioka and Kim 2017). If so, $\text{Appl}_{\text{benef}}$ would not be upward selected by Refl, either. There may exist some other functional heads that I am not aware of, which is of type ⟨e,st⟩, does not add any lexical content to an eventuality, and does not impose any independent restriction on the element that it is to combine with. For now, I will hypothesize that the only element which satisfies these requirements is initiative Voice, and therefore, Refl has to select initiative Voice as its second argument.

I take Refl to be one of the few functional elements available in natural language which encode essential conceptual notions into linguistic representations. And I assume that languages that exhibit the natural reflexive make use of the reflexive head to derive the construction. As discussed extensively by Reinhart and Siloni (2005) and Marelj and Reuland (2016), however, natural reflexives do not show uniform behaviors across languages. I propose that such crosslinguistic variation is attributed primarily to the different selectional requirements of Refl in different languages, analogous to Pylkkänen's (2002, 2008) approach to the causative.

Specifically, in a language like English, the reflexive head is claimed to have the

selectional features [S:V*; S:Voice], and accordingly combines with an element of category V and an element of category Voice in turn in the syntax. Notice here that Refl in English-type languages takes (the projection of) a predicate directly as its first argument. Assuming that semantic selection is strictly local, what this means is that the reflexive head can be semantically selective about predicates that it takes as the first argument. I suggest that this is in fact the case and that Refl in these languages semantically selects the so-called "grooming predicates".[9] In this view, an example like *John washed* in English is derived along the lines of (135), where the reflexive head combines with the verbal element *wash* and Voice in turn, checking off its selectional features. Semantically, it is composed with the unsaturated predicate *wash* and initiative Voice in turn, and associates the open variables of the two with each other. When *John* is composed with the resulting predicate, Voice', of type ⟨e,st⟩, it saturates both the initiator and theme variables, giving the reflexive interpretation.

(135)



i. ⟦**wash**⟧ = λxλe[wash(e,x)]

ii. ⟦**Refl**⟧ = λPλQλyλe'[P(e',y) & Q(e',y)]

iii. ⟦**ReflP**⟧ = λQλyλe'[wash(e',y) & Q(e',y)]

[9] The assertion that Refl in English-type languages semantically selects for a grooming predicate should only be understood as stating a tendency. In English, for example, not all grooming predicates can be used in the reflexive (e.g., *comb*, *groom*); and the reflexive does not always have to involve a grooming predicate (e.g., *pose*, *camouflage*). Also, a language like Russian is reported to allow the predicates such as *brosit'sja* 'to rush', *zaŝiŝat'sja* 'to defend oneself', *podnimat'sja* 'to ascend', *prislonjat'sja* 'to lean', *spuskat'sja* 'to descend', etc. to be used reflexively in addition to the canonical grooming predicates (Wade 2011:321). It seems that in reality, the target predicates of reflexivization, namely, the predicates that can be selected by Refl, may be listed (or "l-selected" according to Pesetsky 1995) rather than determined through a generalized semantic or syntactic constraint. Reserving a careful investigation on this issue for future research, I will characterize the unproductivity of reflexivization in English-type languages in terms of (possibly, "conventionalized") semantic selection, using the term "grooming predicate" as a label for the predicates that are compatible with Refl.

iv. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e[\text{initiator}(e,x)]$

v. $[\![\textbf{Voice'}]\!] = \lambda y \lambda e'[\text{wash}(e',y) \ \& \ \text{initiator}(e',y)]$

vi. $[\![\textbf{VoiceP}]\!] = \lambda e'[\text{wash}(e',\text{John}) \ \& \ \text{initiator}(e',\text{John})]$

Importantly, Refl can combine with *wash* in (135) because *wash* is a grooming predicate and thus is semantically compatible with the reflexive head in English.

The semantic requirement of Refl may be met compositionally as well. This is the case of phrasal reflexives noted in (123)–(125), partially repeated below.

(136) a. Mary *put makeup on* at the wedding.

b. Bill *threw some clothes on* and started to make coffee.

c. Alice did not want to *stick eyelashes on*.

That is, phrases like *put makeup on*, *throw clothes on*, *stick eyelashes on*, etc. can be reflexivized in English because they are compositionally grooming predicates and thus is compatible with Refl. Note in passing that the reflexive use of these phrases is still possible when modifiers are involved as exemplified in (137a–c).

(137) a. Mary put **quite heavy yet natural** makeup on at the wedding.

b. Bill threw **some dirty** clothes on and started to make coffee.

c. Alice did not want to stick **such long** eyelashes on.

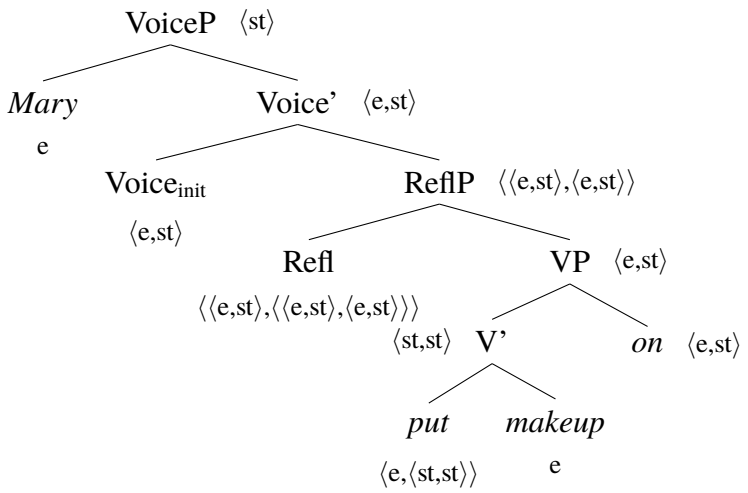
This shows that phrasal reflexives are truly the result of reflexivizing a phrase, rather than memorized chunks of expressions in the lexicon that may be assumed to be targeted by a lexical operation.[10] As for the derivation of phrasal reflexives, I propose the example *Mary put makeup on* is derived along the lines of (138) (see immediately below for the type mismatch between V' and *on*).[11]

---

[10] As noted earlier, the preposition in (136a–c) can also be modified as in *Alice did not want to stick eyelashes **right** on*, which leads to the same conclusion that the phrasal reflexive is not a memorized chuck of expression stored in the lexicon.

[11] The analysis in (138) making use of Function Composition owes a debt to Wood (2012, 2014).

(138)



i. ⟦**put**⟧ = $\lambda x \lambda P_{\langle st \rangle} \lambda e \exists s$[put(e) & figure(s,x) & P(s) & cause(e,s)]

ii. ⟦**V'**⟧ = $\lambda P_{\langle st \rangle} \lambda e \exists s$[put(e) & figure(s,makeup) & P(s) & cause(e,s)]

iii. ⟦**on**⟧ = $\lambda y \lambda s'$[on(s') & ground(s',y)]

iv. ⟦**VP**⟧ = $\lambda y \lambda e \exists s$[put(e) & figure(s,makeup) & on(s) & ground(s,y) & cause(e,s)]

v. ⟦**Refl**⟧ = $\lambda P \lambda Q \lambda x \lambda e'$[P(e',x) & Q(e',x)]

vi. ⟦**ReflP**⟧ = $\lambda Q \lambda x \lambda e' \exists s$[put(e') & figure(s,makeup) & on(s) & ground(s,x) & cause(e',s) & Q(e',x)]

vii. ⟦**Voice$_{init}$**⟧ = $\lambda y \lambda e$[initiator(e,y)]

viii. ⟦**Voice'**⟧ = $\lambda x \lambda e' \exists s$[put(e') & figure(s,makeup) & on(s) & ground(s,x) & cause(e',s) & initiator(e',x)]

ix. ⟦**VoiceP**⟧ = $\lambda e' \exists s$[put(e') & figure(s,makeup) & on(s) & ground(s,Mary) & cause(e',s) & initiator(e',Mary)]

I'm assuming that the verb *put* has the selectional features [S:N; S:P*], and accordingly combines with elements of category N and P in turn in the syntax (although the second argument of *put* in general may be any element that denotes ground as in *John put it here*, *there*, *where everyone can see*, etc.). Semantically, *put* is assumed to be a predicate of type ⟨e,⟨st,st⟩⟩, which takes an entity and a set of states, and returns a set of events. In (138), then, Functional Application cannot apply between V' in (138ii) and *on* in (138iii) due to type mismatch caused by the unsaturated status of *on*. The two syntactic nodes, in this case, may

be composed via Function Composition in (139) (Kratzer 2000; Kobele 2010; Wood 2012, 2014; Wood and Marantz 2017).

(139) **Function Composition** (Wood 2012:34, (40))

If α is a branching node, $\{\beta,\gamma\}$ is the set of α's daughters, where $[\![\beta]\!]$ is in $D_{\langle b,c\rangle}$ and $[\![\gamma]\!]$ is in $D_{\langle a,b\rangle}$, then $[\![\alpha]\!] = \lambda x_a[[\![\beta([\![\gamma(x)]\!])]\!]]$.

What Function Composition does is when the result of a function P provides an argument for another function Q, it combines the two functions and creates a function R which takes the argument of P and yields the result of Q.[12] Applying Function Composition between V' and *on* in (138) then creates the VP of type $\langle e,st\rangle$ shown in (138iv), which takes the argument of *on* and yields the result of V'. The VP, then, is taken by Refl. The rest of the semantic composition proceeds as before, and in the end, the variables of *on* and initiative Voice are saturated by the single NP *Mary*, giving the expected interpretation.[13,14]

[12] I assume with Wood (2015:26) that Function Composition applies only when other compositional mechanisms are not applicable.

[13] An anonymous reviewer for Syntax points out that grooming verbs, on one hand, and expressions like *put makeup on*, on the other, behave differently in languages like Dutch and Russian. In Dutch, for instance, *zich* 'self' is required for a verb for 'wash', but it is prohibited in the phrase for 'put makeup on' as in *deed makeup op (*zich)* 'put makeup on'. Based on such examples, the reviewer suggests that lexical reflexives and expressions like *put makeup on* must not be given an account under the same compositional mechanism. However, such examples might as well indicate that the expressions for 'put makeup on', etc. in Dutch themselves are different from those in English. In fact, the reviewer notes that the reflexive pronoun *zichzelf* 'oneself' is not allowed in such expressions in Dutch as in **deed makeup op zichzelf*, which is not the case in English as in *Mary put makeup on herself*. So, the different behaviors between lexical reflexives and phrases like *put makeup on* in Dutch do not necessarily mean that phrasal reflexives in English are not derived compositionally; it can simply mean that the phrases in question are derived differently in Dutch and in English. The question then is how the expressions for 'put makeup on', etc. in Dutch have a reflexive interpretation without the compositional mechanism suggested in the text. One possibility is that they are actually complex predicates that have the reflexive interpretations in the first place; that is, they are expressions analogous to those in English like *put on makeup* (not *put makeup on*). As noted above, *deed makeup op* in Dutch does not allow the reflexive pronoun, which suggests that the phrase *deed ... op* is a dyadic predicate which only allows one external and one internal arguments. If so, then since the internal argument is saturated by *makeup* in *deed makeup op*, another nominal-like element like *zich* or *zichzelf* will not be allowed as in **deed makeup op zich(zelf)*. The possibility illustrated here is just conjecture; I leave a more systematic investigation on this issue to future research.

[14] Note in passing that phrasal reflexives may be passivized as in *The makeup was put on*, while the reflexive interpretation is maintained. Under the assumption that the element responsible for passivization only targets initiative VoiceP in English (see Chapter 4), the possibility of passivizing the phrasal reflexive would mean that the reflexive in English involves initiative Voice on top of ReflP (rather than, e.g., V_{refl} which both introduces the initiator argument and encodes reflexivity analogous to Labelle's (2008) *se* in French) as suggested in the text.

The current approach provides straightforward accounts of the illicit applications of phrasal reflexivization exemplified in (140) and (141). The selectional features that are checked off in the derivation are indicated by a strikethrough (see Chapter 1 for discussion of the feature checking system adopted in the dissertation).

(140) a. * John gave a bath. (*Intended*: 'John gave himself a bath.')

b. [$_{\text{VoiceP}}$ *John* Voice [$_{\text{ReflP}}$ Refl$_{\text{[}\mathbf{S:V^*}\text{; }\sout{\text{S:Voice}}\text{]}}$ [$_{\mathbf{ApplP}}$ **Appl** [$_{\text{VP}}$ *gave a bath*]]]]

(141) a. * John put the blame on. (*Intended*: 'John put the blame on himself.')

b. [$_{\text{VoiceP}}$ *John* Voice [$_{\text{ReflP}}$ Refl$_{\text{[}\sout{\text{S:V*}}\text{; }\sout{\text{S:Voice}}\text{]}}$ [$_{\mathbf{VP}}$ ***put the blame on***]]]

According to the current view, the example in (140a) is ungrammatical because as shown in (140b), the selectional requirements of Refl cannot be satisfied in the derivation due to the intervening ApplP (Marantz 1993; Bruening 2010a, 2018a).[15] As for (141a), the selectional requirements of Refl are satisfied as shown in (141b), but the sentence is still ungrammatical because the complement VP is not a grooming predicate, and therefore, cannot be semantically selected by Refl.

It has been argued above that natural reflexives in a language like English involve Refl with the selectional features [S:V*; S:Voice]. I suggest that the reflexive in a language like French involves Refl with different selectional properties from its counterpart in English-type languages. Specifically, I propose that the reflexive head in these languages has the selectional features [S:Voice*; S:Voice] and accordingly takes an element of category Voice as its first as well as its second argument. I have been arguing in this chapter that the second argument of Refl is initiative Voice across languages. Refl universally upward selects an element of category Voice, and the selected Voice head should be of type ⟨e,st⟩ due to the denotation of Refl; hence, the second argument of Refl always has to be initiative Voice. A consequence of

[15] I have assumed in Chapter 1 that Appl is of category V, which would make the derivation in (140b) incorrectly well-formed. To address this issue, I assume that Refl (as well as Caus, Appl, etc.) in English selects for (the projection of) a *lexical* verb. That is, category V has two variants, V-lexical and V-functional, and an element of category V-functional is specified to select for an element of category V-lexical, contrary to an element like Voice which does not distinguish between the two. This view is analogous to the approach which assumes the root-categorizer distinction, where the categorizers are taken to have different semantic functions, e.g., v_{caus}, v_{refl}, v_{appl}, etc. I abstract away from the distinction between V-lexical and V-functional elsewhere in the dissertation, since it does not play any significant role in the analysis of the data being discussed.

this view is that the complement (namely, the first argument) of Refl in French-type languages has to be expletive VoiceP for semantic reasons: if Refl takes initiative VoiceP instead, the derivation will end up having two initiator variables involved in a single event in violation of the role exhaustivity (see Williams 2015:165–170 and references therein).[16] But note that due to the semantic type of the reflexive head, the complement expletive VoiceP has to be an open predicate of type ⟨e,st⟩, rather than ⟨st⟩. I suggest that the semantically open status of expletive VoiceP is "prepared" by Op, which is initially introduced in an argument position and then moves to adjoin to the expletive VoiceP abstracting over it (Bruening 2006; Labelle 2008). Before moving on to the derivation of the reflexive in French-type languages, note lastly that unlike in English-type languages, the reflexive head does not take a predicate directly in French-type languages. It takes expletive VoiceP, whose head in turn takes a VP predicate. What this means is that Refl cannot be semantically selective about the predicate buried under VoiceP. Consequently, reflexivization is productive in French-type languages.

According to the proposal illustrated above, the derivation of the reflexive *Jean se lave* in French proceeds as in (142). I am assuming in (142) that the clitic *se* in French reflexives (as well as inchoatives, middles, SE-passives, etc.) is generated in the specifier position of expletive Voice as a "mop-up" element for a (residual) case feature (Reinhart and Siloni 2005:425ff.; Marelj and Reuland 2016:192–193).[17]

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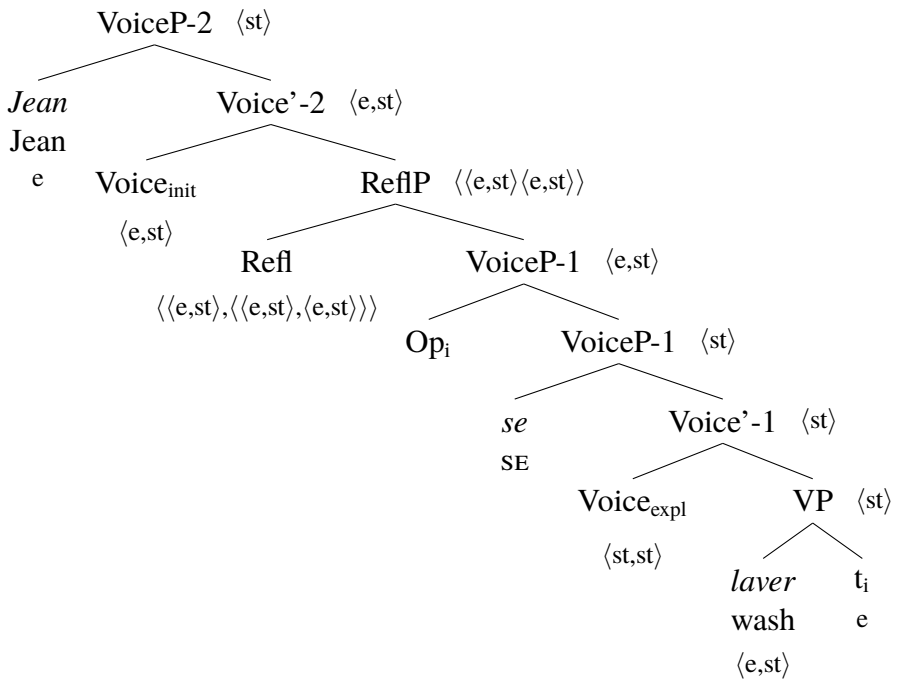
[16] The role exhaustivity has in part to do with the event identity (Williams 2015), in that an event is identified depending on the participant role(s) that it involves (J. Kim 1979). It can be hypothesized, then, that more than one participant role of the same type is not available for a single event because it makes the relevant event unidentifiable, which under the current framework can be interpreted to mean that more than one variable of the same type cannot be associated with a single event. Note that the case in question may be viewed to be ruled out by the θ-Criterion as well, in that having two initiative Voice heads associated with a single lexical verb is practically equivalent to saying that the initiator θ-role being assigned twice by the single verb.

[17] In more technical terms, it may be said that lexical verbs have a case feature to be checked, and the expletive Voice is required in the verbal environment, even though it does nothing semantically, to get rid of the case feature through *se* that it accompanies in the specifier. See Section 2.4 for some discussion. Note that not all uses of *se* can be subsumed under this view, in that in some cases *se* is still required when apparently all syntactic arguments are present as in (i), and in a language like Spanish, it appears that the clitic can "mop up" nominative case rather than accusative case as in (ii).

(i) Il s'est traduit trois romans. French
it SE is translated three novels
'Three novels were translated.'
(Dobrovie-Sorin 2017:3710, (164b))

(142)



i. $[\![\textbf{VP}]\!] = \lambda e[\text{wash}(e,t_i)]$

ii. $[\![\textbf{Voice}_{\textbf{expl}}]\!] = \lambda P[P]$

iii. $[\![\textbf{Voice'-1}]\!] = [\![\textbf{lower VoiceP-1}]\!] = \lambda e[\text{wash}(e,t_i)]$

iv. $[\![\textbf{higher VoiceP-1}]\!] = \lambda x \lambda e[\text{wash}(e,x)]$

v. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e'[P(e',y) \,\&\, Q(e',y)]$

vi. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e'[\text{wash}(e',y) \,\&\, Q(e',y)]$

vii. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e[\text{initiator}(e,x)]$

viii. $[\![\textbf{Voice'-2}]\!] = \lambda y \lambda e'[\text{wash}(e',y) \,\&\, \text{initiator}(e',y)]$

ix. $[\![\textbf{VoiceP-2}]\!] = \lambda e'[\text{wash}(e',\text{Jean}) \,\&\, \text{initiator}(e',\text{Jean})]$

In (142), the lower VoiceP-1 is abstracted over by Op initially merged as the complement of *laver* 'wash'. The abstracted-over VoiceP-1 then is taken by Refl, satisfying the syntactic and

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(ii) En esta escuela se castiga a los alumnos. Spanish
in this school SE punishes DOM the students
'In this school they punish the students.'
(Dobrovie-Sorin 2017:3654, (45))

In this dissertation, I will not attempt to give an account of the different uses of *se* in French or its counterparts in other Romance languages. See Dobrovie-Sorin (2017) for extensive discussion and relevant references.

semantic requirements of the head. As semantic composition proceeds, Refl associates the theme variable of *laver* and the initiator variable of $\text{Voice}_{\text{init}}$ with each other; and when *Jean* is introduced, it saturates both the theme and initiator variables at the same time.

2.3 The crosslinguistic variation

Natural reflexives have been reported to show different properties across languages with respect to their (i) productivity, the possibilities of (ii) ECM reflexivization, (iii) dative reflexivization, (iv) reflexive nominalization, and (v) proxy interpretation. The crosslinguistic variation has motivated the split-lexicalist approach to reflexivization, which in Section 2.1 has been sketched briefly and shown not to be entirely adequate. In this section, I provide analyses of the variation based on the purely syntactic account proposed in Section 2.2.

2.3.1 Productivity

It has long been observed that in some languages, natural reflexives are formed based only on a few grooming predicates; whereas in others, they are formed much more productively. For instance, the reflexive in English cannot involve a non-grooming predicate like *love* or *draw* as in (143a–b), but this is allowed in French as in (144a–b).

(143) a. * John loves. (*Intended*: 'John loves himself.')

b. * John draws. (*Intended*: 'John draws himself.')

(144) a. Jean s'aime. French
Jean SE loves
'Jean loves himself.'

b. Jean se dessine.
Jean SE draws
'Jean draws himself.'

(Reinhart and Siloni 2005:410, (49a–b))

As pointed out in Section 2.2, the contrast illustrated in (143)–(144) can be attributed to the simple fact that in English-type languages, Refl takes a predicate directly as its complement,

and consequently can be sensitive to the semantic content of the predicate[18]; whereas, in French-type languages, Refl takes VoiceP as its complement, and so cannot be sensitive to the semantic content of the predicate buried below VoiceP. In short, the difference in the productivity of natural reflexives between the two types of languages arises because of the structural configuration of the reflexive that each type of languages derives, which, crucially, is driven by the different selectional properties of Refl between these languages.

2.3.2 ECM reflexivization

Reflexivization of an ECM verb is impossible in English, but it is possible in French. This is shown in (145) and (146), respectively.

(145) * John sees wash Mary. (*Intended*: 'John sees himself wash Mary.')

(146) Jean se voit laver Marie. French
Jean SE sees wash Marie
'Jean sees himself wash Marie.'
(Reinhart and Siloni 2005:405, (34a))

The impossibility of ECM reflexivization shown in (145) can be given a simple account: ECM verbs are not grooming predicates and thus cannot be selected by Refl. In a language like French, on the other hand, movement of Op is involved in the derivation of the reflexive. Consequently, an ECM reflexive like (146) can be derived in such a way that Op is generated as the initiator of the embedded verb and then moves to adjoin to the matrix expletive VoiceP, turning the VoiceP into an open predicate whose unsaturated variable is associated with the initiator of the embedded verb. The derivation of (146) in this view is illustrated below.

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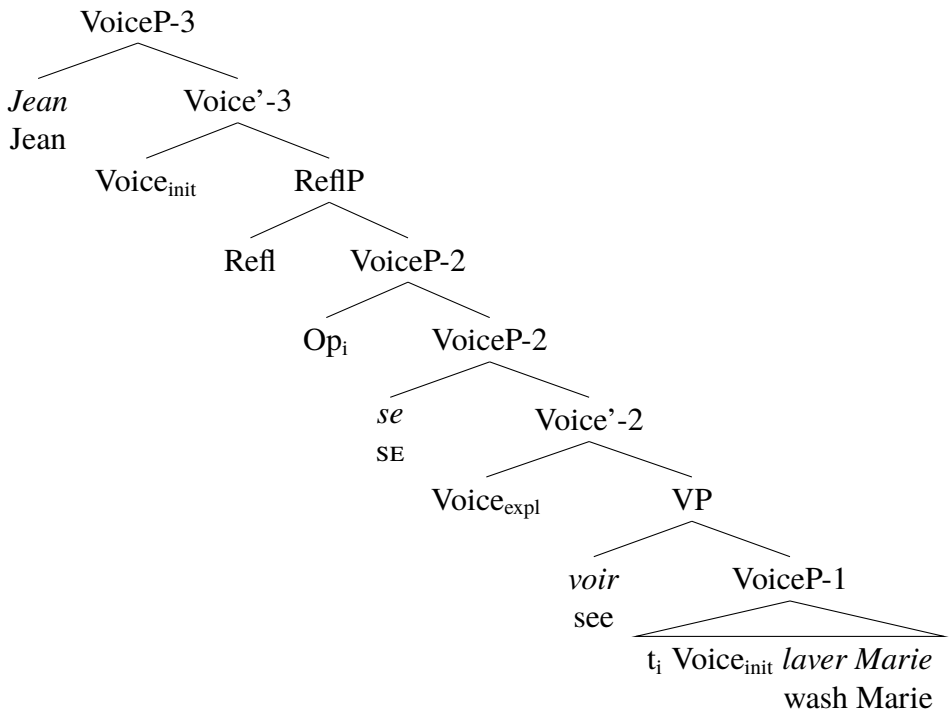
[18] Logically, this does not necessarily have to be the case, and there might be languages whose Refl takes a predicate directly but does not impose any selectional restriction on the predicates that it takes (Perhaps Kannada is an instance of such languages if the verbal suffix *koL*, which marks semantic reflexivity $\lambda x[P(x,x)]$ (Lidz 2001), can be analyzed as the morphological realization of Refl, and the "SE anaphor" *tannu* is analyzed as an expletive required for case reasons (Lidz 2001:135, footnote 17) analogous to the view of French *se* in this chapter; see also Lidz 1995 and Nadahalli 1998). However, the general tendency appears to be that as the head representing a core conceptual notion (e.g., Caus, Refl, etc.) is closer to the lexical predicate in the structure, the productivity is more restricted in one way or another (e.g., zero causativization in English vs. morphological causativization in Korean vs. *sase* causativization in Japanese; see Harley 2008 and Pylkkänen 2002, 2008).

(147)



i. $[\![$**VoiceP-1**$]\!] = \lambda$e[wash(e,Marie) & initiator(e,t_i)]

ii. $[\![$**voir**$]\!] = \lambda$Pλe'$\exists$e"[P(e") & see(e',e")]

iii. $[\![$**VP**$]\!] = [\![$**Voice'-2**$]\!] = [\![$**lower VoiceP-2**$]\!] = \lambda$e'$\exists$e"[wash(e",Marie) & initiator(e",t_i) & see(e',e")]

iv. $[\![$**higher VoiceP-2**$]\!] = \lambda$xλe'$\exists$e"[wash(e",Marie) & initiator(e",x) & see(e',e")]

v. $[\![$**Refl**$]\!] = \lambda$PλQλyλe[P(e,y) & Q(e,y)]

vi. $[\![$**ReflP**$]\!] = \lambda$Qλyλe$\exists$e"[wash(e",Marie) & initiator(e",y) & see(e,e") & Q(e,y)]

vii. $[\![$**Voice$_{init}$**$]\!] = \lambda$xλe'[initiator(e',x)]

viii. $[\![$**Voice'-3**$]\!] = \lambda$yλe$\exists$e"[wash(e",Marie) & initiator(e",y) & see(e,e") & initiator(e,y)]

ix. $[\![$**VoiceP-3**$]\!] = \lambda$e$\exists$e"[wash(e",Marie) & initiator(e",Jean) & see(e,e") & initiator(e,Jean)]

In (147), the initiator trace is abstracted over by Op at VoiceP-2; and Refl associates the variable with the initiator variable of higher Voice$_{init}$. When *Jean* fills in both the initiator variable associated with *laver* 'wash' and the initiator variable of (higher) Voice$_{init}$ (which is

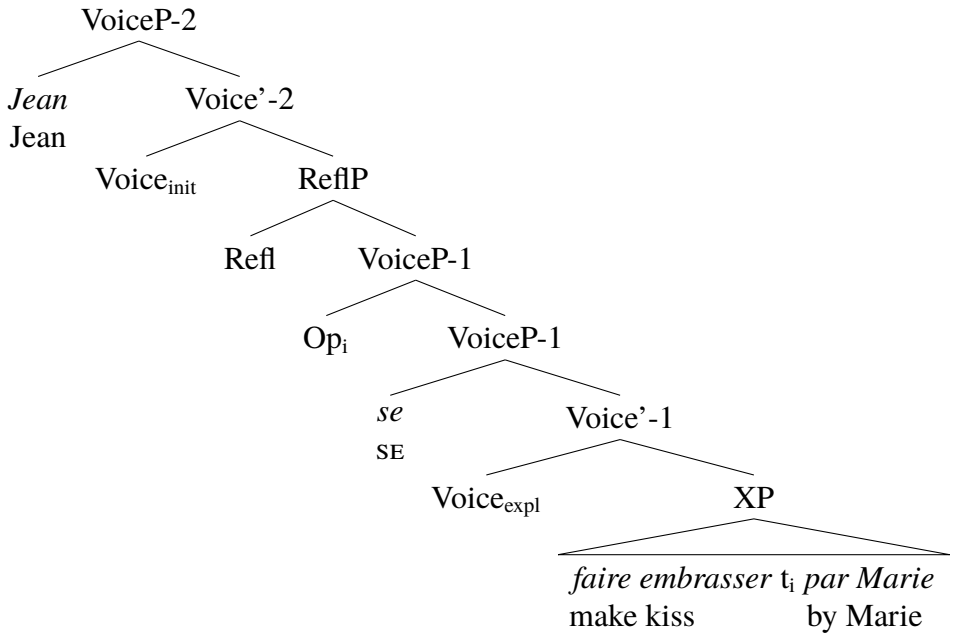
associated with *voir* 'see') later in the derivation, it is interpreted as the initiator of both the washing event and the seeing event.

French allows not only ECM reflexives but also causative reflexives shown in (148).

(148) Jean se fera embrasser par Marie. French
Jean SE make.FUT kiss by Marie
'Jean will make himself be kissed by Marie.'
(Reinhart and Siloni 2005:407, footnote 15, (i))

The causative reflexive can be analyzed in the same way with the ECM reflexive, with the only difference being that Op now is generated as the theme, rather than the initiator, of the embedded verb (Bruening 2006; Labelle 2008). The derivation of (148) then will proceed as shown in (149). Below, I am glossing over the specific analysis of the *faire* causative; what matters for the current purpose is that Op can move from the theme position of the lexical verb to adjoin to VoiceP-1.

(149)



i. $[\![\textbf{XP}]\!] = \lambda e[\text{kiss}(e,t_i)$ & initiator$(e,\text{Marie})]$

ii. $[\![\textbf{faire}]\!] = \lambda P \lambda e' \exists e''[P(e'')$ & cause$(e',e'')]$

iii. $[\![\textbf{VP}]\!] = [\![\textbf{Voice'-1}]\!] = [\![\textbf{lower VoiceP-1}]\!] = \lambda e' \exists e''[\text{kiss}(e'',t_i)$ & initiator(e'',Marie) & cause$(e',e'')]$

iv. ⟦**higher VoiceP-1**⟧ = λxλe'∃e"[kiss(e",x) & initiator(e",Marie) & cause(e',e")]

v. ⟦**Refl**⟧ = λPλQλyλe[P(e,y) & Q(e,y)]

vi. ⟦**ReflP**⟧ = λQλyλe∃e"[kiss(e",y) & initiator(e",Marie) & cause(e,e") & Q(e,y)]

vii. ⟦**Voice$_{init}$**⟧ = λxλe'[initiator(e',x)]

viii. ⟦**Voice'-2**⟧ = λyλe∃e"[kiss(e",y) & initiator(e",Marie) & cause(e,e") & initiator(e,y)]

ix. ⟦**VoiceP-2**⟧ = λe∃e"[kiss(e",Jean) & initiator(e",Marie) & cause(e,e") & initiator(e,Jean)]

In the case of (149), *Jean* saturates the theme variable of *embrasser* 'kiss' (which has been abstracted over by Op at the level of expletive VoiceP) and the initiator variable of Voice$_{init}$, giving the reflexive interpretation that Jean is both the theme of the kissing event and the initiator of the causing event.[19]

Note in passing that the construction with *se faire* in French may also have a "passive" interpretation as in (150) (Washio 1993; Huang 1999; Labelle 2002).

(150) Jean s'est fait écraser par une voiture. French
Jean SE is made run.over by a car
'Jean was run over by a car.'
(Labelle 2002:1, (1))

[19] A similar line of analysis can be given to the reflexive of an inalienable possession construction: the example in (i), for instance, will be derived when Op is generated in the possessor position of the construction (which may differ according to how the construction is analyzed) and then moves to adjoin to expletive VoiceP, which in turn is taken by Refl.

(i) Luc se coupe les cheveux. French
Luc SE cuts the hair
'Luc cuts his hair.'
(Labelle 2008:853, (54))

As Lebelle (2008:854) points out, reflexivization of an inalienable possession construction can be long-distance by involving *faire* as shown below.

(ii) Luc se fait couper les cheveux par Figaro.
Luc SE makes cut the hair by Figaro
'Luc has his hair cut by Figaro.'
(Labelle 2008:854, (57))

An example like (ii) can be given basically the same analysis as the one presented in (149) with the only difference being that Op in (ii) is generated as the possessor rather than as the theme in the construction.

The passive interpretation can be generated if a phonetically null element, *Get*, corresponding to *get* in English is used on top of the abstracted-over expletive VoiceP, instead of Refl and the initiative Voice selected by Refl. If the null Get selects VoiceP and requires it to be a property which Get predicates of the NP that it introduces in the specifier (Bruening and Tran 2015; see also Huang 1999), then the expletive VoiceP has to be abstracted over by movement of Op just as that in the reflexive does. The derivation in this view is sketched below.

(151) [$_{\text{AffP}}$ *Jean* Get [$_{\text{VoiceP}}$ Op$_i$ *se* Voice$_{\text{expl}}$ *faire* *écraser* t$_i$ *par une voiture*]]
Jean SE make run.over by a car

The structure in (151) can be roughly interpreted to mean that 'an event is caused in which x is run over by a car, and this is true of Jean (i.e., x = Jean)'. If the landing site of Op has to be an A-position, and such a position can be provided below the TP layer only by expletive Voice, then it follows that the "passive" reading, where the surface subject corresponds to the theme of the embedded verb, is available in the *faire* causative only when there is the clitic *se* which is introduced in the specifier of expletive VoiceP. This is in fact the case (Washio 1993; Labelle 2002). The availability of the parallel analysis between the reflexive and the passive readings of the *se faire* construction as such suggests that the Op movement analysis of the *se faire* construction is a plausible one.

The involvement of Op in the *se faire* construction can be further supported by the fact that when it is interpreted passively (as well as when it is interpreted reflexively, for that matter), the surface subject cannot be excluded from the event denoted by the predicate embedded below *faire*, even when no selected argument of the embedded predicate is apparently omitted. In (152), for instance, the surface subject must be part of the cutting event by being in close relation (in this case, inalienable possession relation) with the theme argument. The reading where the subject is excluded from the cutting event is unavailable.

(152) Paul s'est fait couper les cheveux par Julie. French
Paul SE is made cut the hair by Julie
i. *Possible*: 'Paul had Julie cut his own hair.'
ii. *Impossible*: 'Paul had Julie cut her own hair.'

(Labelle 2002:10, (23))

This is in contrast with the passive in Japanese, where the surface subject does not necessarily have to be involved in the verbal event (Washio 1993:49; see also Chapter 4).

(153) Taroo-ga Hanako-ni kami-o kir-are-ta. Japanese
Taro-NOM Hanako-by hair-ACC cut-PASS-PST
'Taro had Hanako cut his/her own hair.'

The contrast between (152) and (153) suggests that when the *se faire* construction in French is interpreted passively, there is always a gap below *faire* that is grammatically associated with the subject; whereas, in the passive in Japanese, there may or may not be a gap below the passive morpheme. The obligatory presence of a gap below *faire* in the *se faire* construction follows from the current view that Op movement is always involved in the construction.

2.3.3 Dative reflexivization

Another difference between English-type and French-type languages is that reflexivization of a dative argument is disallowed in the former but allowed in the latter as shown in (154) and (155), respectively.

(154) * John sent a letter. (*Intended*: 'John sent a letter to himself.')

(155) Jean s'est envoyé une lettre. French
Jean SE is sent a letter
'Jean sent a letter to himself.'

(Reinhart and Siloni 2005:411, (51b))

At first sight, the ungrammaticality of (154) appears to be due to the fact that the verb phrase *send a letter* is not a grooming predicate, and thus cannot be selected by Refl as the first argument. But as noted in Section 2.2, dative reflexivization is still prohibited even if the verb phrase involved is compositionally a grooming predicate as in (156), repeated from (140).

(156) * John gave a bath. (*Intended*: 'John gave himself a bath.')

I argued in Section 2.2 that an example like (156) is not allowed because of the intervening ApplP between Refl and VP, and so the selectional requirements of Refl cannot be satisfied. A question that arises regarding this view is why a prepositional dative like (157) is unacceptable.

(157) * John gave a bath to.

If the prepositional dative is not derivationally related to the double object construction (Green 1974, Oehrle 1976, Gropen *et al.* 1989), and accordingly is analyzed to lack ApplP (Bruening 2010b, 2018a), then Refl must be able to select VP directly in the prepositional dative, thereby its selectional requirements being satisfied. And since the VP *give a bath to* in (157) is compositionally a grooming predicate just as *put makeup on* is, it must also be the case that Refl is semantically compatible with the VP. Then why is the example in (157) not acceptable?

The answer appears to be because the NP *a bath* is not allowed in the prepositional dative in the first place. Note first that the intended reflexive meaning cannot be expressed in the prepositional dative even when a reflexive pronoun is used as shown below.

(158) * John gave a bath to himself.

In (158), no syntactic argument is suppressed; therefore, the reflexive head must not be involved in the derivation. But the sentence is still unacceptable. This suggests that whatever reason it is that is responsible for the unacceptability of (158) may also be responsible for the unacceptability of (157): in other words, it is not the case that (157) is unacceptable because of the failure in satisfying the selectional requirements of Refl.

In fact, certain NPs like *a headache* are known to be compatible only with the double object construction, and not with the prepositional dative, as illustrated in (159a–b).[20]

(159) a. That smell gave Bill a headache.

b. * That smell gave a headache to Bill.

(Bruening 2018a:124, (4a–b))

Importantly, NPs that are associated with grooming activities such as *a bath*, *a shower*, and *a haircut*, show the same pattern with *a headache* as shown below.

(160) a. John gave his son a bath/shower/haircut.

[20] See Bruening (2010b, 2018a) for discussion of apparent exceptions.

b. * John gave a bath/shower/haircut to his son.

Bruening (2010a:557) attempts to capture the difference between the double object construction in (159a) and the prepositional dative in (159b) by giving to the indirect object a "possessor" role in the former but a "recipient" role in the latter. Such an account cannot extend straightforwardly to the case in (160a) and (160b) because it cannot be simply said that an eventive nominal like *a bath* is something that can be possessed but not received. But the contrast between (160a) and (160b) appears to be as real as that between (159a) and (159b). It goes beyond the scope of this chapter to give a proper analysis of the difference between the double object construction and the prepositional dative exemplified in (159) and (160); for the current purpose, it suffices to note that the example in (157) is ungrammatical because the NP *a bath* is not allowed as the direct object in the prepositional dative, just as the NP *a headache* is not. That is, the ungrammaticality of (157) is simply because *give a bath* cannot be used in the prepositional dative in the first place.[21]

Turning to French-type languages, the grammaticality of (155) can be given an account along the same lines with the ECM and causative reflexives: Op is generated in the goal argument position and then moves to adjoin to expletive VoiceP. The simplified derivation is illustrated in (161).[22]

(161) [$_{\text{VoiceP-2}}$ *Jean* $\text{Voice}_{\text{init}}$ [$_{\text{ReflP}}$ Refl [$_{\text{VoiceP-1}}$ Op_i *se* $\text{Voice}_{\text{expl}}$ *envoyer une lettre* t_i]]]
Jean SE send a letter

i. $[\![\textbf{VoiceP-1}]\!] = \lambda x \lambda e[\text{send}(e,\text{a letter}) \,\&\, \text{goal}(e,x)]$

ii. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e'[P(e',y) \,\&\, Q(e',y)]$

[21] Examples like those in (160b) are actually quite widely attested in corpora, although they are still much fewer in number than examples like those in (160a). For the speakers who allow an example like *John gave a bath to his son* but disallow its reflexive counterpart in (157), I assume, along the lines of Bruening (2010b, 2018a), that those speakers allow the process of "R-dative shift" to the examples in (160a). That is, what appears to be a prepositional dative is actually a double object construction in which the indirect object has shifted to the right with the preposition *to* appearing. In this view, reflexivization of, e.g., *give a bath to* would still be prohibited because the expression involves the ApplP layer between Refl and VP, preventing the selectional requirements of Refl from being satisfied. Thanks to Benjamin Bruening for pointing out this possibility.

[22] For expository purposes, I am glossing over the details of the syntax and semantics of the ditransitive that are not directly relevant to the current discussion. The point in the text is that dative reflexives in French-type languages can be easily derived through movement of Op. The analysis will work regardless of whether Op is the argument of V or of Appl.

iii. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e'[\text{send}(e',\text{a letter}) \,\&\, \text{goal}(e',y) \,\&\, Q(e',y)]$

iv. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e[\text{initiator}(e,x)]$

v. $[\![\textbf{Voice'-2}]\!] = \lambda y \lambda e'[\text{send}(e',\text{a letter}) \,\&\, \text{goal}(e',y) \,\&\, \text{initiator}(e',y)]$

vi. $[\![\textbf{VoiceP-2}]\!] = \lambda e'[\text{send}(e',\text{a letter}) \,\&\, \text{goal}(e',\text{Jean}) \,\&\, \text{initiator}(e',\text{Jean})]$

In (161), *Jean* ends up saturating both the initiator variable and the goal variable of the sending event, giving the reflexive interpretation.

It has been noted above that an external argument is necessarily involved in the reflexive, and this chapter captures this by assuming that Refl upward selects initiative Voice. The impossibility of dative-theme reflexivization shown in (162) follows from this assumption.

(162) Jean s'est montré l'enfant. French
Jean SE is shown the child
i. *Possible*: Jean_i showed the child to himself_i.
ii. *Impossible*: Jean showed the child_i to himself_i.

(Reinhart and Siloni 2005:412, (53b))

In (162), *Jean* can have two θ-roles as in (162i) because as an initiator argument, it is introduced by initiative Voice that can be upward selected by Refl; but *l'enfant* 'the child' cannot have two θ-roles as in (162ii) because as a goal argument, it is not introduced by initiative Voice, and thus cannot be associated with the theme variable by Refl.

Reinhart and Siloni (2005) capture the agent-oriented nature of the reflexive by assuming that (i) when reflexivization applies in the syntax, its application is triggered by the merger of an external argument; and (ii) when it applies in the lexicon, it only targets a subset of agent-theme verbs. In this regard, it is worth noting that unlike ECM reflexivization, the impossibility of dative reflexivization in English-type languages does not follow from the lexicon-syntax distinction. This is because the target arguments of dative reflexivization belong to a single lexical item, namely, a ditransitive verb, and thus can in principle be targeted by a lexical operation. This might be one of the reasons why the split-lexicalist approach assumes that reflexivization (or the "bundling operation") only targets a subset of

agent-theme verbs (which corresponds to the set of "grooming predicates" in this chapter) when it applies in the lexicon. But as noted earlier, agent-theme verbs are not the only predicates that can be targeted by reflexivization in a "lexicon" language like English; a phrase like *put heavy makeup right on* can also be a target. Moreover, the difference in the possibility of dative reflexivization between English and French can still be captured even if the bundling operation applies in the syntax across languages: all that needs to be said is that bundling targets different sets of verbs in different languages (as in, e.g., "bundling occurs upon the merger of an external argument for a subset of agent-theme verbs in English and for any verbs in French"). This means that even under the split-lexicalist approach, the distinction between lexical and syntactic reflexivization is not entirely necessary for the analysis of dative reflexivization, providing another reason for favoring the purely syntactic approach over the split-lexicalist one. Under the analysis proposed in this chapter, the descriptive generalization is captured in terms of selection.

2.3.4 Reflexive nominalization

Turning to reflexive nominalization, deverbal nominals can have a reflexive interpretation in English but not in French as shown in (163a) and (163b), respectively.

(163) a. She dresses slowly because she is an elegant dresser.

b. Jean est un excellent habilleur/maquilleur. French
Jean is an excellent dresser/"makeup-er" (of others only)

(Reinhart and Siloni 2005:410, (48a–b))

Reinhart and Siloni (2005:409) note that the clitic *se* in French is incompatible with nominal morphology. I suggest that not only can this alone account for the variation without the lexicon-syntax distinction, but also it can do so more adequately.

First, no clitic is involved in the reflexive in English; accordingly, no morphological incompatibility would arise in the nominal environment. A reflexive nominal like *dresser* can be derived along the lines of (164), where $\frown$ indicates the nominalization operator and

Gen a generic operator.[23] The denotation of *-er* is modified from Baker and Vinokurova (2009:531, (38)).

(164) $[_{NP}$ *-er* $[_{VoiceP}$ $Voice_{init}$ $[_{ReflP}$ Refl *dress*]]]

i. $[\![\textbf{dress}]\!] = \lambda x \lambda e[dress(e,x)]$

ii. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e'[P(e',y) \ \& \ Q(e',y)]$

iii. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e'[dress(e',y) \ \& \ Q(e',y)]$

iv. $[\![\textbf{VoiceP}]\!] = \lambda y \lambda e'[dress(e',y) \ \& \ initiator(e',y)]$

v. $[\![\textbf{er}]\!] = \lambda P \frown \lambda x \ Gen \ e \ [P(e)]$

vi. $[\![\textbf{NP}]\!] = \frown \lambda x \ Gen \ e \ [dress(e,x) \ \& \ initiator(e,x)]$

Refl, as before, associates the theme variable of *dress* and the initiator variable of Voice with each other. The resulting one-place predicate then is taken by the agentive nominalizer *-er*. I assume that *-er* always selects initiative VoiceP with its specifier not projected so as to capture the fact that it can nominalize unergative verbs (e.g., *runner*, *worker*) and transitive verbs (e.g., *kisser*, *finder*), but not unaccusative verbs (e.g., **melter*, **drowner*) (Baker and Vinokurova 2009). Semantically, *-er* has two functions: (i) it takes a propositional function to its individual correlate; and (ii) it binds the eventuality of the propositional function with a generic operator. In short, *-er* provides an individual image for the propositional function that it takes as a complement (Chierchia 1985). So, when the VoiceP in (164iv) is taken by *-er* in (164v), the resulting NP in (164vi) will have the reflexive interpretation 'x such that x is the kind of thing that is both initiator and theme in the generic event of dressing'.

In French, on the other hand, reflexivization must be accompanied by the clitic *se*, because the complement that Refl takes is expletive VoiceP, and the expletive VoiceP comes with *se* in its specifier position. This means that in order for an expression to have a reflexive interpretation, it must be compatible with *se*. The impossibility of reflexive nominalization in French, then, can be attributed to the simple fact that *se* is not compatible with nominal morphology. That is, if a nominal expression is not accompanied by *se* as in (163b), it cannot

[23] What the nominalization operator does is to take a propositional function to its individual correlate (Chierchia 1985:423).

have a reflexive interpretation because the absence of *se* indicates that Refl is not involved in the structure. If a nominal expression is accompanied by *se*, the expression is ill-formed as in **s'habilleur* because of the clitic's incompatibility with nominal morphology.

One of the primary motivations for the split-lexicalist analysis of reflexive nominalization is that nominalization of unaccusative or subject-experiencer verbs is still possible without *se* in French as illustrated in (165a) and (165b), respectively.

(165) a. le rétrécissement du pantalon au lavage French
the shrinking of.the pants in.the washing
'the pants' shrinking in the wash'

b. l'intérêt de Marie pour ce livre
the interest of Marie for this book
'Marie's interest in this book'

(Reinhart and Siloni 2005:409, (46a–b))

According to Reinhart and Siloni (2005), the above examples show that the lexicon-syntax distinction is needed for arity operations, because then it can be said that (i) in English, reflexivization is a lexical operation and so can feed nominalization as in (163a), and (ii) in French, reflexivization is a syntactic operation, so cannot feed nominalization as in (163b), but crucially, (iii) decausativization is a lexical operation in any language because it involves removal of a θ-role from the θ-grid of a verb (as compared to reflexivization which simply bundles two θ-roles), therefore, it can feed nominalization in any language including French as in (165a–b).

But, again, this does not have to be the case. Unlike the case of natural reflexives, the interpretations of unaccusatives and subject-experiencers do not require the presence of expletive VoiceP. This is because no independent head is involved in the derivation of the unaccusatives/subject-experiencer constructions that is responsible for their interpretations and requires expletive VoiceP. What this means is that a nominalizer may take VP *directly* to nominalize unaccusative/subject-experiencer verbs while maintaining their interpretations. Therefore, unaccusative/subject-experiencer nominalization is possible without *se*, namely, without the expletive VoiceP layer, involved in the derivation. In accordance with this view,

expletive Voice (and *se*) can be assumed to be present only in the verbal environment for case reasons (See footnote 17 and Section 2.4 for some discussion).

Note that the possibility of reflexive nominalization is not due to the way in which the structure of the reflexive is assembled in each language; it is due to morphology (although the former has the fundamental responsibility in that *se* has to be introduced into the nominal expression in the first place because of the specific way Refl builds a structure). Therefore, it is expected that reflexive nominalization does not always pattern together with the other variations discussed above. Czech demonstrates one such case: the language allows reflexive nominalization as in (166), even though it shows the properties of French-type languages with respect to productivity, ECM reflexivization, and dative reflexivization as shown in (167a–c) (The examples are from Hron 2005:5–6).[24]

(166) zabití se — Czech
killing SE
'self-killing'

(167) a. zabil se ('he killed himself') — Czech

b. Marie se viděla tančit (v zrcadle).
Marie SE saw dance (in mirror)
'Marie saw herself dance (in a mirror).'

c. napsal si dopis ('he wrote a letter to himself')

The above pattern can be easily accounted for if *se* in Czech is compatible with nominal morphology unlike its counterpart in French (Reinhart and Siloni 2005:410, footnote 16). The case of Czech, therefore, shows that the morphological account of reflexive nominalization is not only a possible analysis but also an empirically more adequate one.

2.3.5 Proxy interpretation

Finally, the reflexive in English does not allow a proxy interpretation unless there is a reflexive pronoun syntactically bound by an antecedent (Jackendoff 1992).

[24] See also Bruening (2006) for the case of reciprocals in Passamaquoddy, and Papangeli (2004) for the case where morphology plays a role in the possibility of dative reflexivization.

(168) a. * Ringo washed at the Tussaud Museum. (*Intended*: 'Ringo washed a statue of himself.')

b. Ringo washed himself at the Tussaud Museum. (*Intended*: 'Ringo washed a statue of himself.')

The same is reported to be the case in languages like Russian and Hebrew as in (169) and (170), among many others (Lidz 2001; Doron 2003; Reuland and Winter 2009; Marelj and Reuland 2013).[25]

(169) a. * Nedavno, posetivšij muzej, Ringo pomyl-s'a. Russian
recently having.visited museum Ringo washed-REFL
Intended: 'Ringo washed a statue of himself.'

b. Nedavno, posetivšij muzej, Ringo pomyl seb'a.
recently having.visited museum Ringo washed self
Intended: 'Ringo washed a statue of himself.'

(Reuland and Winter 2009:77, (18a–b))

(170) a. * Dani hitraxec. Hebrew
Dani washed.REFL
Intended: 'Dani washed a statue of himself.'

b. ? Dani raxac et acmo.
Dani washed ACC himself
Intended: 'Dani washed a statue of himself.'

(Doron 2003:58, (110a–b))

In contrast, the reflexive in languages like French, Serbo-Croatian, Czech, etc. are reported to allow a proxy interpretation as shown below.

(171) Luc a pu s'admirer au Musée Tussaud. French
Luc AUX can SE admire at-the Museum Tussaud
Intended: 'Luc was able to admire a statue of himself.'

(Labelle 2008:856, (63))

(172) Marko se pokrio na fotografiji. Serbo-Croatian
Marko SE covered on photograph
Intended: 'Marko covered the image of himself.'

(Marelj and Reuland 2013:77, (3b))

[25] According to Doron (2003), "[i]f Dani were to wash a statue of himself, it would barely be possible to say [(170b)], but it would be totally impossible to describe this situation with [(170a)]".

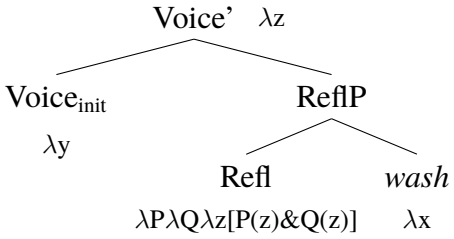
(173) Ringo se začal prohlížet. Czech
Ringo SE started view
Intended: 'Ringo started to look at a statue of himself.'

(Reuland and Winter 2009:77, (19a))

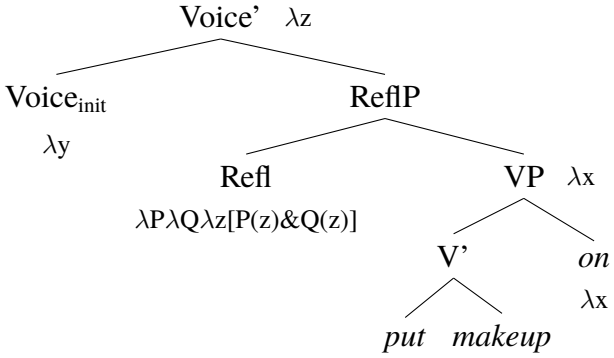
Interestingly, Reuland and Winter (2009) claim, assuming the split-lexicalist approach, that if the reflexive is derived through a lexical operation, it does not allow a proxy interpretation; whereas, if it is derived in the syntax, it does. If Reuland and Winter's claim is empirically correct[26], such a difference can be given an account under the current approach in terms of the different strategies that the two types of languages employ to "prepare" a semantically open complement for Refl.

Specifically, in a language like English, the complement of Refl is semantically open simply by virtue of its variable not being saturated as in (174a) or by virtue of a variable percolating up to the complement via Function Composition as in (174b).

(174) a.



b.



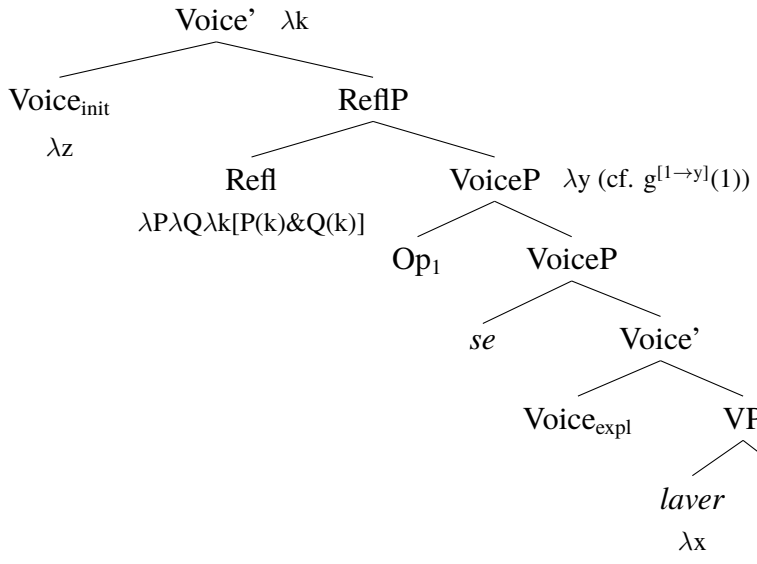
In these cases, there is no possibility of any semantic alteration at all. What is not saturated at or below the complement of Refl should be exactly the same with that of the complement

[26] It appears that Reuland and Winter's (2009) claim is more like a trend than a fact, given that the speakers of Italian, Serbo-Croatian, and Spanish, in all of which the reflexive is formed in the syntax according to Reinhart and Siloni (2005), are reported to have mixed judgments on the reflexive with a proxy interpretation (Marelj and Reuland 2013, 2016).

itself. So, when the unsaturated variable is associated with the variable of initiative Voice by Refl, and an entity-denoting NP is introduced at Spec,VoiceP, the result is as if a single NP saturated the variables of both initiative Voice and the complement of Refl directly. Consequently, the interpretations of the two variables should be completely identical.

In a language like French, on the other hand, the variable of the verb is associated with the external argument by Refl through the mediation of Op as illustrated in (175). Note in particular in (175) that the variable of the verb *laver* 'wash' is saturated by g(1) at the VP level, where g is a function from numeric values to individuals, and then at the VoiceP level, g(1) is abstracted over by the index binder Op_1 and is assigned a variable afresh.

(175)



So, when an NP is introduced in (175), the NP does not saturate the variable of *laver*. Instead, it merely saturates the variable of expletive VoiceP, which in turn is associated with the variable of *laver* through Op binding the trace left behind at the complement of *laver*. What saturates the variable of *laver* is the trace bound by Op. This means that the trace, the element that actually saturates the variable of *laver*, may contribute something to the interpretation of the variable.

Semantically, the trace in (175) is like a pronoun, whose interpretation is also relativized with respect to assignment functions (e.g., $[\![\text{he}_1]\!]^{g[1\rightarrow\text{John},\ 2\rightarrow\text{Bill},\ 3\rightarrow\text{Mike}]}$ = John).[27]

[27] Note that Spec,VoiceP is assumed to be an A-position in this chapter, which means that the trace left behind

Importantly, pronouns (and names, for that matter) are known to allow proxy interpretations (Lidz 2001; Safir 2004; Reuland and Winter 2009). In the following examples, for instance, the bold-faced pronouns *he* in (176), *he* and *she* in (177), and *he* in (178) can refer to a statue of their antecedents, i.e., a statue of Ringo, Fidel, Marlene, or every pop icon.

(176) While Paul was happy with the statue portraying him, Ringo thought that **he** looked kind of goofy.
(Lidz 2001:135, (22a))

(177) As they strolled through the wax museum, Fidel could not help thinking that **he** would have looked better in a uniform, and Marlene could not help thinking that **she** would have looked better without one.
(Safir 2004:113, (23a))

(178) All of a sudden, every pop icon started taking off the shirt **he** was wearing.
(Reuland and Winter 2009:73, (9))

In order to account for the proxy interpretation of a pronoun as such, Reuland and Winter (2009) suggest that pronouns do not simply denote entities (which are attained with respect to assignment functions) but instead denote a Skolem function, a function from entities to entities that takes a relation as a parameter. The formal definition of the Skolem function is presented in (179).

(179) A function f of type $\langle ee \rangle$ with a relational parameter R is a Skolem function if for every entity x: R(x, $f_R(x)$) holds. (Reuland and Winter 2009:73, (10))

If a pronoun is a Skolem function, the example in (178) will have a semantic representation like (180).

(180) $\forall x$[pop.icon(x) $\rightarrow$ x started taking off the shirt $f_R(x)$ was wearing]

---

at the complement of *laver* in (175) is an A-trace. Syntactically, then, the trace must behave like a reflexive pronoun (Chomsky 1981), which one might think explains why the proxy reading is possible. But the parallel distributional properties between an A-trace and a reflexive pronoun do not themselves explain the semantic properties of the trace, calling for an independent *semantic* account.

According to Reuland and Winter (2009), the context provides a proxy relation PR, describing the possible proxies λy[PR(x,y)] of any entity x refers to. If the context for (178) is that every pop icon was at a wax museum, then the context provides PR for R in (180), and the resulting $f_{PR}(x)$ will be interpreted to mean 'a wax statue of x'.

Turning back to the issue at hand in (175), all that needs to be said now is that the trace of Op is really like a pronoun such that it is also a Skolem function. If so, then the proxy interpretation of the reflexive in French-type languages can be attributed to the presence of the trace left behind by Op. In fact, the trace of Op appears to show the same behavior with a pronoun in its interpretation as shown in (181): here, what Mary saw yesterday is a statue of the former president that John ran into.[28]

(181) (*Context*: Yesterday, Mary went to a wax museum and saw the statue of a former president. Today, John ran into the former president in the street.)

John ran into the former president Op_i that Mary saw t_i yesterday.

Given this, the availability of a proxy interpretation in French-type languages is expected under the current approach. The reflexive in these languages involves movement of Op, just as the *that*-relative in (181) does (Chomsky 1982, 1986a; Chomsky and Lasnik 1993). In both cases, the proxy interpretation arises due to the trace that is left behind by Op.

2.3.6 More on proxy interpretation

Lidz (2001) suggests that the availability of a proxy interpretation is correlated with the semantic transitivity of a reflexive predicate, i.e., a predicate two of whose arguments are coindexed (Reinhart and Reuland 1993). According to Lidz, if a reflexive predicate is semantically intransitive involving a single semantic argument, it does not allow a proxy interpretation; and if a reflexive predicate is semantically transitive involving two semantic

[28] In line with footnote 27, the different distributional properties between A- and A'-traces do not necessarily mean that they have different semantic properties. Note that in canonical A-movement examples like *John*$_i$ *is likely* t_i *to win the race* or *Mary*$_i$ *was respected* t_i *by John*, the A-trace cannot refer to a proxy for the moved NP because the NP and its A-trace are associated with a single variable, unlike (181) or the case of the reflexive in French (e.g., 'Mary' of type e and 'a proxy of Mary' of type e can never be both the theme of 'respect' in *Mary was respected by John*; only one of the two can). Therefore, complete identity is required between the moved NP and its trace in these cases.

arguments, then it allows a proxy interpretation. The semantically intransitive and semantically transitive reflexive predicates are represented in (182a) and (182b), respectively, where f(x) in (182b) indicates the near-reflexive function that "rang[es] over entities sufficiently close to [x] to be able to stand proxy for it" (Reuland 2005; Labelle 2008:863). Note that the semantic representation in (182b) is taken to involve two semantic arguments because x and f(x) are not identical and thus must be counted as separate arguments.

(182) a. λx[P(x,x)]

b. λx[P(x,f(x))]

(Lidz 2001:129, (13a–b))

Lidz then shows that the two types of reflexive predicates behave differently in the comparative deletion test (Sells *et al.* 1987): the semantically intransitive predicate (or the "closed" predicate in Sells *et al.*'s terms) allows a sloppy reading but does not allow a strict reading as in (183); whereas, the semantically transitive predicate (or the "open" predicate in Sells *et al.*'s terms) allows both readings as in (184).

(183) Ringo washed faster than Paul.

i. *Sloppy*: 'Ringo washed himself faster than Paul washed himself.'

ii. *Strict (Impossible)*: 'Ringo washed himself faster than Paul washed him.'

(184) Ringo washed himself faster than Paul.

i. *Sloppy*: 'Ringo washed himself faster than Paul washed himself.'

ii. *Strict*: 'Ringo washed himself faster than Paul washed him.'

Lidz claims that the contrast between (183) and (184) arises because the reflexive predicate in (183) is semantically intransitive as in λx[wash(x,x)], and applying this to the subject arguments gives the following representation.

(185) λx[wash(x,x)](Ringo) faster than λx[wash(x,x)](Paul)

In a representation like (185), there is no possibility at all for the object of *wash* to differ from the subject: it is interpreted as a variable bound by the subject. Therefore, only the strict reading can be obtained. On the other hand, the reflexive predicate in (184), which

involves the reflexive pronoun *himself*, is a semantically transitive one that can be represented as in λx[wash(x,f(x))]; so, when this applies to the subject arguments, it gives the following representation.

(186) λx[wash(x,f(x))](Ringo) faster than λx[wash(x,f(x))](Paul)

Crucially, Lidz suggests, following Sag (1976), that a reflexive pronoun behaves like a normal pronoun, and it can be either bound by its antecedent as in (187a) or simply coindexed with it as in (187b).

(187) Ringo washed himself.

a. λx[wash(x,f(x))](Ringo)

b. λx[wash(x,f_i(x))](Ringo$_i$)

The two possibilities give rise to the following two variants of the representation in (186):[29]

(188) a. λx[wash(x,f(x))](Ringo) faster than λx[wash(x,f(x))](Paul)

b. λx[wash(x,f_i(x))](Ringo$_i$) faster than λx[wash(x,f_i(x))](Paul)

In (188a), the object arguments are bound by the respective subjects; as a result, the sloppy reading is obtained. In (188b), on the other hand, the object arguments are both coindexed with *Ringo*, the subject of the preceding clause; consequently, the strict reading is obtained.

The reflexive in French allows a proxy interpretation as noted in (171) above, which indicates that it involves a semantically transitive predicate. It is expected then that it would allow both sloppy and strict readings in the comparative deletion test. But surprisingly, this is not the case. Labelle (2008) reports that they only allow a sloppy reading as shown below.

(189) Lucie se défend mieux que Luc. French
Lucie SE defends better than Luc

i. *Sloppy*: 'Lucie defends herself better than Luc defends himself.'

ii. *Strict (Impossible)*: 'Lucie defends Lucie better than Luc defends Lucie.'

(Labelle 2008:858, (70))

[29] Coindexation is not free from syntactic constraints; so, for example, the object argument of the preceding clause in (188b) cannot be coindexed with Paul, the subject of the *following* clause: *λx[wash(x,f_i(x))](Ringo) faster than λx[wash(x,f_i(x))](Paul$_i$).

Labelle offers an account of such patterns of the French reflexive by giving the reflexive Voice *se* the denotation in (190), where f is the near-reflexive function.

(190) $[\![\textbf{se}]\!] = \lambda P_{\langle e,st\rangle} \lambda x \lambda y \lambda e[P(e,y) \,\&\, \text{initiator}(e,x) \,\&\, y=f(x)]$ (Labelle 2008:854, (59))

Since (190) involves the near-reflexive function, the proxy interpretation of the French reflexive can be easily accounted for: the example in (171), for instance, will have the semantics in (191a) at the VoiceP level, which is in essence equivalent to (191b) when y is replaced by f(Luc).

(191) a. $\lambda y \lambda e[\text{admire}(e,y) \,\&\, \text{initiator}(e,\text{Luc}) \,\&\, y=f(\text{Luc})]$

b. $\lambda e[\text{admire}(e,f(\text{Luc})) \,\&\, \text{initiator}(e,\text{Luc})]$

In (191b), the initiator is Luc but the theme is f(Luc), which can be mapped to a proxy for Luc such as his statue; hence, the proxy interpretation. As for the unavailability of the strict reading in (189), Labelle attributes it to the very nature of the near-reflexive function. Since the near-reflexive function ranges over entities that are close enough to stand proxy for its argument, it can never refer to an entity that is *distinct* from it. That is, f(Luc) in (192), the semantic representation of (189), simply cannot mean Lucie. Therefore, the strict reading is blocked, and only the sloppy reading is allowed.

(192) $\lambda e[\text{defend}(e,f(\text{Lucie})) \,\&\, \text{initiator}(e,\text{Lucie})]$ better than $\lambda e[\text{defend}(e,f(\text{Luc})) \,\&\, \text{initiator}(e,\text{Luc})]$

In short, the reflexive in French shows some seemingly contradicting behaviors (because of which Dobrovie-Sorin 2017 calls it as the "quasi-pronominal reflexive"), and this is due to the particular nature of the near-reflexive function, according to Labelle. Since the near-reflexive function included in the denotation of *se* may denote a proxy for its argument but may never denote some entity distinct from it, the French reflexive allows a proxy interpretation (which according to Lidz 2001 is the property of a semantically transitive reflexive predicate) but does not allow a strict reading in the comparative deletion test (which according to Lidz is the property of a semantically intransitive reflexive predicate). Note that in Labelle's view, French reflexives are semantically transitive because *se* in (190) involves two individual variables,

one for the initiator and the other for the theme; but they are syntactically intransitive because only a single NP is introduced in the syntax.

Labelle (2008:859ff.) further shows that an emphatic pronoun can place contrastive focus either on the initiator or on the theme in an example like (193), supporting her claim that the French reflexive involves a semantically transitive predicate even though it takes a single syntactic argument.

(193) Le ministre se copie lui-même. French
the deputy SE imitates himself

(Labelle 2008:859, (74a))

The sentence in (193) can be interpreted to mean either that the deputy, and not potential alternatives, imitates himself (although Labelle notes that this is not a natural interpretation[30]) or that the deputy imitates himself, not potential alternatives. Such an ambiguity would not arise if the reflexive in French involved a semantically intransitive predicate where the object argument is always bound by the subject.

The approach proposed in this chapter also offers an account of the "quasi-pronominal" behaviors of the French reflexive that Labelle observed. The availability of a proxy interpretation has been addressed in Section 2.3.5. As for the (im)possibility of sloppy and strict readings in the comparative deletion construction, it can be attributed to the simple fact that what is deleted is a reflexive predicate. More specifically, the example in (189) is derived along the following lines under the current approach, omitting irrelevant details including projections above VoiceP (strikethrough indicates deletion).

---

[30] According to Labelle, the preferred interpretation of the following example is one where focus is on the subject (ia), while the interpretation with focus on the object is also possible with a context (ib).

(i) Jean-Pierre ne se rase pas lui-même. French
Jean-Pierre NEG SE shaves not himself
a. It was not Jean-Pierre who shaved Jean-Pierre.
(λe∃x[shave(e,Jean-Pierre) & initiator(e,x) & ¬(Jean-Pierre = f(x))])
b. It was not Jean-Pierre who Jean-Pierre shaved.
(λe∃x[shave(e,x) & initiator(e,Jean-Pierre) & ¬(x = f(Jean-Pierre))])
(Labelle 2008:861, (77b); originally from Rooryck and Vanden Wyngaerd 1999)

An example like (i) shows that an emphatic pronoun can in fact be associated with either the initiator or the theme in the French reflexive.

(194) [$_{\text{VoiceP}}$ *Lucie* Op$_i$ *se défendre* t$_i$] *mieux que* [$_{\text{VoiceP}}$ *Luc* ~~Op$_j$ *se défendre* t$_j$~~]
Lucie SE defend better than Luc

In (194), the semantic representation of the deleted constituent is $\lambda x \lambda e$[defend(e,x) & initiator(e,x)].[31] When this applies to *Luc*, the theme variable has to be saturated by *Luc*, and it can never be associated with *Lucie* in the preceding clause; therefore, the sloppy reading is available but the strict reading is not.

Semantically intransitive and semantically transitive reflexive predicates are also known to differ from each other with respect to the availability of an object comparison reading: the former disallows it, but the latter allows it in the comparative deletion test (Sells *et al.* 1987; Doron and Rappaport Hovav 2007, 2009; Labelle 2008; Dobrovie-Sorin 2017). So, the example *Ringo washed faster than Paul* in (183) cannot be interpreted to mean 'Ringo washed himself faster than he washed Paul', but the example with a reflexive pronoun *Ringo washed himself faster than Paul* in (184) can. The French reflexive does not allow an object comparison reading in the comparative deletion test; that is, the sentence in (189) cannot mean that Lucie defends herself better than she defends Luc. In this regard, the French reflexive again patterns with a semantically intransitive predicate.

Such a pattern can be accounted for under the current approach in terms of the identity requirements on ellipsis (see Phillips and Parker 2014 for a concise review and references on this topic). Note first that in order to give the object comparison reading, the example in (189) needs to be derived along the lines of (195), where irrelevant details are omitted. For convenience, I assume that the remnant NP in the second clause is extracted out of VoiceP and adjoins to it before deletion applies to the lower VoiceP.

(195) [$_{\text{VoiceP}}$ *Lucie* Op$_i$ *se défendre* t$_i$] *mieux que* [$_{\text{VoiceP}}$ [~~$_{\text{VoiceP}}$ *Lucie défendre* t$_j$ ~~] *Luc*$_j$]
Lucie SE defend better than Luc

In (195), the deleted constituent in the second clause involves syntactic and semantic representations shown in (196a) and (196b), respectively.

(196) a. [$_{\text{VoiceP}}$ *Lucie* Voice$_{\text{init}}$ [$_{\text{VP}}$ *défendre* t]]

[31] More precisely, it is $\lambda x \lambda e$[defend(e,f_R(x)) & initiator(e,x)] if the semantics of the trace that Op leaves behind is taken into account. This does not affect the analysis in the text.

b. $\lambda x \lambda e$[defend(e,x) & initiator(e,Lucie)]

Importantly, neither of the two representations in (196a–b) can be found in the first clause in (195), whose syntactic and semantic representations are shown in (197a) and (197b), respectively.

(197) a. [$_{\text{VoiceP}}$ *Lucie* Voice$_{\text{init}}$ [$_{\text{ReflP}}$ Refl [$_{\text{VoiceP}}$ Op$_i$ *se* Voice$_{\text{expl}}$ [$_{\text{VP}}$ *défendre* t$_i$]]]]

b. λe[defend(e,Lucie) & initiator(e,Lucie)]

What this means is that deletion itself is not licensed in (195) because the deleted constituent is not recoverable either syntactically or semantically. Since the derivation that is needed to give the object comparison reading is illicit, the example in (189) is not allowed to have such a reading.

The fact that an emphatic pronoun can be associated either with the initiator or the theme in the French reflexive in (193) can also be given a straightforward account. All that needs to be said is that when it is associated with the initiator, the emphatic pronoun adjoins to the initiative VoiceP so that it places focus on the NP that directly saturates the initiator variable; and when it is associated with the theme, it adjoins to VP so that it places focus on the trace of Op (which is treated semantically as a pronoun in this chapter) that directly saturates the theme variable. The point of the example in (193) is that the French reflexive is semantically transitive even though it only takes a single NP argument. Under the current approach, the French reflexive is both syntactically and semantically transitive; it is just that the theme argument is always bound by the initiator through movement of Op as well as the workings of Refl. Therefore, it is expected that an emphatic pronoun can be associated with either the initiator or the theme.[32]

[32] The status of *lui-même* in (193) is controversial: some consider it to be a reflexive pronoun (Zribi-Hertz 2014; Labelle 2008), while others an emphatic pronoun (Kayne 1975). The analysis in the text favors the latter over the former. Note that the current view offers a simple account of the impossibility of omitting *se* in the presence of *lui-même* (Labelle 2008).

(i) * Le ministre copie lui-même. French
the deputy imitates himself
(Labelle 2008:846, (36a))

If *lui-même* in (i) is an adjunct emphatic pronoun rather than the theme argument of *copier* 'imitate', then the

Finally, Doron and Rappaport Hovav (2007, 2009) point out that the French reflexive under ellipsis in coordinate structures patterns in the same way with that in the comparative deletion construction: it only allows a sloppy reading and does not allow a strict or an object comparison reading as shown in (198).

(198) Marie se regarde et son chat aussi. French
Marie SE looks.at and her cat too
i. *Sloppy*: 'Marie looks at herself, and her cat looks at itself.'
ii. *Strict (Impossible)*: 'Marie looks at herself, and her cat looks at her too.'
iii. *Object comparison (Impossible)*: 'Marie looks at herself, and she looks at her cat too.'

(Doron and Rappaport Hovav 2009:84, (17))

But interestingly, Doron and Rappaport Hovav also report that the ECM reflexive in the same environment allows an object comparison reading in addition to a sloppy reading, although it still does not allow a strict reading.[33] This is illustrated below.

(199) Paul se trouvait drôle et sa soeur aussi. French
Paul SE found funny and his sister too
i. *Sloppy*: 'Paul considered himself funny, and his sister considered herself funny.'
ii. *Strict (Impossible)*: 'Paul considered himself funny, and his sister considered him funny too.'

---

theme variable of *copier* cannot be closed in (i), and thus the derivation crashes for having an uninterpretable variable. Without *se*, which is accompanied by expletive VoiceP that Refl must take as the complement, the theme variable can never be associated with the initiator variable. One of the Labelle's arguments for the view that *lui-même* is an argument when associated with the theme (it is treated to be an adjunct when it is associated with the subject) is that there are cases where it is case-marked as in (ii).

(ii) Le ministre se parle à lui-même. French
the deputy SE talks to himself
'The deputy talks to himself.' (www.liberation.fr)
(Labelle 2008:845, (34a))

But this does not necessarily have to be the case, and *à* in (ii) may as well be treated as an instance of inherent case that must occur according to the semantic role of the argument that the adjunct emphatic pronoun is associated with.

[33] Strictly speaking, it is not 'objects' that are being compared in the "object comparison reading" in (199) since the remnant NP functions as the subject of the embedded predicate. But for the sake of consistency, I will keep using the term "object comparison reading" as a label for the particular interpretational pattern in question (The alternative term "remnant reading" is not used to avoid unnecessary confusion with "remnant NP" that I use to refer to an NP survived from deletion).

iii. *Object comparison*: 'Paul considered himself funny, and he considered his sister funny too.'

(Doron and Rappaport Hovav 2009:85, (19))

To address the contrast between (198) and (199), consider first the simplified derivations in (200a) and (200b), which are needed to give the sloppy readings in the respective examples.

(200) a. [$_{\text{VoiceP}}$ *Marie* Op$_i$ *se regarder* t$_i$] *et* [$_{\text{VoiceP}}$ *son chat* ~~Op$_j$ *se regarder* t$_j$~~]
Marie SE look.at and her cat

b. [$_{\text{VoiceP}}$ *Paul* Op$_i$ *se trouver* t$_i$ *drôle*] *et* [$_{\text{VoiceP}}$ *sa soeur* ~~Op$_j$ *se trouver* t$_j$ *drôle*~~]
Paul SE find funny and his sister

In both (200a) and (200b), deletion in the second conjunct is licensed because it is syntactically and semantically identical with the corresponding constituent in the first conjunct and thus can be properly recovered. When the semantic representation of the deleted part in each example, shown below, applies to the remnant subject in the second conjunct, the sloppy reading is obtained.

(201) a. $\lambda x \lambda e$[look.at(e,x) & initiator(e,x)]

b. $\lambda x \lambda e \exists s$[consider(e,s) & initiator(e,x) & funny(s,x)]

In order for the strict reading to be obtained in (198) and (199), on the other hand, the derivations in (202a) and (202b) are needed, respectively. Crucially, deletion in these derivations is not licensed because the deleted constituent in the second conjunct is neither syntactically nor semantically identical with any constituent in the first conjunct, and thus is not recoverable. By "syntactically identical", I mean that two constituents are morphosyntactically identical in the sense that they have the same syntactic structure with the same elements at the terminal nodes.

(202) a. [$_{\text{VoiceP}}$ *Marie* Op$_i$ *se regarder* t$_i$] *et* [$_{\text{VoiceP}}$ *son chat* ~~*regarder Marie*~~]
Marie SE look.at and her cat

b. [$_{\text{VoiceP}}$ *Paul* Op$_i$ *se trouver* t$_i$ *drôle*] *et* [$_{\text{VoiceP}}$ *sa soeur* ~~*trouver Paul drôle*~~]
Paul SE find funny and his sister

The deleted constituent in the second conjunct in (202a) and (202b) contains an element (*Marie* and *Paul*, respectively) that is not present in the corresponding constituent in the first

conjunct; so, the morphosyntactic form of the deleted constituent cannot be recovered. Also, since the semantics of the deleted constituent in (202a) and (202b) contains information that is not present in the corresponding constituent in the first conjunct, the semantics of the deleted part cannot be properly recovered, either. This is illustrated below.

(203) a. ... look.at(e,x) and ... look.at(e',**Marie**)

b. ... find(e,s) & funny(s,x) and ... consider (e',s') & funny(s',**Paul**)

Therefore, the strict reading is not allowed in (198) and (199).

Now, notice that in both cases of sloppy and strict readings, the remnant NP in the second conjunct functions as the subject. This means that the coordinated constituents in these cases have to be (at least) TP, which introduces a case position that the remnant subject can move into to receive case. In the case of object comparison reading, on the other hand, the remnant NP in the second conjunct functions as the object, not the subject. The subjects in the two conjuncts are identical in this reading, which means that the subjects can be 'shared' between the two conjuncts. Such a characteristic of the object comparison reading allows the derivational possibility that VoicePs are coordinated below a single TP to whose specifier the initiators in both conjuncts move in the across-the-board (ATB) fashion.[34] The derivations for (198) and (199) with the object comparison reading, then, can proceed as shown below.

(204) a. [$_{IP}$ *Marie*$_i$ [$_{VoiceP}$ t$_i$ Op$_j$ *se* [$_{VP}$ *regarder* t$_j$]] *et* [$_{VoiceP}$ t$_i$ ~~[$_{VP}$ *regarder* t$_k$]~~ *son*
Marie SE look.at and her
chat$_k$]]
cat

b. [$_{IP}$ *Paul*$_i$ [$_{VoiceP}$ t$_i$ Op$_j$ *se* [$_{VP}$ *trouver* t$_j$ *drôle*]] *et* [$_{VoiceP}$ t$_i$ ~~[$_{VP}$ *trouver* t$_k$ *drôle*]~~
Paul SE find funny and
sa soeur$_k$]]
his sister

Contrary to the cases in (202a–b), deletion in both (204a) and (204b) can be licensed syntactically, for the deleted constituent in the second conjunct has a corresponding constituent in the first conjunct that shares with it the same structure with the formally same elements at

[34] Note that this is not an option available for the comparative deletion construction: *John likes me more than *(he) likes you*.

the terminal nodes (i.e., they are morphosyntactically identical). Yet, the object comparison reading is unavailable in (198), while it is available in (199). An obvious possibility is that the semantic identity condition is not satisfied for deletion in (204a), while it is satisfied for deletion in (204b), although the syntactic identity condition is satisfied in both derivations. I claim this is the case, and suggest that the semantic identity condition on deletion is examined on the eventuality-by-eventuality basis throughout the conjunct. Put differently, the deleted semantics is claimed to be recovered in a piecemeal fashion, one eventuality after another.

To elaborate, consider the semantic representation of each conjunct in (204a) shown below. The representation that corresponds to the deleted constituent is indicated with an underline. The remnant NP in the second conjunct is notated as an argument because it does not undergo deletion; only the predicate that it saturates does.

(205) a. First conjunct: $\lambda x \lambda e$[look.at(e,x) & initiator(e,x)]

b. Second conjunct: $\underline{\lambda x} \lambda y \lambda e$[$\underline{\text{look.at(e,x)}}$ & initiator(e,y)](her cat)

The representations above show that each conjunct in (204a) involves a single eventuality, and that the eventuality in the first conjunct in (205a) is reflexive in nature which involves a single individual variable that is to be saturated by the ATB-moved subject, whereas that in the second conjunct in (205b) is transitive in nature which involves two individual variables that are to be saturated by the remnant NP and the ATB-moved subject. If the eventuality in the second conjunct were recovered based on the first conjunct in this situation, it would be recovered to be reflexive as in $\lambda y \lambda e$[look.at(e,y) & initiator(e,y)](her cat) because the reference is reflexive. This means that one of the two NPs, the remnant NP or the ATB-moved subject (more precisely, the A-chain that represents the movement from Spec,VoiceP in the second conjunct to Spec,IP), would not find a variable to saturate and thus cannot be given an interpretation leading to the violation of the principle of Full Interpretation (Chomsky 1986b; Chomsky and Lasnik 1993). In other words, since the types of eventuality in the two conjuncts are not identical with each other, when the VP is deleted in the second conjunct, the eventuality involved in the VP cannot be recovered based on the first conjunct.

Therefore, the object comparison reading is unavailable in (198).[35]

Now consider the semantic representations of the conjuncts in (204b) shown below.

(206) a. First conjunct: λxλe∃s[consider(e,s) & initiator(e,x) & funny(s,x)]

b. Second conjunct: λxλyλe∃s[consider(e,s) & initiator(e,y) & funny(s,x)](his sister)

If, as I have suggested above, the deleted semantics is recovered on the eventuality-by-eventuality basis, the problem that arises in (205) does not arise in (206). Each conjunct in (206) involves two eventualities, and each eventuality in the second conjunct is exactly same in nature with the corresponding eventuality in the first conjunct. So, the state of x being funny that is deleted in the second conjunct can be properly recovered based on the state of x being funny in the first conjunct; and the event of y considering p in the second conjunct can also be recovered based on the event of x considering p in the first conjunct. The remnant NP then can saturate the variable of 'funny', and the ATB-moved subject (or the relevant A-chain) can saturate the initiator variable. Hence, the object comparison reading is available in (199).[36]

2.4 The unergative-unaccusative paradox of French reflexives

Under the current approach, the surface subject in the French reflexive is an external argument that is introduced in the thematic subject position, i.e., the specifier of initiative VoiceP. This is in line with the view that the reflexive is not unaccusative (Reinhart and Siloni 2004, 2005; Doron and Rappaport Hovav 2007, 2009; Labelle 2008; Alexiadou and Schäfer

[35] Note that the strict reading in (202a) is ruled out from this perspective as well: λe[look.at(e,Marie) & initiator(e,Marie)] (first conjunct; reflexive) vs. λe[look.at(e,Marie) & initiator(e,her cat)] (second conjunct; transitive).

[36] The claim in the text is equivalent to saying without event semantics that deletion in (204a) is not licensed because the two predicates in the first and the second conjuncts are different from each other (look.at(x,x) vs. look.at(x,y)), but deletion in (204b) is licensed because the predicates involved in the two conjuncts are identical (consider(x,p) vs. consider(y,p); funny(x) vs. funny(x)). That is, the semantics of the predicate in the second conjunct in (204a) cannot, but the semantics of the predicates in the second conjunct in (204b) can, be properly recovered with reference to the respective first conjuncts.

2014; Sportiche 2014; Marelj and Reuland 2016), and not with the view that it is (Marantz 1984; Pesetsky 1995; Sportiche 1998; Rooryck and Vanden Wyngaerd 2011).

The non-unaccusative view of the reflexive is often argued for with the *en*-extraction facts (Reinhart and Siloni 2004). The unaccusative in (207a), for example, allows the *il*-impersonal construction with post-verbal subject as in (207b), and in the *il*-impersonal, the clitic *en* can be extracted out of the post-verbal subject as in (207c).

(207) a. Plusieurs enfants arrivent. French
several children arrive
'Several children arrive.'

b. Il arrive plusieurs enfants.
there arrive several children
'There arrive several children.'

c. Il en arrive plusieurs.
there of.them arrive several
'Several of them arrive.'

(Sportiche 2014:309, (9a–c))

The same pattern is observed in the other constructions involving *se* such as the inchoative, where the surface subject is also taken to be introduced in the internal argument position, as illustrated in (208a–c).

(208) a. Les palissades se sont renversées. French
the fences SE are tipped.over.F.PL
'The fences tipped over.'

b. Il s'est renversé plein de palissades.
there SE is tipped.over lots of fences
'Many fences tipped over.'

c. Il s'en est renversé plein.
there SE of.them is tipped.over lots
'Many of them tipped over.'

(from Sportiche 2014:309, (10))

The reflexive in (209a), however, shows a different pattern from the above constructions: it marginally allows the *il*-impersonal construction as in (209b) (Kayne 1975:381), but it entirely prohibits *en*-extraction from the post-verbal subject in the *il*-impersonal as in (209c).

(209) a. Plusieurs hommes se rasent. French
several men SE shave
'Several men shave themselves.'

b. ?? Il se rase plusieurs hommes.
there SE shave several men
'Several men shave themselves.'

c. * Il s'en rase plusieurs.
there SE of.them shave several
Intended: 'Several of them shave themselves.'

(Sportiche 2014:310, (11a–c))

As is well known, *en*-extraction in French is allowed out of the internal argument position only, as shown in the ungrammaticality of (210b) that involves the unergative whose surface subject is not an internal but an external argument.

(210) a. ? Il a dormi plusieurs enfants. French
there has slept several children
'There slept several children.'

b. * Il en a dormi plusieurs.
there of.them has slept several
Intended: 'Several of them slept.'

(from Sportiche 1998:143, (107a))

The ungrammaticality of (209c), then, can be taken to indicate that the surface subject in the reflexive is also an external argument, supporting the view that the reflexive is not unaccusative.[37]

[37] Note however that such an argument is not airtight in that an example of the reflexive in the impersonal frame is hardly found (Dobrovie-Sorin 2017:3660) and some speakers do not accept it at all (Doron and Rappaport Hovav 2009:100). If a construction is incompatible with the *il*-impersonal in the first place, the *en*-extraction test cannot be used to show the unaccusativity of the construction. Sportiche (2014:311) also points out that a verb like *aller* 'go' cannot be used in the *il*-impersonal as in (ia) nor does it allow *en*-extraction as in (ib), casting doubt on the plausibility of the argument in the text. *Aller* selects 'be' as a perfect auxiliary and thus can be considered to be unaccusative (see the discussion in the text below).

(i) a. * Il est allé plusieurs enfants au musée. French
there is gone several children to.the museum

b. * Il en est allé plusieurs au musée.
there of.them is gone several to.the museum
(Sportiche 2014:311, (13a–b))

Sportiche (2014) also shows using focus alternatives that the subject of the reflexive originates in the external argument position rather than some position below it. According to Sportiche, the reflexive in (211), whose surface subject cooccurs with the focus particle *seul* 'only', is ambiguous and can be interpreted to mean either 'Pierre is the only x such that x finds x intelligent' or 'Pierre is the only x such that x finds Pierre intelligent', but it cannot have the interpretation 'Pierre is the only x such that Pierre finds x intelligent'.

(211) Seul Pierre se trouve intelligent. French
only Pierre SE finds intelligent
'Only Pierre finds himself intelligent.'

(Sportiche 2014:311, (14a))

Accordingly, the assertion in (211) can be rejected by a response like (212a), where the reflexive property of Pierre is denied, or a response like (212b), where the agent/experiencer property of Pierre is denied. A response like (212c), however, is not an option for rejecting (211), according to Sportiche, where the property of being the subject of the embedded predicate is denied.

(212) a. Non, moi aussi je me trouve intelligent. French
no me too I me find intelligent
'No, I find myself intelligent too.'

b. Non, moi aussi je le trouve intelligent
no me too I him find intelligent
'No, I find him intelligent too.'

c. Non, Pierre me trouve intelligent moi aussi.
no Pierre me finds intelligent me too
'No, Pierre finds me intelligent too.'

(Sportiche 2014:311, (15a–b); 314, (18))

The fact that the focus particle in (211) can be associated with Pierre as the subject of the matrix predicate (whether the predicate is reflexive or non-reflexive) but not with Pierre as the subject of the embedded predicate indicates that the surface subject of the reflexive is generated in the matrix subject position, rather than being generated in a position below it and moves there. So, it must be an external argument.

The non-unaccusative properties of the French reflexive illustrated above follows straightforwardly from the approach proposed in this chapter. First, as noted above, the sole NP argument of the reflexive is claimed to be generated in the external argument position, not in the internal argument position; consequently, *en*-extraction is prohibited, which can only take place from the internal argument position. Second, according to the proposed approach, an example like (211) has the following syntactic representation.

(213) [*seul Pierre* [Op_i *se trouver* t_i *intelligent*]]
only Pierre SE find intelligent

If, as Sportiche suggests, computing alternatives on the focused NP can either precede or follow the saturation of the property that is predicated of the NP, then the representation in (213) will generate the interpretation in (214a) or (214b).

(214) a. λx[x finds x intelligent](only Pierre)

'Only Pierre has the property of finding oneself intelligent.' (focusing Pierre before saturation)

b. only Pierre finds Pierre intelligent

'Only Pierre has the property of finding Pierre intelligent.' (focusing Pierre after saturation)

But crucially, the structure in (213) does not provide any way of calculating alternatives on the focused NP as the embedded subject: the NP, along with the cooccurring focus particle, does not occupy the embedded subject position at any point in the derivation. Therefore, the interpretation is impossible where the alternatives are computed on the subject of the embedded predicate alone. If the subject in the reflexive were a derived one like that in the unaccusative, such an interpretation would be allowed as the English example below is.

(215) Only $John_i$ is considered t_i intelligent.

'John is the only x such that people find x intelligent.'

The assertion in (215) can be denied by a response like 'No, they consider Mary intelligent, too'. Note in passing that the possible interpretations of (211) also indicate that the example is not derived in the way that the movement account of the reflexive (which is a version of

the unaccusative approach) introduced in Section 2.1 suggests (i.e., [*Seul Pierre*]$_{1/i}$ *se*$_i$ *trouve* t$_1$ *intelligent*), because the example has the interpretation in (214b) which such a derivation cannot generate.

Now, the complication is that the French reflexive also exhibits some properties of the unaccusative. One such property concerns auxiliary selection. The reflexive selects 'be' as a perfect auxiliary as in (216a), patterning together with the unaccusative in (216b) and the inchoative in (216c), but not with the unergative in (216d) and the transitive in (216e), which select 'have' as a perfect auxiliary.

(216) a. Jean s'est lavé. French
Jean SE is washed
'Jean washed.'

b. Jean est arrivé.
Jean is arrived.
'Jean arrived.'

c. La porte s'est fermée.
the door SE is closed
'The door closed.'

d. Jean a travaillé.
Jean has worked
'Jean worked.'

e. Marie a acheté des livres.
Marie has bought some books
'Marie bought books.'

Another property of the reflexive patterning like the unaccusative is that participle agreement occurs with the surface subject as in (217a), which is known to take place obligatorily when the internal argument of a participle moves to the surface subject position (Sportiche 1998, Chapter 3; see also Burzio 1986:348ff.) as exemplified in the unaccusative in (217b) and the passive in (217c).

(217) a. Marie s'est maudite/*maudit d'avoir laisser mourir Jean. French
Marie.F.SG SE is blamed.F.SG/*blamed for.having let die Jean
'Marie blamed herself for having let John die.'

(Dobrovie-Sorin 2017:3658, (52))

b. Marie est morte/*mort ce matin.
Marie.F.SG is died.F.SG/*died this morning
'Marie died this morning.'

(Rocquet 2010:407, (6))

c. La robe est faite/*fait (par Cardin).
the dress.F.SG is made.F.SG/*made (by Cardin)
'The dress was made (by Cardin).'

(Sportiche 1998:142, (105))

Leaving to future research the task of working out a full-fledged analysis, the unaccusative properties of the reflexive as such may be given an explanation along the following lines within the proposed approach.

First, as for the auxiliary selection, Reinhart and Siloni (2005), based on the ideas in Ackema (1995), Siloni (1997), and Danon (2002), suggest that all cases, including accusative case, have two components: one that encodes a thematic relation ("thematic case") and the other that encodes a syntactic relation ("structural case"). Reinhart and Siloni also suggest that the auxiliary 'be' is used when there is unchecked structural case ("case residue"), reflecting some case checking procedure. The specifics of the case checking procedure has been left as an open question by Reinhart and Siloni (2005:433); in this chapter, I hypothesize that there is a functional projection FP immediately above VP that is responsible for mopping up any unchecked structural case. I further hypothesize that the "mop-up" takes place through head movement. Any unchecked structural case on V is checked when V forms a single morphological unit with F via head movement. It can be said then that the perfect auxiliary is realized as 'be' when the head of its complement is the complex verbal head that contains F as a component (or simply, when the derivation has the FP layer).

Reinhart and Siloni assume that verbs in French have both thematic and structural case to be checked, and the clitic *se* checks thematic case.[38] If so, then the auxiliary 'be' should be used in the reflexive and the unaccusative because there is structural case on the

[38] According to Reinhart and Siloni, the presence of structural case on verbs is parameterized; consequently, in languages like Spanish and Romanian, whose verbs only have thematic case, the reflexive and the unaccusative select 'have' as a perfect auxiliary, instead of 'be'. As far as I can tell, the analysis sketched in the text is compatible with this view.

verb that remains unchecked, and thus FP is required above VP for mopping up the unchecked structural case. In both the reflexive and the unaccusative, the sole NP must check nominative case on T (it thus needs to be assumed that a single NP may check a single (set of) case at most, either thematic or structural, or both as a set in the case of the object of transitives). Reinhart and Siloni limit the discussion to accusative case, but the view presented here may extend to dative case in the dative reflexive, which also selects 'be' as a perfect auxiliary.

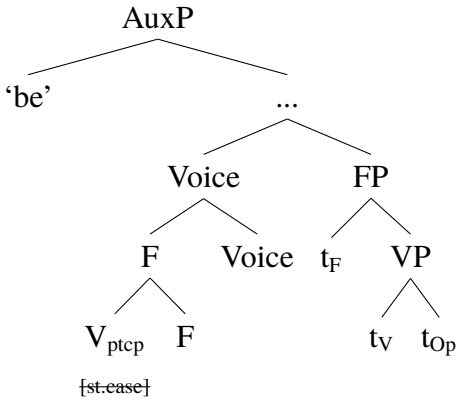
(218) a. Marie s'est envoyé une carte du Maroc. French
Mary SE is sent a postcard from.the Morocco
'Mary sent herself a postcard from Morocco.'

b. Jean s'est lave le visage.
John SE is washed the face
'John washed his face.'

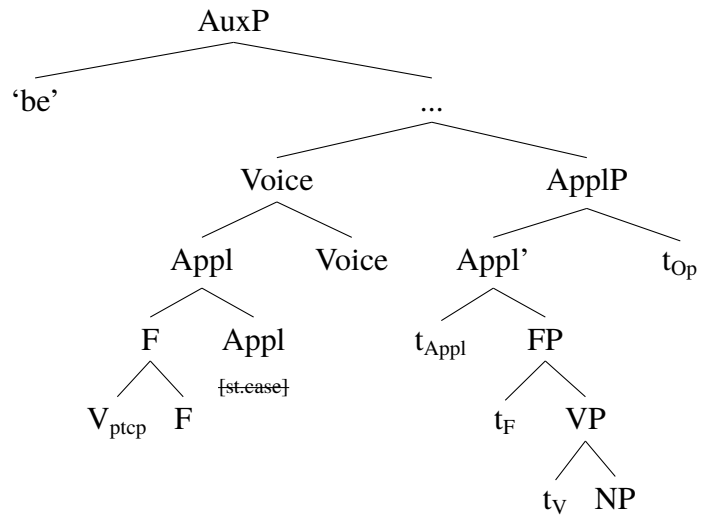
(Dobrovie-Sorin 2017:3658, (51a–b))

If it is assumed that the applicative head (or any head that introduces a dative argument, for that matter; presumably, what introduces the dative argument in (218b) is a head that encodes the inalienable possession relation with the theme) has both thematic and structural case to be checked, then the clitic *se* can be viewed to check its thematic case and the auxiliary 'be' to be selected as the reflex of its structural case checking procedure. The unchecked structural case on Appl is checked by means of Appl forming a single morphological unit with F (along with V). The case checking procedures and concomitant auxiliary selection in the accusative and dative reflexives are sketched in (219a) and (219b), respectively (where [st.case] indicates structural case; thematic case that is checked by *se* is not shown for the sake of simplicity). Note that in (219b), the set of thematic and structural case on V is checked by its complement.

(219) a.



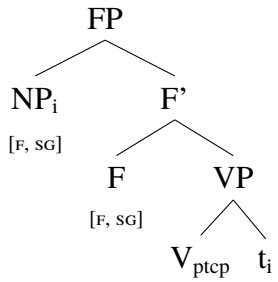
b.



The analysis above solves the apparent problem of selecting 'be' as a perfect auxiliary in the dative reflexive, which involves two NPs and thus may not be considered unaccusative (Reinhart and Siloni 2004).

Turning to the case of participle agreement, I suggest that the functional head F introduced above is responsible for it as well. More specifically, I hypothesize that F projects a specifier by attracting the object of the participle, and agrees in gender and number with it through the spec-head relation. I also hypothesize that the morphological exponence of the participle is determined by the feature specifications of F, copied from the NP in its specifier. If F does not project a specifier, its features will have the values [M, SG] by default. In this view, the participle must agree with the surface subject in the unaccusative or the passive because in these constructions, the subject is a derived one that moves to its surface position from the object position of the participle. As the movement proceeds successive-cyclically, the moving NP stops by Spec,FP and copies its gender and number features onto F, before moving further to the surface subject position. Then, F with the feature specifications copied from the derived subject determines the form of the participle. That is, the unaccusative and the passive with a participle verb involve the derivational procedure illustrated below. For simplicity, it is assumed that the verb is introduced as a participle into the derivation.

(220)



The reflexive can be viewed to involve the same procedure with (220), with the only difference being that it is Op, not an overt NP, that undergoes movement and shares its feature values with F. Given that Op is always bound by the initiator argument in the reflexive, the feature specifications of F must be determined according to those of the initiator argument.

One advantage of the current view of 'be' selection and participle agreement is that it can give an account of the peculiar behavior of the dative reflexive. As shown in (218) above, the dative reflexive selects 'be' as a perfect auxiliary, patterning together with the accusative reflexive. But interestingly enough, participle agreement does not occur in the dative reflexive as shown below.[39]

(221) Marie s'est dit/*dite qu'elle n'aimait plus Jean. French
Marie.F.SG SE is said/*said.F.SG that.she not.loved any.longer Jean
'Mary said to herself that she didn't love John any longer.'

(Dobrovie-Sorin 2017:3659, (53))

The pattern of the dative reflexive in (221), distinct from its accusative counterpart in (217a), follows from the current analysis if it is assumed that the dative argument is initially introduced in a position higher than FP (Recall that FP is immediately above VP). If the dative argument is in a position higher than FP, it will not be 'attracted' by F to Spec,FP; consequently, participle agreement will not take place in the dative reflexive.

Another advantage of the current view is that it can account for the fact that participle agreement does not take place when the auxiliary 'have' is used instead of 'be'. Compare the forms of the participle in (222a) and (222b):

(222) a. La branche a cassé. French
the branch.F.SG has broke

[39] In (218a) above, also, the participle *envoyé* 'sent' does not agree with the feminine singular subject *Marie*.

b. La branche s'est cassée.
the branch.F.SG SE is broke.F.SG
'The branch broke.'

Consider also the participle in (223), which according to Sportiche (1998) is an unaccusative that selects the auxiliary 'have' because it patterns like the unaccusative regarding *en*-extraction in the *il*-impersonal as shown in (224a–b) (compare these examples with (210a–b) which involve the unergative verb for 'sleep').

(223) Les tomates ont cuit/*cuites. French
the tomato.F.PL have cooked/*cooked.F.PL
'The tomatoes are cooked.'

(Sportiche 1998:143, (106c))

(224) a. Il a cuit beaucoup de tomates. French
there has cooked a.lot of tomatoes
'There were cooked many tomatoes.'

b. Il en a cuit beaucoup.
there of.them has cooked a.lot
'A lot of them were cooked.'

(from Sportiche 1998:143, (107c))

According to the current view, participle agreement does not take place when 'have' is used because selecting 'have' indicates that the verb does not have unchecked structural case, which in turn means that the derivation does not involve FP to whose specifier the internal argument moves for agreement. Hence, the absence of participle agreement in (222a) and (223).

Finally, the current approach predicts that in a language like English where Refl selects a predicate directly, the reflexive patterns entirely with the unergative and never with the unaccusative. Insofar as the evidence that has been put forward in the literature is concerned, this does appear to be the case (Takehisa 2003; Reinhart and Siloni 2005; Alexiadou and Schäfer 2014). With respect to licensing of a resultative secondary predicate (225), *X-way* construction (226), *out*-prefixation (227), and *er*-nominalization (228), the reflexive ('a' sentences) patterns together with the unergative ('b' sentences) but not with the unaccusative ('c' sentences).

(225) a. * John washed clean.

b. * Dora shouted hoarse.

c. The river froze solid.

(226) a. John dressed his way into a better job.
(modified from Takehisa 2003:225, (3))

b. John danced his way out of the room.
(Takehisa 2003:225, (2a))

c. * The wood burns its way to the ground.
(Goldberg 1997:45, (48))

(227) a. Mary out-dressed her sister at the party yesterday.

b. Mary out-ran John.

c. * The windows out-broke the cups.

(228) a. Mary dresses slowly because she is an elegant dresser.
(Reinhart and Siloni 2005:398, (20c))

b. Mary runs so fast because she is an experienced runner.
(Reinhart and Siloni 2005:398, (20a))

c. * John will probably remain behind because he is an avid remainer.

To summarize the section, the reflexive in French is derived under the proposed approach in such a way that the surface subject is base-generated in the external argument position, and the external argument is associated with the variable for an internal argument through the mediation of Op that moves out of the internal argument position. This section suggests that the apparently contradicting properties of the French reflexive are due to these two derivational procedures. It exhibits the non-unaccusative properties with respect to *en*-extraction and focus interpretation, because the surface subject is introduced in the external argument position and thus never occupies an internal argument position at any point in the derivation. And it exhibits the unaccusative properties with respect to auxiliary selection and participle agreement, because French verbs have both thematic and structural case features to

be checked, and Op undergoes movement out of an internal argument position. Admittedly, the analyses presented in this section is rather sketchy. I leave to future research the task of developing the outlined analysis further into a more comprehensive one.

2.5 Summary

In this chapter, I have proposed a syntactic account of natural reflexives in which their interpretation is attained through a reflexive element, Refl, and their crosslinguistic variation is resulted from the different selectional requirements that Refl has in each language. The universal features of Refl is to take two open predicates of type ⟨e,st⟩ as its two arguments, the second of which is of category Voice, and to associate the variables of the two arguments with each other, thereby encoding reflexivity in the linguistic structure. The variation between languages was suggested to be because of the different types of the first argument that Refl selects. In English-type languages, it selects an element of category V, and in French-type languages, an element of category Voice. It was also suggested that the semantic type of Refl requires its first argument in French-type languages to be expletive VoiceP abstracted over by Op. It has been shown that the derivational differences between the two types of languages, which are due essentially to a single selectional difference, were responsible for the variation between languages including the productivity of reflexivization, the possibilities of ECM and dative reflexivization, reflexive nominalization, and proxy interpretation. It has also been claimed that the paradoxical behaviors of the French reflexive can be attributed to the peculiar derivational procedure that the reflexive in the language is involved in: the movement of Op from a lower argument position to the edge of expletive VoiceP in addition to the generation of the surface subject in the external argument position.

This chapter extends Labelle's (2008) view of the French reflexive to the other languages, and Pylkkänen's (2002, 2008) view of the typology of causatives to natural reflexives. By doing so, the chapter shows that the crosslinguistic patterns of natural reflexives can be accounted for in purely syntactic terms, without resorting to a generative process in the lexicon. There still remain some fundamental as well as technical issues at large. No explanation has been given as to why the so-called "grooming predicates" are compatible with

Refl in English-type languages. It was simply captured with the assumption that the possible complement of Refl is listed in each language (or 'l-selection' is involved). From a more technical point of view, the nature of the functional head "F" that is responsible for auxiliary selection and participle agreement in French has not been addressed. The apparent limitations notwithstanding, I believe the discussion in the chapter shows that natural reflexives can be accounted for in a more economical and empirically more adequate way from a purely syntactic perspective, providing a support for the purely syntactic approach to argument structure and argument structure alternations.

Chapter 3

CAUSATIVES

3.1 Introduction

The valence-changing alternation of the kind exemplified in (229a–b) is often called the causative-inchoative alternation, or more generally the causative alternation, as the variant with higher valence is interpreted to involve a causing event and a causer argument that bring about the eventuality described by the variant with lower valence.[1] The intransitive example in (229a) describes a simple change-of-state event where the window went into a broken state from a previously unbroken state, and the transitive example in (229b) is interpreted to involve an event where the change-of-state event described by (229a) was caused by a mischievous child.

(229) a. The window broke.

b. A mischievous child broke the window.

The causative alternation as such is extremely widespread, if not universal, across languages (Pylkkänen 2002, 2008; Schäfer 2009), and the investigations of the alternation often lead to important implications for the conception of grammar, in particular, for the views on the nature of the lexicon and how the syntactic, semantic, and morphological modules of grammar conspire to generate linguistic representations (Schäfer 2009). Naturally, the alternation has received considerable attention in the literature of argument structure.

Previous analyses of the causative alternation may be grouped roughly into two camps depending on which component of grammar is viewed to bear the primary responsibility.

[1] Previous versions of parts of the material discussed in this chapter were presented at the 25th Japanese/Korean Linguistics Conference (JK 25; in collaboration with Mai Ha Vu), the 19th Seoul International Conference on Generative Grammar (SICOGG 19), the 92nd Annual Meeting of the Linguistic Society of America (LSA 92), and the 42nd Annual Penn Linguistics Conference (PLC 42).

In one camp, it has been argued that the component that is responsible for the causative alternation is the lexicon (Hale and Keyser 1986; Levin and Rappaport Hovav 1995; Reinhart 2002; Reinhart and Siloni 2005; Koontz-Garboden 2009). According to the lexicalist approach, either the causative or the non-causative variants of the predicates participating in the alternation are derived through the operation of decausativization or causativization in the lexicon, thereby the derived variants project structures in the syntax that are distinct from those of the underived ones. In this view, then, the lexicon is not a mere repository of memorized information; instead, it is a computationally active component of grammar in which productive processes take place to generate novel linguistic representations. In the other camp, on the other hand, it has been claimed that the causative alternation is attributed to the specific way in which each variant is constructed in the syntax, eliminating the need for the computationally active lexicon in grammar (Harley 1995, 2008; Pesetsky 1995; Pylkkänen 2002, 2008; M. Son 2006; Ramchand 2008; Legate 2014). According to the purely syntactic view of the causative alternation, the lexicon can simply be the repository of idiosyncratic information; consequently, grammar can be modeled to have a single component, namely the syntax, where novel linguistic representations are productively generated.[2]

Previous analyses of the causative alternation may also be categorized into three broad groups based on their view on the direction of derivation. The analyses in one camp, which adopt the causativization approach, have argued that the causative variant of the alternation is derived from the non-causative variant (Hale and Keyser 1986; Pesetsky 1995; Harley 2008). Those in another camp have argued that the non-causative variant is derived from the causative variant, adopting the decausativization approach (Levin and Rappaport Hovav 1995; Reinhart 2002; Reinhart and Siloni 2005; Koontz-Garboden 2009). Lastly, the analyses

[2] Yet another possible approach to the causative alternation would be the kind proposed by Horvath and Siloni (2011), which may be called the split-lexicalist approach (cf. Reinhart and Siloni 2005). Horvath and Siloni argue that (i) the causative-inchoative alternation (which they call the transitive-unaccusative alternation) is due to the lexical operation of decausativization crosslinguistically (Levin and Rappaport Hovav 1995; Reinhart 2002; Reinhart and Siloni 2005), and (ii) the instances of the causative alternation that do not fall under the causative-inchoative alternation are due to the process of causativization, which may apply either in the lexicon (e.g., Hungarian) or in the syntax (e.g., Japanese) depending on a language. The split-lexicalist approach may be grouped together with the lexicalist approach in a broad sense as both introduce the generative lexicon into grammar.

which adopt the common-base approach have claimed that the causative and the non-causative variants share a common base, and each variant is derived independently from the shared base (Harley 1995; Embick 2004; M. Son 2006; Ramchand 2008; Cuervo 2015).[3]

The arguments over the direction of derivation are often closely associated with the issues of how the syntactic, semantic, and morphological modules of grammar operate and/or interact with one another to derive the end results. The decausativization approach, for instance, has been motivated by the apparent pattern that the availability of the non-causative variant seems to hinge on the types of external argument that the causative variant can have (Levin and Rappaport Hovav 1995; Reinhart 2002; Cuervo 2015; Lavine and Babby 2019). This, if true, means that a lexical verb must have access to its external argument in the lexicon, which in turn means that the external argument is projected by, rather than is severed from, the lexical verb in the syntax (cf. Chomsky 1995; Kratzer 1996). From a morphological perspective, the causative alternation in a language like Russian, exemplified in (230), may be taken to support the decausativization approach assuming that morphology reflects the direction of derivational relations, that is, if the morphologically marked variant is assumed to be derived from its unmarked counterpart (cf. Haspelmath 1993).[4]

(230) rasplavit' 'melt (tr.)' $\longrightarrow$ rasplavit'-sja 'melt (intr.)'
(Haspelmath 1993:89, (2a))

In the case of the causativization approach, on the other hand, an external argument does not have to be associated with a verb in the lexicon, since addition of the causative components (namely, the causing event and a causer argument) can be done in the syntax as well.

[3] The analyses adopting the decausativization approach mostly (if not all) also adopt the lexicalist approach, in that eliminating lexical information in the syntax is generally thought to be prohibited (No-Tempering Condition; Chomsky 2008:138). On the other hand, the analyses in most (if not all) of the common-base camp also adopt the purely syntactic approach: they employ combinatorial processes of the structure-building system to derive each variant of the alternation. The causativization approach has been proposed from both the lexicalist (e.g., Hale and Keyser 1986) and the purely syntactic (e.g., Harley 2008) perspectives.

[4] Haspelmath (1993) suggests that the direction of derivation can be either way and is determined based on the likelihood of spontaneity of the event denoted by a given predicate. If the event denoted by a predicate is more likely to occur spontaneously, the causative form of the predicate tends to be morphologically marked (hence, the direction from the non-causative to the causative variant). On the other hand, if the event denoted by a predicate is less likely to occur spontaneously, the non-causative form of the predicate tends to be morphologically marked (hence, the direction from the causative to the non-causative variant).

The apparent correlation in a language like English between the possible types of external argument that the causative variant can have and the availability of the non-causative variant, then, would need to be given an independent account (as in, e.g., Rappaport Hovav and Levin 2012; Rappaport Hovav 2014). Morphologically, the alternation in a language like Mongolian shown in (231) may be taken to support the causativization approach.

(231) xajl-ax 'melt (intr.)' ⟶ xajl-uul-ax 'melt (tr.)'
(Haspelmath 1993:89, (2b))

In (231), the causative variant is morphologically marked whereas the non-causative variant is not, indicating that the potential direction of derivation may be from the non-causative to the causative variant. From a semantic perspective, both the decausativization and the causativization approaches, in general, maintain the view that the semantics of the non-causative variant is part of the semantics of the causative variant. In other words, the causative variant is typically taken to have the causative components on top of the semantics denoted by the non-causative variant.[5]

The semantic "part-of" relationship between the non-causative and the causative variants does not have to hold under the common-base approach. The two variants share a common base, but the rest of the derivation may involve different lexical items in each variant such as v_{do} in the derivation of a causative variant and v_{go} in the derivation of a non-causative variant (Cuervo 2015). The direction of derivation is not an issue relevant for the common-base approach. As for the morphological marking that has been considered to reflect the direction of derivation, different possibilities have been proposed under the framework of Distributed Morphology (Halle and Marantz 1993). For instance, the suffix that appears in the causative variant in Japanese has been claimed to be the exponence of the light verb that is responsible for introducing the causative components into the structure (Harley 2008); and the suffix that marks the non-causative variant in Greek has been suggested to be the realization of the light verbs that do not project an external argument (Embick 2004).

[5] Koontz-Garboden (2009) argues building on Chierchia (2004) that the non-causative variant is derived through reflexivization of the causative variant. In this view, the causative and the non-causative variants must both have the causative components.

In this chapter, I provide an analysis of the causative alternation in Korean exemplified in (232), focusing on the points of controversy introduced above.[6]

(232) a. Swuken-i mal-lass-ta.
towel-NOM dry-PST-DECL
'The towel dried.'

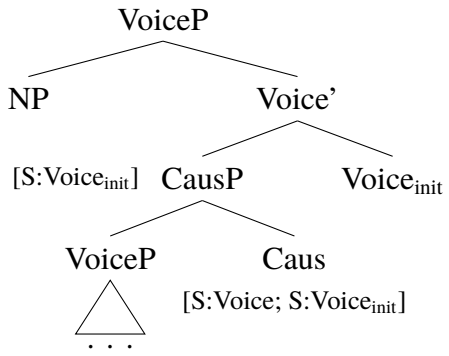
b. Apeci-ka swuken-ul mal-li-ess-ta.
father-NOM towel-ACC dry-CI-PST-DECL
'The father dried the towel.'

Specifically, I propose that the causative variant in Korean involves a universal causative element, *Caus(e)*, in (233) (Pylkkänen 2002, 2008). The function of Caus is to introduce the causing event that brings about the eventuality denoted by the predicate that it takes.

(233) $[\![\textbf{Caus}]\!] = \lambda P \lambda e \exists v[P(v)$ & cause(e,v)] (where v indicates e 'event' or s 'state')

Adopting the split vP hypothesis (Pylkkänen 2002, 2008; Alexiadou *et al.* 2006, 2015; Schäfer 2008; Harley 2013, 2017; Legate 2014; Lavine and Babby 2019), I also suggest that the causer argument is introduced by initiative Voice (Kratzer 1996) above CausP in the syntax. That is, I adopt the view that causation is not due to the presence of a causer argument (Pylkkänen 2002, 2008). The argument that is often referred to as a causer is simply an argument which initiates the causing event. Finally, I argue that the causative head in Korean has the selectional features [S:Voice; S:$\text{Voice}_{\text{init}}$] and thus takes an element of category (initiative or expletive) Voice and initiative Voice in turn. The causative variant of the alternation, then, will involve the structure shown in (234).

(234)



[6] I will gloss the suffix that marks the causative variant as -CI in this chapter. Below, I suggest that the suffix is the morphological realization of a Voice head.

In the sense that the causative components in the causative variant are introduced by independent heads on top of the structure of a non-causative variant, the current approach is in line with the causativization approach. The current approach also follows the tradition of the purely syntactic approach, as the addition of the causative components is viewed to be done in the syntax.

This chapter is organized as follows. In Section 3.2, I provide an overview of the basic properties of the morphological causative in Korean. In this section, I conclude that the causative variant is derived from the non-causative variant through causativization in Korean. But as for the component of grammar where the alternation occurs, I simply note, without drawing any conclusion yet, that some of the properties of the causative seem to indicate that it occurs in the lexicon while others seem to indicate that it occurs in the syntax. Putting this issue on hold for a while, I put forward the proposal in Section 3.3, providing analyses of the basic patterns of the causative in Korean. Then in Section 3.4, I discuss the paradoxical behaviors of the causative noted in Section 3.2 and argue that the behaviors can be accounted for under the purely syntactic approach adopted in this chapter. That is, the component of grammar responsible for the causative alternation is concluded to be the syntax. Moving on to Section 3.5, I discuss the well-known overlap between the causative and the passive in Korean. I claim in this section that despite the apparent similarities between the two constructions, they are derived in two different ways, and accordingly, have different syntactic properties. Lastly, in Section 3.6, I provide a brief summary of the chapter, claiming that the purely syntactic causativization approach can be generalized to all languages.

3.2 Morphological causatives in Korean

The causative alternation in Korean takes place morphologically with the suffix -Cɪ, whose allomorphs include *-i*, *-hi*, *-li*, *-ki*, *-wu*, *-kwu*, and *-chwu*.[7]

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[7] Korean also has a few "lexical" causatives exemplified in (i), which lack morphological marking and do not participate in the transitivity alternation (M. Son 2006), and analytic causatives exemplified in (ii), which are derived with the light verb *ha-* 'do'.

(235)

kkakk-:	'cut'	*kkakk-i-*:	'cause to cut'
ilk-:	'read'	*ilk-hi-*:	'cause to read'
mwul-:	'bite'	*mwul-li-*:	'cause to bite'
an-:	'hug'	*an-ki-*:	'cause to hug'
kkay-:	'wake up'	*kkay-wu-*:	'cause to wake up'
sos-:	'soar'	*sos-kwu-*:	'cause to soar'
mac-:	'be.hit'	*mac-chwu-*:	'cause to be hit', 'hit'

The classes of predicates that participate in the causative alternation include unaccusatives (236), unergatives (237), state-denoting intransitives (238)[8], as well as transitives (239)–(240).

(236) a. Elum-i nok-ass-ta.
ice-NOM melt-PST-DECL
'The ice melted.'

b. Swuni-ka elum-ul nok-i-ess-ta.
Swuni-NOM ice-ACC melt-CI-PST-DECL
'Swuni melted the ice.'

(237) a. Ai-ka wus-ess-ta.
child-NOM laugh-PST-DECL
'The child laughed.'

b. Emeni-ka ai-lul wus-ki-ess-ta.
mother-NOM child-ACC laugh-CI-PST-DECL
'The mother made the child laugh.'

(i) Cheli-ka mwun-ul yel-ess-ta.
Cheli-NOM door-ACC open-PST-DECL
'Cheli opened the door.'

(ii) Swuni-ka elum-ul nok-key ha-yess-ta.
Swuni-NOM ice-ACC melt-CONN do-PST-DECL
'Swuni caused the ice to melt.'

In this chapter, the "lexical" and analytic causatives in (i)–(ii) will not be analyzed in any detail, while the analytic causative will be discussed occasionally for the purpose of clarifying the properties of the morphological causative. Throughout the chapter, the terms "causative" and "causative alternation" will be used to refer to morphological ones unless indicated otherwise.

[8] The state-denoting intransitive refers to the adjective, which in Korean can be used as a predicate without a copula. A state-denoting intransitive is considered to be of category A not category V, because it is not compatible with the suffix *-(nu)n* which signals that some event or activity is taking place at the moment of utterance: *Elum-i nok-nun-ta* ('The ice is currently melting') vs. **Soli-ka khu-n-ta* (*Intended*: 'The sound is being loud'). For convenience, I will assume in this chapter that adjectives are verbalized before being used as a stem predicate in the causative. The analysis will not be affected if adjectives can be used without verbalization as long as it is instead assumed that expletive Voice can combine either with unaccusative VP or with AP.

(238) a. Latio soli-ka cokum kh-ess-ta.
radio sound-NOM a.little be.big-PST-DECL
'The radio was a little loud.'

b. Cheli-ka latio soli-lul cokum khi-wu-ess-ta.
Cheli-NOM radio sound-ACC a.little be.big-CI-PST-DECL
'Cheli turned up the volume of the radio a little.'

(239) a. Kicatul-i yonguyca-uy sinpwun-ul al-ass-ta.
reporters-NOM suspect-GEN identity-ACC know-PST-DECL
'The reporters knew the identity of the suspect.'

b. Kyengchal-i kicatul-eykey yonguyca-uy sinpwun-ul al-li-ess-ta.
police-NOM reporters-DAT suspect-GEN identity-ACC know-CI-PST-DECL
'The police informed the reporters of the identity of the suspect.'

(240) a. Haksayngtul-i chayk-ul ilk-ess-ta.
students-NOM book-ACC read-PST-DECL
'The students read a book.'

b. Kim sensayng-i haksayngtul-eykey chayk-ul ilk-hi-ess-ta.
Kim teacher-NOM students-DAT book-ACC read-CI-PST-DECL
'Mr. Kim made the students read a book.'

The examples in (236)–(240) show that basically any class of predicates can participate in the causative alternation in Korean; accordingly, the alternation is realized not only as a transitive-intransitive alternation as in (236)–(238), but also as a transitive-ditransitive alternation as in (239)–(240). Notice also from (235) and (236)–(240) that the suffix -CI invariably appears in the causative variants, not in the non-causative ones; that is, the causative, not the non-causative, variants are morphologically marked. I take the two properties as such to indicate that the causative alternation occurs through the process of causativization in Korean: i.e., the causative variants are derived from the non-causative counterparts, not vice versa.

Although the direction of derivation is relatively clear in the causative alternation in Korean, the component of grammar in which the alternation takes place is not so obvious. With respect to the possibility of coordination and the scopes of short-form negation and an adverb of degree, the causative behaves as if it involves a single predicate which occupies a single terminal node in the syntax. This may be considered to show that the causative alternation takes place in the lexicon. On the other hand, when it comes to the Condition

B effect and the scopes of an adverb of manner and the adverbial for 'again', the causative behaves as if it involves two predicates which project their own phrases that respectively represent the embedded event and the causing event. This may be considered to show that the causative alternation takes place in the syntax. In Section 3.4, I argue that the mono-predicational properties of the causative may as well be given syntactic accounts. For now, I introduce the paradoxical behaviors simply to point out that the causative alternation in Korean can be analyzed to take place either in the lexicon or in the syntax.

First, coordination is impossible under the suffix -Ci in the morphological causative (see Kuroda 2003 and Harley 2008 for the case of Japanese, and Horvath and Siloni 2011 for the case of Hungarian). This is shown in (241a–b): in (241a), stem predicates are coordinated below -Ci; and in (241b), verb phrases including the stem predicate and its internal argument are coordinated below -Ci.

(241) a. * Ai-ka pwumo-lul [wul-ko wus]-ki-ess-ta.
child-NOM parents-ACC [cry-and laugh]-CI-PST-DECL
Intended: 'The child made the parents cry and laugh.'

b. * Emeni-ka aitul-eykey [os-ul ip-ko chayk-ul ilk]-hi-ess-ta.
mother-NOM children-DAT [clothes-ACC put.on-and book-ACC read]-CI-PST-DECL
Intended: 'The mother made children put on clothes and read a book.'

The pattern of the morphological causative as such contrasts with that of the analytic causative involving the light verb *ha-* 'do'. In the analytic causative, coordination is possible under *ha-* as shown below.

(242) a. Ai-ka pwumo-lul [wul-ko wus]-key ha-yess-ta.
child-NOM parents-ACC [cry-and laugh]-CONN do-PST-DECL
'The child made the parents cry and laugh.'

b. Emeni-ka aitul-eykey [os-ul ip-ko chayk-ul ilk]-key ha-yess-ta.
mother-NOM children-DAT [clothes-ACC put.on-and book-ACC read]-CONN do-PST-DECL
'The mother made children put on clothes and read a book.'

The analytic causative clearly involves two predicates, one the main predicate and the other the light verb. The unavailability of coordination under -Ci in (241) that contrasts with the availability of coordination under *ha-* in (242), then, may be taken to indicate that the suffix -Ci

does not count as an independent predicate whereas the light verb *ha-* does.[9] Put differently, the fact that coordination is impossible under -CI in the morphological causative may be analyzed to indicate that the 'predicate+CI' as a whole is a single lexical item that occupies a single terminal node in the syntax.[10] One might think that coordination is impossible below -CI in (241) because of the suffixal nature of -CI, which requires a verbal stem to which it can attach. However, coordination is still possible below a tense marker even though the tense marker is also a suffix that requires a verbal stem.

(243) a. Ai-ka pwumo-lul [wul-li-ko wus-ki]-ess-ta.
child-NOM parents-ACC [cry-CI-and laugh-CI]-PST-DECL
'The child made the parents cry and made them laugh.'

b. Emeni-ka aitul-eykey [os-ul ip-hi-ko chayk-ul ilk-hi]-ess-ta.
mother-NOM children-DAT [clothes-ACC put.on-CI-and book-ACC read-CI]-PST-DECL
'The mother made children put on clothes and made them read a book.'

The grammaticality of (243a–b) shows that coordination below an element that requires a verbal stem itself is not a problem for (241a–b). The contrast between (241a–b) and (243a–b), then, might once again be considered to mean that the stem predicate and the suffix -CI, unlike the verbal stem and the tense marker, form a single lexical item that occupies a single terminal node in the syntax.

Another pattern that appears on the surface to indicate that the stem predicate and -CI together form a single predicate involves the scope of short-form negation (cf. Horvath and

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[9] The unavailability of coordination below -CI must not be because the stem predicates are associated with improper forms of -CI. The stem predicates in (241b), *ip-* and *ilk-*, are both realized with the allomorph *-hi* in the causative; yet, the example is ungrammatical.

[10] The same pattern is observed when coordination occurs with *-kena* 'or' as shown in (ia–b). The example in (ia) is an instance of the morphological causative, and the example in (ib) is an instance of the analytic causative.

(i) a. * Cwupangcang-i kakcong ccikay-lul [kkulh-kena col]-i-ess-ta.
chef-NOM various stew-ACC [boil-or boil.down]-CI-PST-DECL
Intended: 'The chef boiled or boiled down various stews.'

b. Cwupangcang-i kakcong ccikay-lul [kkulh-kena col]-key ha-yess-ta.
chef-NOM various stew-ACC [boil-or boil.down]-CONN do-PST-DECL
'The chef made various stews boil or boil down.'

See Harley (2008:25–26, 47, endnote 6), who reports that coordination under *-(s)ase* is available in the *sase*-causative in Japanese only when it is an instance of disjunction.

Siloni 2011). As illustrated in (244a–b), short-form negation always targets the causing event in the morphological causative, and it cannot target the embedded event denoted by the stem predicate.

(244) a. Cheli-ka elum-ul an nok-i-ess-ta.
Cheli-NOM ice-ACC NEG melt-CI-PST-DECL
i. *Possible*: 'Cheli did not make the ice melt.'
ii. *Impossible*: 'Cheli made the ice not melt.'

b. Pwucang-i cikwentul-eykey swul-ul an mek-i-ess-ta.
head.of.dept-NOM employees-DAT liquor-ACC NEG eat-CI-PST-DECL
i. *Possible*: 'The head of the department did not make the employees drink alcohol.'
ii. *Impossible*: 'The head of the department made the employees not drink alcohol.'

The rigid scope of short-form negation in the morphological causative, again, contrasts with its ambiguous scope in the analytic causative. In the analytic causative, short-form negation may target either the causing event or the embedded event as illustrated below.[11]

[11] Note that the interpretation where negation scopes over the entire causing event is not readily accessible in the analytic causative in (245a–b). This is because the interpretation can be unambiguously encoded with long-form negation as exemplified below.

(i) Cheli-ka elum-ul nok-key ha-ci ahn-ass-ta.
Cheli-NOM ice-ACC melt-CONN do-CONN NEG-PST-DECL
'Cheli did not make the ice to melt.'

That is, since the expression with long-form negation has a more specific interpretation, the choice of short-form negation over long-form negation in (245a–b) generates the implicature that the target of negation is the embedded event, not the causing event. Although it is not easily accessible in an out-of-the-blue context, the interpretation where the causing event is negated can be easily obtained in certain contexts such as one where the speaker is identifying an individual who caused the embedded event to occur. The relevant examples are shown below.

(ii) a. A: Ney-ka nwunsalam-ul nok-key hay-ss-ni?
you-NOM snowman-ACC melt-CONN do-PST-Q
'Did you make the snowman melt?'
B: Nay-ka an nok-key hay-ss-e. Swuni-ka nok-key hay-ss-e.
I-NOM NEG melt-CONN do-PST-DECL Swuni-NOM melt-CONN do-PST-DECL
'I did not make it melt. Swuni did it.'

b. A: Kim pwucang-i cikwentul-eykey kwunmwu cwung swul-ul mek-key
Kim head.of.dept-NOM employees-DAT work during liquor-ACC eat-CONN
hay-ss-supni-ka?
do-PST-POLITE-Q
'Did Mr. Kim make the employees drink alcohol at work?'

(245) a. Cheli-ka elum-ul an nok-key ha-yess-ta.
Cheli-NOM ice-ACC NEG melt-CONN do-PST-DECL
i. 'Cheli did not make the ice melt.' (→ Someone else made the ice melt/The ice melted by itself.)
ii. 'Cheli made the ice not melt.' (→ The ice did not melt.)

b. Pwucang-i cikwentul-eykey swul-ul an mek-key ha-yess-ta.
head.of.dept-NOM employees-DAT liquor-ACC NEG eat-CONN do-PST-DECL
i. 'The head of the department did not make the employees drink alcohol.' (→ Someone else made the employees drink alcohol/The employees drank alcohol voluntarily.)
ii. 'The head of the department made the employees not drink alcohol.' (→ The employees did not drink alcohol.)

The fixed scope of short-form negation in the morphological causative, which contrasts with that in the analytic causative, may be analyzed to be because the morphological causative involves a causative verb formed in the lexicon, and thus, negation cannot scope over only part of the causative verb in the syntax.

In a similar vein, an adverb of degree cannot modify the stem predicate alone. The example in (246a) shows that a degree adverb like *cengmallo* 'really' can modify the predicate *kh-* 'be big'. When the predicate is used in the morphological causative, however, the adverb can no longer modify the embedded predicate. It always scopes over the entire causing event as in (246b).

(246) a. Latio soli-ka cengmallo kh-ess-ta.
radio sound-NOM really be.big-PST-DECL
'The radio was really loud.'

b. Cheli-ka latio soli-lul cengmallo khi-wu-ess-ta.
Cheli-NOM radio sound-ACC really be.big-CI-PST-DECL
i. *Impossible*: 'Cheli made the radio really loud.'

B: Kim pwucang-i an mek-key hay-ss-supni-ta. Park kwacang-i mek-key hay-ss-supni-ta.
Kim head.of.dept-NOM NEG eat-CONN do-PST-POLITE-DECL Park head.of.section-NOM eat-CONN do-PST-POLITE-DECL
'Mr. Kim did not make them drink at work. Mr. Park did it.'

The examples in (iia–b) show that short-form negation can in principle scope over the causing event as well as over the embedded event alone.

ii. *Possible*: 'Cheli really turned up the volume of the radio.'

This contrasts with the analytic causative, in which a degree adverb may modify either the embedded or the embedding predicate.

(247) Cheli-ka latio soli-lul cengmallo khu-key ha-yess-ta.
Cheli-NOM radio sound-ACC really be.big-CONN do-PST-DECL
i. 'Cheli made the radio really loud.'
ii. 'Cheli really turned up the volume of the radio.'

The rigid scope of an adverb of degree in the morphological causative that contrasts with its ambiguous scope in the analytic causative, again, may be taken by some to indicate that the morphological causative involves a single predicate rather than two.

The behaviors of the morphological causative illustrated so far seem to indicate that the causative alternation in Korean occurs in the lexicon, because the causative behaves as if it involves one predicate that occupies a single terminal node in the syntax (see Horvath and Siloni 2011 for the case of Hungarian). However, the Condition B effect as well as the scopes of a manner adverb and *tasi* 'again' show that this might not be the case (M. Son 2006).

First, building on Miyagawa's (1984) observation and Hara's (1999) claim about the *sase*-causative in Japanese, Horvath and Siloni (2011) argue that the Condition B effect provides evidence that the morphological causative in Hungarian consists of a single predicate. Consider the following examples:

(248) a. Kati$_i$ le-fotóz-ta őt$_{*i}$. Hungarian
Kati.NOM down-photograph-PST.DEF.DO she.ACC
'Kati has photographed her.'

b. Kati$_i$ le-fotóz-tat-ta őt$_{*i}$ Mari-val.
Kati.NOM down-photograph-CAUS-PST.DEF.DO she.ACC Mari-INS
'Kati made Mari phtograph her.'

(Horvath and Siloni 2011:667, (18a–b))

In the simple transitive in (248a), the pronominal object *őt* 'she' cannot be coindexed with the subject *Kati* 'Kati'; and the same pattern is observed in the causative counterpart of (248a) shown in (248b), where *őt* and *Kati* are not allowed to be coindexed. According to

Condition B of Reinhart and Reuland (1993), a predicate whose coarguments are coindexed must either be lexically reflexive or have a SELF-anaphor as an argument. The impossibility of coindexation between the pronominal object and the causer subject in (248b), then, would indicate that the two arguments are coarguments of a single predicate.

The causative in Korean shows a different pattern from the causative in Hungarian. The pronominal object *ku* 'he' and the subject *Cheli* 'Cheli' cannot be coindexed in the simple transitive as in (249a); but, contrary to the case in Hungarian, the causative counterpart of (249a) allows coindexation between the pronominal object and the subject as in (249b).

(249) a. Cheli$_i$-nun sangtam-ul thonghay ku$_{*i}$-lul al-key toy-ess-ta.
Cheli-TOP counseling-ACC through he-ACC know-CONN become-PST-DECL
'Through the counseling, Cheli got to know him.'

b. Cheli$_i$-nun cese-lul thonghay taycwung-eykey ku$_{?i}$-lul al-li-key
Cheli-NOM book-ACC through public-DAT he-ACC know-CI-CONN
toy-ess-ta.
become-PST-DECL
'Through the book, Cheli got to make the public know him.'

The example in (249b) with coindexation between the causer subject and the pronominal object may sound unacceptable at first (presumably because of the competing elements with more specific functions like *caki* 'self' or *caki casin* 'oneself'), but the example becomes acceptable if it is being narrated in a television documentary about the life of Cheli.[12] Coindexation between the subject and the object in the simple transitive in (249a) is still disallowed even if the example is being uttered in the documentary context.

Under Condition B of Reinhart and Reuland (1993), the possibility of coindexation between the pronominal object and the causer subject in (249b) can be interpreted to indicate that the two arguments are not coarguments of a single predicate: the former is an argument of the lexical predicate, whereas the latter is an argument of the causation predicate. Then, the contrasting behaviors between the causatives in Korean and in Hungarian with respect to the Condition B effect may be taken to show that the morphological causative in Korean involves

[12] Thanks to Myung Hye Yoo and Juyeon Cho for pointing this out.

two predicates which respectively project the argument(s) associated with the embedded event and the argument associated with the causing event.

Furthermore, M. Son (2006) observes that an adverb of manner has ambiguous scope when it is used in the morphological causative unlike the scope of an adverb of degree that has been discussed above. So, adverbs like *chenchenhi* 'slowly' and *kechilkey* 'roughly' can be associated either with the embedded event or the causing event as illustrated below.

(250) a. Ai-ka elum-ul chenchenhi nok-i-ess-ta.
child-NOM ice-ACC slowly melt-CI-PST-DECL
   i. 'The child made the ice slowly melt (by putting it in the fridge).'
   ii. 'The child melted the ice not in a hurry (by blowing her breath to it a few times whenever she sees it).'

b. Kamtok-i paywu-lul uyca-ey kechilkey anc-hi-ess-ta.
director-NOM actor-ACC chair-LOC roughly sit-CI-PST-DECL
   i. 'The director made the actor roughly sit in a chair (in a movie).'
   ii. 'The director roughly sat the actor down in a chair (in real life).'

c. Emeni-ka ai-eykey achim-ul chenchenhi mek-i-ess-ta.
mother-NOM child-DAT breakfast-ACC slowly eat-CI-PST-DECL
   i. 'The mother made the child eat breakfast slowly (by warning him that he might get a stomachache if he eats too quickly).'
   ii. 'The mother, not in a hurry, made the child eat breakfast.'

M. Son reports that the adverbial for 'again' in Korean has ambiguous scope as well. The following examples illustrate the interpretations that M. Son suggests can be obtained.

(251) a. Apeci-ka sonswuken-ul tasi thay-wu-ess-ta.
father-NOM handkerchief-ACC again burn-CI-PST-DECL
   i. 'The father made [the handkerchief burn again].'
   ii. 'The father again made the handkerchief burn.'

b. Yenge sensayng-i Swuni-eykey yeymwun-ul tasi ilk-hi-ess-ta.
English teacher-NOM Swuni-DAT example.sentence-ACC again read-CI-PST-DECL
   i. 'The English teacher made [Swuni read the example sentence again].'
   ii. 'The English teacher again made Swuni read the example sentence.'

Later in the chapter, I will argue that there are other interpretations that can be obtained in examples like (251a–b). Regardless, what matters for the current purpose is that the causative

predicate in the morphological causative does not seem to be formed in the lexicon when it comes to the scopes of a manner adverb and the adverbial for 'again'. Instead, it appears that the morphological causative involves two predicates in the syntax, each of which can be targeted by a manner adverb or the adverbial for 'again'.[13]

To summarize this section, it seems relatively clear that the causative alternation in Korean occurs through causativization; that is, the causative variant is derived from the corresponding non-causative variant. The component of grammar in which causativization applies is not entirely clear, however. On the one hand, the lexicon seems to be responsible for the alternation as the causative variant behaves as if it involved a single lexical item with respect to the possibility of coordination and the scopes of short-form negation and an adverb of degree. On the other hand, with respect to the Condition B effect and the scopes of an adverb of manner and the adverbial for 'again', the embedded and the causing events in the causative appear to be represented by independent predicates in the syntax. In the next section, I propose that causativization takes place in the syntax in Korean; and in the section that follows it, I offer analyses of the patterns discussed in the current section.

3.3 The syntax and semantics of causatives

3.3.1 Proposal

Following Pylkkänen (2002, 2008), I first assume that the morphological causative in Korean involves the causative element, *Caus(e)*, shown in (252), which introduces the causing event that brings about the eventuality denoted by the complement that it takes.

(252) $[\![\textbf{Caus}]\!] = \lambda P \lambda e \exists v[P(v) \,\&\, \text{cause}(e,v)]$ (where v indicates e 'event' or s 'state')

I also assume that Voice comes in two variants: initiative Voice (Kratzer 1996), which combines with transitives or unergatives, and semantically vacuous expletive Voice (Labelle 2008; Schäfer 2008; Wood 2012, 2015; Alexiadou *et al.* 2015), which combines with non-agentive intransitives. The variants of Voice are shown in (253) and (254), respectively.

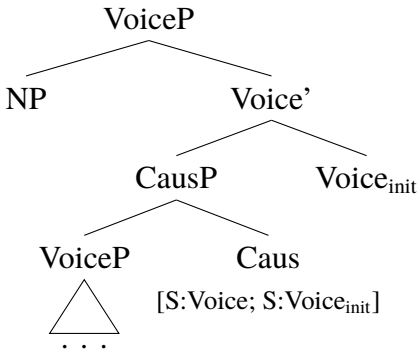
[13] Although the view that adverbs are structure-sensitive is not uncontroversial (Dowty 1979; Fabricius-Hansen 2001; etc.), I will assume in this dissertation that their scope is determined according to the position in which they are introduced in the structure.

(253) $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e[\text{initiator}(e,x)]$

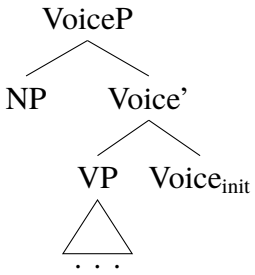
(254) $[\![\textbf{Voice}_{\textbf{expl}}]\!] = \lambda P[P]$

With these assumptions, I propose that Caus has the selectional feature [S:Voice; S:$\text{Voice}_{\text{init}}$], and thus takes an element of category Voice and initiative Voice in turn. The causative in Korean then will have the structure shown in (255a), which is constructed based on the non-causative variants shown in (255b–c). The structure in (255b) represents the transitive and the unergative, and the structure in (255c) represents the non-agentive intransitive.

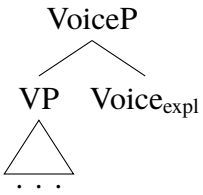
(255) a.



b.



c.



The fact that the causative alternation is found on all classes of predicates in Korean can be accounted for by the structure in (255a), in particular, by the selectional property of Caus that is responsible for the derivation of (255a). Since Caus takes VoiceP as its complement and it does not take the projection of a predicate directly, Caus cannot be semantically selective about the predicate that it occurs with. Accordingly, the causative alternation, in principle, is not limited to a certain class of predicates in Korean.

As for the suffix -Cɪ that marks the causative variant in the causative alternation, I assume following K. Kim (2009) that it is the morphological realization of Voice.[14] And I propose that the allomorphy of the Voice head is listed in the lexicon as exemplified below

[14] A suggestive piece of evidence for this view may come from the fact that -Cɪ is identifiable in different contexts other than the causative. For instance, the suffix is found in the simple transitive verbs that do not participate in the causative alternation: e.g., *na-i-* 'submit', *swuk-i-* 'bend', *pel-li-* 'spread (arms, legs, etc.)', among others (S. Kim 1997:165). It is also found in the intransitive verbs that do not participate in the causative (or passive) alternation: e.g., *mwul-li-* 'be boring', *kel-li-* 'take (time)', *wumcik-i-* 'move', etc. There are also the transitive-intransitive alternation where the transitive variant appears with *-ttuli* whereas the intransitive variant appears with *-ci*: *mwune-ttuli-* 'make collapse', *mwune-ci-* 'collapse', *ssule-ttuli-* 'fell down', *ssule-ci-* 'fall down', etc. It should not be concluded based on these cases that the suffix -Cɪ in the causative actually is the realization of Voice. But it seems reasonable to assume that it is, unless there is evidence to the contrary.

(see I. Lee 2005 and M. Son 2006, among others, for a more comprehensive list of the forms of causative verbs).

(256) a. Voice → *i* / {*mek-* 'eat', *cwuk-* 'die', *kkulh-* 'boil', ...} __ Caus
b. Voice → *hi* / {*nelp-* 'be wide', *ilk-* 'read', *ip-* 'put on', ...} __ Caus
c. Voice → *li* / {*kal-* 'plow', *al-* 'know', ...} __ Caus
d. Voice → *ki* / {*an-* 'hug', *wus-* 'laugh' ...} __ Caus
e. Voice → *wu* / {*ssu-* 'put on', *ci-* 'carry', *kkay-* 'wake', ...} __ Caus
f. Voice → *kwu* / {*sos-* 'soar'} __ Caus
g. Voice → *chwu* / {*mac-* 'be hit', *nuc-* 'be late', ...} __ Caus

The allomorphy of Voice in the causative must be listed as in (256), rather than determined by rules, because as J. Yeon (1991) points out, the allomorphs can hardly be phonologically motivated from a synchronic point of view, for there is no phonetic feature common to the elements that should be preceded by each allomorph. Moreover, there are cases where homonyms are marked with different allomorphs as illustrated below.

(257) a. *cha-* 'kick' *cha-i-* 'cause to kick'
b. *cha-* 'be filled' *chay-wu-* 'cause to be filled'

(258) a. *ssu-* 'write' *ssu-i-* 'cause to write'
b. *ssu-* 'put on' *ssuy-wu-* 'cause to put on'

The examples in (257) show that the predicates *cha-* 'kick' and *cha-* 'be filled' should be marked with different forms of the suffix -Cɪ even though they have exactly the same form, and the examples in (258) show that the same holds for the predicates *ssu-* 'write' and *ssu-* 'put on'. For many speakers, even a single predicate like *tot-* 'sprout' may be marked with either one of the two allomorphs, *-wu* and *-kwu*.[15]

(259) Sinsenhan namwul-i ipmas-ul tot-wu/kwu-ess-ta.
Fresh seasoned.vegetable-NOM appetite-ACC sprout-CI-PST-DECL
'Fresh seasoned vegetable stimulated the appetite.'

Examples like (257)–(259) show that the allomorphy of Caus is not systematic (hence, is not determined by rules), but is idiosyncratic (hence, is listed in the lexicon).

[15] The prescribed form listed in the dictionary is *tot-wu*, yet many contemporary speakers of Korean use the two forms interchangeably.

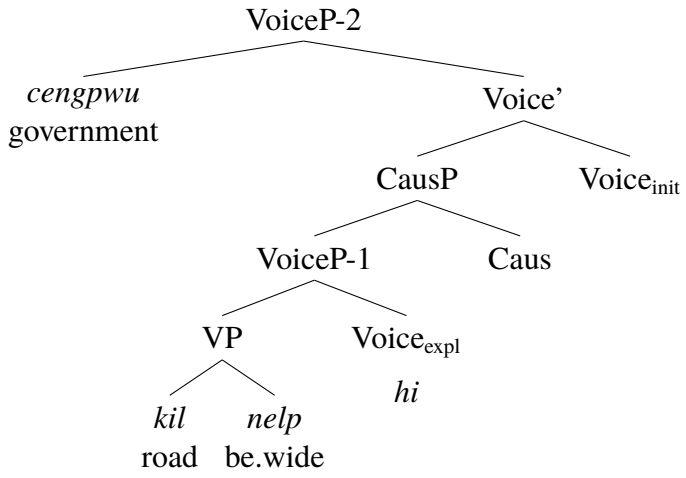
Apart from the morphology, the listedness (with no default morphophonological rule) is also responsible for the relatively low productivity of the morphological causative. In contemporary Korean, the morphological causative is productive to a certain extent but not as productive as the analytic causative, and the possibility of causativizing a given predicate itself may vary between speakers. The morphological causative is not entirely productive, because the allomorphy for each predicate has to be "memorized", which means that the derivation of the morphological causative cannot converge purely by grammatical rules unlike that of the analytic causative. Even if the causative structure in (255a) were derived for a given predicate in the narrow syntax, the derivation could still be filtered out as ill-formed at PF if the form of Voice were not listed in the lexicon, and thus, could not be spelled-out. As for the speaker variation, since the allomorphy has to be memorized, the information stored in one speaker's lexicon may be absent in another speaker's lexicon (just as different speakers have different vocabularies). Consequently, *kel-li-* 'cause to walk' and *ppal-li-* 'cause to wash (clothes)', for instance, may sound odd or even "ungrammatical" to some speakers (including myself), even though they are repeatedly used as well-formed examples in the literature and are listed as possible forms in the Standard Korean Dictionary published by the National Institute of the Korean Language. In short, morphological causativization is a productive process in Korean in the sense that Caus does not impose any selectional restrictions on the class of predicates that it occurs with, but it is restricted in idiosyncratic ways due to the listedness of the allomorphy of Voice in the causative structure.[16]

Turning to the specific derivation of the causative in Korean, the causative of a state-denoting intransitive like (260) will be derived as illustrated in (261) under the current approach. Recall that v in the denotation of Caus is not a variable per se; it is the symbol for eventuality, borrowed from Koontz-Garboden (2009) to indicate 'either state or event'.

(260) Cengpwu-ka kil-ul nelp-hi-ess-ta.
government-NOM road-ACC be.wide-CI-PST-DECL
'The government widened the road.'

[16] J.-h. Yang (2018) notes that the causative allomorphs had already begun to lose phonological regularity and become idiosyncratic in Medieval Korean (approximately 1000–1600 CE). This suggests that morphological causativization has been losing its productivity since as early as the 11th century.

(261)



i. $[\![\textbf{nelp}]\!] = \lambda x \lambda s[\text{wide}(s,x)]$

ii. $[\![\textbf{VP}]\!] = \lambda s[\text{wide}(s,\text{road})]$

iii. $[\![\textbf{Voice}_{\textbf{expl}}]\!] = \lambda P[P]$

iv. $[\![\textbf{VoiceP-1}]\!] = \lambda s[\text{wide}(s,\text{road})]$

v. $[\![\textbf{Caus}]\!] = \lambda P \lambda e \exists v[P(v) \,\&\, \text{cause}(e,v)]$

vi. $[\![\textbf{CausP}]\!] = \lambda e \exists s[\text{wide}(s,\text{road}) \,\&\, \text{cause}(e,s)]$

vii. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e'[\text{initiator}(e',x)]$

viii. $[\![\textbf{Voice'}]\!] = \lambda x \lambda e \exists s[\text{wide}(s,\text{road}) \,\&\, \text{cause}(e,s) \,\&\, \text{initiator}(e,x)]$

ix. $[\![\textbf{VoiceP-2}]\!] = \lambda x \lambda e \exists s[\text{wide}(s,\text{road}) \,\&\, \text{cause}(e,s) \,\&\, \text{initiator}(e,\text{government})]$

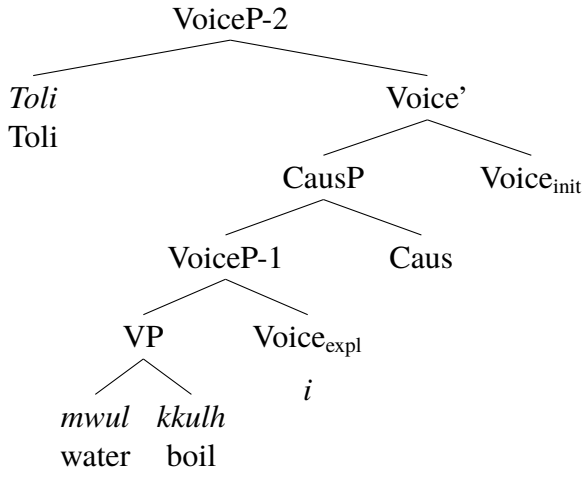
The stem predicate *nelp-* 'be wide' takes the theme argument *kil* 'road', forming VP in (261ii). Expletive Voice, then, combines with VP and forms VoiceP-1, where the form of expletive Voice is determined to be *-hi* according to the information listed in the lexicon. Since expletive Voice is semantically vacuous, VoiceP-1 has exactly the same denotation with VP as shown in (261iv). Caus, then, takes VoiceP-1 and introduces the causing event that brings about the state denoted by VoiceP-1. The resulting CausP in (261vi) is taken by initiative Voice and is composed with it through Kratzer's (1996) Event Identification as in (261vii)–(261viii). The initiator argument of the causing event *cengpwu* 'government', then, is introduced into the derivation, resulting in VoiceP-2 which denotes the set of causing events that bring about a wider state of the road. When the rest of the derivation above VoiceP-2

is completed (in which TP, CP, etc. are projected), the example in (260) is generated with the interpretation 'the government caused the road to be wider' or simply 'the government widened the road'.[17]

The derivations of the other types of causatives proceed in similar ways. To begin with, the derivation of the unaccusative-based causative proceeds in exactly the same way with that of the causative of a state-denoting intransitive, except that this time the eventuality brought about by the causing event is an event rather than a state. An example of the unaccusative-based causative and its derivation are presented below. Hereafter, I will not delineate the steps of semantic composition for the derivation.

(262) Toli-ka mwul-ul kkulh-i-ess-ta.
Toli-NOM water-ACC boil-CI-PST-DECL
'Toli boiled the water.'

(263)



[17] The embedded state in the causative in (260) is interpreted as if it were a comparative because the state which the predicate *nelp-* 'be wide' denotes is gradable. If the government has widened the road, the road must have attained a wide state compared to its previous state, even though it might not be "wide" in absolute terms (in the utterance context or for its intended purposes). When the state denoted by an embedded predicate is not gradable, it is not interpreted as such as shown in (i).

(i) Swuni-ka namtongsayng-ul koylop-hi-ess-ta.
Swuni-NOM younger.brother-ACC be.distressed-CI-PST-DECL
'Swuni teased his younger brother.' (*Literal*: 'Swuni caused his younger brother to be distressed.')

In (i), the embedded predicate *koylop-* 'be distressed' denotes a non-gradable state; accordingly, the caused state in the example is not interpreted as a comparative. As Hee-Don Ahn and Satoshi Tomioka (p.c.) point out, the difference between the two types of "deadjectival" causatives may as well be represented in the syntax as in, e.g., M. H. Yoo (2019). Since it is beyond the scope of the dissertation, I will leave the task of providing a more concrete analysis of the difference to future research.

i. ⟦**kkulh**⟧ = λxλe[boil(e,x)]

ii. ⟦**VP**⟧ = λe[boil(e,water)]

iii. ⟦**Voice$_{\textbf{expl}}$**⟧ = λP[P]

iv. ⟦**VoiceP-1**⟧ = λe[boil(e,water)]

v. ⟦**Caus**⟧ = λPλe'$\exists$v[P(v) & cause(e',v)]

vi. ⟦**CausP**⟧ = λe'$\exists$e[boil(e,water) & cause(e',e)]

vii. ⟦**Voice$_{\textbf{init}}$**⟧ = λxλe''[initiator(e'',x)]

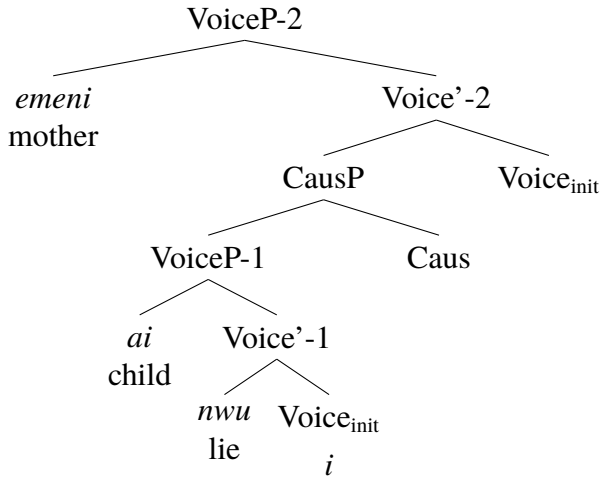
viii. ⟦**Voice'**⟧ = λxλe'$\exists$e[boil(e,water) & cause(e',e) & initiator(e,x)]

ix. ⟦**VoiceP-2**⟧ = λe'$\exists$e[boil(e,water) & cause(e',e) & initiator(e',Toli)]

The derivation of the unergative-based causative is minimally different from that of the unaccusative-based one: the accusative-marked object in the unergative-based causative is an initiator introduced by initiative Voice rather than a theme introduced by a lexical predicate. An example of the unergative-based causative and its derivation are shown in (264) and (265), respectively.

(264) Emeni-ka ai-lul nwu-i-ess-ta.
mother-NOM child-ACC lie-CI-PST-DECL
'The mother made the child lie down.'

(265)



i. ⟦**nwu**⟧ = λe[lie(e)]

ii. ⟦**Voice$_{\textbf{init}}$**⟧ = λxλe'[initiator(e',x)]

iii. ⟦**Voice'-1**⟧ = λxλe[lie(e) & initiator(e,x)]

iv. ⟦**VoiceP-1**⟧ = λe[lie(e) & initiator(e,child)]

v. ⟦**Caus**⟧ = λPλe'∃v[P(v) & cause(e',v)]

vi. ⟦**CausP**⟧ = λe'∃e[lie(e) & initiator(e,child) & cause(e',e)]

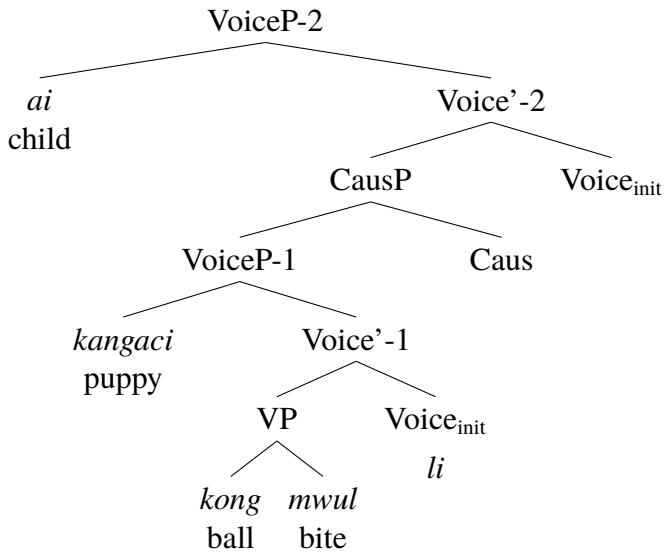
vii. ⟦**Voice'-2**⟧ = λxλe'∃e[lie(e) & initiator(e,child) & cause(e',e) & initiator(e',x)]

viii. ⟦**VoiceP-2**⟧ = λe'∃e[lie(e) & initiator(e,child) & cause(e',e) & initiator(e',mother)]

The derivation of the transitive-based causative, again, proceeds in exactly the same way with that of the unergative-based causative, except that this time the lexical predicate takes a theme argument.

(266) Ai-ka kangaci-eykey kong-ul mwul-li-ess-ta.
child-NOM puppy-DAT ball-ACC bite-CI-PST-DECL
'The child made the puppy bite the ball.'

(267)



i. ⟦**mwul**⟧ = λxλe[bite(e,x)]

ii. ⟦**VP**⟧ = λe[bite(e,ball)]

iii. ⟦**Voice$_{init}$**⟧ = λxλe'[initiator(e',x)]

iv. ⟦**Voice'-1**⟧ = λxλe[bite(e,ball) & initiator(e,x)]

v. ⟦**VoiceP-1**⟧ = λe[bite(e,ball) & initiator(e,puppy)]

vi. ⟦**Caus**⟧ = λPλe'∃v[P(v) & cause(e',v)]

vii. ⟦**CausP**⟧ = λe'∃e[bite(e,ball) & initiator(e,puppy) & cause(e',e)]

viii. ⟦**Voice'-2**⟧ = λxλe'∃e[bite(e,ball) & initiator(e,puppy) & cause(e',e) & initiator(e',x)]

ix. ⟦**VoiceP-2**⟧ = λe'∃e[bite(e,ball) & initiator(e,puppy) & cause(e',e) & initiator(e',child)]

Note that under the current view, the highest argument associated with the embedded event in the unergative-based and the transitive-based causative has the same initiator θ-role that it does in the non-causative counterpart (cf. Legate 2014; Akkuş 2019). The examples in (268)–(269) , where the argument in question can be modified by various initiator-detecting adverbials, show that this is in fact that case.

(268) Emeni-ka aitul-ul ekcilo cay-wu-ess-ta.
mother-NOM children-ACC unwillingly sleep-CI-PST-DECL
'The mother made the children go to bed against their will.'

(269) Emeni-ka adul-eykey taywang mantwu-lul ceckalak-ulo/chinkwu-wa
mother-NOM son-DAT great.king dumpling-ACC chopstick-with/friend-with
hamkkey/ekcilo mek-i-ess-ta.
together/unwillingly eat-CI-PST-DECL
'The mother made the son eat the jumbo dumpling with chopsticks/with his friend/against his will.'

In the unergative-based causative in (268), the causee, *aitul* 'children', can be modified by the initiator-oriented adverbial *ekcilo* 'unwillingly' as indicated in the English translation.[18] And in the transitive-based causative in (269), the causee, *adul* 'son', can be modified by the instrumental *ceckalak-ulo* 'with chopsticks' and the initiator-oriented comitative *chinkwu-wa hamkkey* 'with a friend', as well as the initiator-oriented adverbial *ekcilo* 'unwillingly'.[19] The adverbials used in (268)–(269) are known to detect an initiator argument associated with

[18] The adverbial that is most often used to detect an initiator, *ilpwule* 'deliberately', is not allowed to modify the causee for pragmatic reasons: it is contradictory to say that 'someone is made to do something' and 'they did it deliberately' at the same time. Thanks to Faruk Akkuş for pointing this out.

[19] The adverbials in (268)–(269), in principle, can also be interpreted to modify the surface subject, i.e., the causer, although the examples need to be modified somewhat to make them sound natural (e.g., someone being caused/forced with chopsticks to do something sounds awkward). These possibilities are ignored in the text for expository purposes, and accordingly, are not indicated in the English translations.

initiative Voice (Bruening 2013). The fact that these adverbials can modify the causee in (268)–(269), then, shows that the causee in the unergative- and transitive-based causatives indeed receives the initiator θ-role.

As is well-known, the causative of a transitive verb can often be interpreted to involve transfer of possession as shown below.

(270) a. Swuni-ka aki-eykey paci-lul ip-hi-ess-ta.
Swuni-NOM baby-DAT pants-ACC wear-CI-PST-DECL
'Swuni put the pants on the baby.'

b. Emeni-ka aki-eykey kamkiyak-ul mek-i-ess-ta.
mother-NOM baby-DAT cold.medicine-ACC eat-CI-PST-DECL
'The mother fed the baby medicine for cold.'

In (270a) and (270b), the dative-marked argument, *aki* 'baby', is interpreted as if it were a goal as indicated in the English translations. Naturally, examples like those in (270a–b) have been proposed to involve a type of applicative head, rather than initiative Voice, below CausP (M. Son 2006; K. Kim 2011; Legate 2014). But it appears that the dative-marked argument in (270a–b) is still an initiator, and thus must be associated initiative Voice as suggested in this chapter.

The dative-marked argument in (270) is semantically distinct from the goal in the sense that some action of the argument is still required for the embedded event to occur. Compare, for instance, the example in (270b) with the one in (271):

(271) Halapeci-ka sonnye-eykey poyak-ul han-chep ponay-ess-ta.
grandfather-NOM granddaughter-DAT invigorating.medicine-ACC one-CL send-PST-DECL
'The grandfather sent a set of (herbal) tonics to his granddaughter.'

In the ditransitive in (271), the dative-marked argument, *sonnye* 'granddaughter' is a goal, and the granddaughter does not have to do anything at all for the sending event to actually occur. However, in the case of (270b), the dative-marked argument is still an initiator in the sense that the baby has to do the action of swallowing for the eating event to occur.[20] Such

[20] The example in (270a) is more deceptive as the baby does not need to do anything for the putting-on event to take place. But the baby can always resist putting on the pants, preventing the event denoted by the stem predicate from actually taking place. In this sense, the dative-marked argument in (270a) is still in contrast with

a difference can be clearly seen when an initiator-oriented adverbial like *ekcilo* 'unwillingly' is used in each construction: the adverbial can modify the dative-marked argument in an example like (270b), but it cannot modify the dative-marked argument in an example like (271). The transitive-based causative and the ditransitive with *ekcilo* are shown in (272a) and (272b), respectively.

(272) a. Emeni-ka ai-eykey kamkiyak-ul ekcilo mek-i-ess-ta.
mother-NOM child-DAT cold.medicine-ACC unwillingly eat-CI-PST-DECL
'The mother fed the child medicine for cold against his will.'

b. * Halapeci-ka sonnye-eykey poyak-ul ekcilo
grandfather-NOM granddaughter-DAT invigorating.medicine-ACC unwillingly
ponay-ess-ta.
send-PST-DECL
Intended: 'The grandfather sent (herbal) tonics to his granddaughter against her will.'

The examples above indicate that the transitive-based causative which, at first glance, appears to involve an applicative head is actually derived with initiative Voice. That is, the dative-marked argument is not a goal but an initiator.[21,22]

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its counterpart in (271), since the granddaughter in (271) can never prevent the sending event from taking place (even though she may prevent the 'receiving' event).

[21] An issue as to why the initiator argument can be marked with dative case in the transitive-based causative as the goal argument is in the ditransitive is left to future research, while acknowledging the possibility that there might be a principled (semantic or configurational) reason for the overlap.

[22] J. J. Song (2015:103) notes that the morphological causative entails the embedded event as illustrated in (ia–b). If this were the case, it would also support the view in the text that the causee in the unergative- and transitive-based causative is introduced by initiative Voice as it would be in the non-causative variant, rather than by some other element.

(i) a. # Emeni-ka ai-lul phyenanhi nwu-i-ess-ciman ai-ka tomwuci nwup-ci ahn-ass-ta.
mother-NOM child-ACC comfortably lie-CI-PST-but child-NOM at.all lie-CONN NEG-PST-DECL
Intended: 'The mother laid down the child in a comfortable way, but the child did not lie down at all.'

b. # Sensayngnim-i haksayngtul-eykey chayk-ul khunsolilo ilk-hi-ess-ciman nwukwuto chayk-ul
teacher.NOM-NOM students-DAT book-ACC loudly read-CI-PST-but anyone bookACC
ilk-ci ahn-ass-ta.
read-CONN NEG-PST-DECL
Intended: 'The teacher made the students read a book out loud, but no one read it.'

The judgment, however, does not seem to be stable across speakers as the Korean speakers that I consulted found the above examples felicitous. It appears that the speakers who allow examples like (ia–b) interpret the

I suggest that the impression that the causee is a goal rather than an initiator in examples like (270a–b) is simply due to the world knowledge. The causee, *aki* 'baby', in the example in (270b), for instance, is construed as if it were a goal because according to the world knowledge, the most common way for a mother to make her baby take medicine is by the mother herself putting the medicine in the baby's mouth. In fact, the implication for transfer of possession observed in (270a–b) hardly arises in different contexts as exemplified below.

(273) a. Kamtok-i paywutul-eykey coyswupok-ul ip-hi-ess-ta.
director-NOM actors-DAT prison.garb-ACC wear-CI-PST-DECL
'The director made the actors wear prison garb.'

b. Emeni-ka apeci-eykey poyak-ul han-chep mek-i-ess-ta.
mother-NOM father-DAT invigorating.medicine-ACC one-CL eat-CI-PST-DECL
'The mother made the father take a set of (herbal) tonics.'

The examples in (273a–b) are less likely to be interpreted to involve transfer of possession, because the director of a movie usually does not dress the actors herself, and the father is an adult who can take medicine on his own (unless the father is in some critical medical condition, which is not likely to be the case considering the type of medicine he was made to take). Based on the discussion above, I conclude that the causee in the transitive-based causative has the same θ-role that it would have in the simple transitive. It is not an applied argument or a goal.

3.3.2 Other structural possibilities

I have proposed that the causative head has the selectional features [S:Voice; S:$\text{Voice}_{\text{init}}$] in Korean under the assumption that a causer argument is introduced by initiative Voice independently of the causative head that introduces the causing event (Pylkkänen 2002, 2008). The ungrammaticality of examples like (274a–b) follows from the fact that the causative head upward selects initiative Voice.

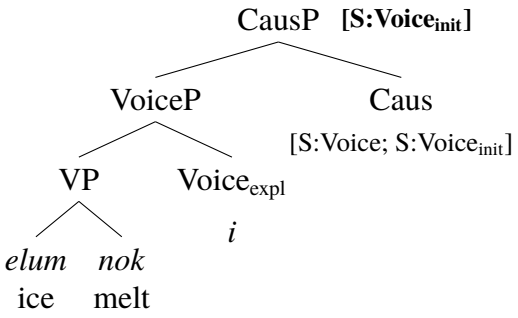
causing event as an "attempt" to bring about the embedded event. If the causing event is interpreted to be a mere attempt, the embedded event may not be entailed even if the structure of a causative contains the structure of the corresponding non-causative as claimed in this chapter.

(274) a. * Elum-i nok-i-ess-ta.
ice-NOM melt-CI-PST-DECL
Intended: 'The ice was caused to melt.'

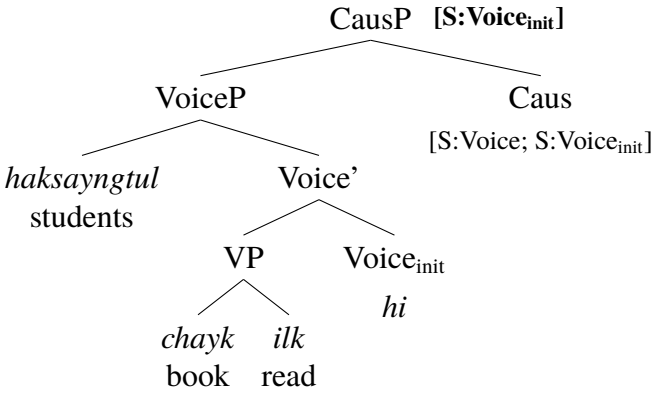
b. * Haksayngtul-i chayk-ul ilk-hi-ess-ta.
students-NOM book-ACC read-CI-PST-DECL
Intended: 'The students were caused to read a book.'

The above examples are ungrammatical, simply because the selectional feature [S:Voice$_{init}$] on the causative head is not checked off in their derivations. This is illustrated in (275a–b).

(275) a.



b.



In this sense, the causative in Korean is distinguished from languages like Japanese, Finnish (Pylkkänen 2002, 2008), Russian, and Icelandic (Lavine and Babby 2019), in which it has been suggested that initiative Voice can be absent while the causative head is present in the causative.

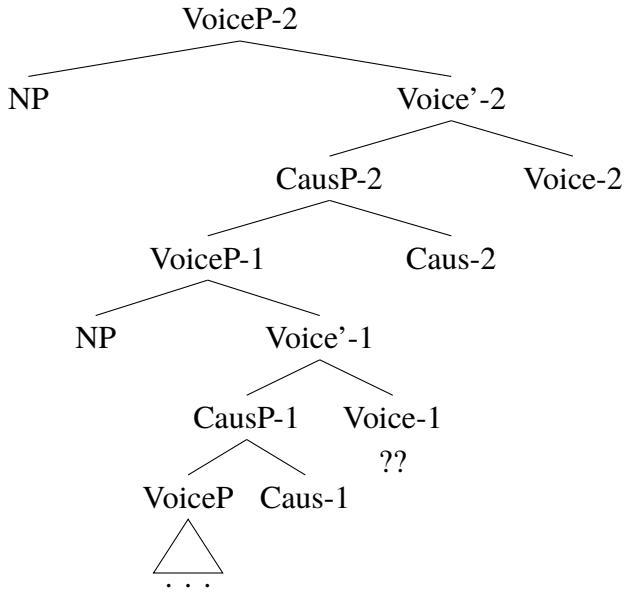
The current approach also rules out the possibility of morphological double causation exemplified in (276a–b).

(276) a. * Emeni-ka ai-eykey elum-ul nok-i(-i/hi/li/ki/wu/ku/chwu)-ess-ta.
mother-NOM child-DAT ice-ACC melt-CI(-CI)-PST-DECL
Intended: 'The mother made the child melt the ice.'

b. * Kyocang-i Kim sensayng-eykey haksayngtul-eykey chayk-ul
principal-NOM Kim teacher-DAT students-DAT book-ACC
ilk-hi(-i/hi/li/ki/wu/ku/chwu)-ess-ta.
read-CI(-CI)-PST-DECL
Intended: 'The principal made Mr. Kim made the students read a book.'

It has been claimed earlier that the suffix -CI that marks the causative variant is the morphological realization of Voice, and that the allomorphy of Voice in the causative structure is listed in the lexicon rather than determined by rules. Crucially, the listed information involves the stem predicate as well as the causative head as conditioning factors in the allomorphy of Voice (see (256) in Section 3.3.1). That is, the specific form of Voice in the causative is in part determined according to what predicate it is adjacent to in the syntax. If Voice is adjacent to *cwuk-* 'die', for instance, it will be realized as *-i* in the causative; and if Voice is adjacent to *kkay-* 'wake', then it will be realized as *-wu* in the causative, and so on. The impossibility of morphological double causation in Korean follows from this. Consider the ill-formed structure in (277), where the causativized structure (i.e., VoiceP-1) undergoes another round of causativization by being taken by the causative head (i.e., Caus-2) and initiative Voice (i.e., Voice-2) in turn:

(277)



In (277), Voice-1, which would introduce a causer argument for the lower causing event introduced by Caus-1, is adjacent to Caus-2 on the right and thus should be realized as

the suffix -Ci. However, the specific form of Voice-1 cannot be determined because there is no lexical predicate that is adjacent to it. Consequently, Voice-1 fails to be given a morphological form, and the derivation crashes at PF. Note that under the current approach, all the allomorphs of Voice in the causative are suppletive forms in that every single one of them has to be memorized by the speakers; in other words, there is no default form for Voice-1 in (277) that would be generated by a morphophonological rule. The allomorphy of -Ci, in this sense, is different from the cases found in English such as *sink-sank*, where suppletion takes place only for a few verbs and a default morphophonological rule applies elsewhere.

3.4 The paradoxical behaviors

It has been noted in Section 3.2 that the morphological causative in Korean behaves as if it involved a single predicate with respect to the possibility of coordination and the scopes of short-form negation and an adverb of degree. With respect to the Condition B effect and the scopes of an adverb of manner and the adverbial for 'again', however, the morphological causative behaves as if it involved two predicates, one associated with the embedded event and the other with the causing event. In this section, I offer analyses of the paradoxical behaviors of the morphological causative under the approach proposed in Section 3.3.

3.4.1 Coordination

Coordination is not allowed under the suffix -Ci in the morphological causative in Korean as shown below, repeated from (241a–b).

(278) a. * Ai-ka pwumo-lul [wul-ko wus]-ki-ess-ta.
child-NOM parents-ACC [cry-and laugh]-CI-PST-DECL
Intended: 'The child made the parents cry and laugh.'

b. * Emeni-ka aitul-eykey [os-ul ip-ko chayk-ul ilk]-hi-ess-ta.
mother-NOM children-DAT [clothes-ACC put.on-and book-ACC read]-CI-PST-DECL
Intended: 'The mother made children put on clothes and read a book.'

The ungrammaticality of (278a–b) might seem to indicate that, contrary to what has been argued in this chapter, the stem predicate and the suffix -Ci form a single lexical item that

occupies a single terminal node in the syntax. However, the impossibility of coordination exemplified in (278a–b) may also be given a syntactic account with the simple assumption that the heads in the domain of the same "first phase" (Ramchand 2008) must undergo head movement to form a complex head. That is, the coordination fact that is accounted for with the assumption of a lexical operation of causativization can also be easily accounted for with the assumption of a syntactic operation of head movement in the "first phrase". The "first phase" refers to the domain in which the information traditionally seen to reside within a lexical item is decomposed into distinct projections (Ramchand 2008:16–17). Under the current approach, it corresponds to the highest VoiceP in the causative structure.

The examples involving coordination under -Ci in (278a–b) will be derived if VPs are coordinated. Given the assumption made above, such a derivation inevitably leads to the violation of the coordinate structure constraint, and thus must be ruled out. In the case of (278b), for instance, the predicate in the first conjunct, *ip-* 'put on', does not have to undergo head movement because it is hosted by the conjunction *-ko* 'and'. The predicate in the second conjunct, *ilk-* 'read', however, has to undergo head movement as it is an element within the "first phase" that is not supported by any host element. But moving *ilk-* out of the second conjunct to adjoin to Voice leads to the violation of the coordinate structure constraint, since the constraint states that no element in a conjunct can be moved out of that conjunct in a coordinated structure. Therefore, the examples in (278a–b) are ungrammatical. Note that under the given assumption, coordination will be possible in the causative if projections bigger than the highest VoiceP are coordinated. Accordingly, verbal elements can be coordinated below the tense marker as shown in (243a–b), repeated below.

(279) a. Ai-ka pwumo-lul [wul-li-ko wus-ki]-ess-ta.
child-NOM parents-ACC [cry-CI-and laugh-CI]-PST-DECL
'The child made the parents cry and made them laugh.'

b. Emeni-ka aitul-eykey [os-ul ip-hi-ko chayk-ul ilk-hi]-ess-ta.
mother-NOM children-DAT [clothes-ACC put.on-CI-and book-ACC read-CI]-PST-DECL
'The mother made children put on clothes and made them read a book.'

If the highest VoicePs are coordinated, it is expected that each conjunct exhibits the full argument structure that is observed in the causative in the non-coordinated environment.

However, only VP-internal arguments are observable in the conjuncts in (279a–b). I assume that this is because the arguments outside VP in the conjuncts undergo across-the-board movement to some position higher than the coordinated VoicePs in the structure. In fact, it is possible for each conjunct to have the full argument structure when coordinated below the tense marker as shown below.

(280) a. [Atul-i apeci-lul wul-li-ko ttal-i emeni-lul wus-ki]-ess-ta.
[son-NOM father-ACC cry-CI-and daughter-NOM mother-ACC laugh-CI]-PST-DECL
'The son made the father cry and the daughter made the mother laugh.'

b. [Emeni-ka chesccay-eykey os-ul ip-hi-ko apeci-ka twulccay-eykey
[mother-NOM first.child-DAT clothes-ACC put.on-CI-and father-NOM second.child-DAT
chayk-ul ilk-hi]-ess-ta.
book-ACC read-CI]-PST-DECL
'The mother made the first child put on clothes and the father made the second child read a book.'

In (280a–b), the arguments in one conjunct differ from those in the other, and thus are not allowed to undergo across-the-board movement. Consequently, each conjunct contains all the arguments that are projected within the highest VoiceP in the typical causative.

To make a quick remark on the analytic causative, I assume that the causative light verb *ha-* 'do' takes non-finite TP as the complement based on the facts that long-form negation, which appears below TP, can appear between the lexical predicate and the light verb as in (281) and that the (highest) argument associated with the embedded predicate can receive nominative case as in (282), among others.

(281) Swuni-ka elum-ul nok-ci anh-key ha-yess-ta.
Swuni-NOM ice-ACC melt-CONN NEG-CONN do-PST-DECL
'Swuni made the ice not melt.'

(282) Swuni-ka elum-i nok-key ha-yess-ta.
Swuni-NOM ice-NOM melt-CONN do-PST-DECL
'Swuni made the ice melt.'

The possibility of coordination below the light verb in the analytic causative shown in (283a–b), then, follows from the analysis of the impossibility of coordination below -CI in the morphological causative.

(283) a. Ai-ka pwumo-lul [wul-ko wus]-key ha-yess-ta.
child-NOM parents-ACC [cry-and laugh]-CONN do-PST-DECL
'The child made the parents cry and laugh.'

b. Emeni-ka aitul-eykey [os-ul ip-ko chayk-ul ilk]-key ha-yess-ta.
mother-NOM children-DAT [clothes-ACC put.on-and book-ACC read]-CONN do-PST-DECL
'The mother made children put on clothes and read a book.'

Since it takes TP as the complement, the light verb in the analytic causative must not be within the "first phase". This means that the lexical predicate in the second conjunct does not undergo head movement to adjoin to the light verb (which can be clearly seen in the surface form since the connective *-key* is intervening between the lexical predicate and the light verb). Therefore, coordination below the light verb is possible without violating the coordinate structure constraint.

3.4.2 Short-form negation

Short-form negation in Korean always targets the causing event in the morphological causative, and it cannot target the embedded event. This is illustrated in (244a–b), repeated in (284a–b).

(284) a. Cheli-ka elum-ul an nok-i-ess-ta.
Cheli-NOM ice-ACC NEG melt-CI-PST-DECL
i. *Possible*: 'Cheli did not make the ice melt.'
ii. *Impossible*: 'Cheli made the ice not melt.'

b. Pwucang-i cikwentul-eykey swul-ul an mek-i-ess-ta.
head.of.dept-NOM employees-DAT liquor-ACC NEG eat-CI-PST-DECL
i. *Possible*: 'The head of the department did not make the employees drink alcohol.'
ii. *Impossible*: 'The head of the department made the employees not drink alcohol.'

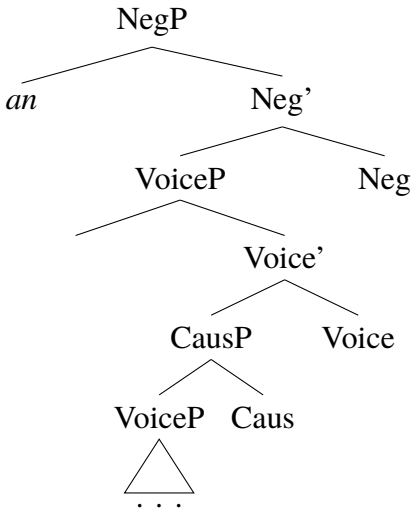
The rigid scope of short-form negation might appear to indicate that causative verbs are formed in the lexicon before being inserted in the syntax, but this does not necessarily have to be the case.

To show this, I first assume that short-form negation is NegP which has the selectional features [S:Voice; S:Clitic], and accordingly takes VoiceP as its complement and hosts the

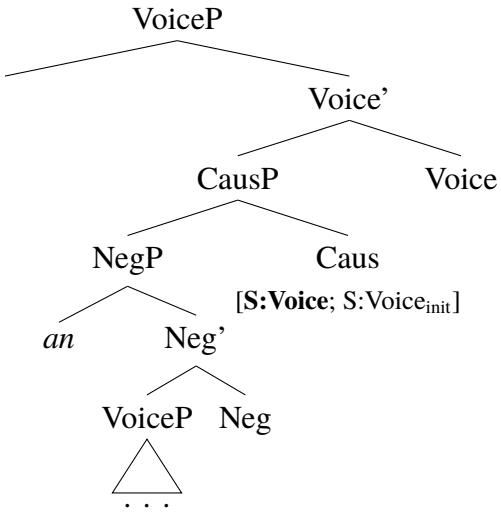
clitic *an* in its specifier. I further assume that the clitic *an* generated at Spec,NegP cliticizes onto any verbal stem in the domain of negation. The impossibility of short-form negation being associated with the embedded event follows from these assumptions and the proposal that Caus in Korean selects an element of category Voice as its complement.[23]

There are two VoicePs in the proposed structure of the morphological causative: one that is associated with the lexical predicate and the other that is associated with the causative head. Of the two VoicePs, Neg must always take VoiceP associated with the causative head as the complement as illustrated in (285a). If it takes VoiceP associated with the lexical predicate instead, the derivation cannot proceed any further because the causative head strictly selects VoiceP as its complement. The impossible derivation is shown in (285b).

(285) a.



b.



Since NegP should always appear above CausP as in (285a) and it cannot appear below CausP as in (285b), short-form negation always scopes above the causing event, but not below it, in the morphological causative. As for the clitic *an* in (285a), it would cliticize onto the lexical predicate because the lexical predicate is the only verbal stem in the domain of negation.

It has been noted in Section 3.2 that the scope of short-form negation is ambiguous in the analytic causative as shown below, repeated from (245a–b).

(286) a. Cheli-ka elum-ul an nok-key ha-yess-ta.
Cheli-NOM ice-ACC NEG melt-CONN do-PST-DECL

[23] Thanks to Benjamin Bruening for pointing out this possibility.

i. ‘Cheli did not make the ice melt.’
ii. ‘Cheli made the ice not melt.’

b. Pwucang-i cikwentul-eykey swul-ul an mek-key ha-yess-ta.
head.of.dept-NOM employees-DAT liquor-ACC NEG eat-CONN do-PST-DECL
i. ‘The head of the department did not make the employees drink alcohol.’
ii. ‘The head of the department made the employees not drink alcohol.’

The ambiguous scope of short-form negation in the analytic causative also follows from the assumptions that Neg in short-form negation takes an element of category Voice and that the clitic *an* at Spec,NegP cliticizes onto any verbal stem in the domain of negation.

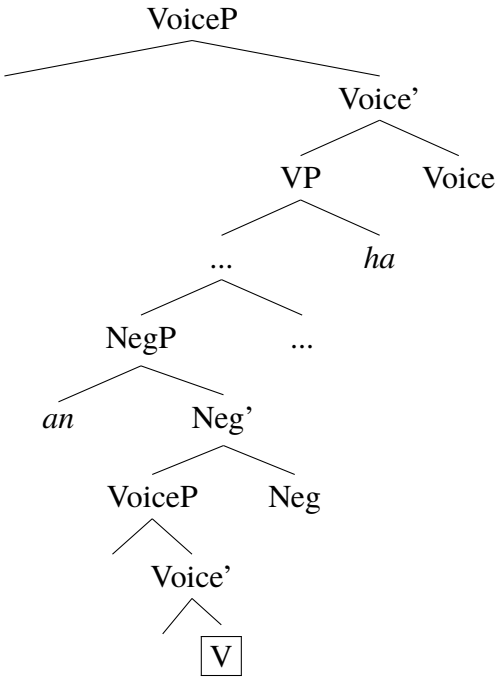
The analytic causative involves two VoicePs, one associated with the lexical predicate and the other associated with the light verb *ha-* ‘do’; so, there are two possibilities in which short-form negation is introduced into the derivation. Unlike the case of the morphological causative, the derivation will converge regardless of which VoiceP Neg takes as the complement. First, if Neg combines with VoiceP associated with the lexical predicate, then the low scope reading in (286bii) and (286bii) is obtained, while *an* cliticizes onto the lexical predicate. Second, if Neg combines with VoiceP associated with the light verb, the high scope reading in (286bi) and (286bi) is obtained. But in this case, there are two verbal stems in the domain of negation, namely, the lexical predicate and the light verb. Accordingly, the clitic *an* may cliticize onto the lexical predicate as in (286a–b) or onto the causative light verb as in (287a–b).

(287) a. Cheli-ka elum-ul nok-key an ha-yess-ta.
Cheli-NOM ice-ACC melt-CONN NEG do-PST-DECL
‘Cheli did not make the ice melt.’

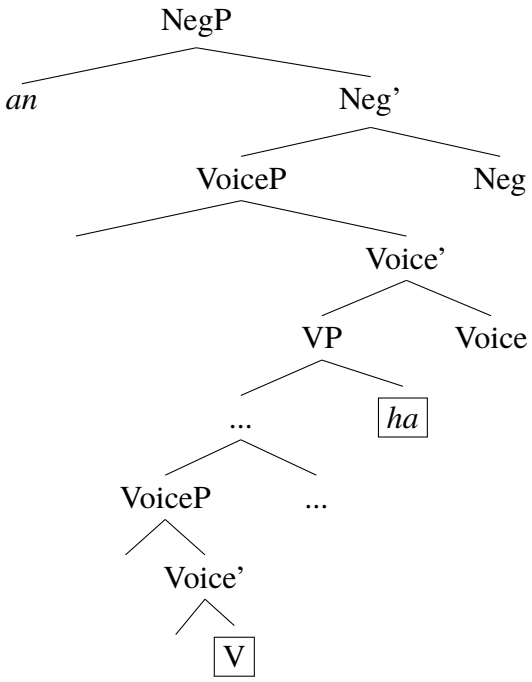
b. Pwucang-i cikwentul-eykey swul-ul mek-key an ha-yess-ta.
head.of.dept-NOM employees-DAT liquor-ACC eat-CONN NEG do-PST-DECL
‘The head of the department did not make the employees drink alcohol.’

Unlike the examples in (286a–b), the examples in (287a–b) are not ambiguous, and negation always scopes over the causing event reflecting the position where NegP appears in the structure. The simplified derivations of the analytic causative with short-form are presented below, where a potential target of cliticization is indicated by the square frame.

(288) a.



b.



The structures in (288a–b) account for the behaviors of short-form negation illustrated in (286a–b) as well as (287a–b). When the clitic *an* cliticizes onto V as in (286a–b), both the low scope and high scope readings are possible: the low scope reading is obtained from (288a), and the high scope reading is obtained from (288b) with *an* cliticized onto V. On the

other hand, when the clitic cliticizes onto the light verb *ha* as in (287a–b), only the high scope reading is possible. This is because the structure in (288b) is the only derivational possibility where *an* is cliticized onto *ha-*.

3.4.3 Adverbs of degree and manner

As noted in Section 3.2, the degree and manner adverbs show conflicting behaviors in the causative in Korean. On the one hand, the degree adverb cannot detect the embedded eventuality denoted by the stem predicate, and it always scopes over the entire causing event as shown in (289), repeated from (246b).

(289) Cheli-ka latio soli-lul cengmallo khi-wu-ess-ta.
Cheli-NOM radio sound-ACC really be.big-CI-PST-DECL
i. *Impossible*: 'Cheli made the radio really loud.'
ii. *Possible*: 'Cheli really turned up the volume of the radio.'

On the other hand, the manner adverb has ambiguous scope and may be associated either with the embedded eventuality or with the entire causing event (M. Son 2006). This is shown below, repeated from (250b).

(290) Kamtok-i paywu-ul uyca-ey kechilkey anc-hi-ess-ta.
director-NOM actor-ACC chair-LOC roughly sit-CI-PST-DECL
i. 'The director made the actor roughly sit in a chair.'
ii. 'The director roughly sat the actor down in a chair.'

The conflicting behaviors of the two kinds of adverbs may initially appear to be problematic for both the lexicalist and the syntactic approaches to the causative in Korean (cf. Pylkkänen 2002, 2008; see footnote 18 in Chapter 1). The behavior of the degree adverb can be problematic for the syntactic approach since it appears to indicate that the causative involves a causative verb formed in the lexicon, whose stem predicate cannot be targeted by an independent lexical item, i.e., the degree adverb, in the syntax. The behavior of the manner adverb can be problematic for the lexicalist approach for exactly the opposite reason: the stem predicate can be modified by an independent lexical item, i.e., the manner adverb, in the syntax, making it look like the stem predicate that introduces the embedded eventuality

occupies a syntactic position independent of the element that introduces the causing event. In this subsection, I claim that contrary to the initial impression, the conflicting behaviors are not really problematic for the syntactic approach like the one advocated in this dissertation.

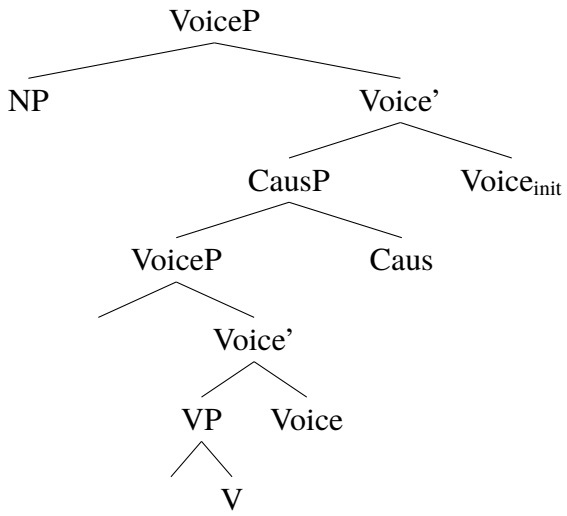
Many researchers suggest that the hierarchy of adverbs (Jackendoff 1972) is the reflection of the hierarchical positions in which different classes of adverbs appear in the syntax (Alexiadou 1997; Cinque 1999, 2004; among others). Among the researchers, Payne (2018) points out that the classes of adverbs that are often grouped together on semantic grounds show parallel syntactic behaviors as well; and based on this observation, she proposes a reduced adverb hierarchy shown in (291).

(291) Evaluative/speaker-oriented (e.g., *apparently*) > Epistemic (e.g., *probably*, *perhaps*) > Tense (e.g., *once*) & Aspectual (e.g., *already*, *no longer*, *still*, *almost*) > Frequency (e.g., *always*, *never*, *rarely*) & Degree (e.g., *actually*, *really*, *very*) > Manner (e.g., *neatly*, *quickly*) (Payne 2018:19, (1))

According to the adverb hierarchy above, the degree adverb should appear higher in the structure than the manner adverb does. The conflicting behaviors of the two kinds of adverbs in (289)–(290) can simply be due to the hierarchical relationship; that is, they can be ascribed to the different structural positions to which each kind of adverbs can attach.

To elaborate, I assume for concreteness that the degree adverb adjoins to the highest node of category V, whereas the manner adverb adjoins to any node of category V. With this assumption, consider the structure of the causative in Korean shown below:

(292)



In this dissertation, I assume that Caus is an element of category V (that is, Caus is actually V_{caus}; see Chapter 1). Then, according to the current view of the degree and manner adverbs, the degree adverb must adjoin to CausP because it can only adjoin to the highest V node in the structure, whereas the manner adverb may adjoin to either CausP or VP because it is allowed to adjoin to any node of category V. Consequently, the degree adverb always scopes over the causing event as in (289a–b), while the manner adverb has ambiguous scope as in (290a–b). This way, the assumption made above about the specific attachment sites of the degree and manner adverbs can easily account for the conflicting behaviors of the two kinds of adverbs in the causative in Korean. Importantly, the assumption is in line with the independently motivated adverb hierarchy in (291), which suggests that the conflicting behaviors of the adverbs are actually in support of the purely syntactic approach like the one proposed in this chapter.

Note lastly that the degree adverb (as well as the manner adverb, for that matter) can have ambiguous scope in the analytic causative, simply because the analytic causative involves two TPs (as assumed in Section 3.4.1), and thus the adverb can appear either in the embedded TP attaching to the lexical VP or in the matrix TP attaching to the light verb VP.

3.4.4 The Condition B effect

According to Condition B of Reinhart and Reuland (1993), a predicate whose co-arguments are coindexed must either be lexically reflexive or have a SELF-anaphor as an argument. In this view, the possibility of the pronominal object being bound by the causer argument in (293) indicates that the two arguments are not coarguments of the same predicate.

(293) Cheli$_i$-nun cese-lul thonghay taycwung-eykey ku$_{?i}$-lul hwaksilhi al-li-ess-ta.
Cheli-NOM book-ACC through public-DAT he-ACC certainly know-CI-PST-DECL
'Through the book, Cheli certainly made the public know him.'

Under the current approach, the causer argument *Cheli* 'Cheli' and the pronominal object *ku* 'he' in (293) may indeed be taken to be arguments of different predicates. This is because the causer argument is projected by initiative Voice associated with the causing event, whereas the pronominal object is projected by the stem predicate associated with the embedded event.

However, the issue is not as simple as it initially appears, because the causer argument and the pronominal object cannot be coindexed in the unaccusative-based causative as exemplified below.

(294) Cheli$_{i}$-ka pithonghan simceng-ulo ku$_{*i}$-lul cwuk-i-ess-ta.
Cheli-NOM grief.stricken feeling-with he-ACC die-CI-PST-DECL
'Cheli killed him grief-stricken.'

According to the derivation of the unaccusative-based causative proposed in this chapter, the causer argument is introduced by initiative Voice associated with the causing event, and the accusative-marked object is introduced by the lexical predicate denoting the embedded event just like the one in the transitive-based causative. This means that under Reinhart and Reuland's Condition B, the causer argument *Cheli* 'Cheli' and the pronominal object *ku* 'he' in (294) must be allowed to be coindexed, contrary to fact. So, it appears that when it comes to the unaccusative-based causative, Reinhart and Reuland's Condition B combined with the current approach to the causative does not provide an adequate account of the binding facts.

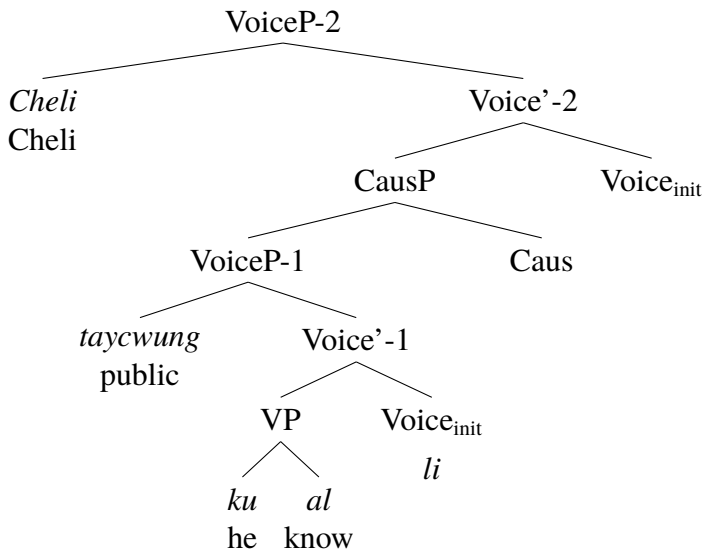
In order to resolve this issue, I adopt an alternative version of the binding theory which employs phasehood for the locality domain (Lee-Schoenfeld 2004; Quicoli 2008; Bruening 2014a). Lee-Schoenfeld (2004), for instance, suggests that the binding conditions shown in (295a–b). I assume, based on the Phase-Impenetrability Condition, that an element at the edge of a phase can bind an element in the phase and can be bound by an element in the next higher phase.[24]

(295) a. A reflexive must be bound within the minimal phase containing it.
b. A pronominal must be free within the minimal phase containing it.
(Lee-Schoenfeld 2004:147, (51))

Under the version of Condition B in (295b), the causer argument must be able to bind the pronominal object in the transitive-based causative in (293), because they are not contained within the same phase. This is illustrated below.

[24] cf. "Being located at the phase-edge means being part of the next higher phase." (Lee-Schoenfeld 2004:148)

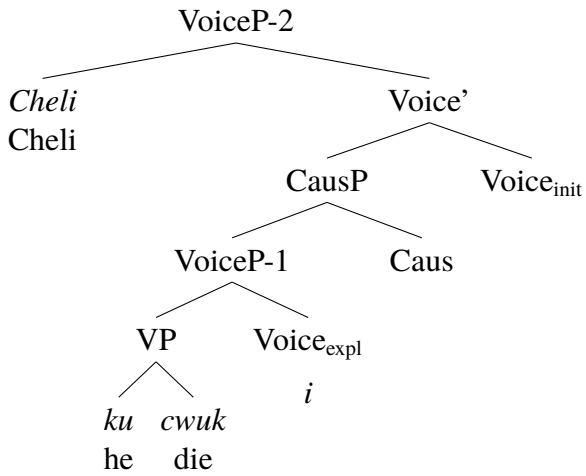
(296)



In (296), the causer argument *Cheli* 'Cheli' is minimally dominated by VoiceP-2, while the pronominal object *ku* 'he' is minimally dominated by VoiceP-1. Assuming that initiative VoiceP constitutes a phase node as Lee-Schoenfeld does, the two arguments must belong to distinct phase domains. Since they are not within the same phase domain, the two arguments are allowed to be coindexed without manifesting the Condition B effect.

As for the unaccusative-based causative exemplified in (294), however, coindexation between the two arguments will lead to the violation of Condition B. This is crucially because unlike the case in (296), the VoiceP that Caus takes in (294) is the projection of expletive Voice which does not project a specifier. The derivation of (294) is illustrated below.

(297)



VoiceP-1 in (297) is "defective" in the sense that it does not project a specifier; accordingly,

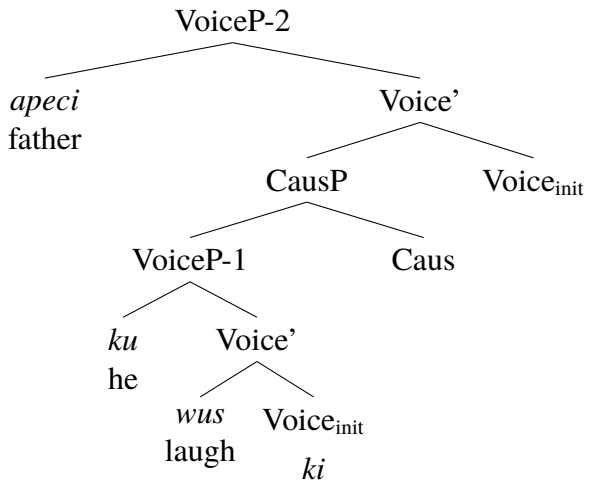
it does not constitute a phrase node in the sense of Chomsky (2008). This amounts to saying that the two arguments *Cheli* and *ku* in (297) are within the minimal phase, namely VoiceP-2. Therefore, coindexation between the two arguments brings about the Condition B effect.

The pronominal object in the unergative-based causative is not allowed to be coindexed with the causer argument, either, as illustrated in (298).

(298) Apeci$_{i}$-ka ku$_{*i}$-lul wus-ki-ess-ta.
father-NOM he-ACC laugh-CI-PST-DECL
'The father made him laugh.'

Under the present account, this is because the pronominal object in the unergative-based causative is introduced at the edge of a phrase as shown below.

(299)



In (299), the pronominal object *ku* 'he' is at the phase-edge, which is accessible in both the lower phase (i.e., VoiceP-1) and the higher phase (i.e., VoiceP-2) for binding purposes (cf. Lee-Schoenfeld 2004). Accordingly, the pronominal object cannot be coindexed with the causer argument *apeci* 'father'.

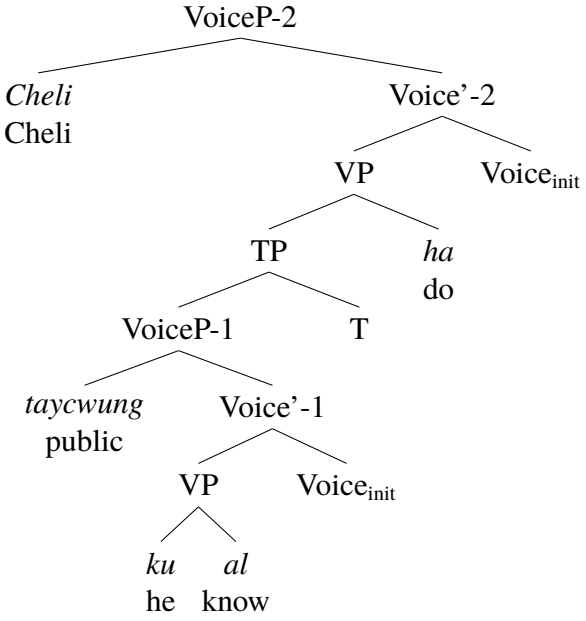
The analytic causative shows the same patterns with the morphological causative regarding the Condition B effect unlike the cases of coordination, short-form negation, and the degree adverb discussed earlier. The examples of transitive-based and unaccusative-based analytic causatives are presented in (300a) and (300b), respectively.

(300) a. Cheli$_{i}$-nun cese-lul thonghay taycwung-eykey ku$_{?i}$-lul hwaksilhi al-key
Cheli-NOM book-ACC through public-DAT he-ACC certainly know-CONN
ha-yess-ta.
do-PST-DECL
'Through the book, Cheli certainly made the public know him.'

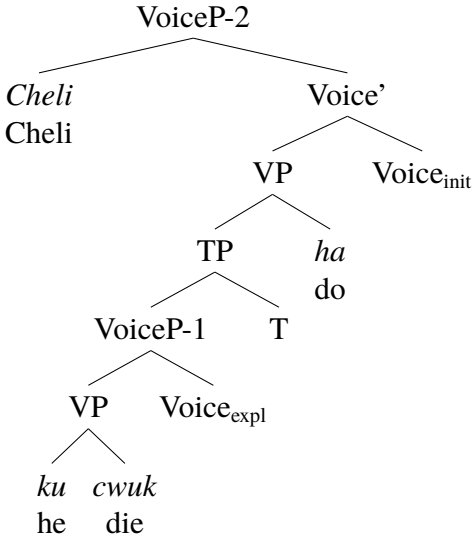
b. Cheli$_{i}$-ka pithonghan simceng-ulo ku$_{*i}$-lul cwuk-key ha-yess-ta.
Cheli-NOM grief.stricken feeling-with he-ACC die-CONN do-PST-DECL
'Grief-strickenly, Cheli made him die.'

The parallel patterns between the morphological and the analytic causatives follow from the present account. Consider the simplified derivations of (300a) and (300b) shown in (301a) and (301b), respectively:

(301) a.



b.



I have been assuming that the causative light verb takes TP, not CP, as its complement in the analytic causative.[25] If this is so, the causer argument and the pronominal object must belong to different phase domains in (301a) because VoiceP-1 constitutes a phase as the projection of initiative Voice; on the other hand, the two arguments must belong to the same

[25] See the text around (281)–(282) in Section 3.4.1 for the assumption that the light verb *ha-* takes TP as the complement in the analytic causative. I am open to the possibility that what the light verb takes might not be TP after all; what is important for the current purpose is that whatever it is that the light verb takes as the complement, it is not another phase node, e.g., CP, so that the phase domains between the morphological and the analytic causatives remain the same.

phase domain in (301b) due to the defective nature of expletive VoiceP. Clearly, the causer argument and the pronominal object are in the same phase configurations when they appear in the analytic causative in (301a–b) and when they appear in the morphological causative in (296) and (297). Therefore, the analytic causatives in (300a–b) show the parallel patterns with the morphological counterparts in (293)–(294) with respect to the Condition B effect.

3.4.5 The scope of *tasi* 'again'

M. Son (2006) reports that *tasi* 'again' has ambiguous scope in the causative in Korean as shown in (302).

(302) Kim sensayng-i Swuni-eykey yeymwun-ul tasi ilk-hi-ess-ta.
Kim teacher-NOM Swuni-DAT example.sentence-ACC again read-CI-PST-DECL
i. 'Mr. Kim made [Swuni read the example sentence again].'
ii. 'Mr. Kim again made Swuni read the example sentence.'

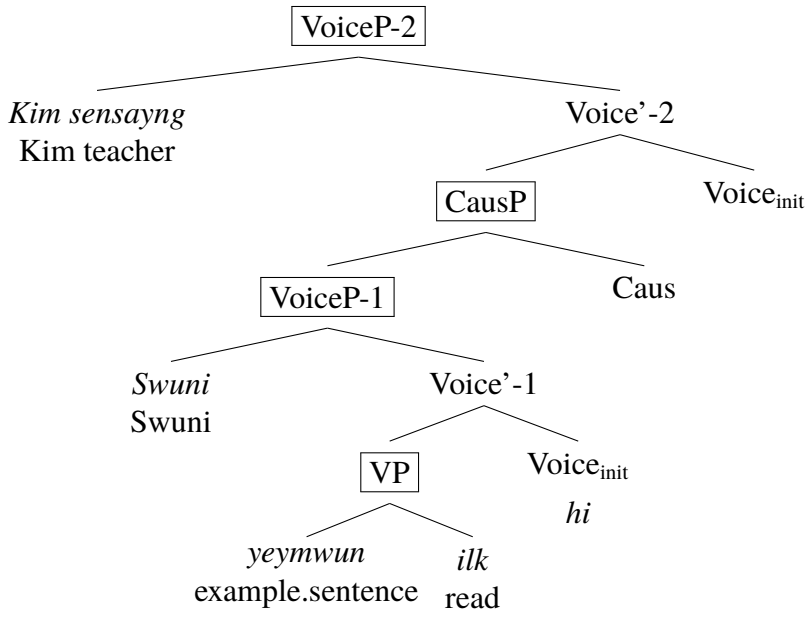
The scope of the adverbial for 'again' has often been used to detect syntactic nodes of type ⟨st⟩ in the structure (von Stechow 1996; Pylkkänen 2002, 2008; Beck and Johnson 2004; M. Son 2006; Bale 2007; Bosse *et al.* 2012). More specifically, it has been claimed that the adverbial adjoins to a syntactic node of type ⟨st⟩, and introduces the presupposition that the event denoted by the constituent that it adjoins to has already taken place. The denotation of *tasi* in Korean along this line is shown below, which is from Bosse *et al*. (2012:1215, (75)).

(303) $[\![\textbf{tasi}]\!] = \lambda P_{\langle st \rangle} \lambda e[P(e)]: \exists e'[P(e') \ \& \$ the run time of e' precedes that of e]

In this view, the fact that the example in (302) has two interpretations, one where the embedded event is repeated and the other where the causing event is repeated, indicates that the embedded and the causing events are represented in the syntax separately by independent projections of type ⟨st⟩ to which *tasi* can attach. The ambiguous scope of *tasi*, then, can be considered to support the syntactic approach to the causative in Korean.

According to M. Son (2006), the transitive-based causative in Korean allows two interpretations shown in (302i–ii), but the present account predicts that there are four interpretations, including the two shown in (302i–ii), that are available for the example in (302). Consider the structure involved in the example in (302) shown below:

(304)



If semantic composition proceeds as claimed in this chapter, the structure in (304) will provide four syntactic nodes of type ⟨st⟩ to which *tasi* 'again' can attach: namely, VP, VoiceP-1, CausP, and VoiceP-2 that are indicated by the square frame. The example in (302), then, is expected to allow four interpretations shown in (305i), (305ii), (305iii), and (305iv), which would be generated if *tasi* attached to VP, VoiceP-1, CausP, and VoiceP-2, respectively.

(305) In a classroom context:

i. *VP attachment*: 'Someone had already read the example sentence (voluntarily), but Mr. Kim made Swuni read the example sentence again.'

ii. *VoiceP-1 attachment*: 'Swuni had already read the example sentence (voluntarily), but Mr. Kim made her read it again.'

iii. *CausP attachment*: 'Someone (e.g., a co-teacher) had already made Swuni read the example sentence, but Mr. Kim made her do it again.'

iv. *VoiceP-2 attachment*: 'Mr. Kim had already made Swuni read the example sentence, but he did it again.'

The example in (302) can in fact have any one of the interpretations shown in (305i–iv); hence, the prediction that the transitive-based causative with *tasi* allows four interpretations is borne out.

It is relatively easy to have access to any one of the four interpretations in the given context, but in an example like (306) below, the VP-attachment interpretation is not easily accessible.

(306) Park sensayng-i Cheli-eykey kyokwase-lul tasi ilk-hi-ess-ta.
Park teacher-NOM Cheli-DAT textbook-ACC again read-CI-PST-DECL

i. *VP attachment*: 'Someone had already read the book, but Ms. Park made Cheli read the book again.'
ii. *VoiceP-1 attachment*: 'Cheli had already read the book, but Ms. Park made him do it again.'
iii. *CausP attachment*: 'Someone had already made Cheli read the book, but Ms. Park made him read the book again.'
iv. *VoiceP-2 attachment*: 'Ms. Park had already made Cheli read the book, but she did it again.'

I suggest that this is for pragmatic reasons. More specifically, 'someone' in (306i) cannot be, e.g., Toli, because repetition of the event denoted by VP 'reading the textbook' does not have any pragmatic significance at all unless it is done by the same individual. If Cheli had read the textbook, but nevertheless he had failed to pass an exam for instance, then Ms. Park might make Cheli read the textbook again so that he could pass the exam next time. However, if someone other than Cheli, say, Toli, had read the textbook, then there is no clear reason why, all of a sudden, Ms. Park would make *Cheli* read the textbook again. Therefore, it is implausible to think that what the speaker of the example in (306) meant is that 'someone' in (306i) is not Cheli. This is in contrast to the case in (302) discussed earlier. In that case, 'someone' in the VP-attachment interpretation in (302i) can be either someone other than Swuni or Swuni herself, because repetition of the event denoted by VP 'reading the example sentence' has some pragmatic significance whether or not it is done by the same individual. Whoever had read the example sentence before, Mr. Kim might as well make Swuni read it again so that, for instance, he could help her improve her pronunciation. In fact, the textbook example in (306) may have the VP-attachment interpretation with different initiators too if a specific context is given where the event denoted by VP has some significance. For instance, suppose that Cheli and Toli are not Ms. Park's students but proofreaders of the textbook that Ms. Park had written. In this context, the example in (306) may easily be interpreted to mean that Toli had already read the textbook, but Ms. Park made Cheli read the book again. The VP-attachment interpretation with differing initiators becomes available here, because the event denoted by VP 'reading the textbook' is pragmatically significant in the given context:

whether or not it is done by the same individual, reading the textbook may always lead to finding new typos. The fact that the VP-attachment interpretation is available when a context is given supports the view that VP in the causative provides a constituent to which *tasi* 'again' can adjoin.[26]

I have argued above that the scope of *tasi* 'again' provides evidence for the syntactic approach to the causative in general, and the structure of the causative proposed in this chapter in particular. There is a potential problem for the proposed structure, however, which concerns the unergative-based causative. I have limited the discussion to the transitive-based causative so far, arguing that the causative provides four syntactic nodes of type ⟨st⟩ to which *tasi* 'again' can attach in the structure. The same must hold for the intransitive-based causatives since the causative head in Korean always selects a Voice projection of type ⟨st⟩. The structures of the intransitive-based causatives are shown below, where the causative derived from a non-agentive predicate and from an unergative are shown in (307a) and (307b), respectively.

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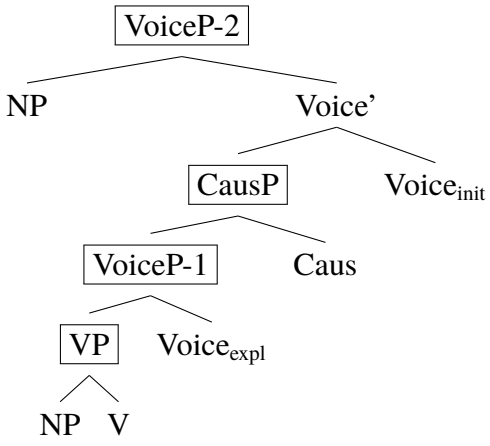
[26] The same pattern is observed in the simple transitive. Under the severed external argument hypothesis (Kratzer 1996), the structure of simple transitives like (i) and (ii) provides two nodes of type ⟨st⟩, i.e., VP and VoiceP, to which *tasi* 'again' can attach. This means that the transitive with *tasi* allows two interpretations, one in which the repeated event can involve different initiators (repeated VP) and the other in which the repeated event involves the same initiator (repeated VoiceP) (Bale 2007).

(i) Swuni-ka yenge yeymwun-ul tasi ilk-ess-ta.
Swuni-NOM English example.sentence-ACC again read-PST-DECL
   a. *VP attachment*: 'Someone had already read the English example sentence, but Swuni read it again.'
   b. *VoiceP attachment*: 'Swuni had already read the English example sentence, but she did it again.'

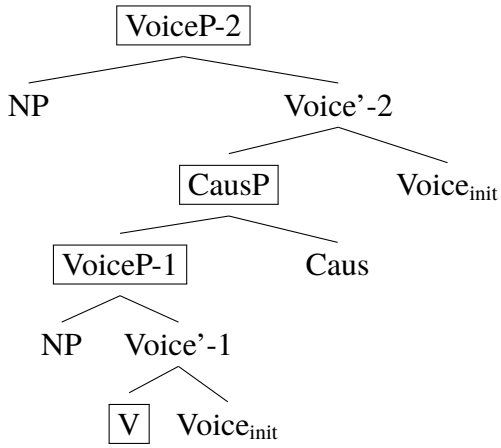
(ii) Cheli-ka yenge kyokwase-lul tasi ilk-ess-ta.
Cheli-NOM English textbook-ACC again read-PST-DECL
   a. *VP attachment*: 'Someone had already read the English textbook, but Swuni read it again.'
   b. *VoiceP attachment*: 'Swuni had already read the English textbook, but she did it again.'

However, the two interpretations are not equally accessible in the examples in (i)–(ii) in the out-of-the-blue context. The VoiceP-attachment interpretation is available for both examples. But the VP-attachment interpretation is freely available for the example in (i), while it is restricted for the example in (ii) in such a way that 'someone' must be Cheli, which is practically the same with the VoiceP-attachment interpretation. As in the causative in the text, the restriction involved in the interpretation of (ii) must be imposed for pragmatic reasons. So, if Cheli is not a student but a proofreader in some textbook-publishing company, then the example in (ii) will easily have the VP-attachment interpretation where 'someone' is not Cheli but someone else, most likely, another proofreader in the company.

(307) a.



b.



As indicated by the square frame, both the structures in (307a) and (307b) provide four syntactic nodes to which *tasi* can adjoin. However, when the causative is derived from a non-agentive intransitive as in (307a), the causative with *tasi* will only allow three interpretations. This is because one of the four syntactic nodes of type ⟨st⟩ in (307a) is expletive VoiceP whose head is a semantically vacuous identity function; that is, there will be no interpretational difference at all between VP and expletive VoiceP. On the other hand, when the causative is derived from an unergative as in (307b), the causative with *tasi* is expected to allow four interpretations as the transitive-based causative does. This is because the sole argument of an unergative verb is introduced by initiative Voice, and thus there will be an interpretational difference between V and initiative VoiceP.

The prediction about the causative of a non-agentive intransitive is borne out as exemplified in (308).

(308) Apeci-ka mwul-ul tasi kkulh-i-ess-ta.
father-NOM water-ACC again boil-CI-PST-DECL

i. *VP/VoiceP-1 attachment*: 'The water had already boiled, but it cooled down, so the father boiled the water again.'
ii. *CausP attachment*: 'Someone had already boiled the water, but it cooled down, so the father boiled the water again.'
iii. *VoiceP-2 attachment*: 'The father had already boiled the water, but it cooled down, so he did it again.'

The prediction about the causative of an unergative, however, is not borne out: the unergative-based causative with *tasi* allows only three interpretations as shown below.

(309) Emeni-ka aki-lul tasi cay-wu-ess-ta.
mother-NOM baby-ACC again sleep-CI-PST-DECL
i. *V attachment (Impossible)*: 'Sleeping had already occurred, but the mother made the baby sleep again.'
ii. *VoiceP-1 attachment*: 'The baby went to bed, but he woke up in the middle of the night, so the mother made him sleep again.'
iii. *CausP attachment*: 'Someone had already made the baby sleep, but he woke up, so the mother made him sleep again.'
iv. *VoiceP-2 attachment*: 'The mother had already made the baby sleep, but he woke up, so she did it again.'

Contrary to what is predicted according to the structure in (307b), the V-attachment interpretation is not possible for the unergative-based causative as in (309i).

Actually, the same pattern is observed in the simple unergative, and *tasi* 'again' does not seem to be able to attach to an unergative verb in the intransitive frame, either. The example in (310), for instance, cannot have the V-attachment interpretation, and it can only have the VoiceP-attachment interpretation.

(310) Aki-ka tasi ca-ss-ta.
baby-NOM again sleep-PST-DECL
i. *V attachment (Impossible)*: 'Sleeping had already occurred, but the baby slept again.'
ii. *VoiceP attachment*: 'The baby had already slept, but he slept again.'

The unavailability of the V-attachment interpretation in (310) indicates that *tasi* cannot attach to an unergative verb in the first place, even though it is of type ⟨st⟩. One possibility is that the sole argument of an unergative verb is not projected by initiative Voice but instead is projected by the unergative verb itself as Bale (2007) suggests. Bale's view may be easily accommodated in the current approach if it is assumed that all intransitives, not only state-denoting intransitives and unaccusatives, but also unergatives, come with expletive Voice in the structure. In a similar vein, it may be the case that the sole argument of an unergative is semantically selected by the verb but is projected by a special kind of expletive Voice which is semantically vacuous but has the feature [S:N] (Labelle 2008). By having them occupy different structural positions as such, the different behaviors between the sole arguments in the unaccusative and the unergative may be captured (B.-s. Yang 1991). Yet another possibility

would be to give it a pragmatic account along the lines discussed above. That is, since the atelic activity denoted by an unergative verb does not have any pragmatic significance when repeated, the V-attachment reading can barely (if possible at all) be obtained. In this dissertation, I will not attempt to choose one analysis over the others. I will simply note here that the impossibility of the V-attachment reading in (309i) is a potential problem for the current approach, but there can be an independent explanation for the unexpected behavior of the unergative-based causative.

3.5 On the causative-passive correlation

The morphological passive displays some correlations with the morphological causative in Korean across different domains of grammar. Morphologically, the active-passive alternation makes use of the suffix -Cɪ to mark the derived variant just as the causative alternation does. More precisely, the passive in Korean is marked with one of the allomorphs *-i*, *-hi*, *-li*, and *-ki*, which constitute a subset of the set of allomorphs used in the causative, namely, *-i*, *-hi*, *-li*, *-ki*, *-wu*, *-kwu*, and *-chwu*. An example of the active-passive alternation is shown below.

(311) a. Kyengchal-i totwuk-ul cap-ass-ta.
police-NOM thief-ACC catch-PST-DECL
'The police caught the theif.'

b. Totwuk-i kyengchal-eykey cap-hi-ess-ta.
thief-NOM police-by catch-Cɪ-PST-DECL
'The thief was caught by the police.'

In the alternation in (311a–b), the passive variant in (311b) involves the suffix -Cɪ, which is absent in the active variant in (311a). As seen so far, the causative variant in the causative alternation involves the same suffix although its range of allomorphic variation is larger than that of the passive.

Syntactically, the passive marks the initiator argument of the stem predicate with *-eykey* as shown in (311b) above; *-eykey* is also what is marked on the the initiator argument of the stem predicate in the transitive-based causative. An example of the transitive-based causative is presented below.

(312) Mophiesu-ka Neyo-eykey phalan alyak-ul mek-i-ess-ta.
Morpheus-NOM Neo-DAT blue pill-ACC eat-CI-PST-DECL
'Morpheus made Neo take the blue pill.'

I will argue below that *-eykey* used in the passive is actually an element different from *-eykey* used in the causative (hence, the different glosses in (311b) and (312)). Yet, at least on the surface, the two constructions appear to employ the same element to mark the initiator of the stem predicate, which gives the impression that they may be derivationally related.

Semantically, some causatives can be interpreted passively if the accusative-marked object has a "close relation" with the nominative-marked subject (Washio 1993; J. Yeon 2002, 2005). For instance, an example like (313), which is often called the retained object construction, is ambiguous between the two interpretations in (313i) and (313ii).[27]

(313) Halmeni-ka sonca-eykey tung-ul palp-hi-ess-ta.
grandmother-NOM grandson-DAT/by back-ACC step.on-CI-PST-DECL
i. The grandmother made her grandson step on her back (e.g., to relieve the back pain).
ii. The grandmother was stepped on her back by her grandson (e.g., by accident).

(modified from J. Yeon 2005:170, (17))

The existence of the retained object construction exemplified in (313) appears to suggest that the causative and the passive may be semantically related at some level in the derivation.[28]

In this section, I argue that despite the apparent correlations between the causative and the passive illustrated above, they are actually two different constructions with their own

[27] The example in (312) is not semantically ambiguous because (i) there is no close relation established between the surface subject *Mophiesu* 'Morpheus' and the surface object *phalan alyak* 'blue pill', and (ii) the allomorph *-i* is used only when the stem predicate *mek-* 'eat' is used causatively. See below for discussion.

[28] Some speakers, especially those of the younger generations, may find the causative reading unavailable for the example in (313) (Thanks to Hee-Don Ahn for pointing this out). This might be because the causative use of the verb *palp-* 'step on' is not listed in their lexicon (see Section 3.3.1). Those speakers, however, would still allow both the causative and the passive readings in the retained object construction with a verb like *mwul-* 'bite' exemplified in (343) below, as the verb *mwul-* is frequently used in the causative as well as in the passive (see also L. Kim 2014:199–201). I will assume that the retained object construction is in principle allowed in the grammar of Korean as the previous literature has assumed (J. Yeon 1991; Washio 1993; Kim and Pires 2003; among many others). Note in passing that both the causative and the passive readings of the retained object construction are more easily accessible for the speakers of Gyeongsang dialects spoken in the southeastern part of Korea, as the dialects phonologically mark each variant by placing pitch accent on different morphemes in the homonymous verbal complex: e.g., *pálp-hi-ess-ta* (causative) vs. *palp-hí-ess-ta* (passive).

derivational histories. The apparent correlations between the two are claimed to arise because of the (partial) homonymy between passive and causative allomorphs as well as between the dative case and the postposition *-eykey*, and because the surface subject and the surface object in the causative can establish a possessive relation through pragmatic enrichment.

3.5.1 The passive in Korean

I first assume that the essential property of the passive is (syntactic) demotion or removal of an argument (Comrie 1977; Perlmutter and Postal 1977, 1984; Marantz 1984; Shibatani 1985; Baker 1988; Keenan and Dryer 2007; Legate 2012, 2014; Bruening 2013; Bruening and Tran 2015; Williams 2015); and following Bruening (2013), I suggest that the passive in Korean is derived with the passive element, *Pass(ive)*, shown in (314).

(314) $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle}(\exists x)[P((x))]$ $(= \lambda P_{\langle e,st\rangle}[P]$ *or* $\lambda P_{\langle e,st\rangle}\exists x[P(x)])$
(modified from Bruening 2013:25, (91a))

The function of Pass is to take an open predicate of type ⟨e,st⟩ as its complement, and optionally existentially quantifies over the unsaturated variable of the complement. I further suggest that the passive head in Korean has the selectional feature [S:Voice(S:N)], and thus can only take a projection of initiative Voice as the complement. Because of the requirement of Pass that it take an open predicate, an argument associated with the stem predicate cannot be projected in the usual way and should be removed or demoted as an oblique phrase in the passive. And due to the selectional feature of Pass, what is removed or demoted in the passive is the external argument of a transitive verb. So, when the unsaturated variable of the complement initiative VoiceP is existentially quantified over by Pass, the argument that would be realized as the subject in the active will not be projected in the passive; hence, the removal. And when the unsaturated variable of initiative Voice is not existentially quantified over, then the argument that would be realized as the subject in the active will be demoted and occur as the *-eykey* phrase in the passive. As for *-eykey* which attaches to the demoted argument in the passive, I suggest, again in line with Bruening's (2013) view, that it is a postposition which provides an NP argument for its sister predicate. The denotation of *-eykey* in this view is shown below.

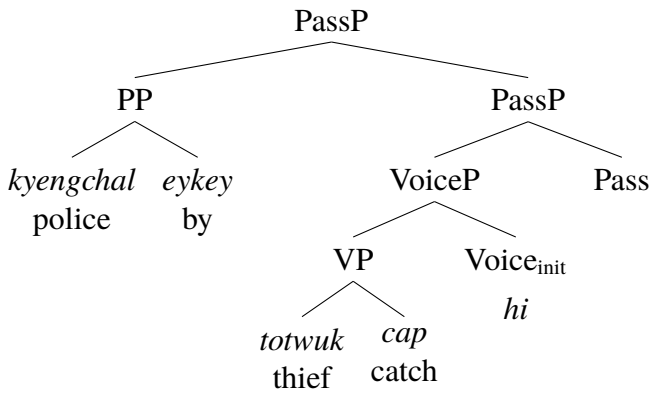
(315) $[\![\textbf{eykey}]\!] = \lambda x \lambda P_{\langle e,st\rangle}[P(x)]$

(modified from Bruening 2013:25, (90a))

I further assume that the postposition *-eykey* has the selectional features [S:N; S_a:Pass], where [S_a:X] indicates that the selecting element combines with (the projection of) X through adjunction, and the selected element, not the selecting one, projects to the next dominating node (Bruening 2013:24).

According to the discussion so far, the passive in (311b) with the *-eykey* phrase will be derived along the lines of (316a–b) (See the next subsection for the exponence of $\text{Voice}_{\text{init}}$).

(316)



i. $[\![\textbf{VP}]\!] = \lambda e[\text{catch}(e,\text{thief})]$

ii. $[\![\textbf{Voice}_{\textbf{init}}]\!] = \lambda x \lambda e'[\text{initiator}(e',x)]$

iii. $[\![\textbf{VoiceP}]\!] = \lambda x \lambda e[\text{catch}(e,\text{thief}) \,\&\, \text{initiator}(e,x)]$

iv. $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle}[P]$

v. $[\![\textbf{lower PassP}]\!] = \lambda x \lambda e[\text{catch}(e,\text{thief}) \,\&\, \text{initiator}(e,x)]$

vi. $[\![\textbf{eykey}]\!] = \lambda y \lambda P_{\langle e,st\rangle}[P(y)]$

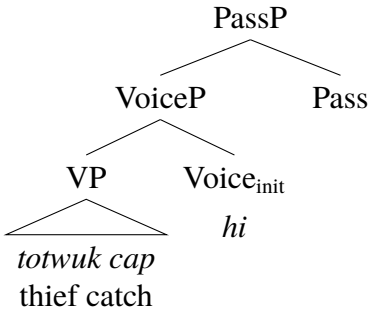
vii. $[\![\textbf{PP}]\!] = \lambda P_{\langle e,st\rangle}[P(\text{police})]$

viii. $[\![\textbf{higher PassP}]\!] = \lambda e[\text{catch}(e,\text{thief}) \,\&\, \text{initiator}(e,\text{police})]$

When the theme *totwuk* 'thief' moves to Spec,TP to satisfy the [S:N] (or [EPP]) on T, the surface order of the passive in (311b) will be derived with the interpretation that the thief was caught by the police. The derivation without the *-eykey* phrase proceeds in exactly same way except that this time, instead of *-eykey* providing an NP argument for the unsaturated variable

of initiative Voice, the passive head existentially quantifies over it. The simplified derivation of the passive without the *-eykey* phrase and its semantic composition are presented below.

(317)



i. $[\![\textbf{VP}]\!] = \lambda e[\text{catch}(e,\text{thief})]$

ii. $[\![\textbf{VoiceP}]\!] = \lambda x \lambda e[\text{catch}(e,\text{thief}) \,\&\, \text{initiator}(e,x)]$

iii. $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle} \exists y[P(y)]$

iv. $[\![\textbf{PassP}]\!] = \lambda e \exists y[\text{catch}(e,\text{thief}) \,\&\, \text{initiator}(e,y)]$

Again, when the theme argument moves to Spec,TP for the [S:N] on T, the surface order without the *-eykey* phrase is derived with the interpretation that the thief was caught.

3.5.2 The partial syncretism between the causative and the passive morphemes

The derivation of the passive always involves specifierless initiative Voice due to the semantic and syntactic requirements of the passive head, and as indicated in (316) in the preceding subsection, the Voice head is realized as the suffix -Cı as it is in the causative. The allomorphy of Voice in the passive must be listed in the lexicon for the same reasons why the allomorphy of Voice in the causative must be listed (such as lack of phonetic motivation, varying forms of the suffix on homonyms, and so on). The listed allomorphy of the passive is exemplified below (see I. Lee 2005 for a more comprehensive list of the allomorphic variation in the passive).[29]

[29] Under the current view, then, the (partial) syncretism between the causative and the passive morphemes must simply be an accident at least from a synchronic point of view. Note that there might be a (diachronic or synchronic) reason for the syncretism considering that the morphological correlation between the causative and the passive has been attested in many languages including Manchu, Evenki, Mandarin, Cantonese, Hungarian, Greenlandic Inuit (Fortescue 1984; Haspelmath 1990; Nedjalkov 1993; Xu 1994; Yap and Iwasaki 2007; etc.). In this dissertation, however, I will assume based on the discussion immediately below in the text that the partial

(318) a. Voice → *i* / {*ssu*- 'put on', *takk*- 'wipe', *kko*- 'twist', ...} __ Pass
b. Voice → *hi* / {*mek*- 'eat', *cek*- 'write', *ic*- 'forget', ...} __ Pass
c. Voice → *li* / {*kel*- 'hang', *phal*- 'sell', *phwul*- 'solve', ...} __ Pass
d. Voice → *ki* / {*an*- 'hug', *ppayas*- 'take.away', *ttut*- 'pluck', ...} __ Pass

The allomorphic variations in the causative and the passive must be listed separately as presented in (256) in Section 3.3.1 and in (318), respectively, and they must not be listed together as in, e.g., 'Voice → {a set of lexical predicates} __ {Caus, Pass}'. This is because the set of predicates that participate in the causative alternation differs from the set of predicates that participate in the active-passive alternation. To begin with, the target predicates of passivization is limited to transitive verbs, whereas those of causativization is not limited as such. As noted in Section 3.2, causativization in principle may apply to any class of predicates including state-denoting intransitives, unaccusatives, unergatives, and transitives. Moreover, the target predicates of causativization and passivization differ from each other even when only transitive verbs are taken into account. For instance, a verb like *math*- 'take care of, look after' can undergo causativization as in *math-ki*- 'cause to take care of, cause to look after', but the predicate cannot undergo passivization. This is illustrated below.

(319) a. Nay-ka cokha-lul math-ass-ta.
I-NOM niece-ACC take.care-PST-DECL
'I took care of my niece.'

b. Tongsayng-i na-eykey cokha-lul math-ki-ess-ta.
sister-NOM I-DAT niece-ACC take.care-CI-PST-DECL
'My sister made me take care of my niece.'

c. * Cokha-ka na-eykey math-i/hi/li/ki-ess-ta.
niece-NOM I-by take.care-CI-PST-DECL
Intended: 'My niece was taken care of by me.'

The example in (319a) is the basic transitive where *nay* 'I' is the initiator and *cokha* 'niece, nephew' is the theme. The transitive can be causativized with the suffix -CI whereby the causer argument *tongsayng* 'sister' is added as in (319b). But it cannot be passivized with

syncretism has no syntactic or semantic motivation in the contemporary grammar of Korean, leaving to future research the task of giving a more principled account.

-Ci whereby the initiator is demoted (or removed, for that matter): none of the allomorphs works in (319c). As a transitive, there is no principled reason why the example in (319a) cannot undergo passivization. The reason for ungrammaticality of (319c), then, must be an arbitrary one, which under the present account is that the contextual environment in which Voice appears in the derivation, namely, '*math* __ Pass', is simply not listed in the lexicon, and accordingly, the Voice head fails to be spelled out having the derivation crash at PF. There exist opposite cases as well. A verb like *pwulu-* 'call (out)', for instance, cannot undergo causativization, whereas it can undergo passivization as in *pwul-li-* 'be called (out)'. This is illustrated in (320a–c).

(320) a. Kanhosa-ka Toli-uy ilum-ul pwul-ess-ta.
nurse-NOM Toli-GEN name-ACC call-PST-DECL
'The nurse called Toli's name.'

b. * Uysa-ka kanhosa-eykey Toli-uy ilum-ul pwul-li-ess-ta.
doctor-NOM nurse-DAT Toli-GEN name-ACC call-CI-PST-DECL
Intended: 'The doctor made the nurse call Toli's name.'

c. Toli-uy ilum-i kanhosa-eykey pwul-li-ess-ta.
Toli-GEN name-NOM nurse-by call-CI-PST-DECL
'Toli's name was called by the nurse.'

Again, there is no principled reason for why causativization is disallowed whereas passivization is allowed to apply to the transitive in (320a). According to the current approach, it is simply because the contextual environment in which Voice appears in the derivation of (320b) happens not to be listed in the lexicon.

The above cases show that the allomorphy of Voice must be listed separately as claimed in this dissertation rather than listed together as a group. Yet another case which shows that this is in fact the case is one where the same predicate is marked with different allomorphs when it appears in the causative and when it appears in the passive. So, *mek-* 'eat' is marked with *-i* as in *mek-i-* 'cause to eat' when causativized, but the predicate is marked with *-hi* as in *mek-hi-* 'be eaten' when passivized; also, *ssu-* 'put on (a false accusation, etc.)' is marked with *-wu* along with root alternation as in *ssuy-wu-* 'cause to put on (a false

accusation, etc.)' when causativized, but it is marked with *-i* as in *ssu-i-* '(a false accusation, etc.) be put on' when passivized.

It has been argued in Section 3.3.2 that causativization of the causative is impossible in Korean because of the listed allomorphy of Voice. The causative is not only disallowed to be causativized, but it is also disallowed to be passivized in Korean as exemplified below.

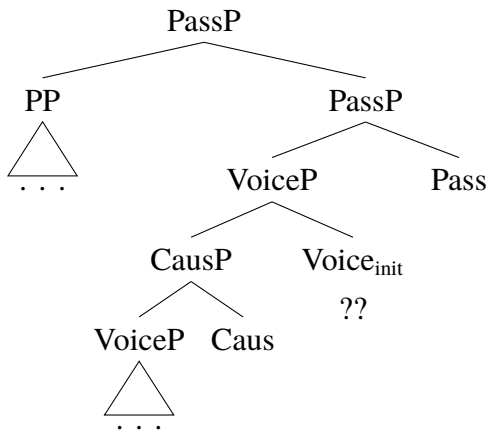
(321) a. Swuni-ka elum-ul nok-i-ess-ta.
Swuni-NOM ice-ACC melt-CI-PST-DECL
'Swuni melted the ice.'

b. * Elum-i Swuni-eykey nok-i(-i/hi/li/ki)-ess-ta.
ice-NOM Swuni-by melt-CI(-CI)-PST-DECL
Intended: 'The ice was melted by Swuni.'

The example in (321a) is an unaccusative-based causative, which has the valence of a transitive verb. The ungrammaticality of the example in (321b) shows that the causative in (321a) cannot be passivized regardless of whether it has the valence of a transitive. The above examples are the case of passivization of an unaccusative-based causative, but the same is true for passivization of any class of causatives; it is always prohibited.

The impossibility of passivization of the causative can be given the same account with the impossibility of causativization of the causative. Consider the simplified derivation of the passive of the causative illustrated below:

(322)



In (322), initiative Voice which would introduce a causer argument in the specifier is adjacent to Pass, and thus, should be realized as the suffix -CI. However, since it is not adjacent to the

stem predicate, the Voice head cannot be given a phonological form according to the listed information in the lexicon. Consequently, the derivation crashes PF.

3.5.3 The *-eykey* phrase in the causative and the passive

In the previous subsection, I addressed the morphological correlation exhibited between the causative and the passive and suggested that it is simply an instance of homonymy. Turning to the syntactic correlation between the two constructions, the specific issue that needs to be accounted for is why the initiator argument of the stem predicate in both constructions is marked with *-eykey*.

I suggest that again, it is simply because the dative case marker *-eykey* and the postposition *-eykey* are homonyms in Korean. The *-eykey* phrase that appears in the causative is an NP argument marked with dative case *-eykey*, but the *-eykey* phrase that appears in the passive is a PP adjunct headed by the postposition *-eykey*. That is, both the causative and the passive project an *-eykey* phrase in the structure, but they do so in two entirely different ways as claimed in this dissertation. Both constructions involving *-eykey* is just a superficial similarity, and there is evidence for such a view, which comes from the possibilities of relativization and quantifier floating, among others (see Chapter 4 for discussion of the properties of the *-ni* phrase in Japanese passives, which can be observable in Korean passives as well).[30]

Ishizuka (2010, 2012) shows that the demoted argument in the passive is not allowed to be relativized in Japanese. The same holds in Korean as well, and the *-eykey* phrase in the passive cannot be relativized as shown in the ungrammaticality of (323).

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[30] A question that naturally arises, then, is why dative case and the postposition introducing a demoted argument in the passive have the same form, *-eykey*. As Hee-Don Ahn and Darrell Larsen (p.c.) point out, it does not seem to be a mere coincidence since such homophony is also observed in other languages such as Japanese. As discussed immediately below in the text, however, the dative case *-eykey* and the postposition *-eykey* show different syntactic properties, indicating that they are distinct elements from a synchronic perspective. Historically, one element might have been derived from the other and there might be some functional or conceptual motivation for why it had occurred, but I will not attempt to address this issue in this dissertation, limiting the focus to the different syntactic properties of the two elements.

(323) * totwuk-i cap-hi-n kyengchal
thief-NOM catch-CI-ADN police
Intended: 'the police by whom the thief was caught'

Importantly, relativization of the *-eykey* phrase is possible in the causative as in (324), which indicates that the *-eykey* phrase in the passive is different in nature from that in the causative.

(324) Mophiesu-ka phalan alyak-ul mek-i-n namca
Morpheus-NOM blue pill-ACC eat-CI-ADN man
'the man who Morpheus made take the blue pill'

The *-eykey* phrase in the two constructions pattern differently with respect to quantifier floating as well. Sadakane and Koizumi (1995) note that postpositional phrases are not compatible with a floating numeral quantifier. In fact, the *-eykey* phrase in the passive in Korean cannot host a floating numeral quantifier as in (325).

(325) * Totwuk-i kyengchal$_i$-eykey sey-myeng$_i$ cap-hi-ess-ta.
thief-NOM police$_i$-by three-CL$_i$ catch-CI-PST-DECL
Intended: The thief was caught by three police officers.

This contrasts with the *-eykey* phrase in the causative, which allows quantifier floating.

(326) Morphiesu-ka pwuha$_i$-eykey sey-myeng$_i$ phalan alyak-ul mek-i-ess-ta.
Morpheus-NOM subordinate$_i$-DAT three-CL$_i$ blue pill-ACC eat-CI-PST-DECL
'Morpheus made three of his subordinates take the blue pill.'

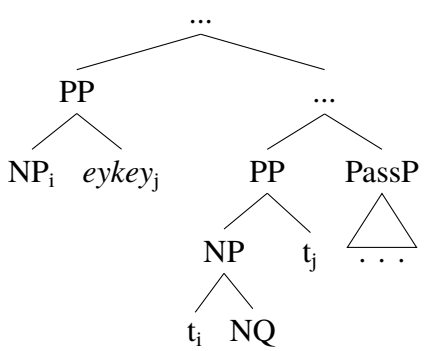
The contrast between the passive and the causative shown in (325) and (326) again indicates that the *-eykey* phrases in the these constructions are not the same grammatical entity.

The impossibility of relativization and quantifier floating in the passive as such follows from the current analysis. I have argued above that *-eykey* that appears in the passive is a postposition with the denotation in (315). According to the denotation, what *-eykey* does in the derivation of the passive is to introduce an NP argument which saturates the unsaturated variable of initiative Voice. This means that the unsaturated variable of initiative Voice in the passive cannot be saturated by an NP without the help of *-eykey*; if *-eykey* is absent in the passive, the variable of initiative Voice has to be existentially quantified over by Pass. Crucially, relativization of a nominal eliminates any marker that is attached to the nominal; so, when the nominal introduced by *-eykey* in the passive is relativized, *-eykey* has to be

eliminated. As just pointed out, however, without *-eykey*, the variable of initiative Voice has to be existentially quantified over, which means that the relativized nominal will be left uninterpretable, having the derivation crash at LF. Therefore, relativization of the *-eykey* phrase is impossible in the passive.

As for the impossibility of quantifier floating, it can be attributed to the simple fact that the *-eykey* phrase in the passive is a PP headed by *-eykey*. Since a numeral quantifier cannot attach to an element of category P, it must attach to the complement nominal of *-eykey* at the underlying level (I assume, following Sportiche 1988 and H. Ko 2005 among others, that a numeral quantifier forms a constituent with the host NP when it is initially introduced into the derivation). In order to derive the desired surface order 'NP-*eykey* NQ' (where NQ indicates a numeral quantifier), then, the nominal and the postposition should together move out of PP to some higher position in the structure as illustrated below.

(327)



The movement of the kind in (327), however, is prohibited because the nominal and the postposition do not form a constituent. Hence, quantifier floating is impossible for the *-eykey* phrase in the passive. Note that the problems discussed above do not arise for the *-eykey* phrase in the causative if *-eykey* in the causative is simply a case marker as assumed so far. Since *-eykey* in the causative does not play any role in introducing the nominal that is marked with it, eliminating *-eykey* from the relativized nominal will not make the nominal uninterpretable. Therefore, relativization of the *-eykey* phrase is possible in the causative. And since, as a case marker, *-eykey* in the causative may be assigned to a nominal after it moves out of the constituent initially formed with a numeral quantifier. Therefore, the *-eykey* phrase in the causative is allowed to host a floating numeral quantifier.

3.5.4 The retained object construction

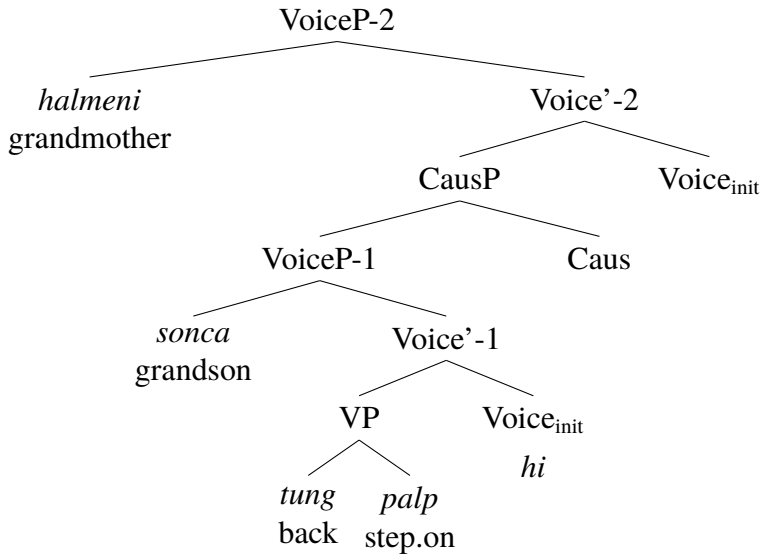
As noted in (313), repeated below, the transitive-based causative may have a passive interpretation when the surface subject has some close relation with the surface object.

(328) Halmeni-ka sonca-eykey tung-ul palp-hi-ess-ta.
grandmother-NOM grandson-DAT/by back-ACC step.on-CI-PST-DECL
i. The grandmother made her grandson step on her back.
ii. The grandmother was stepped on her back by her grandson.

The "retained object construction" exemplified in (328) has been studies extensively in the literature (J. Yeon 1991, 2002, 2005, 2015; Washio 1993; Kim and Pires 2003; S. Nam 2005; Y.-s. Kim 2006, 2007; K. Kim 2011; L. Kim 2014; etc.), and many attempts have been made to give a conceptual or structural account of why the causative is allowed to have a passive interpretation in such a context. In this subsection, I argue that the ambiguity of the retained object construction arises because the causative derived from a transitive, on one hand, and the passive derived from a possessor raising construction, on the other, happen to generate the same surface word order with the same forms of the suffix -CI and the *-eykey* phrase. That is, the two interpretations that a retained object construction can have are claimed to be read off from two structures that are not derivationally related to each other (J. Yeon 2005:168–170).

To begin with, the causative interpretation in (328i) is attained when the example has the structure of a transitive-based causative shown in (329).

(329)



When semantic composition of (329) is completed, VoiceP-2 will have the denotation λe∃e'[step.on(e',back) & initiator(e',grandson) & cause(e,e') & initiator(e,grandmother)]; hence, the usual causative interpretation. Importantly, note that the derivation in (329) involves no grammatical process at all which encodes the possessive relation between *halmeni* 'grandmother' and *tung* 'back'. In fact, the example can also be interpreted to mean that the grandmother made the grandson step on the father's back, the mother's back, her friend's back, etc. according to the context. That is, the back that the grandmother made the grandson step on can in principle be anyone's body part. This means that the possessive relation between *halmeni* and *sonca* in (329) is established only pragmatically: the back (and the grandson, for that matter) is implicated to be the grandmother's in accordance with the maxim of quantity, because it is not told otherwise. This is not a special phenomenon that occurs only in the causative. The same can be observed in the simple transitive as well.

(330) Halmeni-ka tung-ul kulk-ess-ta.
grandmother-NOM back-ACC scratch-PST-DECL
'The grandmother scratched the back.'

In (330), the back is most likely to be the grandmother's, but it can be understood to be anyone's body part in a given context. Note that since it is a simple transitive, the subject *halmeni* in (330) must not be introduced by some head other than initiative Voice: if it were, the derivation would crash at LF because there will be no argument left to saturate initiative Voice. The parallel behaviors between (329) and (330) regarding the optionality of the possessive relation indicate that the possessive relation in (329) is not grammatically encoded just as it is not in (330).

It is sometimes argued that the retained object construction can have a passive interpretation because a reflexive relation can be represented by the causative in certain contexts (e.g., Y.-s. Kim 2006). For instance, the example in (328) is ambiguous because the grandmother is understood to have caused the stepping-on event, but at the same time, she is understood to have been affected by the stepping-on event in that the theme of the event, the back, is an inalienable part of the grandmother. If the causative can establish the reflexive relation between the subject and the object as such, it will become ambiguous as in (328). On the

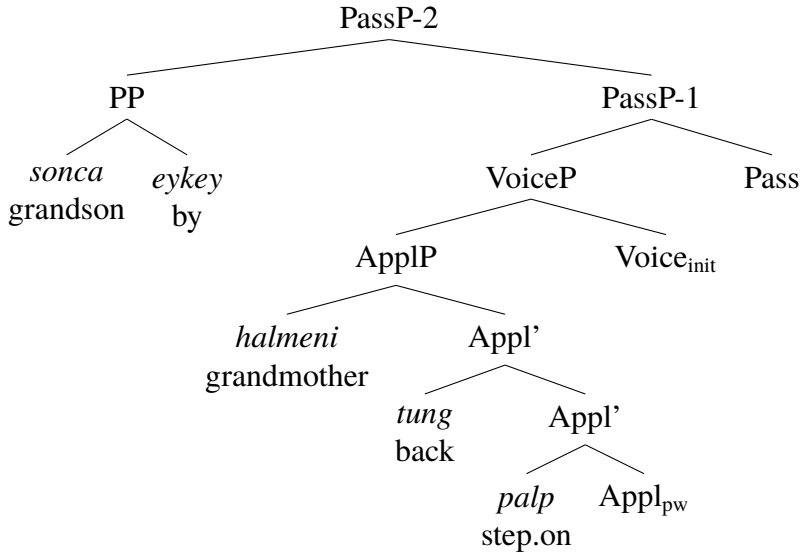
other hand, if the causative cannot establish such a reflexive relation between the subject and the object, then it will unambiguously have a causative interpretation as exemplified below.

(331) Halmeni-ka sonca-eykey Cheli-uy tung-ul palp-hi-ess-ta.
grandmother-NOM grandson-DAT/by Cheli-GEN back-ACC step.on-CI-PST-DECL
i. *Possible*: 'The grandmother made the grandson step on Cheli's back.'
ii. *Impossible*: 'The grandmother was stepped on Cheli's back by her grandson.'

The passive interpretation is impossible in (331), because it is explicitly indicated that the object, *Cheli-uy tung* 'Cheli's back', is not an inalienable part of the grandmother.

Under the current approach, such a view may be plausible but only at the level of pragmatics. The affectee reading of the grandmother can be obtained, but it does not have to: it is only pragmatic implicature. The causer reading of the grandmother, on the other hand, has to be obtained since the reading is grammatically encoded in the structure in (329). What this means is that a structure different from (329) must be responsible for the interpretation of (328) where the grandmother is *not* interpreted to be a causer. I suggest this is in fact the case, and the interpretation in (328ii) is obtained when the example is derived as in (332).

(332)



I assume following L. Kim (2014) that the possessive relation between *halmeni* 'grandmother' and *tung* 'back' in (332) is established through an applicative head, *Appl(icative)*$_{p(art\text{-})w(hole)}$

(Bosse 2011, 2015), which encodes the part-whole relation between two entities (see also Tomioka and Sim 2005).[31]

(333) $[\![\textbf{Appl}_{\textbf{pw}}]\!] = \lambda P_{\langle e,st\rangle}\lambda x\lambda y\lambda e[P(e,x)$ & x $\triangleleft$ y for the duration of e] (where $\triangleleft$ indicates that x is a material part of y) (Bosse 2011:198, (346))

Bosse (2011:199) assumes that Appl_{pw} "prevents the constituents used to form [the projection of Appl_{pw}] from combining semantically". That is, it is assumed that the theme/possessee argument is syntactically introduced by the lexical verb thereby forming VP, but it undergoes semantic composition only after Appl_{pw} combines with the VP and then with a possessor argument. In this chapter, I will instead assume that Appl_{pw} has the selectional features [S:V(S:N); S:N; S:N; S:$\text{Voice}_{\text{init}}$], and that semantically it takes an open predicate as the complement, projects the unsaturated argument of the predicate in the first specifier, and introduces another argument in the second specifier while making the argument in the first specifier be the material part to the one in the second specifier. Since it only involves mechanical applications of Functional Application and Event Identification, I will not present how semantic composition proceeds in (332), but after the semantic composition is completed, PassP-2 in (332) will have the denotation λe[step.on(e,back) & initiator(e,grandson) & the back $\triangleleft$ the grandmother for the duration of e]. Since the possessor argument is the highest NP in the structure, it moves to Spec,TP to check off the [S:N] on T later in the derivation. Then, the surface word order is produced with the desired interpretation that the back, which is a material part of the grandmother, was stepped on by the grandson.

I have shown above that when the retained object construction has a causative interpretation, the possessive relation between the subject and the object is established only through pragmatics, and accordingly, the relation does not always have to hold. This is not the case when the retained object construction has a passive interpretation, which under

[31] I adopt L. Kim's analysis of the construction in (332) primarily for convenience. There are subtle semantic/compositional differences between Bosse's *Appl$_{pw}$* and Tomioka and Sim's *Aff(ect)*, which are both applicable to the passive version of the retained object construction. In this dissertation, I will not investigate the precise semantic properties of the possessive relation or choose (or propose) a mechanism that introduces the relation in the syntax. What matters for the current purpose is that the possessive relation is grammatically encoded by a syntactic element when the retained object construction is interpreted passively (unlike when it is interpreted causatively), and the syntactic element appears between VoiceP and VP in the structure.

the current approach is the outcome of the derivation in (332). When the retained object construction is interpreted passively, the subject and the object *have to* be in the possessive relation, and the object can never be construed to belong to someone else. So, the example in (332) can never mean that the back, which is a material part of the father, the mother, a friend of the grandmother's, etc. was stepped on by the grandson. This is a carried-over property of the active counterpart of (332) shown below, which does not allow the possessive relation between the grandmother and the back not to be established, either.

(334) Sonca-ka halmeni-lul tung-ul palp-ass-ta.
grandson-NOM grandmother-ACC back-ACC step.on-PST-DECL
'The grandson stepped on the grandmother's back.'

The fact that the possessive relation between the grandmother and the back is obligatorily established in (332), as it is in (334), indicates that the former is derivationally related to the latter (L. Kim 2014), in both of which the relation is encoded through a syntactic head. This is in sharp contrast with the case discussed above, where the possessive relation between the grandmother and the back is optional when the construction in question is interpreted causatively. The contrast shows that the example in (328) is in fact derived differently when it has the passive interpretation from when it has the causative interpretation.

In addition to the optionality of the possessive relation between the subject and the object, the retained object construction shows some other patterns as well which indicate that its causative and passive interpretations are obtained separately from different structures.

First, the ambiguity of the retained object construction disappears when there is a cue which resolves the structural ambiguity. It was noted in Section 3.5.2 that a few predicates like *mek-* 'eat' is marked with different forms of the suffix when it appears in the causative and when it appears in the passive. And I have argued in this chapter that the suffix is the realization of a Voice head, whose specific form is determined according to the elements that are adjacent to it. In the case of *mek-*, the Voice head that is associated with the verb is realized as *-i* if it appears between *mek-* and Caus as in '*mek* Voice Caus'; and it is realized as *-hi* if it appears between *mek-* and Pass as in '*mek* Voice Pass'. If the retained object construction always has the structure of a causative while a passive interpretation is attained

for conceptual reasons, the passive interpretation should be possible when the stem predicate of the construction is *mek-* suffixed by *-i*. This is not the case as shown below.[32]:

(335) Ywuan-i sonnim-eykey anay-lul mek-i-ess-ta.
Liu.An-NOM guest.HON-DAT wife-ACC eat-CI-PST-DECL
i. *Possible*: 'Liu An fed the guest his wife.'
ii. *Impossible*: 'Liu An's wife was eaten by the guest.'

(336) Ywuan-i sonnim-eykey anay-lul mek-hi-ess-ta.
Liu.An-NOM guest.HON-by wife-ACC eat-CI-PST-DECL
i. *Impossible*: 'Liu An fed the guest his wife.'
ii. *Possible*: 'Liu An's wife was eaten by the guest.'

The surface forms of the examples in (335) and (336) are exactly the same except for the form of the suffix -CI. But when the form of the suffix is *-i* as in (335), the example can only be interpreted causatively; and when the form of the suffix is *-hi* as in (336), the example can only be interpreted passively. If the allomorphy of the suffix -CI is determined as claimed in this chapter, then the fact that different interpretations are available according to the forms of -CI in (335)–(336) indicates that the causative and the passive interpretations of a retained object construction are generated by two different structures which create different allomorphic contexts.

The different properties of the *-eykey* phrase as dative-marked NP and as adjunct PP can also disambiguate the retained object construction. It has been noted in Section 3.5.3 that the *-eykey* phrase in the causative allows relativization or quantifier floating, but the *-eykey* phrase in the passive does not. If the two interpretations of a retained object construction are generated by different structures as argued in this subsection, then the construction should be compatible with relativization or quantifier floating only when it has a causative interpretation. On the other hand, if the two interpretations of a retained object construction arise due to some conceptual reasons while the construction itself is always derived in the

[32] The examples are constructed based on an anecdote in the classic Chinese novel *Romance of the Three Kingdoms*, in which Liu An fed the protagonist, Liu Bei, his wife when he could not find a meal for the guest. I assume that the wife here is a material part of Liu An in the metaphorical sense, as a spouse can also be referred to as "one's other half".

same way, then the difference between the causative and the passive concerning relativization and quantifier floating must not be observed in the retained object construction regardless of its interpretation. The following examples demonstrate that the former is the case.

(337) halmeni-ka tung-ul palp-hi-n sonca
grandmother-NOM back-ACC step.on-CI-ADN grandson
i. *Possible*: the grandson who the grandmother made step on her back
ii. *Impossible*: the grandson by whom the grandmother was stepped on

(338) Halmeni-ka sonca-eykey sey-myeng tung-ul palp-hi-ess-ta.
grandmother-NOM grandson-DAT/by back-ACC three-CL step.on-CI-PST-DECL
i. *Possible*: The grandmother made three grandsons step on her back.
ii. *Impossible*: The grandmother was stepped on her back by three grandsons.

The examples in (337) and (338) show that the passive interpretation is impossible when the *-eykey* phrase in the retained object construction involves relativization and quantifier floating, respectively. This means that *-eykey* in the retained object construction is not the same element when the construction has a causative interpretation and when it has a passive interpretation. The *-eykey* phrase behaves as if it is NP marked with dative case when the construction is interpreted causatively, and it behaves as if it is PP headed by the argument-introducing postposition when the construction is interpreted passively. Therefore, the patterns shown in (337)–(338) support the view that the causative and the passive interpretations of a retained object construction are due to the structures of the causative and the passive, respectively.

Furthermore, the retained object construction is allowed to have other case marking patterns, but in two different ways according to its interpretation. When it has a causative interpretation, the construction can involve two accusative-marked arguments; and when it has a passive interpretation, it can involve two nominative-marked arguments. The alternative case marking patterns of (328) are shown in (339) and (340).

(339) Halmeni-ka sonca-lul tung-ul palp-hi-ess-ta.
grandmother-NOM grandson-ACC back-ACC step.on-CI-PST-DECL
'The grandmother made the grandson step on her back.'

(340) Halmeni-ka sonca-eykey tung-i palp-hi-ess-ta.
grandmother-NOM grandson-by back-NOM step.on-CI-PST-DECL
'The grandmother was stepped on her back by the grandson.'

The surface forms of the retained object construction in (328) and its alternatives in (339)–(340) are the same except for the case marking patterns. But each alternative can only have a single interpretation, either that of a causative in the case of (339) or that of a passive in the case of (340). If case marking is sensitive to structural configurations as argued in most versions of the case theory, then the different possibilities of case marking patterns as such, which are determined according to how it is interpreted, again shows that the different interpretations of a retained object construction are associated with different structures.

The possibility of idiomatic interpretation also indicates that the retained object construction is structurally ambiguous. Some idiomatic expressions can maintain their idiomatic readings in the active but not in the passive. This is exemplified below, where the example in (341) is the active, and the example in (342) is its passive counterpart.

(341) Aki-ka cec-ul mwul-ess-ta.
baby-NOM breast-ACC bite-PST-DECL
i. *Literal*: 'The baby bit the breast.'
ii. *Idiomatic*: 'The baby ate breast milk.'

(342) Cec-i aki-eykey mwul-li-ess-ta.
breast-NOM baby-by bite-CI-PST-DECL
i. *Literal*: 'The breast was bitten by the baby.'
ii. *Idiomatic (Impossible)*: 'Breast milk was eaten by the baby.'

The above examples illustrate that the expression for 'bite the breast' can be interpreted either literally or idiomatically in the active, but it can be interpreted only literally in the passive. This shows that passivization blocks the idiomatic reading of the expression for 'bite the breast'. Now, the idiomatic reading of the expression in question survives when the retained object construction has a causative interpretation, but it disappears when the construction has a passive interpretation.

(343) Emeni-ka aki-eykey cec-ul mwul-li-ess-ta.
mother-NOM baby-DAT/by breast-ACC bite-CI-PST-DECL
a. Causative interpretation:
i. *Literal*: 'The mother made the baby bite the breast.'
ii. *Idiomatic*: 'The mother breastfed the baby.'

b. Passive interpretation:
   i. *Literal*: 'The mother was bitten in her breast by the baby.'
   ii. *Idiomatic (Impossible)*: 'The mother's breast milk was eaten by the baby.'

The contrast between (343a) and (343b) can be easily accounted for if the two interpretations in (343a) and (343b) are associated with the causative and the passive structures, respectively. That is, the idiomatic reading is impossible when the retained object construction is interpreted passively as in (343b) because the passive interpretation is generated by the structure which has undergone passivization.

There is an opposite case as well. The idiomatic reading of the expression for 'chop the instep', for instance, is unavailable when the retained object construction has a causative interpretation, but it is available when the construction has a passive interpretation.

(344) Swuni-ka Cheli-eykey paltung-ul ccik-hi-ess-ta.
Swuni-NOM Cheli-DAT instep-ACC chop-CI-PST-DECL
   a. Causative interpretation:
      i. *Literal*: 'Swuni made Cheli chop her instep.'
      ii. *Idiomatic (Impossible)*: 'Swuni made Cheli betray herself.'
   b. Passive interpretation:
      i. *Literal*: 'Swuni was chopped in her instep by Cheli.'
      ii. *Idiomatic*: 'Swuni was betrayed by Cheli.'

The idiomatic reading of the expression for 'chop the instep' is not available in (344a), namely, when the example is interpreted causatively, because it requires Appl_{pw} as part of its component. So, in the simple transitive that does not involve Appl_{pw}, the idiomatic reading is not available as in (345)[33], whereas in the possessor raising construction that involves Appl_{pw}, the idiomatic reading is available as in (346).[34]

[33] In (345), the definite article *ku* 'the' is used in the object to eliminate the possibility of a null pronoun.

[34] The idiomatic reading may also be obtained when the object in the simple transitive contains a possessor as in (i).

(i) Cheli-ka Swuni-uy paltung-ul ccik-ess-ta.
Cheli-NOM Swuni-GEN instep-ACC chop-PST-DECL
   i. *Literal*: 'Cheli chopped Swuni's instep.'
   ii. *Idiomatic*: 'Cheli betrayed Swuni.'

(345) Cheli-ka ku paltung-ul ccik-ess-ta.
Cheli-NOM the instep-ACC chop-PST-DECL
i. *Literal*: 'Cheli chopped the instep.'
ii. *Idiomatic (Impossible)*: 'Cheli betrayed someone (to whom the instep belongs).'

(346) Cheli-ka Swuni-lul paltung-ul ccik-ess-ta.
Cheli-NOM Swuni-ACC instep-ACC chop-PST-DECL
i. *Literal*: 'Cheli chopped Swuni's instep.'
ii. *Idiomatic*: 'Cheli betrayed Swuni.'

The contrast between (344a) and (344b), then, can be attributed to the fact that the example with the causative reading is not derived from a possessor raising construction, whereas that with the passive reading is derived from a possessor raising construction. The contrast, therefore, again demonstrates that the two interpretations of a retained object construction come from structures with different derivational histories.

Finally, applying the 'again' test to the retained object construction leads to the same conclusion. It has been argued in Section 3.4.5 that the transitive-based causative has four possible readings with *tasi* 'again'. The same is true when the retained object construction has the causative interpretation as illustrated below.

(347) Halmeni-ka sonca-eykey tung-ul tasi palp-hi-ess-ta.
grandmother-NOM grandson-DAT back-ACC again step.on-CI-PST-DECL
i. 'Someone had already stepped on the grandmother's back (voluntarily), but the grandmother made the grandson step on her back again.'
ii. 'The grandson had already stepped on the grandmother's back (voluntarily), but the grandmother made him do it again.'
iii. 'Someone had already made the grandson step on the grandmother's back, but the grandmother made him to it again.'
iv. 'The grandmother had already made the grandson step on her back, but she did it again.'

The construction with a passive interpretation, on the other hand, allows two interpretations as shown below (Tomioka and Sim 2005; M. Son 2006; Bosse 2011, 2015; L. Kim 2014).

The possibility of the idiomatic reading in (i) suggests that the licensing condition of the reading must be more subtle than stated in the text. But this does not affect the argument in the text, for the fact still remains that the idiomatic reading is impossible when the retained object construction in (344) has the causative interpretation.

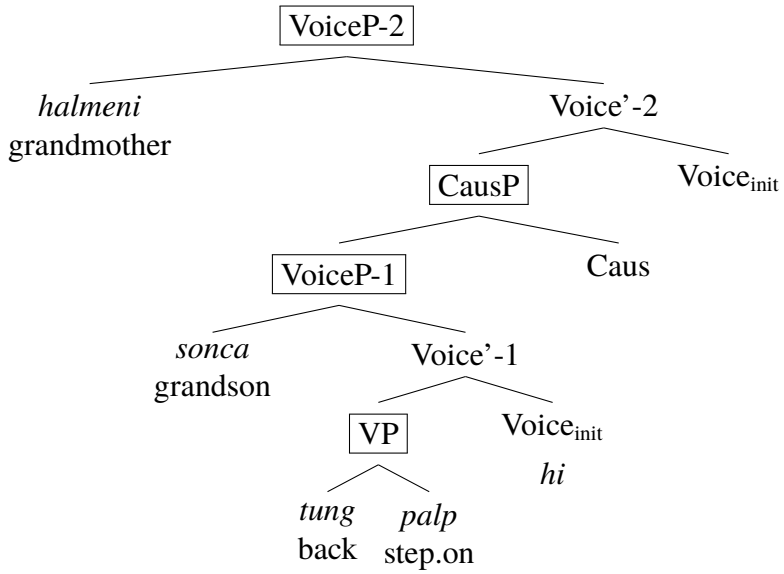
(348) Halmeni-ka sonca-eykey tung-ul tasi palp-hi-ess-ta.
grandmother-NOM grandson-by back-ACC again step.on-CI-PST-DECL

i. 'Someone stepped on the grandmother's back before, and this time, the grandson did it again.'

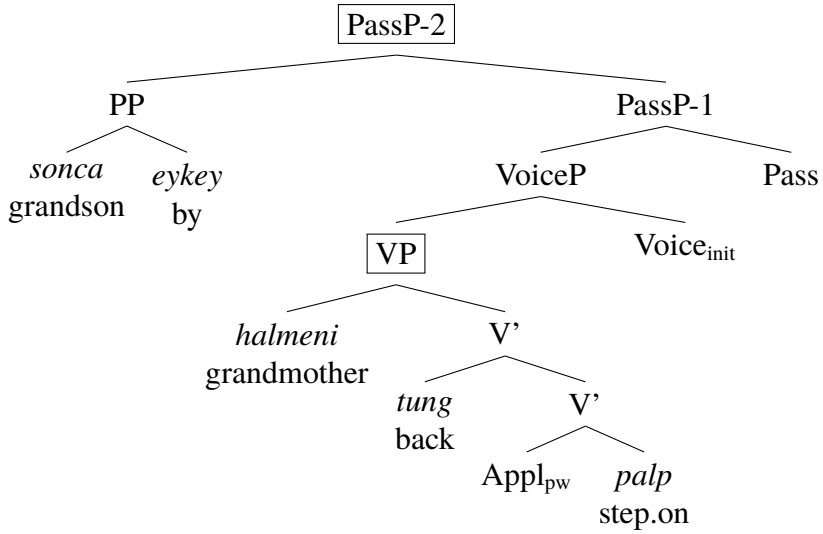
ii. 'The grandson stepped on the grandmother's back before, and he did it again.'

The difference between (347) and (348) concerning *tasi* can be given a straightforward account if they are associated with two different structures. Under the current approach, the examples in (347) and (348) are associated with the structures shown in (349) and (350), respectively. The syntactic nodes of type ⟨st⟩ to which *tasi* can attach are in the square frame.

(349)



(350)



As indicated in (349), the structure for the retained object construction in (347) provides four syntactic nodes of type ⟨st⟩, i.e., VP, VoiceP-1, CausP, and VoiceP-2; hence, the four interpretations, where (347i), (347ii), (347iii), and (347iv) are obtained when *tasi* attaches to VP, VoiceP-1, CausP, and VoiceP-2, respectively. On the other hand, as shown in (350), the structure for the retained object construction in (348) only provides two syntactic nodes of type ⟨st⟩, namely, VP and PassP-2. Therefore, only two readings in (348i) and (348ii) are available for the example, which are obtained when *tasi* attaches to VP and PassP, respectively.

The structures in (349) and (350) may be further supported by the fact that they successfully account for the impossible readings of (347) and (348). When the retained object construction is interpreted causatively as in (347), the reading in (351) is impossible, where the whole event is repeated to the exclusion of *sonca* 'grandson'.

(351) 'The grandmother had already made someone step on her back, but she made her grandson do it again.' (→ *Impossible for* (347))

This is predicted from the structure in (349), in that the structure provides no syntactic node of type ⟨st⟩ which dominates *halmeni* 'grandmother' but does not dominate *sonca*. In order for the grandmother to be part of repetition, the grandson must also be part of it; hence, the impossible reading in (351). On the other hand, when the retained object construction is interpreted passively as in (348), the reading in (352) is unavailable, where the whole event is repeated to the exclusion of *halmeni* (L. Kim 2014).

(352) 'The grandson stepped on someone's back before, and he did it to the grandmother again.' (→ *Impossible for* (348))

The impossible reading in (352) is also expected from the structure in (350): there is no syntactic node of type ⟨st⟩ in (350) which dominates *sonca* but does not dominate *halmeni*. Note that the impossible reading in (351) corresponds to the possible reading in (348i), in the sense that in both cases, the entire event is repeated to the exclusion of the grandson. And the impossible reading in (352) corresponds to the possible reading in (347ii), in the sense that the entire event is repeated to the exclusion of the grandmother. This indicates that the relative heights of the two arguments *halmeni* and *sonca* in the structure differ between

when the retained object construction has a causative interpretation and when it has a passive interpretation: in the former, *halmeni* is higher than *sonca*; and in the latter *halmeni* is lower than *sonca*. This is what the proposed structures in (349) and (350) show.

3.6 Summary

In this chapter, I have argued that the morphological causative in Korean is successfully accounted for under a purely syntactic causativization approach to the causative. First, I have proposed that the causative in Korean involves a causative element, Caus, which selects elements of category Voice as the complement, and argued that the selectional requirement of Caus is responsible for the fact that morphological causativization occurs on all classes of predicates in Korean. It was noted that although causativization may apply in principle to any class of predicates, it is not entirely productive unlike the analytic causative. The limited productivity of causativization as such has been attributed to the listedness of the allomorphic variation of the suffix -Ci. As for the mono-predicational behaviors of the causative with respect to the possibility of coordination and the scopes of short-form negation and an adverb of degree, I have suggested that they can be given independent accounts within the proposed approach. In particular, I have argued that the impossibility of coordination below -Ci is attributed to the coordinate structure constraint, the obligatory wide scope of short-form negation to the selectional requirement of Caus, and the obligatory wide scope of a degree adverb to the adverb hierarchy. I have shown that the bi-predicational properties of the causative with respect to the Condition B effect and the scopes of an adverb of manner and the adverbial for 'again' can also be successfully accounted for under the proposed structure. The lack of the Condition B effect in the transitive-based causative was claimed to be due to the presence of a phase node between the causer argument and the pronominal object, whereas the manifestation of the Condition B effect in the intransitive-based causative to the absence of a phase node between the causer argument and the pronominal object. The ambiguous scope of a manner adverb was attributed to the adverb hierarchy, and the ambiguous interpretations of the causative with *tasi* 'again' to the number of syntactic nodes of type $\langle st \rangle$ in the proposed structure. Finally, I have claimed that the ambiguous interpretations of the retained object

construction are generated by two different structures, one from the causative and the other from the passive of a possessor raising construction. The possessive relation between the subject and the object in the construction with a causative interpretation was claimed to arise due to pragmatics. I have shown that the retained object construction behaves differently depending on its interpretation with respect to relativization, quantifier floating, alternative case marking patterns, possibility of idiomatic readings, and the 'again' test, supporting the view that the retained object construction is structurally ambiguous.

The main argument of the current chapter is that the causative alternation in Korean can be best analyzed when it is viewed to be due to causativization that takes place in the syntax. The discussion has been limited to the causative in Korean; but the current view may easily extend to the causative alternation in other languages, while attributing the typology of causatives to the different selectional properties of the causative head in different languages (Pylkkänen 2002, 2008). For instance, I have suggested in Chapter 1 that the causative head in English takes an element of category V as the complement. The difference between Korean and English in the range of predicates to which causativization can apply, then, may be accounted for in terms of selection along the similar lines with the typology of the reflexive discussed in Chapter 2. That is, since the causative head in Korean does not takes (the projection of) a lexical predicate directly, it is not sensitive to the properties of the lexical predicate; accordingly, the causative is found on all classes of predicates. In English, on the other hand, the causative head takes (the projection of) a predicate directly, and it semantically selects for non-agentive verbs. Therefore, the range of predicates that participate in the causative alternation in English is not as wide as that in Korean. The fact that the causative alternation in Hungarian can occur only for agentive predicates, namely, transitives and unergatives, can also be accounted for in terms of selection (although there are complications, e.g., the binding facts in Hungarian causatives differ from those in Korean discussed in Section 3.4.4; see Horvath and Siloni 2011). It can be simply said that the causative head in Hungarian takes initiative VoiceP as the complement. All in all, the purely syntactic causativization approach advocated in this chapter offers an account of the typology of causatives with local selectional relations between relevant heads in the derivation.

Chapter 4

PASSIVES

4.1 Introduction

The constructions called "passives" exhibit a wide range of properties across languages.[1] Of the various properties exhibited by the purported passives in the world languages, it has long been noted that the defining characteristic of the passive should be suppression of an external argument (Comrie 1977; Marantz 1984; Shibatani 1985; Baker 1988; Keenan and Dryer 2007; Legate 2012, 2014; Bruening 2013; Bruening and Tran 2015; Williams 2015). Under this criterion, some of the constructions previously thought passives would be not really passives but something else. In this regard, some of the BI/DUOC-constructions in Vietnamese have been claimed not to be the passive, contra the traditional analysis of the constructions, but instead to be the active accompanied by an argument introducer that brings about some not-at-issue entailment of suffering or benefit (Bruening and Tran 2015). And the so-called "passives of passives" and "passives of unaccusatives" in Turkish have been claimed to be the impersonal that projects a null pronoun in the internal argument position, not the "passive" that involves suppression of an internal argument (Legate *et al.* 2019).

The constructions with the morpheme *-(r)are* in Japanese are generally called the passive in Japanese literature. Yet, they do not show uniform properties, and they are often categorized into two distinct types: "direct" and "indirect" RARE-constructions (see Hoshi 1999 and Iwasaki 2018, among others, for reviews).[2] The former is exemplified in (353a), and the latter in (353b).

[1] This chapter is based on work done in collaboration with Yuki A. Seo, which was presented at the 94th Annual Meeting of the Linguistic Society of America (LSA 94). Part of the material is also an extension of the analysis of the passive in Korean presented at the 42nd Annual Penn Linguistics Conference (PLC 42).

[2] The indirect RARE-constructions are sometimes further classified into "gapped" and "gapless" indirect RARE-constructions (Kubo 1992; Pylkkänen 2002, 2008; Bosse *et al.* 2012). See Section 4.5 for discussion.

(353) a. Hanako-ga sensei-ni sikar-are-ta.
Hanako-NOM teacher-by scold-PASS-PST
'Hanako was scolded by a teacher.'

b. Hanako-ga sensei-ni musume-o sikar-are-ta.
Hanako-NOM teacher-by daughter-ACC scold-PASS-PST
'Hanako was affected by the daughter's being scolded by a teacher.'

Roughly speaking, in both (353a) and (353b), the referent of the surface subject, *Hanako*, is interpreted to be affected by the event described by the rest of the sentence, where the term "affected" is used with the sense that it has in common use, covering both "affected theme" (i.e., patient; Dowty 1991) and "affected experiencer" (Bosse *et al.* 2012). In (353a), Hanako is the affected theme of the scolding event, and in (353b), Hanako is the affected experiencer of the scolding event. So, in both sentences, the surface subject is an affected argument of some sort, which would function as the direct object in the active in the sense of Dowty (1991); accordingly, they are grouped together as the passive. Upon close inspection, however, the subjects in the two sentences have different semantics from each other: while the subject is affected directly in (353a) (it is the patient participant of the scolding event), it is affected only indirectly in (353b) (it is not a participant of the scolding event itself). Accordingly, they are distinguished from each other and referred to as the direct or the indirect RARE-construction, respectively.

The two types of RARE-constructions show some syntactic differences as well. One of the differences is that intransitive verbs are not allowed in the direct RARE-construction as in (354a–b), but they are allowed in the indirect RARE-construction as in (355a–b) (see Section 4.2 for more differences between the two).[3]

[3] Ishizuka (2010, 2012) reports that the indirect RARE-construction with an unergative verb is judged unacceptable by the native speakers of Japanese with no background in linguistics. The questionnaire surveys that she conducted do not provide any supporting context for the presented examples, and in the out-of-the-blue context, an example like (355b) indeed sounds bad. However, the fact that an example is judged unacceptable without a supporting context does not necessarily mean that it cannot be generated in grammar. It may be just that the example is judged infelicitous because there seems to be no appropriate context in which the example might be used: if an example cannot be used in *any* context that one can imagine, it might as well be just taken to be a bad expression. But an example like (355b) has been generally considered to be grammatical in the literature, and the collaborator of this chapter as well as an informant, both native speakers of Japanese from Tokyo, find it acceptable with a supporting context (e.g., the context for (355b) can be: Taro's room is right above Hanako's room, and Taro's running around in his room makes Hanako distressed because of the loud banging noise that

(354) a. * Ame-ni fur-are-ta.
rain-by fall-PASS-PST
Intended: 'It was fallen by rain.'

b. * Taroo-ni hasir-are-ta.
Taro-by run-PASS-PST
Intended: 'It was run by Taro.'

(355) a. Hanako-ga ame-ni fur-are-ta.
Hanako-NOM rain-by fall-PASS-PST
'Hanako was affected by rain's falling.'

b. Hanako-ga Taroo-ni hasir-are-ta.
Hanako-NOM Taro-by run-PASS-PST
'Hanako was affected by Taro's running.'

If the sole criterion identifying a construction as the passive were suppression of an external argument, the indirect RARE-construction might not be the passive at all since it is permitted to involve an unaccusative verb which lacks an external argument as in (355a). Nonetheless, I argue that Japanese RARE-constructions are all actually passives, suggesting that the characteristic feature of the passive should be (syntactic) suppression of any argument rather than of an external argument.[4]

Specifically, as noted briefly in Chapter 3, I define the passive as a construction that involves a passive element, *Pass(ive)*, shown below (Bruening 2013).

(356) $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle}(\exists x)[P((x))]$ (= $\lambda P_{\langle e,st\rangle}[P]$ *or* $\lambda P_{\langle e,st\rangle}\exists x[P(x)]$)

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it generates). Ishizuka (2010:140–142) herself also uses supporting contexts to argue that examples that are initially judged unacceptable can in fact be generated in grammar. Based on these considerations, I maintain with much of the previous literature that the indirect RARE-construction can be formed out of an unergative verb.

[4] Demotion of an argument is not likely to be one and only feature of the passive, however, because if it is, constructions like the object drop construction and the middle may be (presumably incorrectly) categorized as the passive as well. There is a possibility that the middle is a type of passive at least in certain languages like Korean, in that it employs the morpheme that is found in the passive (See Chapter 3 for discussion of the morpheme -CI).

(i) I nonmwun-un swulswul cal ilk-hi-n-ta.
this paper-TOP smoothly well read-CI-NPST-DECL
'This paper reads smoothly.'

In this chapter, I will set aside the issue and assume that the generalization holds in one direction: the passive necessarily involves demotion of an argument, but a construction involving demotion of an argument is not necessarily the passive.

The essential function of Pass is syntactic suppression of an argument. It does so by requiring its complement to be an unsaturated predicate of type ⟨e,st⟩. That is, the passive head *prevents* an argument from being projected within its complement predicate by requiring it to remain semantically open. I suggest that Pass in Japanese requires an XP to occupy its specifier at some point in the derivation (see below), and it optionally existentially quantifies over an unsaturated variable of the complement as indicated by the parentheses in (356). The requirement of Pass to have its specifier occupied may be satisfied by a demoted argument with the postposition *-ni* 'by', although it does not necessarily have to be the *-ni* phrase that satisfies the requirement. The ability to existentially quantify over an unsaturated variable enables Pass to have an argument not projected in the syntax at all. The unsaturated argument of the complement predicate, then, will be either realized as the oblique *-ni* phrase at Spec,PassP ("demoted") or existentially closed ("(syntactically) removed"). I contend that the RARE-constructions in Japanese all make use of Pass in their derivations, and consequently, involve either demotion or removal of an argument. Therefore, they are genuinely passives.

The information about what type of argument can undergo demotion or removal is not specified in the denotation of Pass. I propose that the type of argument that can be demoted or removed is determined in terms of the selectional requirement of Pass in each language. In English, for instance, Pass has the selectional feature [S:Voice(S:N)] and thus takes as its complement initiative VoiceP (Bruening 2013) that is capable of projecting an initiator argument in the specifier; consequently, the passive in English is compatible with transitive verbs (e.g., *The book was reviewed by the newspaper*) or unergative verbs (e.g., *The bed was slept in by the queen*), but not with unaccusative verbs (e.g., **The hotel was remained in by the king*).[5] In the case of Japanese, I suggest that Pass has the selectional features [S:Voice*; S:α], and accordingly takes any VoiceP as its complement and an element of an unspecified category as its specifier. This means that, in principle, the passive can be formed out of any

[5] Note that not all transitive verbs can be passivized in English: e.g., *John has a new car* vs. **A new car is had by John* (Jackendoff 1972; Keenan and Dryer 2007, Williams 2015). It may be assumed that verbs like *have*, although transitive in English, are not selected by initiative Voice, and consequently, cannot undergo passivization (contrary to, e.g., *own*, which can be passivized as in *The house is owned by my sister*, and thus can be taken to be selected by initiative Voice).

class of verbs in Japanese so long as it comes with a VoiceP layer in the structure, analogous to the case of causatives in Korean. But as noted in (354)–(355), this is not the case, and intransitive verbs are not allowed in the direct RARE-construction while they are allowed in the indirect RARE-construction. And as will be shown in Section 4.2, the direct and indirect RARE-constructions show further differences with respect to argument demotion/removal. The non-uniform patterns of the RARE-constructions as such are attributed to the language-specific properties of Pass in Japanese as well as the interactions of the passive head with the other elements involved in the derivation, including (i) *Aff(ect)* (Bosse *et al.* 2012), which selects PassP as its complement and introduces a non-selected affected experiencer argument in its specifier, and (ii) *T(ense)*, which I assume to have the selectional features [S:F; S:N] so that it takes the projection of a functional head (such as VoiceP, NegP, etc.) as its complement and an element of category N as its specifier.

If the analyses presented in this chapter are tenable, the RARE-constructions in Japanese may constitute another support for the claim that the passive does not necessarily involve suppression of an 'external' argument (Bruening 2013; Kiparsky 2013; Murphy 2014; Williams 2015), against the more traditional view in, for example, Perlmutter and Postal (1977). That is, a construction that involves suppression of an internal argument may as well be considered a 'true' passive as long as it is derived with Pass. The specific analysis of the RARE-constructions that I propose in terms of the passive head and its selectional requirements may also extend to non-typical passives in other languages, such as the SE-passive in some Romance languages and the BE-passive in Dutch and German, which can be formed with an unaccusative verb, as well as the antipassive in some ergative languages, which suppresses the internal rather than the external argument of a transitive verb. Leaving aside other potential factors that may affect the grammaticality of a structure, if a construction involves suppression of an argument, it may be analyzed to be derived by Pass selecting the predicate that would otherwise project the argument in the usual, non-suppressing way (Bruening 2013).

This chapter is organized as follows. In Section 4.2, I present the parallel behaviors of the direct and the indirect RARE-constructions, based on which I argue that the indirect RARE-construction is the passive to the extent that the direct RARE-construction is the passive. Then,

in Section 4.3, I propose that the passive in any language involves the passive head introduced above, and claim that both the direct and the indirect RARE-constructions involve the passive head. In this section, the specific derivations of the RARE-constructions are presented along with the interactions between the passive head and the other syntactic elements involved in their derivations, offering an account of the peculiar behaviors of the two types of RARE-constructions. In Section 4.4, I discuss the nature of *-ni* and *-niyotte*, both of which are often considered to introduce a demoted initiator argument in the passive in Japanese. Building on Bruening (2013) and Fukuda (2011), among others, I suggest that *-ni* is a semantically vacuous postposition that provides its own argument to its sister open predicate, thereby saturating the unsaturated variable of the predicate; and *-niyotte* is an adjunct element that introduces a causing event and a causer argument into the structure. The different distributions of *-ni* and *-niyotte* in the RARE-constructions will be examined under this view. In Section 4.5, I discuss the so-called "gapped" and "gapless" indirect RARE-constructions (Kubo 1992). It will be argued that the "gapped" indirect RARE-construction is ambiguous between two structures, one that is derived with the applicative head, $Appl_{pw}$, which encodes a possessive relation between two entities (Bosse 2015, L. Kim 2014; see Chapter 3 in this dissertation), and the other that is derived with Aff. I suggest that the parsing possibilities of the ambiguous construction are determined in accordance with linguistic and pragmatic factors: if the subject is inanimate, or if the *-niyotte* phrase is used, the construction is parsed to be the structure involving Appl_{pw} (cf. Kubo 1992; Pylkkänen 2002, 2008; Ishizuka 2010, 2012); whereas, if the subject is animate, it is parsed to have the same structure with the "gapless" indirect passive, i.e., the structure involving Aff. Finally, in Section 4.6, I summarize the chapter.

4.2 Japanese RARE-constructions are passives

In this section, I argue that both the direct and the indirect RARE-constructions in Japanese are passives despite the fact that the indirect variant can be formed out of an unaccusative verb that lacks an external argument. At the end of the section, I summarize the key patterns of the RARE-constructions and identify potential problems for the unified view, which in later sections will be addressed under the proposed approach.

There is little controversy over the passive status of the direct RARE-construction: its derivation appears to involve the grammatical processes that are involved in what is considered the canonical passive in other languages. Specifically, as compared to the active in (357a), the direct RARE-construction in (357b) can be characterized by three derivational properties, namely, (i) suppression of an external argument, (ii) absorption of accusative case, and (iii) promotion of an internal argument to the clausal subject position. These properties are what are claimed to be the properties of the canonical passive in a language like English (Perlmutter and Postal 1984; Baker *et al.* 1989).

(357) a. Neko-ga inu-o oikake-ta.
cat-NOM dog-ACC chase-PST
'A cat chased a dog.'

b. Inu_i-ga neko-ni t_i oikake-rare-ta.
dog-NOM cat-by chase-PASS-PST
'A dog was chased by a cat.'

It is not obvious, however, if the indirect RARE-construction is also the passive, for it shows quite different patterns from the direct variant, and thus must involve at least some grammatical processes distinct from those involved in the canonical passive. However, the indirect RARE-construction appears to show certain characteristics that are also shown by the direct RARE-construction. If the characteristics common to the two types of RARE-constructions are the reflections of the essential feature of the passive, then the indirect RARE-construction may as well be considered the passive even though it is derived somewhat differently from the direct RARE-construction.

The most obvious characteristic of the indirect RARE-construction shared by the direct RARE-construction is that the selected argument of the stem verb that would function as the subject in the active is marked with the postposition *-ni*. So, the sole argument of the unaccusative in (358a) and the unergative in (359a) as well as the external argument of the transitive in (360a) are marked with *-ni* in the corresponding indirect RARE-construction as shown in (358b), (359b), and (360b), respectively.

(358) a. **Taroo-ga** sin-da.
Taro-NOM die-PST
'Taro died.'

b. Hanako-ga **Taroo-ni** sin-are-ta.
Hanako-NOM Taro-by die-PASS-PST
'Hanako was affected by Taro's dying.'

(359) a. **Taroo-ga** hasit-ta.
Taro-NOM run-PST
'Taro ran.'

b. Hanako-ga **Taroo-ni** hasir-are-ta.
Hanako-NOM Taro-by run-PASS-PST
'Hanako was affected by Taro's running.'

(360) a. **Sensei-ga** Taroo-o home-ta.
teacher-NOM Taro-ACC praise-PST
'The teacher praised Taro.'

b. Hanako-ga **sensei-ni** Taroo-o home-rare-ta.
Hanako-NOM teacher-by Taro-ACC praise-PASS-PST
'Hanako was affected by the teacher praising of Taro.'

In both types of RARE-constructions shown in (357) and in (358)–(360), the highest argument selected by the stem verb is marked with *-ni*. We know that the *-ni* phrase in the direct RARE-construction is a demoted argument, since the direct RARE-construction is obviously passive. If the *-ni* phrase in the indirect RARE-construction shows the same properties as that in the direct RARE-construction, it can be interpreted to mean that the *-ni* phrase in the indirect RARE-construction is also a demoted argument. And if passivization is described as "demotion of whichever role is bound by [the subject] in the active" (Williams 2015:281), then both the direct and the indirect RARE-constructions can be considered the passive.

In fact, the NPs marked with the postposition *-ni* in the direct and the indirect RARE-constructions pattern together and show different behaviors from the goal argument marked with dative case *-ni* in the ditransitive (Sadakane and Koizumi 1995). First, the *-ni* phrase in the direct RARE-construction cannot host a floating numeral quantifier as in (361), while the *-ni* phrase in the ditransitive can as in (362). The *-ni* phrase in the indirect RARE-construction

patterns with that in the direct RARE-construction and does not allow a floating numeral quantifier as in (363a–c).[6]

(361) * Taroo-ga **sensei-ni san-nin** home-rare-ta.
Taro-NOM teacher-by 3-CL praise-PASS-PST
Intended: 'Taro was praised by three teachers.'

(Goro 2006:237, (9a))

(362) Sensei-ga **gakusei-ni san-nin** hanataba-o age-ta.
teacher-NOM student-DAT 3-CL bouquet-ACC give-PST
'The teacher gave a bouquet to three students.'

(Goro 2006:237, (9c))

(363) a. * Hanako-ga **gakusei-ni san-nin** sin-are-ta.
Hanako-NOM student-by 3-CL die-PASS-PST
Intended: 'Hanako was affected by three students' dying.'

b. * Hanako-ga **gakusei-ni san-nin** hasir-are-ta.
Hanako-NOM student-by 3-CL run-PASS-PST
Intended: 'Hanako was affected by three students' running.'

c. * Taroo-ga **sensei-ni san-nin** ronbun-o home-rare-ta.
Taro-NOM teacher-by 3-CL paper-ACC praise-PASS-PST
Intended: 'Taro was affected by three teachers' praising of his paper.'

(Goro 2006:237, (9b))

Also, the postposition *-ni* in the direct RARE-construction must appear in the focus position of a cleft construction as in (364), but dative case *-ni* in the ditransitive must not as in (365). The indirect RARE-construction again patterns with the former, not the latter as illustrated in (366a–c).

[6] The patterns of a floating numeral quantifier are not as straightforward as stated in the text. It appears that the judgment of the RARE-construction in which a floating numeral quantifier is associated with the *-ni* phrase varies considerably across speakers and examples, and not only syntactic but also semantic and pragmatic factors are involved in licensing a floating numeral quantifier (see Kitagawa and Kuroda 1992; Kitagawa 2018). Also, as Ishizuka (2010:186) points out, there are cases where the *-ni* phrase in the ditransitive cannot host a floating numeral quantifier. Since it is beyond the scope of this chapter, I will not attempt to identify the exact environments where a floating quantifier can be licensed. The point of the examples in (361)–(363), along with the other examples that follow, is that the *-ni* phrases in the direct and the indirect RARE-constructions appear to pattern together, contra, e.g., Miyagawa (1989) who suggests that the *-ni* phrase in the direct RARE-construction is an adjunct PP whereas that in the indirect RARE-construction is a dative-marked NP. See also Kitagawa (2018) for discussion of the cases in which the *-ni* phrases in both types of RARE-constructions do allow a floating numeral quantifier.

(364) Taroo-ga home-rare-ta-no-wa Tanaka sensei***(-ni)**-da.
Taro-NOM praise-PASS-PST-NMZ-TOP Tanaka teacher*(-by)-COP
'It is by Mr. Tanaka that Taro was praised.'

(Goro 2006:237, (10a))

(365) Taroo-ga hanataba-o age-ta-no-wa Hanako**(??-ni)**-da.
Taro-NOM bouquet-ACC give-PST-NML-TOP Hanako(??-DAT)-COP
'It is Hanako to whom Taro gave a bouquet.'

(Goro 2006:237, (10c))

(366) a. Hanako-ga sin-are-ta-no-wa Taroo***(-ni)**-da.
Hanako-NOM die-PASS-PST-NML-TOP Taro*(-by)-COP
'It is by Taro that Hanako was died on.'

b. Hanako-ga hasir-are-ta-no-wa Taroo***(-ni)**-da.
Hanako-NOM run-PASS-PST-NML-TOP Taro*(-by)-COP
'It is by Taro that Hanako was run on.'

c. Taroo-ga ronbun-o home-rare-ta-no-wa Tanaka sensei***(-ni)**-da.
Taro-NOM paper-ACC praise-PASS-PST-NMZ-TOP Tanaka teacher*(-by)-COP
'It is Mr. Tanaka who praised on Taro$_i$'s paper on him$_i$.'

(Goro 2006:237, (10b))

It has also been reported that the NP marked with the postposition *-ni* in the direct RARE-construction cannot undergo relativization as in (367), whereas the NP marked with dative case *-ni* in the ditransitive can as in (368) (Ishizuka 2010, 2012). The NP marked with *-ni* in the indirect RARE-construction cannot be relativized as shown in (369a–c), patterning yet again with the direct RARE-construction.

(367) * [Doroboo-ga t$_i$ tukamae-rare-ta] **keisatukan**$_i$-ga yuumei-ni nat-ta.
[thief-NOM catch-PASS-PST] police.officer-NOM famous-DAT become-PST
Intended: 'The policeman by whom the thief was caught became famous.'

(modified from Ishizuka 2010:97, (48a))

(368) [Sensei-ga t$_i$ hon-o watasi-ta] **gakusei**$_i$-ga yorokon-da.
[teacher-NOM book-ACC hand-PST] student-NOM be.pleased-PST
'The student to whom the teacher handed a book was pleased.'

(modified from Ishizuka 2010:98, (49a))

(369) a. * [Sensei-ga t_i sin-are-ta] **gakusei$_i$**-ga kono tegami-o nokosi-ta.
[teacher-NOM die-PASS-PST] student-NOM this letter-ACC leave-PST
Intended: 'The student by whom the teacher was died on left this letter.'

b. * [Hahaoya-ga t_i oyog-are-ta] **kodomo$_i$**-ga warat-ta.
[mom-NOM swim-PASS-PST] child-NOM laugh-PST
Intended: 'The child by whom Mom was swum on laughed.'

c. * [Gakusei-ga t_i ronbun-o home-are-ta] **sensei$_i$**-ga betuno gakusei-o yon-da.
[student-NOM paper-ACC praise-PASS-PST] teacher-NOM different student-ACC call-PST
Intended: 'The teacher who praised the student for his paper called another student.'

The uniform patterns of the *-ni* phrase in both types of RARE-constructions, distinct from the patterns of the *-ni* phrase in the ditransitive, suggest that the *-ni* phrase in the indirect RARE-construction is the same element as that in the direct RARE-construction. If the *-ni* phrase in the latter is not a dative-marked noun phrase but a postposition phrase, then so is the *-ni* phrase in the former. In the same vein, if the *-ni* phrase in the latter is not a normally projected dative argument but a demoted argument in an oblique phrase, so can be the *-ni* phrase in the former.

Yet another piece of evidence for the passive status of the indirect RARE-construction comes from the possibility of argument removal and the accompanying existential interpretation. When transitive verbs are involved, the initiator argument marked with *-ni* in both the direct and the indirect RARE-constructions can be omitted as shown in (370a) and (370b), respectively, just as the initiator argument marked with *by* in the English passive can as in the English translation of (370a).

(370) a. Inu-ga (neko-ni) oikake-rare-ta.
dog-NOM (cat-by) chase-PASS-PST
'A dog was chased (by a cat).'

b. Hanako-wa (sensei-ni) musume-o sikar-are-ta.
Hanako-TOP (teacher-by) daughter-ACC scold-PASS-PST
'Hanako was affected by the daughter's being scolded (by a teacher).

And when it is omitted, the missing argument is interpreted existentially, again just like that in the English passive. The existential interpretation of the missing argument in the direct and the indirect RARE-constructions can be demonstrated by the facts that (i) it can be the inner antecedent of a following sluiced wh-phrase (Chung *et al.* 1995; Legate 2014; Tomioka and Kim 2017), (ii) it cannot be bound or controlled (Bhatt and Pancheva 2006; Bruening and Tran 2015), (iii) it cannot license a reflexive pronoun[7] (Alexiadou *et al.* 2018), and (iv) it takes obligatory narrow scope with respect to negation (cf. Chung and Ladusaw 2004), among others. The respective cases are exemplified below, where the 'a' sentences are instances of the direct RARE-construction and the 'b' sentences instances of the indirect RARE-construction.

(371) *The missing argument can be the inner antecedent of a sluiced wh-phrase*

a. Watasi-wa Hanako-ga home-rare-ta-to kii-ta-ga dare-ni-ka-wa
I-TOP Hanako-NOM praise-PASS-PST-COMP hear-PST-but who-DAT-Q-TOP know-NEG
'I heard that Hanako was praised, but I don't know by whom.'

b. Watasi-wa Hanako-ga Taroo-o home-rare-ta-to kii-ta-ga dare-ni-ka-wa
I-TOP Hanako-NOM Taro-ACC praise-PASS-PST-COMP hear-PST-but who-DAT-Q-TOP
wakara-nai.
know-NEG
'I heard that Hanako was affected by Taro being praised, but I don't know by whom (Taro was praised).'

(372) *The missing argument cannot be bound or controlled*

a. Subete-no kisya-wa syusyou-ga intabyuus-are-ru koto-o nozonde-iru.
all-GEN reporter-TOP prime.minister-NOM interview-PASS-PRS thing-ACC want-PRS

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[7] This is not entirely clear in some languages like English, as there are cases in which a reflexive pronoun appears to be licensed by the missing argument of a passive as exemplified below.

(i) a. Such privileges should be kept to oneself.
(Collins 2005:101, (42a); originally from Baker *et al.* 1989)

b. Damaging testimony is always given about oneself in secret trials.
(Collins 2005:101, (42b); originally from Roberts 1987)

However, Alexiadou *et al.* (2018) point out that examples like (ia–b) are rather impossible across languages, and that the reported cases in English literature all involve modality or negation (which is pointed out to them by Norbert Hornstein). Based on these considerations, I assume with Alexiadou *et al.* that the missing argument of a passive itself is not a licenser of a reflexive pronoun.

i. *Possible*: 'Every reporter wants the Prime Minister to be interviewed (by someone).'

ii. *Impossible*: 'Every reporter$_i$ wants the Prime Minister to be interviewed by them$_i$.'

b. Subete-no kisya-wa syusyou-ga musume-o intabyuus-are-ru koto-o
all-GEN reporter-TOP prime.minister-NOM daughter-ACC interview-PASS-PRS thing-ACC
nozonde-iru.
want-PRS

i. *Possible*: 'Every reporter wants the Prime Minister to be affected by the daughter being interviewed (by someone)'

ii. *Impossible*: 'Every reporter$_i$ wants the Prime Minister to be affected by the daughter being interviewed by them$_i$'

(373) *The missing argument cannot license a reflexive pronoun*

a. * Hanataba-ga zibun-ni age-rare-ta.
bouquet-NOM self-DAT give-PASS-PST
Intended: 'A bouquet was given to himself/herself.'

b. * Hanako-ga zibun-ni hanataba-o age-rare-ta.
Hanako-NOM self-DAT bouquet-ACC give-PASS-PST
Intended: 'Hanako was affected by a bouquet being given to himself/herself.'

(where himself/herself = the bouquet-sender)

(374) *The missing argument takes obligatory narrow scope with respect to negation*

a. Kabe-ga nu-rare-nakat-ta.
wall-NOM paint-PASS-NEG-PST

i. *Possible*: 'It was not the case that the wall was painted by someone.' ($\neg > \exists$)

ii. *Impossible*: 'There was someone who did not paint the wall.' ($\exists > \neg$)

b. Hanako-ga kabe-o nu-rare-nakat-ta.
Hanako-NOM wall-ACC paint-PASS-NEG-PST

i. *Possible*: 'It was not the case that Hanako was affected by the wall being painted by someone.' ($\neg > \exists$)

ii. *Impossible*: 'There was someone such that Hanako was affected by the wall not being painted by him or her.' ($\exists > \neg$)

The examples in (371)–(374) all indicate that the missing initiator argument in the RARE-constructions is existential not pronominal, showing that both the direct and the indirect RARE-constructions can involve existential quantification like the passive in English.

The discussion so far suggests that the *-ni* phrase in the indirect RARE-construction is the same element with the *-ni* phrase in the direct RARE-construction: they are both an argument demoted to an oblique phrase, which is in principle allowed to be removed in the syntax through existential quantification. If demotion or removal of an argument is the essential feature of the passive as this paper contends, then the indirect RARE-construction must be categorized as the passive together with the direct RARE-construction.

There are a few complications for the unified view, however. First, intransitive verbs cannot be used in the direct RARE-construction, while they can be in the indirect RARE-construction. This is illustrated in (354a–b) and (355a–b), repeated below.

(375) a. * Ame-ni fur-are-ta.
rain-by fall-PASS-PST
Intended: 'It was fallen by rain.'

b. * Taroo-ni hasir-are-ta.
Taro-by run-PASS-PST
Intended: 'It was run by Taro.'

(376) a. Hanako-ga ame-ni fur-are-ta.
Hanako-NOM rain-by fall-PASS-PST
'Hanako was affected by rain's falling.'

b. Hanako-ga Taroo-ni hasir-are-ta.
Hanako-NOM Taro-by run-PASS-PST
'Hanako was affected by Taro's running.'

It is not immediately clear why the above contrast arises if both the direct and the indirect RARE-constructions are the passive.

Second, although the *-ni* phrase can be omitted and interpreted existentially when the RARE-constructions are transitive-based as illustrated in (370)–(374), this is not possible when they are intransitive-based as shown below. In (377a–b), the missing argument is intended to be existential; the examples are not ungrammatical if the missing argument is interpreted to be a null pronoun referring to a specific individual in the context.

(377) a. * Hanako-ga sin-are-ta.
Hanako-NOM die-PASS-PST
Intended: 'Hanako was affected by someone's dying.'

b. * Hanako-ga hasir-are-ta.
Hanako-NOM run-PASS-PST
Intended: 'Hanako was affected by someone's running.'

The fact that an oblique phrase is obligatory in the intransitive-based indirect RARE-construction can be particularly problematic for the view being pursued in this chapter, in that such a pattern is rarely (if at all) attested in the passive across languages.[8] In general, if the passive in a language allows an oblique phrase, it also allows the oblique phrase to be omitted entirely (e.g., the passive in English). Some languages are reported to have the passive obligatorily omit an argument as exemplified below (Lazdina 1966; Dryer 1994); but no language other than Japanese (assuming that the RARE-constructions are passives) seems to require the passive to have an oblique phrase while prohibiting the oblique phrase from being omitted.

(378) Es tieku macits (*no mates). Latvian
I am taught (*by mother)
'I am taught.'

(Keenan and Dryer 2007:331, (10); originally from Lazdina 1966)

Lastly, the *-niyotte* phrase, which is often taken to introduce an initiator argument in Japanese passives, is generally allowed in the transitive-based (direct or indirect) RARE-constructions as in (379a–b), but it is disallowed in the unaccusative-based (indirect) RARE-construction or in the unergative-based (indirect) RARE-construction as shown in (380a) and (380b), respectively.

(379) a. Inu-ga neko-ni/**niyotte** oikake-rare-ta.
dog-NOM cat-by/owing.to chase-PASS-PST
'A dog was chased by a cat.'

b. Hanako-ga sensei-ni/**niyotte** musume-o sikar-are-ta.
Hanako-NOM teacher-by/owing.to daughter-ACC scold-PASS-PST
'Hanako was affected by the teacher's scolding of the daughter.

(380) a. Hanako-ga Taroo-ni/***niyotte** sin-are-ta.
Hanako-NOM Taro-by/owing.to die-PASS-PST
'Hanako was affected by Taro's dying.'

[8] Thanks to Benjamin Bruening for pointing this out.

Direct			Indirect		
unacc.	unerg.	tr.	unacc.	unerg.	tr.
x	x	o	o	o	o
–	–	(*ni*)	*(*ni*)	*(*ni*)	(*ni*)
–	–	(*niyotte*)	**niyotte*	**niyotte*	(*niyotte*)

Table 4.1: The patterns of Japanese RARE-constructions

b. Hanako-ga Taroo-ni/***niyotte** hasir-are-ta.
Hanako-NOM Taro-by/owing.to run-PASS-PST
'Hanako was affected by Taro's running.'

Notice that *Taroo* 'Taro' in (380b) is the initiator of *hasir-* 'run', suggesting that the incompatibility of *-niyotte* in the intransitive-based RARE-construction is not simply because the demoted argument is not an initiator.

In short, it appears that the transitive-based (direct and indirect) RARE-constructions uniformly show passive-like behaviors, but the intransitive-based ones show mixed properties, obscuring the nature of the RARE-constructions. The patterns of the RARE-constructions are summarized in Table 4.1. The view that the RARE-constructions are all passives would offer a straightforward account of the distribution of the morpheme *-(r)are* and the postposition *-ni* that is accompanied by the morpheme. In order to maintain this view, however, it appears that the following issues must be addressed at the very least:

A. Why are intransitive verbs incompatible with the direct RARE-construction, but they are compatible with the indirect RARE-construction?

B. Why can the *-ni* phrase be omitted and interpreted existentially in the transitive-based (direct and indirect) RARE-constructions, but this is not possible in the intransitive-based (indirect) RARE-construction?

C. Why is the *-niyotte* phrase allowed in the transitive-based (direct and indirect) RARE-constructions but not in the intransitive-based (indirect) RARE-construction?

In the rest of this chapter, I address these issues with the approach proposed in Section 4.3.

4.3 Proposal

Following Bruening (2013), I first suggest that the passive is a construction that involves a passive element, *Pass(ive)*, shown below.

(381) $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle}(\exists x)[P((x))]$ (= $\lambda P_{\langle e,st\rangle}[P]$ *or* $\lambda P_{\langle e,st\rangle}\exists x[P(x)]$) (= (356))

According to the denotation of Pass in (381), the complement of Pass has to be an open predicate of type ⟨e,st⟩. By requiring its complement to remain semantically open, Pass prevents an argument from being projected in its complement predicate. I suggest that this is one of the universal features of Pass across languages. That is, the passive in any language is viewed to involve a predicate whose argument is not projected the way it would be in the active. Another feature of Pass that I claim is universal is the ability to existentially quantify over an unsaturated variable. Whether it is optional or obligatory, Pass in any language is capable of existential quantifying over a variable; if a given head is inherently incapable of doing so, then it is not a passive head. So, the semantically open predicate that Pass takes as its complement can be closed by the passive head itself.

The universal features of Pass as such lead to the essential characteristic of the passive. The passive always involves an argument that is not projected in the usual way due to the requirement of Pass to take an open predicate; and the unprojected argument can be suppressed completely in the structure due to the ability of Pass to existentially quantify over an unsaturated variable. That is, the passive is characterized to involve either demotion or removal of an argument. Note that Pass itself does not specify the type of argument that it can prevent from being projected in the usual way. It merely requires its complement to be semantically open. So, in principle, the passive may involve demotion or removal of *any* argument unless it is prevented by some other factors in grammar.

I propose that *-(r)are* is the morphological realization of Pass in Japanese, and accordingly, the RARE-constructions all involve Pass in their derivation. I further suggest that Pass in Japanese has the following language-specific properties in addition to the universal features introduced above. First, Pass in Japanese has the selectional features [S:Voice*; S:α]. As for the first selectional feature [S:Voice*], it means that Pass takes as its complement any VoiceP,

without distinguishing between initiative and expletive VoiceP and that if the selected VoiceP has any residual selectional feature, Pass checks it off (see Chapter 1 for discussion). What this means is that the RARE-constructions in Japanese are, in principle, compatible with any class of verbs as long as it comes with a VoiceP layer, contrary to a language like English, in which Pass selects initiative VoiceP only, and thus the passive is compatible only with transitive and unergative verbs (Perlmutter and Postal 1984). If certain verbs cannot be used in the RARE-constructions, it is attributed to independent factors in the grammar of Japanese. It has been noted in Section 4.2 that it is always the highest argument selected by the stem verb (or the argument that would function as the subject in the active) that is demoted and marked with the postposition *-ni* in the RARE-constructions. This follows from the selectional requirement of Pass in Japanese: for example, since the lexical verb cannot be selected by Pass, the internal argument in the transitive cannot be suppressed by Pass while the external argument is projected in the usual way by initiative Voice.

As for the second selectional feature [S:α], it means that Pass in Japanese requires an XP to occupy its specifier at some point in the derivation. The feature [S:α] on Pass introduces a position in which the unprojected argument within the complement of Pass may be projected as an oblique phrase. Note that the category is not specified on the feature [S:α]. So, the feature is not necessarily checked off by the oblique phrase; any XP can check off the feature [S:α] as long as it occupies Spec,PassP at some point in the derivation.[9] As for the postposition *-ni* that comes with the oblique argument at Spec,PassP, I assume that it has the same function with *by* in English passives in the sense of Bruening (2013). That is, it is an element that provides an NP argument for its sister predicate.

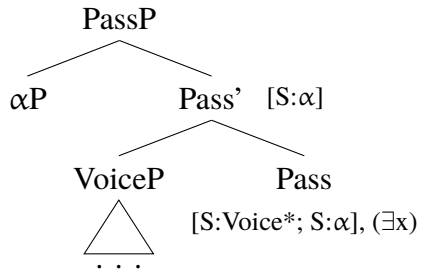
Finally, Pass in Japanese optionally existentially quantifies over an unsaturated variable

[9] In principle, then, the VP complement of Voice may be able to check off the [S:α] on Pass along the lines of the smuggling approach to the passive (Collins 2005; see Ishizuka 2010, 2012 for the analysis of Japanese RARE-constructions under the smuggling approach). But I rule out this possibility by assuming that VP as a whole cannot escape from VoiceP because in order to do so, it must first move to the edge of the VoiceP phase (Chomsky 2000, 2001), but such movement is not licensed as it is too local (Bošković 1994, 2005; Abels 2003; Boeckx 2007). Even if VP can move out of VoiceP in certain environments (e.g., in the ditransitive where there is ApplP intervening between VoiceP and VP), the theme argument inside the moved VP, I assume, will not be able to move to Spec,TP due to the freezing effect (Culicover and Wexler 1977; Wexler and Culicover 1980), leading to a derivational crash.

of its complement. Due to the optionality of existential quantification, the unprojected argument may be either omitted entirely or projected as an oblique phrase at Spec,PassP. As briefly noted above, languages may differ as to whether the existential quantification is optional or obligatory. In a language like Japanese, it is optional as indicated in (381); in a language like Latvian exemplified in (378), on the other hand, it is obligatory, meaning that the denotation of Pass in this language lacks the parentheses around the existential operator as in $\lambda P_{\langle e,st\rangle} \exists x[P(x)]$.

To summarize the proposal, the RARE-constructions in Japanese are all derived through the passive head in (381); and the language-specific features of the passive head in Japanese cause the RARE-constructions to all be associated with the partial structure illustrated in (382).

(382)



In what follows, I elaborate the proposal with specific analyses of the derivations of the RARE-constructions. I will call the RARE-constructions simply passives, hereafter.

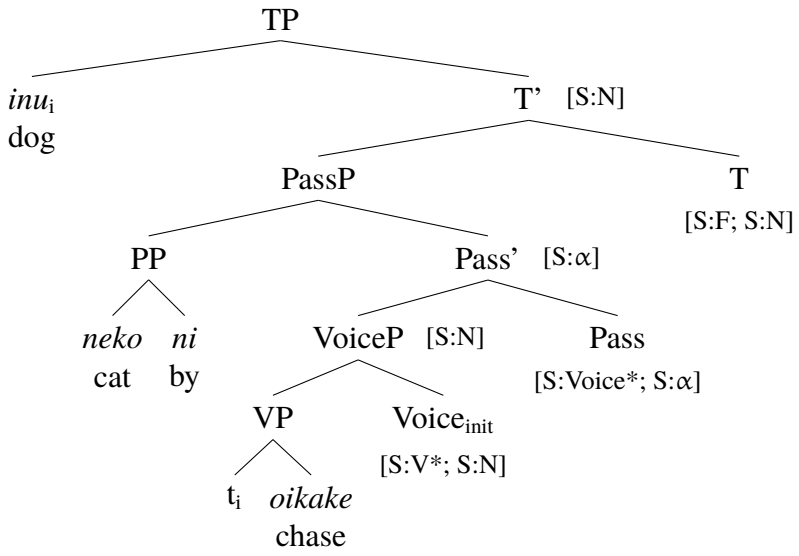
4.3.1 Derivations of the direct passive

In the direct passive in Japanese, the theme argument appears in the surface subject position, and the initiator argument either appears as an oblique phrase marked with the postposition *-ni* or is omitted and interpreted existentially.

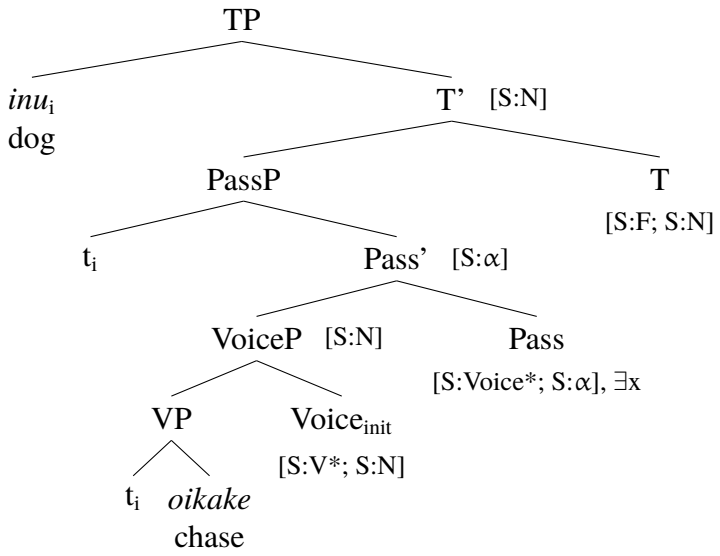
(383) Inu-ga (neko-ni) oikake-rare-ta.
dog-NOM (cat-by) chase-PASS-PST
'A dog was chased (by a cat).'

I suggest that the direct passive with and without the oblique phrase in (383) is derived as in (384a) and (384b), respectively. As noted in Section 4.1, I assume that T has the selectional features [S:F; S:N], and accordingly takes a functional element as the complement and a nominal element as the specifier.

(384) a.



b.



In both (384a) and (384b), the Voice head does not project an initiator argument in the specifier, having VoiceP remain an open predicate of type ⟨e,st⟩; accordingly, the VoiceP can be taken by Pass as the complement. The paths of the derivation diverge from this point on depending on whether or not the passive head existentially quantifies over the unsaturated variable of VoiceP.

In (384a), Pass does not existentially quantifies over the unsaturated variable of VoiceP, and behaves like an identity function with the semantic requirement that its complement be a function of type ⟨e,st⟩. Consequently, Pass does not contribute any semantics at all to the structure, and Pass' merely inherits the semantics of VoiceP that contains the unsaturated

variable. Pass, by virtue of being a semantically deficient functional head, cannot project an NP argument in its specifier. The unsaturated variable, however, can be saturated by the the oblique *-ni* phrase base-generated at Spec,PassP. I assume that the postposition *-ni* in the Japanese passive corresponds to the preposition *by* in the English passive in the sense of Bruening (2013). Bruening suggests that *by* combines with an individual argument and a function argument of type ⟨e,st⟩ in turn, where the former is of category N and the latter of category Voice. I suggest that *-ni* in Japanese has the same semantic requirements with *by* as illustrated in the denotation below, but it differs from *by* in that it has the selectional feature [S:N], rather than [S:N; S_a:Voice] (see also Chapter 3 for the features of *-eykey* in Korean), and thus is not required to adjoin to the element of a specific category. The merger between the *-ni* phrase and Pass' is driven by the [S:α] on Pass.

(385) $[\![\textbf{ni}]\!] = \lambda x \lambda P_{\langle e,st\rangle} \lambda e[P(e,x)]$ (Bruening 2013:25, (90a))

In this view, the unsaturated variable of Pass' is saturated by the *-ni* phrase, by means of *-ni* supplying its own argument to Pass'.[10] The semantic composition from VoiceP to PassP in (384a) is illustrated below.[11]

(386) a. $[\![\textbf{VoiceP}]\!] = \lambda x \lambda e[\text{chase}(e,t_i) \,\&\, \text{initiator}(e,x)]$

b. $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle}[P]$

c. $[\![\textbf{Pass'}]\!] = \lambda x \lambda e[\text{chase}(e,t_i) \,\&\, \text{initiator}(e,x)]$

d. $[\![\textbf{ni}]\!] = \lambda y \lambda P_{\langle e,st\rangle} \lambda e'[P(e',y)]$

e. $[\![\textbf{PP}]\!] = \lambda P_{\langle e,st\rangle} \lambda e'[P(e',\text{cat})]$

f. $[\![\textbf{PassP}]\!] = \lambda e'[\text{chase}(e',t_i) \,\&\, \text{initiator}(e',\text{cat})]$

---

[10] As noted in Chapter 1, the X'-notation is used only for expository convenience. The *-ni* phrase is described to combine with Pass' rather than Pass or PassP to indicate that it is an element satisfying the selectional requirement on Pass.

[11] The trace filling in the theme variable of *oikake-* 'chase' may be abstracted over by an index binder and be saturated by *inu* 'dog' at Spec,TP. Since it is tangential to the current discussion, I will not discuss how movement interacts with semantic composition, and the relevant details have been and will be omitted in the derivations presented in the text.

At the point where the *-ni* phrase saturates the open variable of Pass', it also checks off the [S:α] on Pass by combining with Pass'. The theme argument of *oikake-* 'chase' then moves to Spec,TP and checks off the [S:N] on T; and the derivation converges as all the relevant features have been properly checked off.

In (384b), on the other hand, Pass existentially quantifies over the unsaturated variable of VoiceP. In this case, Pass' does not have an open variable; accordingly, the *-ni* phrase does not appear at Spec,PassP. If it appeared at Spec,PassP, semantic composition would not be able to proceed any further due to type mismatch between PP and Pass' (PP is of type ⟨⟨e,st⟩,st⟩ and Pass' in this case is of type ⟨st⟩).[12] As for the [S:α] on Pass, it is checked off by the theme argument stopping by Spec,PassP before moving further to Spec,TP. When the theme argument arrives at Spec,TP, it checks off the [S:N] on T. The semantic composition from VoiceP to PassP in (384b) is presented below.

(387) a. $[\![\textbf{VoiceP}]\!] = \lambda x \lambda e[\text{chase}(e,t_i) \,\&\, \text{initiator}(e,x)]$

b. $[\![\textbf{Pass}]\!] = \lambda P_{\langle e,st\rangle} \exists y[P(y)]$

c. $[\![\textbf{Pass'}]\!] = [\![\textbf{PassP}]\!] = \lambda e \exists y[\text{chase}(e,t_i) \,\&\, \text{initiator}(e,y)]$

The important assumption underlying the above analysis is that syntactic feature checking and semantic composition work independently of each other. That is, the fact that *inu* 'dog' occupies Spec,PassP at some point in the derivation in (384b) does not mean that it has to undergo semantic composition with Pass'. The moving NP merely checks off the syntactic feature of Pass, and it does nothing more. The open variable of VoiceP is existentially quantified over by Pass independently of the feature checking procedure.

It has been noted earlier that intransitive verbs are not compatible with the direct passive in Japanese as illustrated in (354a–b), repeated below.

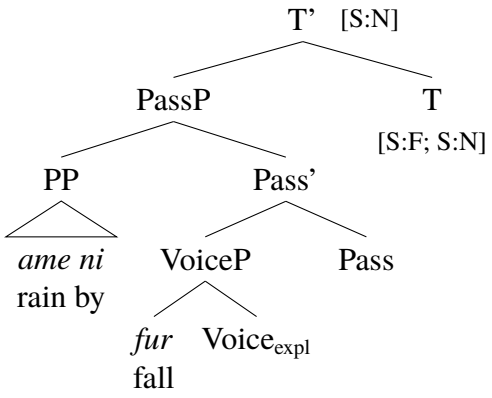
(388) a. * Ame-ni fur-are-ta.
rain-by fall-PASS-PST
Intended: 'It was fallen by rain.'

[12] The same holds for (384a): if Pass existentially quantified over the open initiator variable of VoiceP, semantic composition could not proceed between PP and Pass' due to type mismatch.

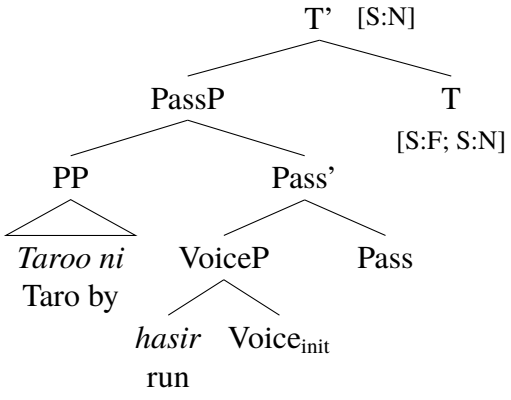
b. * Taroo-ni hasir-are-ta.
Taro-by run-PASS-PST
Intended: 'It was run by Taro.'

The ungrammaticality of (388a–b) can be given a simple account under the current proposal. If an intransitive verb is used in the direct passive, the lone argument selected by the verb is demoted by Pass and marked with the postposition *-ni*. Since the *-ni* phrase in the passive is not a nominal element, the feature [S:N] on T cannot be checked off, and accordingly the derivation crashes.[13] The simplified illicit derivations of the intransitive-based direct passives are illustrated below. In (389a), I am assuming that the unaccusative verb is taken by expletive Voice (i.e., $[\![\textbf{Voice}_{\textbf{expl}}]\!] = \lambda P[P]$), and accordingly, the semantics of the verb is inherited by VoiceP, which then is taken by Pass.

(389) a.



b.



[13] I assume with Fukui (1986) and Miyagawa (1989), among others, that Japanese lacks a (phonetically null) expletive NP.

In short, in order for the derivation of a direct passive to converge, a caseless nominal is required that checks off the [S:N] on T. Although transitive verbs can provide such a nominal after an argument is demoted by Pass, intransitive verbs cannot; therefore, the former can but the latter cannot be used in the direct passive. Pass existentially quantifying over the unsaturated variable of VoiceP does not resolve the ungrammaticality of (388a–b) because whether or not existential quantification takes place, the [S:N] on T is always left unchecked when an intransitive verb is used in the direct passive. The current approach, in this sense, is essentially the case absorption analysis proposed by Miyagawa (1989) restated from a purely syntactic perspective.[14]

4.3.2 Derivations of the indirect passive

Unlike in the direct passive, intransitive verbs are allowed in the indirect passive as shown in (355a–b), repeated below.

(390) a. Hanako-ga ame-ni fur-are-ta.
Hanako-NOM rain-by fall-PASS-PST
'Hanako was affected by rain's falling.'

b. Hanako-ga Taroo-ni hasir-are-ta.
Hanako-NOM Taro-by run-PASS-PST
'Hanako was affected by Taro's running.'

Notice first that an additional nominal is involved in the indirect passive of intransitives in (390a–b), compared to the corresponding direct passive in (388a–b). In the previous subsection, I claimed that intransitive verbs are incompatible with the direct passive because there is no nominal that can check off the [S:N] on T. Intuitively, then, since there is an additional nominal involved in the indirect passive, the grammaticality of examples like (390a–b) may follow from the current analysis.

[14] The current approach differs from Miyagawa (1989) in that the former is purely syntactic whereas the latter is lexicalist in nature, and that the former claims that *-ni* in both the direct and indirect passives is a postposition, whereas the latter claims that *-ni* in the direct passive is a postposition but *-ni* in the indirect passive is dative case. See Section 4.2 for evidence which shows that *-ni* in the indirect passive is a postposition just as *-ni* in the direct passive is; and see Section 4.3.3 for potential counter example involving *zibun* 'self'.

Recall from Section 4.1 that the surface subject of the indirect passive is not a required participant of the event denoted by the stem verb; that is, it is not an argument selected by the stem verb itself. To account for this fact, I follow Bosse *et al.* (2012) and assume that the surface subject in the indirect passive is introduced by a head *Aff(ect)* shown in (391), which takes an event property of type ⟨st⟩ as its complement, introduces an experiencing event, and projects an experiencer argument in its specifier. The event property denoted by the complement of Aff is conventionally implicated as the source of the experiencing event.

(391) $[\![\textbf{Aff}]\!] = \lambda P_{\langle st \rangle} \lambda x \lambda e[P(e) \ \& \ \exists e'[\text{experience}(e') \ \& \ \text{experiencer}(e',x)]: \ \forall e''[P(e'') \rightarrow \text{source}(e'',e')]]$ (Bosse *et al.* 2012:1210, (63))

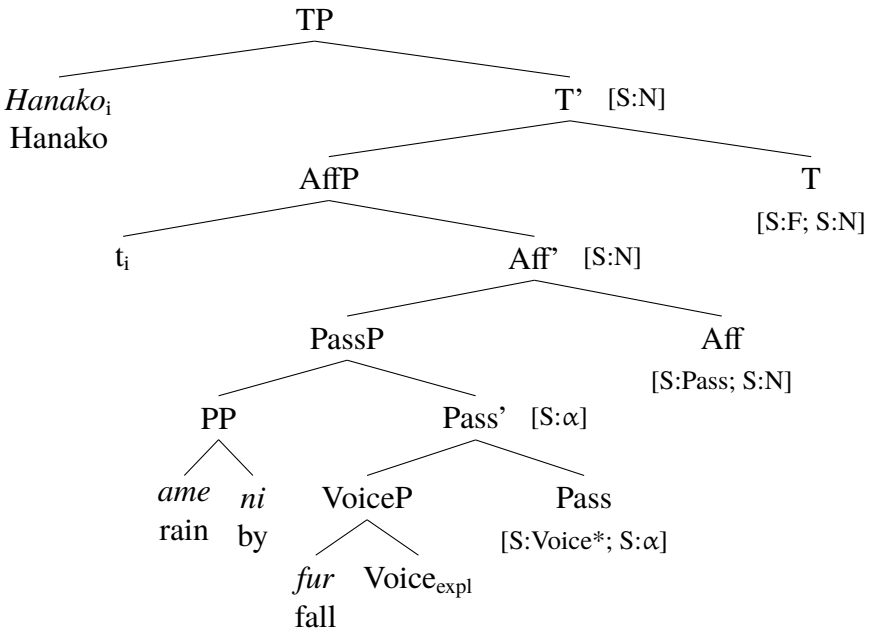
And I suggest that Aff in Japanese has the selectional features [S:Pass; S:N]; i.e., the event property that Aff takes as the complement is an element of category Pass. This is not only compatible with the high attachment site of Aff in Japanese observed by Bosse *et al.*, but it also offers an account of the fact that the highest selected argument of the stem verb must be demoted and marked with the postposition *-ni* in the indirect passive. In fact, under the current approach, Aff necessarily takes PassP as its complement for syntactic reasons.[15] Aff introduces an additional nominal into the structure, without providing any case to be assigned to the nominal. Consequently, the additional nominal is assigned nominative case, not some inherent or oblique case, in the indirect passive as shown in (390a–b). This means that if Aff takes a verbal projection whose argument(s) are all normally projected, the argument that would receive nominative case in the active will end up being caseless. In order for a derivation to converge with Aff, then, one of the selected argument of the lexical verb has to undergo demotion. Since demotion of an argument is the primary function of Pass, Aff has to take the projection of Pass as the complement.

According to the view sketched above, the possibility of intransitive verbs in the indirect passive can be analyzed as follows: the [S:N] on T is checked off by the affected experiencer argument introduced by Aff, while the [S:α] on Pass is checked off by the *-ni* phrase; accordingly, unlike the case of the direct passive, the derivation converges even when

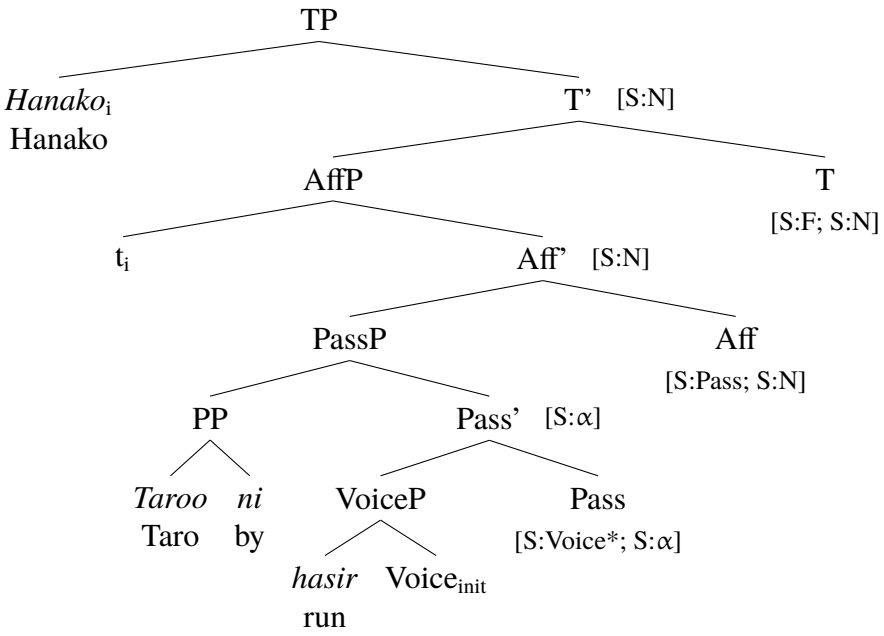
[15] Thanks to Benjamin Bruening for pointing this out.

intransitive verbs are used. The derivations for the unaccusative-based indirect passive in (390a) and the unergative-based indirect passive in (390b) are illustrated in (392a) and (392b).

(392) a.



b.



The above analysis also provides an account of why the *-ni* phrase cannot be omitted in the intransitive-based indirect passive: if it is omitted, the [S:α] on Pass can never be checked off, because there is no XP within VoiceP that can check the [S:α] instead. As noted earlier, I assume that syntactic feature checking and semantic composition works independently of

each other. Therefore, semantically, there will be no problem even if the *-ni* phrase is omitted, since the unsaturated variable of VoiceP can be existentially quantified over by Pass. The reason for the impossibility of argument removal in the intransitive-based indirect passive is purely syntactic.[16]

As for their semantics, the semantic composition from PassP to AffP for the structure in (392a) proceeds as follows (the semantic composition for (392b) proceeds in exactly the same way). In (393), I am abstracting away from the movement of the affected experiencer to Spec,TP, and the composition process is presented as if the affected experiencer, *Hanako*, were at Spec,AffP.

(393) a. $[\![\textbf{PassP}]\!] = \lambda e[\text{fall}(e,\text{rain})]$

b. $[\![\textbf{Aff}]\!] = \lambda P_{\langle st\rangle}\lambda x\lambda e'[P(e') \,\&\, \exists e''[\text{experience}(e'') \,\&\, \text{experiencer}(e'',x)]: \forall e'''[P(e''') \rightarrow \text{source}(e''',e'')]]$

c. $[\![\textbf{Aff'}]\!] = \lambda x\lambda e'[\text{fall}(e',\text{rain}) \,\&\, \exists e''[\text{experience}(e'') \,\&\, \text{experiencer}(e'',x)]: \forall e'''[\text{fall}(e''',\text{rain}) \rightarrow \text{source}(e''',e'')]]$

d. $[\![\textbf{AffP}]\!] = \lambda e'[\text{fall}(e',\text{rain}) \,\&\, \exists e''[\text{experience}(e'') \,\&\, \text{experiencer}(e'',\text{Hanako})]: \forall e'''[\text{fall}(e''',\text{rain}) \rightarrow \text{source}(e''', e'')]]$

As the result of the composition illustrated above, the structure in (392a) is interpreted to mean that the raining event precedes Hanako's experiencing event where it is implicated that its raining is the source of Hanako's experiencing. In other words, Hanako has a (positive or negative) psychological experience because of its raining, or simply put, 'Hanako is affected by its raining'.

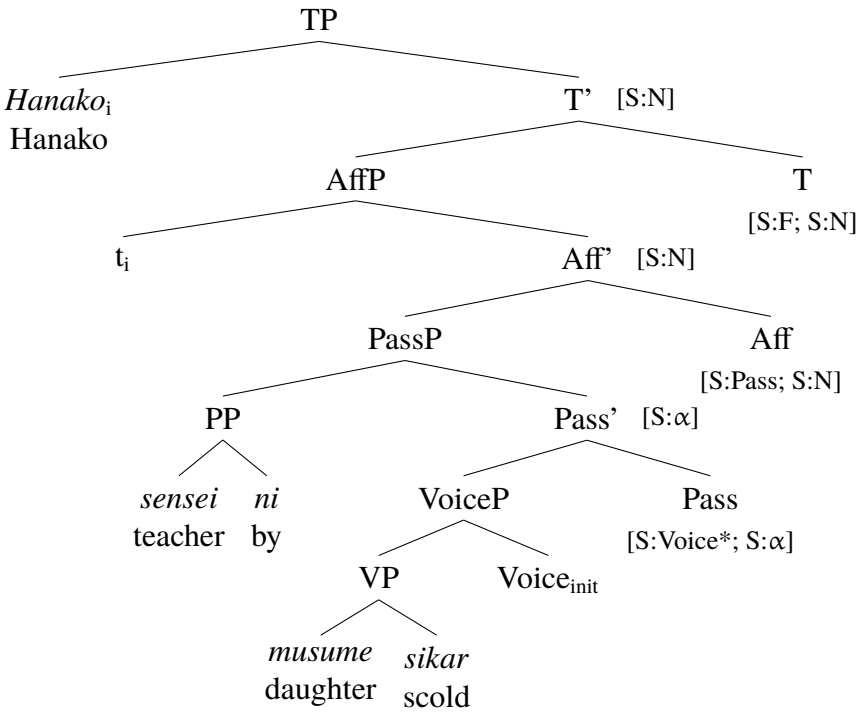
Turning to the transitive-based indirect passive, the *-ni* phrase can be omitted and interpreted existentially as it is in the direct passive.

(394) Hanako-ga (sensei-ni) musume-o sikar-are-ta.
Hanako-NOM (teacher-by) daughter-ACC scold-PASS-PST
'Hanako was affected by the daughter's being scolded (by a teacher).

[16] "Argument removal" in the text does not mean phonological removal; the term is used to mean that an argument is not projected in the syntax due to existential quantification. A null pronoun may satisfy the selectional feature of Pass, as it can occupy a syntactic position.

The derivations of (394) with and without the *-ni* phrase are illustrated in (395a) and (395b), respectively.

(395) a.



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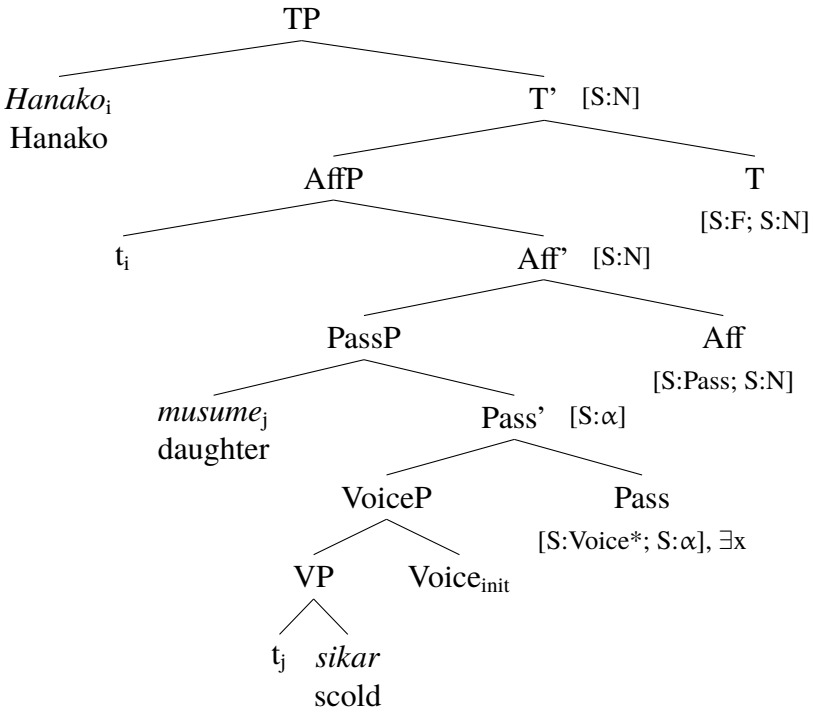


In (395a), the [S:α] on Pass is checked off by the *-ni* phrase, and the [S:N] on T by the affected experiencer. In (395b), the [S:α] on Pass is checked off by the theme argument that moves string vacuously to Spec,PassP (just as it is in the direct passive which lacks the *-ni* phrase), while the [S:N] on T is again checked off by the affected experiencer. In both cases, the derivation converges as all the relevant syntactic features are properly checked off.

The semantic composition from PassP to AffP in (395a) and (395b) proceeds as in (396) and (397), respectively, abstracting away from the A-movement operations.

(396) a. $[\![\textbf{PassP}]\!]$ = λe[scold(e,daughter) & initiator(e,teacher)]

b. $[\![\textbf{Aff}]\!] = \lambda P_{\langle st \rangle} \lambda x \lambda e'[P(e') \,\&\, \exists e''[\text{experience}(e'') \,\&\, \text{experiencer}(e'',x)]: \forall e'''[P(e''') \rightarrow \text{source}(e''',e'')]]$

c. $[\![\textbf{Aff'}]\!]$ = λxλe'[scold(e',daughter) & initiator(e',teacher) & ∃e''[experience(e'') & experiencer(e'',x)]: ∀e'''[scold(e''',daughter) & initiator(e''',teacher) → source(e''',e'')]]

d. $[\![\textbf{AffP}]\!]$ = λe'[scold(e',daughter) & initiator(e',teacher) & ∃e''[experience(e'') & experiencer(e'',Hanako)]: ∀e'''[scold(e''',daughter) & initiator(e''',teacher) → source(e''',e'')]]

(397) a. $[\![\textbf{PassP}]\!]$ = λe∃x[scold(e,daughter) & initiator(e,x)]

b. $[\![\textbf{Aff}]\!] = \lambda P_{\langle st \rangle} \lambda y \lambda e'[P(e') \,\&\, \exists e''[\text{experience}(e'') \,\&\, \text{experiencer}(e'',y)]: \forall e'''[P(e''') \rightarrow \text{source}(e''',e'')]]$

c. $[\![\textbf{Aff'}]\!]$ = λyλe'∃x[scold(e',daughter) & initiator(e',x) & ∃e''[experience(e'') & experiencer(e'',y)]: ∀e'''[scold(e''',daughter) & initiator(e''',x) → source(e''',e'')]]

d. $[\![\textbf{AffP}]\!]$ = λe'∃x[scold(e',daughter) & initiator(e',x) & ∃e''[experience(e'') & experiencer(e'',Hanako)]: ∀e'''[scold(e''',daughter) & initiator(e''',x) → source(e''',e'')]]

AffP in (396) asserts that Hanako has a psychological experience with the implicature that the teacher's scolding of Taro is the source of that experience; and AffP in (397) asserts that Hanako has a psychological experience with the implicature that Taro's being scolded (by someone) is the source of that experience.

Under the current approach, the essential characteristics of the direct and indirect passives follow from the presence or absence of a single syntactic head, Aff, in their derivations.

Semantically, the surface subject in the direct passive does not necessarily have a psychological experience, whereas that in the indirect passive does. This is due to the semantics that Aff introduces into the structure. And syntactically, the direct passive has an active counterpart, whereas the indirect passive does not have one. The fact that the indirect passive does not have an active counterpart is demonstrated below.

(398) a. Taroo-ga kodomo-ni nak-are-ta.
Taro-NOM child-by cry-PASS-PST
'Taro was affected by the child's crying.'

b. * Kodomo-ga Taroo-ni nai-ta.
child-NOM Taro-DAT cry-PST
Intended: 'The child cried on Taro.'

(399) a. Hanako-ga sensei-ni Taro-o sikar-are-ta.
Hanako-NOM teacher-by Taro-ACC scold-PASS-PST
'Hanako was affected by Taro's being scolded by the teacher.'

b. * Sensei-ga Hanako-ni Taro-o sikar-ta.
teacher-NOM Hanako-DAT Taro-ACC scold-PST
Intended: 'The teacher scolded Taro on Hanako.'

(400) a. Sati-ga Masa-ni Aiko-no kabin-o kowas-are-ta.
Sati-NOM Masa-by Aiko-GEN vase-ACC break-PASS-PST
'Sati was affected by Masa's breaking of Aiko's vase.'

(Bosse *et al.* 2012:1186, (1c))

b. * Masa-ga Sati-ni Aiko-no kabin-o kowasi-ta.
Masa-NOM Sati-DAT Aiko-GEN vase-ACC break-PST
'Masa broke Aiko's vase on Sati.'

The indirect passive has such a syntactic characteristic distinct from its direct counterpart, because Aff, which is responsible for the derivation of the indirect passive, has to select PassP for case reasons as noted above. Aff is simply incompatible with a derivation that does not involve Pass; so, the indirect passive does not have a corresponding active sentence. As expected, the surface subject of the 'a' sentences in (398)–(400) has to be interpreted as an affected experiencer; that is, the surface subject necessarily experiences some positive or negative influence from the verbal event.

Some of the constructions that were previously thought the indirect passive must be not the indirect passive but the direct passive in the sense that they do have an active counterpart.[17] The following are examples of the direct passive which superficially look like the indirect passive ('a' sentences) and its active counterpart ('b' sentences).

(401) a. Bin-ga Taroo-ni mizu-o ire-rare-ta.
bottle-NOM Taro-by water-ACC put.in-PASS-PST
'The bottle had water filled by Taro.'

b. Taroo-ga bin-ni mizu-o ire-ta.
Taro-NOM bottle-DAT water-ACC put.in-PST
'Taro filled water in the bottle.'

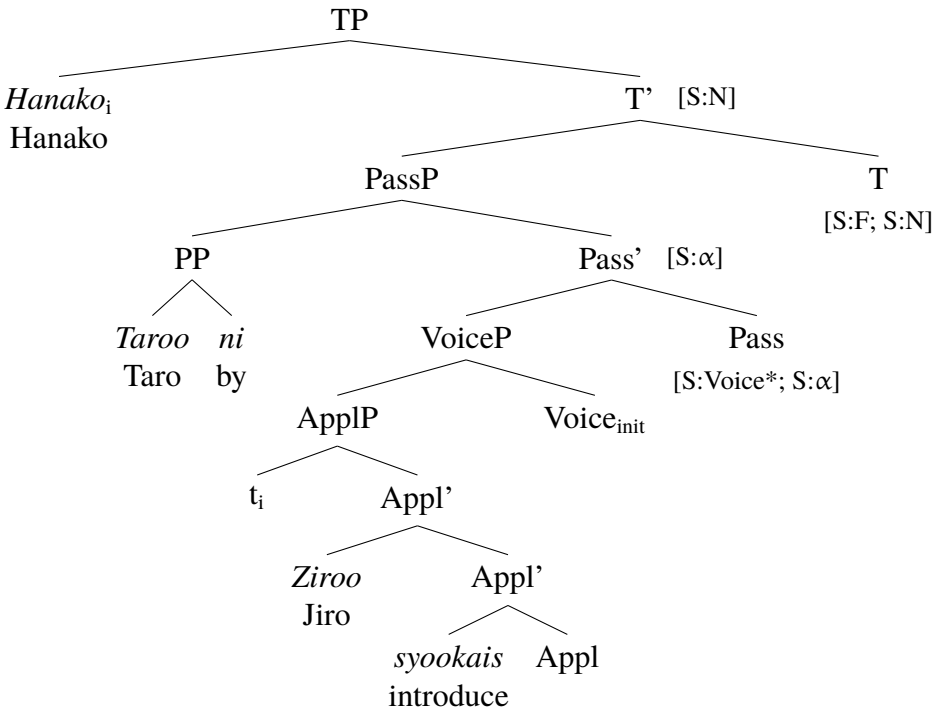
(402) a. Hanako-ga Taroo-ni Ziroo-o syookais-are-ta.
Hanako-NOM Taroo-by Jiro-ACC introduce-PASS-PST
'Hanako had Jiro introduced by Taro.'

b. Taroo-ga Hanako-ni Ziroo-o syookaisi-ta.
Taro-NOM Hanako-DAT Jiro-ACC introduce-PST
'Taro introduced Jiro to Hanako.'

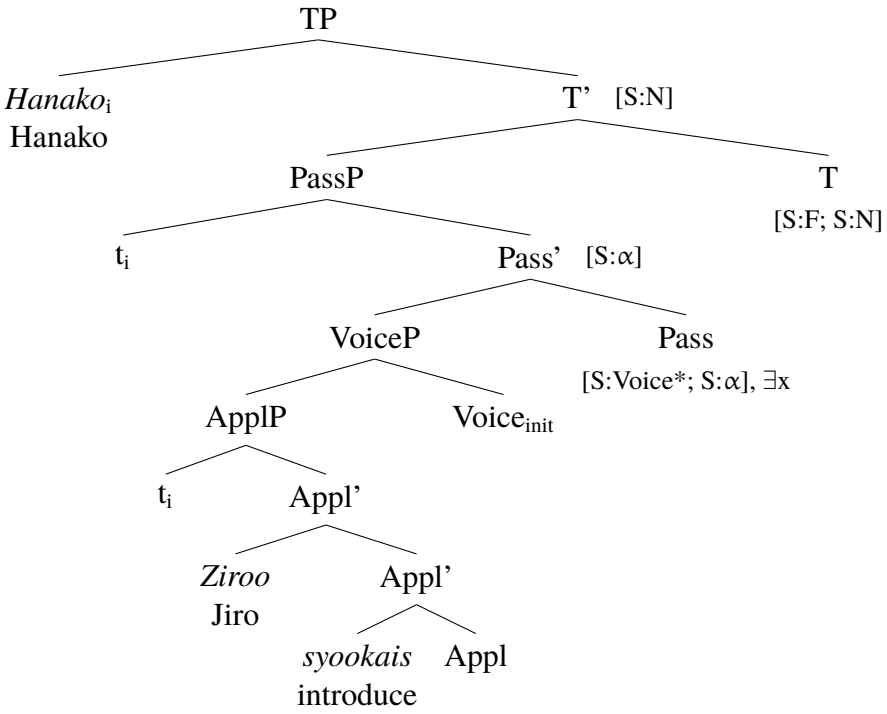
Contrary to the 'a' sentences in (398)–(400), the surface subject of the 'a' sentences in (401)–(402) does not have to be interpreted as an affected experiencer (although it can be pragmatically). The 'a' sentences in (401)–(402) can be interpreted as "neutrally" as the 'b' sentences without any connotation of affectedness, supporting the claim that the 'a' sentences in (401)–(402) are the direct passive which does not involve Aff. Given that the *-ni* phrase in the 'a' sentences in (401)–(402) can be omitted and interpreted existentially, their derivations with and without the *-ni* phrase proceeds along the lines of the sample derivations for (402a) shown in (403a–b).

[17] Ishizuka (2010, 2012) claims that all RARE-constructions are direct passives that involve a gap created by movement of an internal argument to Spec,TP. I do not adopt this view because there are cases where the indirect passive does not involve any gap associated with an internal argument (e.g., the unergative-based indirect passive; see footnote 3) and some of the correlations between NPs in the indirect passive that Ishizuka claims to be established through NP movement is exhibited in constructions other than the indirect passive as well (see Section 4.5 for discussion). Conversely, Kitagawa (2018) suggests that all RARE-constructions are indirect passives where the surface subject does not involve movement from an internal argument position. It seems that such an analysis can hardly capture the animacy restriction imposed only on the subject of the indirect passive (see Section 4.5 for discussion).

(403) a.



b.



In (403a), the *-ni* phrase that is base-generated at Spec,PassP checks the [S:α] on Pass, while the goal argument that is introduced at outer Spec,ApplP moves to Spec,TP and checks off the [S:N] on T. In (403b), the unsaturated variable of VoiceP is existentially quantified

over by Pass, and the goal argument moves successive-cyclically from outer Spec,ApplP to Spec,PassP and then to Spec,TP, checking off the [S:α] on Pass and the [S:N] on T, in turn.

In (401)–(402), the dative argument is promoted to be the surface subject in the passive of a three-place predicate. Japanese also allows promotion of an accusative argument in the passive of a three-place predicate. In this case, the demoted initiator argument has to be marked with *-niyotte* instead of *-ni* as shown below.

(404) Ziroo-ga Taroo-niyotte/*ni Hanako-ni syookais-are-ta.
Jiro-NOM Taro-owing.to/*by Hanako-DAT introduce-PASS-PST
'Jiro was introduced to Hanako by Taro.'

The discussion relevant to the example in (404) is presented in Section 4.4.

4.3.3 Remarks on the behaviors of *zibun* 'self'

I have argued that the *-ni* phrase in the indirect passive is an argument demoted to an oblique phrase as the *-ni* phrase in the direct passive is. A well-known issue that is potentially problematic for the unified view is that the anaphor *zibun* 'self' cannot be anteceded by the *-ni* phrase in the direct passive as in (405a), whereas it can be anteceded by the *-ni* phrase in the indirect passive as in (405b) (McCawley 1972; Kuno 1973; Hoshi 1999).

(405) a. Taroo-wa Hanako-ni zibun-no heya-de nagur-are-ta.
Taro-TOP Hanako-by self-GEN room-LOC hit-PASS-PST
'Taro was hit by Hanako in his/*her room.'

b. Taroo-wa Hanako-ni zibun-no heya-de sawag-are-ta.
Taro-TOP Hanako-by self-GEN room-LOC make.noise-PASS-PST
'Taro was affected by Hanako's making noise in his/her room.'

(Murasugi and Sugisaki 2008: 269, (49a–b))

The contrast in (405a–b) appears to indicate that the *-ni* phrases in the direct and indirect passives are different in nature as in, e.g., Miyagawa (1989) who suggests that *-ni* in the direct passive is a postposition, whereas *-ni* in the indirect passive is dative case. However, this does not have to be the case, and the contrast in (405a–b) may be given an account which maintains the view that the *-ni* phrases in the direct and indirect passives are the same element.

Zibun is known to be a subject-oriented anaphor that can be used as a diagnostic for subjecthood of an argument (e.g. Kuroda 1965; Shibatani 1973). In (405a), the surface subject *Taroo* 'Taro' can antecede the anaphor, and in (405b), either the surface subject *Taroo* or the underlying subject *Hanako* 'Hanako' can antecede the anaphor. The problem here is why *zibun* cannot be anteceded by *Hanako* in (405a), while it can in (405b): *Hanako* in (405a) is the logical subject of *nagur-* 'hit' by virtue of being the initiator of the hitting event just as *Hanako* in (405b) is the logical subject of *sawag-* 'make noise' by virtue of being the initiator of the noise-making event.

The problem may be resolved with the following assumptions: (i) *zibun* must be anteceded by a Subject, where "Subject" refers to either a surface subject or an underlying subject of a predicate; (ii) a single predicate may be associated with one Subject at most; and (iii) a surface subject takes priority over an underlying subject when the Subject of a predicate is determined. By "underlying subject", I mean an element that would function as the surface subject in an unmarked (active, non-causative, etc.) clause.[18]

The assumption in (i) is simply a restatement of what is known about *zibun*. The assumptions in (ii) and (iii) are made to account for the impossibility of *Hanako* anteceding *zibun* in (405a). The example in (405a) involves a single predicate, *nagur-* introducing the hitting event, and thus can have a single Subject at most (*-(r)are* is a semantically vacuous element that syntactically suppresses an argument, hence does not count as a predicate). Since *Taroo* is the surface subject and *Hanako* is the underlying subject, the former becomes the Subject of the predicate, not the latter. Accordingly, *Taroo* but not *Hanako* can antecede *zibun* in (405a). As for (405b), I have analyzed that the indirect passive is associated with two predicates, Aff which introduces the experiencing event and a stem verb which introduces the the verbal event. This means that contrary to the case of the direct passive, the indirect passive can have two Subjects, one for Aff and the other for the verb. In (405b), *Taroo* is the Subject of Aff by virtue of being the surface subject of the construction. Importantly, *Hanako* is also a Subject in (405b): it is the Subject of the verbal event by virtue of being the

[18] So, the theme argument of an unaccusative verb would count as an underlying subject, even though it is not a logical subject, i.e., not the initiator of the verbal event.

underlying subject of *sawag-*. Hence, either *Taroo* or *Hanako* can antecede *zibun* in (405b).

The above account may extend to the contrast between the simple transitive and the *sase*-causative shown below.

(406) a. Hanako-ga Taroo-o zibun-no heya-de nagu-ta.
Hanako-NOM Taro-ACC self-GEN room-LOC hit-PST
'Hanako hit Taro in her/*his room.'

b. Hanako-ga Taroo-o zibun-no heya-de sin-ase-ta.
Hanako-NOM Taro-ACC self-GEN room-LOC die-CAUS-PST
'Hanako let Taro die in her/his room.'

Both the examples in (406a) and (406b) have the transitive frame in which *Hanako* is the surface subject and *Taroo* the surface object. But as indicated in the English translations, *zibun* in the former cannot, while that in the latter can, be anteceded by the object *Taroo*. Under the present account, the contrast can be attributed to the fact that the causative morpheme *-(s)ase* counts as an independent predicate that introduces a causing event into the structure (Pylkkänen 2002, 2008). In the case of (406a), since the example involves a single predicate as the simple transitive, only the surface subject *Hanako* can be the Subject that can antecede *zibun*. On the other hand, the causative example in (406b) involves two predicates, *-(s)ase* and *sin-* 'die', which means that the example can have two Subjects. In (406b), *Hanako* is the surface subject of the construction, hence is a Subject; and *Taroo* is the underlying subject of *sin-*, hence is also a Subject. Consequently, either *Hanako* or *Taroo* can antecede *zibun*.

Although the account presented in this subsection is only an informal generalization, it certainly shows that the behaviors of *zibun* do not necessarily mean that the *-ni* phrases in the direct and indirect passives have to be different elements. In other words, despite the contrast exemplified in (405a–b), both the direct and indirect passives can be analyzed to be genuinely passives involving a demoted argument. Leaving the task of developing a more formal theory of *zibun* to future research, I conclude, based on the analysis in this subsection as well as the discussion in Section 4.2, that the *-ni* phrases in the direct and indirect passives are both an argument demoted to an oblique phrase.

4.3.4 Interim summary

I claimed that the RARE-constructions in Japanese are all passives in the sense that they make use of the passive head, Pass, in their derivation, and consequently involve either demotion or removal of an argument. I then suggested that since Pass in Japanese can take any VoiceP as its complement, the passive in the language can in principle be formed out of transitive as well as intransitive verbs. This way, the intransitive-based indirect RARE-construction could be grouped as the passive together with the transitive-based direct and indirect RARE-constructions. The fact that intransitive verbs are disallowed in the direct RARE-construction was attributed to the universal property of Pass that syntactically suppresses the argument of its complement. If an intransitive verb is used in the direct RARE-construction, the [S:N] on T will never be checked off because the sole argument of the verb is suppressed by Pass, having no NP left to check off the [S:N]. In the case of the indirect RARE-construction, an intransitive verb can be used even if its sole argument is suppressed by Pass. I suggested that this is because Aff is involved in the derivation of the indirect RARE-construction, which introduces a non-selected affected experiencer argument; consequently, the non-selected NP argument can check off the [S:N] on T. The indirect RARE-construction can be formed out of an intransitive verb as such, but the resulting construction still shows a peculiar behavior compared to the transitive-based direct and indirect RARE-constructions: i.e., the *-ni* phrase cannot be omitted and interpreted existentially. I proposed that this is because Pass in Japanese comes with the [S:α] that requires an XP to occupy its specifier at some point in the derivation. That is, if the the sole argument of an intransitive verb is omitted entirely, the [S:α] on Pass cannot be checked off due to the absence of an NP below PassP.

All in all, I argued in this section that the proposed approach can capture the essential syntactic and semantic patterns of the RARE-constructions in Japanese, while maintaining the view that they are all passives. In the next section, I discuss the distributions of *-ni* and *-niyotte*, both of which are often considered to introduce a demoted initiator argument in Japanese passives.

4.4 The nature of the *-ni* and *-niyotte* phrases

It has been suggested above that the [S:N] on T is responsible for the incompatibility of intransitive verbs in the direct passive, and the [S:α] on Pass is responsible for the impossibility of argument removal in the intransitive-based indirect passive. These are the answers to two of the three complications for the unified view of the RARE-constructions advocated in this chapter (see Section 4.2). The last complication for the unified view is that the *-niyotte* phrase is allowed in the transitive-based (direct and indirect) passive as in (407a–b), but it is disallowed in the intransitive-based (indirect) passive as in (408a–b).

(407) a. Inu-ga neko-ni/**niyotte** oikake-rare-ta.
dog-NOM cat-by/owing.to chase-PASS-PST
'A dog was chased by a cat.'

b. Hanako-wa sensei-ni/**niyotte** musume-o sikar-are-ta.
Hanako-TOP teacher-by/owing.to daughter-ACC scold-PASS-PST
'Hanako was affected by the teacher's scolding of the daughter.

(408) a. Hanako-ga Taroo-ni/*__niyotte__ sin-are-ta.
Hanako-NOM Taro-by/owing.to die-PASS-PST
Intended: 'Hanako was affected by Taro's dying.'

b. Hanako-ga Taroo-ni/*__niyotte__ hasir-are-ta.
Hanako-NOM Taro-by/owing.to run-PASS-PST
Intended: 'Hanako was affected by Taro's running.'

As noted in Section 4.2, the incompatibility of *-niyotte* in the intransitive-based indirect passive is not simply because *-niyotte* can only introduce an initiator argument (cf. Goro 2006). The sole argument of an unergative verb like *hasir-* 'run' is an initiator, yet it is still prohibited from being introduced by *-niyotte* as shown in (408b). This suggests that the pattern in (407)–(408) calls for a syntactic, not a semantic, explanation.

In fact, under the current approach, the above pattern can be given an account along the same lines as the possibility of argument removal in the Japanese passive. The *-niyotte* phrase can be used instead of the *-ni* phrase, and the *-ni* phrase can be omitted and interpreted existentially, in exactly the same environment: namely, when the passive is transitive-based. And in both cases, it is attributable to the mandatory requirement of Pass to have the specifier at some point in the derivation.

To elaborate, recall first that the *-ni* phrase can be omitted in the transitive-based passives because the stem verb projects an internal argument which moves to Spec,PassP and checks off the [S:α] on Pass. In the intransitive-based passive, on the other hand, the stem verb involves only a single argument that is demoted to be the *-ni* phrase at Spec,PassP. This means that if the *-ni* phrase is omitted, there remains no NP which checks off the [S:α] on Pass; hence, the *-ni* phrase cannot be omitted. Now, it has been pointed out in the literature that *-niyotte* is different in nature from the postposition *-ni* (Goro 2006; Fukuda 2011; Ishizuka 2010, 2012). First, it is not a simple postposition but a morphologically complex element: *-niyotte* can be decomposed into *-ni* 'DAT', *yor-* 'owe, be attributable', and *-te* 'CONN', where *yor-* can be used as an independent predicate as exemplified below (Goro 2006).

(409) a. Seikoo-wa kinben-ni yor-u.
success-TOP diligence-DAT owe-PRS
'Success is determined according to diligence.' (*Literal*: 'Success owes to diligence.')

b. [rooden-ni yor-u] kasai
[short.circuit-DAT owe-PRS] fire
'a fire caused by a short circuit' (*Literal*: 'a fire that owes to a short circuit')

Also, whereas *-ni* introduces whatever is the highest argument that is selected by the stem verb[19], *-niyotte* appears to impose its own selectional requirement on the NP that it introduces. For example, *-ni* can introduce the experiencer of a psych verb, but *-niyotte* cannot as shown in (410) (Kinsui 1997; Park and Whitman 2003; Ishizuka 2010, 2012; Fukuda 2011).

(410) Kare-no Haru-no Umi-wa ooku-no hito-ni/#niyotte ais-are-te i-ru.
he-GEN spring-GEN sea-TOP many-GEN person-by/#owing.to love-PASS-CONN be-PRS
'His Spring Sea is loved by many people.'

(Park and Whitman 2003, (9b); originally from Taramura 1982)

Furthermore, *-ni* and *-niyotte* can cooccur in a single passive sentence as in (411a) (Ishizuka 2010:164), and *-niyotte* can also appear in the unaccusative, whose derivation does not involve demotion of any argument as in (411b).

[19] Note, however, that this is not always the case due essentially to the homonymy between the postposition *-ni* and dative case *-ni*. See below in this section for discussion.

(411) a. Biru-ga Dokutaa Heru-niyotte kikaizyuu-ni hakais-are-ta.
building-NOM Doctor Hell-owing.to machine.monster-by destroy-PASS-PST
'Dr. Hell caused the building to be destroyed by a machine monster.' (*Literal*: 'Owing to Dr. Hell, the building was destroyed by a machine moster.')

b. Ooku-no hito-ga kikin-niyotte siboosi-ta.
many-GEN person-NOM famine-owing.to die-PST
'Many people died from the famine.' (*Literal*: Owing to the famine, many people died.)

Based on these considerations, I suggest with Fukuda (2011) that *-niyotte* is an element that introduces a causing event and a causer argument, forming an adjunct *-niyotte* phrase that attaches to the topmost extended verbal projection right before it is taken by an inflectional head. The proposed semantics of *-niyotte* is shown below.

(412) $[\![\textbf{niyotte}]\!] = \lambda x \lambda P_{\langle st \rangle} \lambda e \exists e'[\text{cause}(e',e) \,\&\, \text{causer}(e',x) \,\&\, P(e)]$

The *-niyotte* phrase, therefore, is interpreted to mean that some event takes place 'owing to x' or the event is 'caused by x'.[20] As for the fact that *-niyotte* is compatible only with the

[20] In many languages, a demoted argument in the passive can be introduced by a morphologically complex element like *-niyotte* (e.g., *-eyuyhay* in Korean, *-tarafından* in Turkish). In some of these languages, there is an element that corresponds to *-ni* in Japanese or *by* in English in addition to the morphologically complex element (e.g., Korean); whereas, in other languages, there is only a morphologically complex element (e.g., Turkish). In the case of the latter type of languages, it may be said that the passive always involves removal of an argument like the passive in Latvian introduced in (378), but demotion can still be expressed analytically by means of the morphologically complex element that each language employs. The phrases formed with the morphologically complex element may be called "analytic 'by'-phrase", as compared to the true 'by'-phrase like the *-ni* phrase in Japanese or the *by* phrase in English. Some literature analyzes *-kara* 'from' on a par with *-ni* and *-niyotte* in Japanese passives. In the present view, *-ni* is a simple 'by'-phrase that merely introduces an NP that fills in the variable associated with the stem verb (see Section 4.3.1); whereas, *-niyotte* and *-kara* are both analytic 'by'-phrases which contribute something to the semantics of the structure that they attach to. Basically, *-niyotte* introduces a causer as suggested in the text, while *-kara* introduces a source as its literal meaning indicates. The difference between the two analytic 'by'-phrases is demonstrated in (ia–b).

(i) a. Kare-wa tizi-kara/*niyotte kansyazyoo-o okur-are-ta.
he-TOP governor-from/*owing.to thanks.certificate-ACC present-PASS-PST
'He was presented a certificate of appreciation by the governor.'

b. Kodomo-ga hahaoya-niyotte/*kara kuruma-ni nose-rare-ru.
child-NOM mother-owing.to/*from car-DAT get-PASS-PRS
'The child is got in the car by the mother.'
(Park and Whitman 2003, (10a–b); originally from Taramura 1982)

In (ia), *-kara* is, but *-niyotte* is not, permitted because the relevant NP is clearly a source, not a causer; and, in (ib) *-kara* is not, but *-niyotte* is, permitted because the relevant NP is clearly a causer, not a source. I will not discuss *-kara* any further in this chapter.

passive or the unaccusative and not with the (di)transitive or the unergative, I suggest that this is because from the pragmatic perspective, the (di)transitive/unergative is used when the verbal event is carried out with the initiator's volition and is under the initiator's control. If *-niyotte* is included in the the transitive or the unergative, the semantics of *-niyotte* (i.e., 'the verbal event is caused by the NP that it introduces') will bring about contradiction with the implicature carried by these constructions.

Crucially, if the *-niyotte* phrase is an adjunct as suggested above, then the pattern in (407)–(408) follows from the current approach with an assumption that adjuncts, as structurally dispensable elements, are incapable of checking off the [S:α] on Pass. If the *-niyotte* phrase cannot check off the [S:α] on Pass, the presence of the *-niyotte* phrase does not have anything to do with the syntactic convergence of the derivation of a passive. This means that the "replacement" of the *-ni* phrase with the *-niyotte* phrase is not really replacement; it is actually *omission* of the *-ni* phrase followed by adjunction of the *-niyotte* phrase. If the presence or absence of the *-niyotte* phrase is factored out, all that remains to consider in the derivation of an intransitive-based passive is whether or not the *-ni* phrase is present to satisfy the syntactic requirement of Pass. Therefore, the same account can be given to the possibilities of omission of the *-ni* phrase and "replacement" of the *-ni* phrase with the *-niyotte* phrase. In both cases, the [S:α] on Pass cannot be checked off when the passive is formed out of an intransitive verb.

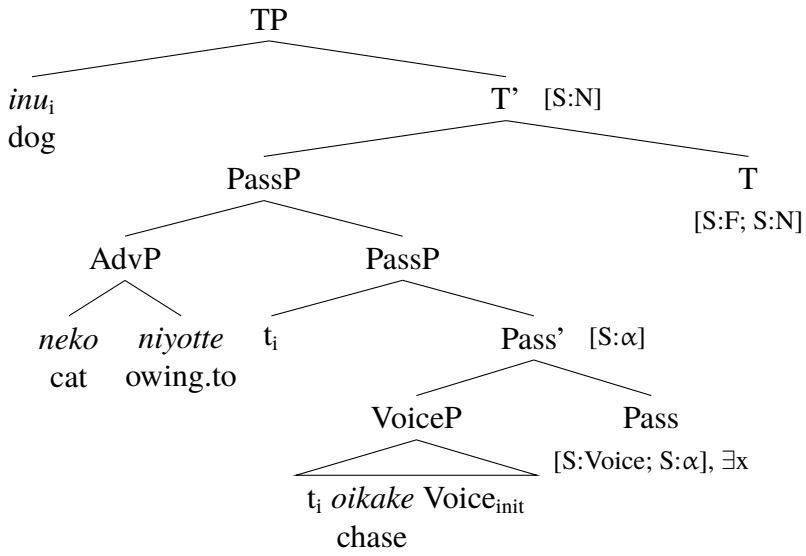
Central to the above account is the view that the *-niyotte* phrase is not an argument phrase that plays a role in the syntactic convergence of the passive but is an adjunct phrase that merely contributes causative semantics to the passive. A question that immediately arises regarding this view is why the *-niyotte* phrase is interpreted as if it is the external argument of the stem verb when it is used in place of the *-ni* phrase. For instance, the example in (407a) with the choice of *-niyotte* is still interpreted as if the NP introduced by *-niyotte*, i.e., *neko* 'cat', were the initiator of the chasing event. As an answer to this question, I suggest that the initiative reading of an element like the *-niyotte* phrase is attained through pragmatics. Consider the example in (413):

(413) Biru-ga Dokutaa heru-niyotte hakais-are-te i-ta-yo. Kare-no
building-NOM Doctor Hell-owing.to destroy-PASS-CONN be-PST-PRT he-GEN
kikaizyuu-ni-ne.
machine.monster-by-PRT
'Dr. Hell had the building be being destroyed. It was being done by his machine monster.'

In (413), the dominant interpretation of the first sentence is 'the building was being destroyed by Dr. Hell', where Dr. Hell is the initiator of the destroying event. But the following sentence cancels the initiative reading of Dr. Hell, and generates the updated interpretation where Dr. Hell is the causer of the destroying event whose initiator is his machine monster. This shows that the initiative reading of the *-niyotte* phrase is cancellable. If the initiative reading of the *-niyotte* phrase were encoded semantically, it should not be able to be cancelled, and accordingly, the following sentence in (413) would cause contradiction. The cancellability of the initiative reading of the *-niyotte* phrase, thus, suggests that it is due not to semantic composition but to pragmatic enrichment.

According to the discussion so far, the transitive-based direct passive with *-niyotte* is derived as illustrated below.

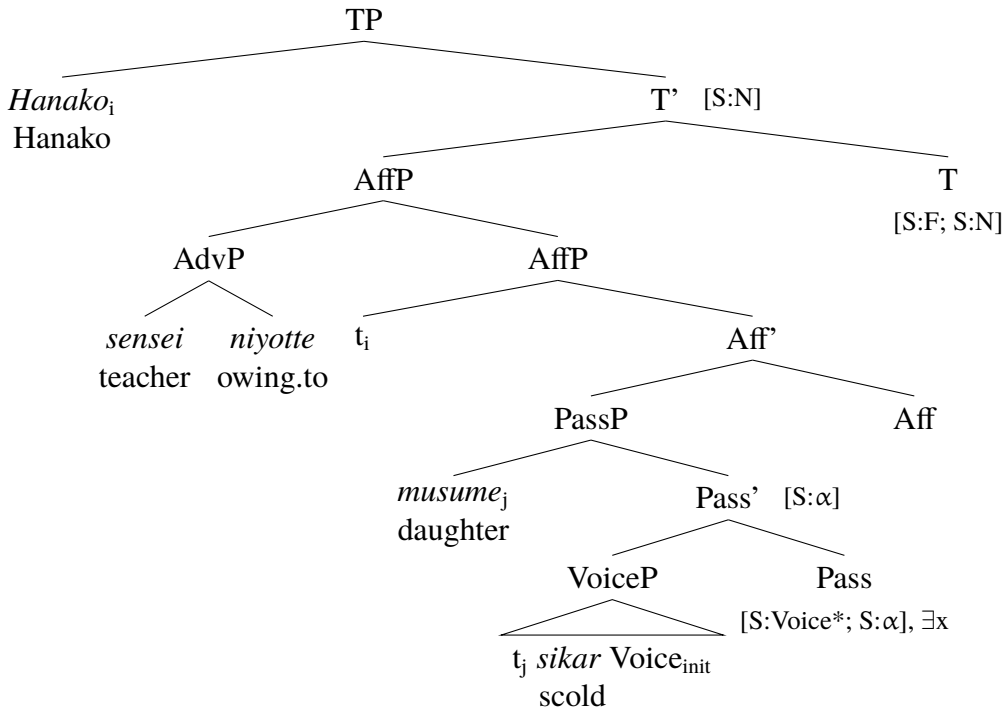
(414)



In (414), the unsaturated variable of VoiceP is existentially quantified over by Pass, and the theme argument of the stem verb, *inu* 'dog', moves successive-cyclically to Spec,PassP, where it checks off the [S:α] on Pass, and then to Spec,TP, where it receives nominative

case and checks off the [S:N] on T. The *-niyotte* phrase is adjoined to PassP and introduces the causing event and the causer argument, *neko* 'cat', into the structure. Consequently, the resulting structure has the interpretation 'a cat had a dog be chased', where 'a cat' is pragmatically understood to be the initiator of the chasing event. Note that the derivation in (414) proceeds in exactly the same way with that of the transitive-based direct passive without the *-ni* phrase discussed in (384b), except that the *-niyotte* phrase is adjoined to PassP in the structure. The same is true for the transitive-based indirect passive. The derivation of the transitive-based indirect passive with the *-niyotte* phrase proceeds in exactly the same way as that of the transitive-based indirect passive without the *-ni* phrase shown in (395b), except that the *-niyotte* phrase attaches to AffP, the topmost extended verbal projection in the structure. The derivation of the transitive-based indirect passive with *-niyotte* is illustrated below.

(415)



Recall from (411a) that *-niyotte* and *-ni* can cooccur in a single passive sentence. This follows from the current analysis. The *-ni* phrase is absent in (414) simply because Pass existentially quantifies over the open variable of VoiceP. This means that if Pass does not existentially close the VoiceP as such, the *-ni* phrase may as well appear at Spec,PassP along

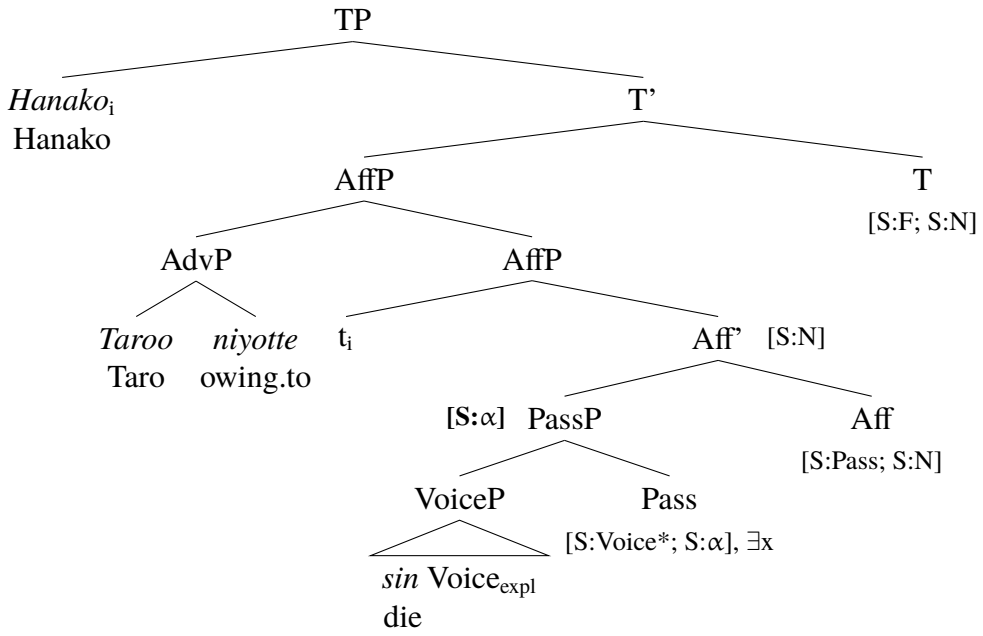
with the *-niyotte* phrase adjoined to PassP as long as the resulting interpretation is supported by a context. This is true not only for the direct passive as shown in (411a) above, but also for the indirect passive as shown below.

(416) Sityoo-ga Dokutaa Heru-niyotte kikaizyuu-ni biru-o hakais-are-ta.
mayor-NOM Doctor Hell-owing.to machine.monster-by building-ACC destroy-PASS-PST
'The mayor was affected as Dr. Hell caused the building to be destroyed by a machine monster.'

The fact that *-ni* and *-niyotte* can cooccur in the direct and indirect passives, thus, supports the claim that the "replacement" of *-ni* with *-niyotte* is not really replacement but actually is omission of the *-ni* phrase followed by adjunction of the *-niyotte* phrase.

Turning to the case of the intransitive-based indirect passive, it is impossible for *-niyotte* to be used in place of *-ni* as in (408a–b). Under the current view, this is simply because in the intransitive-based indirect passive, the [S:α] on Pass cannot be checked off if the *-ni* phrase is omitted. The ungrammatical derivation of the unaccusative-based indirect passive is illustrated below (the same analysis applies to the unergative-based one).

(417)



In (417), the [S:α] on Pass is not checked off because the *-ni* phrase is omitted at Spec,PassP. Since there is no NP argument below PassP, the [S:α] on Pass can never be checked off in

the absence of the *-ni* phrase; hence, the ungrammaticality.[21] Note that according to the current analysis, the intransitive-based indirect passive is ungrammatical when *-niyotte* is used instead of *-ni*, solely because the [S:α] on Pass cannot be checked off. It is predicted then that the intransitive-based indirect passive becomes grammatical if the *-niyotte* phrase is used in addition to the *-ni* phrase. The prediction is borne out as shown in (418a–b).

(418) a. Hanako-ga gan-niyotte Taroo-ni sin-are-ta.
Hanako-NOM cancer-owing.to Taro-by die-PASS-PST
'Hanako was affected by Taro's dying from a cancer.'

b. Hanako-ga warui tomodati-no eikyoo-niyotte musuko-ni iedes-are-ta.
Hanako-NOM bad friend-GEN influence-owing.to son-by run.away-PASS-PST
'Hanako was affected by the son's running away caused by a bad friend's influence.'

The examples in (418a) and (418b) are the unaccusative-based and the unergative-based indirect passives, respectively. As expected, the examples are grammatical with the *-niyotte* phrase, because the [S:α] on Pass is checked off due to the presence of the *-ni* phrase. The grammaticality of (418a–b) shows that it is not the case that *-niyotte* is inherently incompatible with the intransitive-based indirect passive. The apparent incompatibility is simply because the *-niyotte* phrase cannot be used in the absence of the *-ni* phrase for syntactic reasons.

It has been claimed above that *-ni* in the Japanese passive simply supplies its own argument to its sister open predicate; and according to the derivation that I have suggested, the *-ni* phrase is always associated with the highest argument selected by the stem verb. This means that *-ni* must not impose any selectional restriction of its own on the NP that it introduces. In other words, if some NP is allowed to appear in the active, it must also be allowed to appear as the *-ni* phrase in the corresponding passive. However, this is not always the case as the well-known examples in (419)–(420) show.

(419) a. Gityoo-ga kaikai-o sengensi-ta.
chairperson-NOM opening-ACC announce-PST
'The chairperson announced the opening (of a meeting).'

[21] The feature [S:α] cannot project to the next dominating node, Aff', because Aff has to project to the node its own selectional feature [S:N]. According to the condition on feature percolation suggested in Chapter 1, a mother node can carry unchecked selectional features projected from a single daughter at most.

b. * Kaikai-ga gityoo-ni sengens-are-ta.
opening-NOM chairperson-by announce-PASS-PST
Intended: 'The opening (of a meeting) was announced by the chairperson.'

(Kuroda 1992:206, (111); originally from Inoue 1976)

(420) a. Hanako-ga Feruma-no teiri-o syoomeisi-ta.
Hanako-NOM Fermat-GEN theorem-ACC prove-PST
Hanako proved Fermat's theorem.

b. * Feruma-no teiri-ga Hanako-ni syoomeis-are-ta.
Fermat-GEN theorem-NOM Hanako-by prove-PASS-PST
Intended: 'Fermat's theorem was proven by Hanako.'

(from Kuroda 1992:206, (113))

In (419a), *gityoo* 'chairperson' is the highest argument selected by *sengens-* 'announce', and in (420a), *Hanako* 'Hanako' is the highest argument selected by *syoomeis-* 'prove'; but these arguments cannot be expressed as the *-ni* phrase in the passive shown in (419b) and (420b).

Regarding the above examples, Ishizuka (2010, 2012) points out that the sentences in (419b) and (420b) become grammatical if the *-ni* phrase is interpreted as the 'addressee' of the announcing event and the 'goal' of the proving event, respectively. That is, both sentences are acceptable with the interpretations 'The opening (of a meeting) was announced *to* the chairperson' and 'Fermat's theorem was proven *to* Hanako'. Ishizuka then suggests that the ungrammaticality of (419b) and (420b) is ascribed to the constraint in Japanese that the *-ni* phrase in the passive has to be interpreted as the dative argument and not as the external argument when the stem verb is ditransitive (Ishizuka 2010:87, (34)). Ishizuka's proposal may be reinterpreted and further generalized as the condition formalized in (421).[22]

[22] Adding a second *-ni* phrase in the examples in (419b) and (420b) does not resolve the ungrammaticality as shown below.

(i) a. * Kaikai-ga gityoo-ni sangaisya-ni sengens-are-ta.
opening-NOM chairperson-by attendee-DAT announce-PASS-PST
Intended: 'The opening was announced to the attendees by the chairperson.'

b. * Feruma-no teiri-ga Hanako-ni Taroo-ni syoomeis-are-ta.
Fermat-GEN theorem-NOM Hanako-by Taro-DAT prove-PASS-PST
Intended: 'Fermat's theorem was proven to Taro by Hanako.'

I assume that this is because when a context is given that forces the *-ni* phrase to be interpreted as a normally projected argument, the condition in (421) applies to any *-ni* phrase that appears in the given context. That

(421) Whenever an NP can be interpreted as a normally projected argument, the interpretation of the NP as a demoted argument is blocked.

The condition in (421) is a type of markedness constraint in the sense that (i) a normally projected argument can be considered unmarked, whereas a demoted argument can be considered marked, since the former does not undergo additional process of 'demotion' that the latter does, and (ii) it dictates that the interpretation of an NP as an unmarked argument overrides the interpretation of the NP as a marked argument. Applying the markedness condition to the passive, it prevents the *-ni* phrase from being interpreted as a demoted initiator in the contexts where the *-ni* phrase can be interpreted as a normally projected addressee or goal; hence, the unacceptability of (419b) and (420b) with the intended interpretations. The scope of Ishizuka's constraint is limited to the cases in which the stem verb of a passive is ditransitive, but the condition in (421) is not limited as such. According to (421), wherever an NP can be interpreted as a normally projected argument, whether it is selected by the stem verb or not, its interpretation as a demoted argument should be blocked. There are cases in Korean that suggest that the generalized condition is empirically more adequate from a crosslinguistic perspective. Consider the active-passive pair in (422a–b), which exemplifies that the passive of certain verbs in Korean is formed through suppletion of the light verb *ha-* 'do' with *toy-* 'become'.

(422) a. Haksayngtul-i sinchwuk tosekwan-ul iyongha-yess-ta. Korean
students-NOM newly.built library-ACC use-PST-DECL
'The students made use of the newly built library.'

b. Sinchwuk tosekwan-i haksayngtul-eykey iyongtoy-ess-ta.
newly.built library-NOM students-by be.used-PST-DECL
'The newly built library was made use of by the students.'

In the passive in (422b), the argument that functions as the subject in its active counterpart in (422a) is demoted to be an oblique phrase with the postposition *-eykey*. Just as *-ni* in

is, the examples in (ia–b) are interpreted to have two goal arguments, rather than being interpreted to have a demoted initiator argument and a goal argument.

Japanese, the postposition *-eykey* is homophonous with dative case *-eykey* that marks the normally projected goal argument in the ditransitive as shown below.

(423) Cheli-ga Swuni-eykey cangmikkoch-ul ponay-ess-ta. Korean
Cheli-NOM Swuni-DAT rose-ACC send-PST-DECL
'Cheli sent Swuni roses.'

Importantly, in the context where *-eykey* can be interpreted as a normally projected goal argument, it cannot be interpreted as a demoted argument even when the stem verb is not ditransitive. This can be witnessed in the following examples.[23]

(424) a. Cheli-ka Swuni-lul panghayha-yess-ta. Korean
Cheli-NOM Swuni-ACC hinder-PST-DECL
'Cheli hindered Swuni.'

b. Swuni-ka Cheli-eykey panghaytoy-ess-ta.
Swuni-NOM Cheli-DAT be.hindered-PST-DECL
'Swuni got in the way of Cheli.' (*Literal*: 'Swuni was hindering to Cheli.')

Superficially, the above examples appear to constitute an active-passive pair involving the same truth-conditional semantics (Bruening and Tran 2015), but their interpretations indicate that this is not the case. In (424a), Cheli is the causer and Swuni is the experiencer of the hindering event. If the example in (424b) were the passive counterpart of (424a), the two arguments would be expected to have the same participant roles. But in (424b), Swuni is the causer and Cheli is the experiencer of the hindering event. Such an interpretation of (424b) follows from the markedness condition in (421). Since *Cheli-eykey* can be interpreted as a normally projected applied argument in the context of (424b), its interpretation as a demoted

[23] The example in (424b) is an instance of the stative passive (or "adjectival passive"), not the eventive passive that we have been considering so far; but this does not affect the point being made in the text that the interpretation of the *-eykey* phrase as a demoted argument is blocked when it can be interpreted as a normally projected argument. Note in passing that the passive of (424a) can still be formed analytically by using a verb for 'receive' as shown below.

(i) Swuni-ka Cheli-eykey panghay-lul pat-ass-ta. Korean
Swuni-NOM Cheli-by hindrance-ACC receive-PST-DECL
'Swuni was hindered by Cheli.'

The analytic passive of the kind shown in (i) is not available for the verb *iyongha-* 'use' in (422a–b), suggesting that the "*pat*-passive" might be a strategy for deriving a passive when the markedness constraint in (421) prevents the "*toy*-passive" from having a passive interpretation.

initiator is blocked; consequently, the example is not interpreted as the passive counterpart of (424a). The verb involved in (424a–b) is not ditransitive which can project the *-eykey* phrase in the active, suggesting that the pair in (424a–b) can hardly be accounted for under Ishizuka's constraint alone.

Finally, the current view also explains why using *-niyotte* instead of *-ni* in (419b) and (420b) makes the sentences grammatical as shown in (425a) and (425b), respectively.

(425) a. Kaikai-ga gityoo-niyotte sengens-are-ta.
opening-NOM chairperson-owing.to announce-PASS-PST
'The opening (of a meeting) was announced by the chairperson.'

(Kuroda 1992:206, (110); originally from Inoue 1976)

b. Feruma-no teiri-ga Hanako-niyotte syoomeis-are-ta.
Fermat-GEN theorem-NOM Hanako-owing.to prove-PASS-PST
'Fermat's theorem was proven by Hanako.'

(from Kuroda 1992:206, (112))

The condition in (421) applies to the *-ni* phrase in the passive essentially because the postposition *-ni* 'by' is homophonous with dative case *-ni* (and the postposition *-ni* 'to', for that matter). In the case of *-niyotte*, however, it is formally distinct from *-ni*, and thus there is no possibility at all for it to be interpreted as a normally projected dative argument. Therefore, the *-niyotte* phrase is not blocked from being interpreted as the initiator of the respective events. Recall that the initiative interpretation of the *-niyotte* phrase is pragmatic enrichment. The argument NPs of *-niyotte* in (425a–b) may as well be interpreted as the causer in appropriate contexts: e.g., in the contexts where the chairperson simply ordered someone in charge to announce the opening, and where Hanako made Fermat's theorem be proven by someone else but she bears the primary responsibility for the event to have taken place (analogous to the case where we use the sentence *The president privatized a state-owned company* when it was the government employees who actually worked on the privatization process but the president bears the primary responsibility for it to have taken place by giving out an order).

The examples discussed in (419)–(420) and (425) are sometimes used as evidence for the claim that the direct passive should be distinguished into the "*-ni* passive" and the "*-niyotte* passive". According to Kuroda (1979, 1992), for instance, the subject of the "*-ni*

passive" is the affectee of the verbal event (as it is in the indirect passive), whereas the subject of the "*-niyotte* passive" is not; accordingly, the former has to be an animate entity which can have a psychological experience, but the latter does not have to be one. In Kuroda's view, *kaikai* 'opening' and *teiri* 'theorem' cannot be used as the subject in the "*-ni* passive" in (419b) and (420b), but they can in the "*-niyotte* passive" in (425a–b), because *kaikai* and *teiri* are abstract NPs that cannot have a psychological experience. It is argued in a similar vein that a nominal like *booru* 'ball' cannot be the subject in the "*-ni* passive" as in (426a), but it can in the "*-niyotte* passive" as in (426b), because it is an inanimate entity that cannot have a psychological experience.

(426) a. * Siori booru-ga Oo-ni takadakato utiage-rare-ta.
white ball-NOM Oo-by high hit.up-PASS-PST
Intended: 'A white ball was hit high in the air by Oo.'

(Kuroda 1992:187, (20))

b. Siori booru-ga Oo-niyotte takadakato utiage-rare-ta.
white ball-NOM Oo-owing.to high hit.up-PASS-PST
'A white ball was hit high in the air by Oo.'

(Kuroda 1992:187, (19))

But the subject of the "*-ni* passive" does not always have to be psychologically affected, and thus might as well be an abstract NP or an inanimate NP as in (427a) and (427b), indicating that Kuroda's dichotomy of the *-ni* and *-niyotte* passives is not tenable (Shibatani 1994; Oshima 2006; Bosse *et al.* 2012).

(427) a. Kaikai-ga gityoo-ni syoonins-are-ta.
opening-NOM chairperson-by approve-PASS-PST
'The opening (of a meeting) was approved by the chairperson.'

b. Tokyootawaa-ga Gozira-ni hakais-are-ta.
Tokyo.tower-NOM Godzilla-by destroy-PASS-PST
'The Tokyo tower was destroyed by Godzilla.'

(Bosse *et al.* 2012:1208, (58b))

Under the current approach, the *-ni* phrase can be used in the examples with an abstract or inanimate subject in (427a–b), because it cannot be interpreted as a normally projected

argument in the given context, and thus the interpretation of a demoted initiator argument is not blocked in accordance with the markedness condition in (421). As for the ungrammaticality of (426a), it is also attributable to the markedness condition in that the sentence is grammatical with the interpretation 'A white ball was hit high in the air *towards* Oo' (Ishizuka 2010, 2012).

4.5 On the gapped and gapless indirect passives

Kubo (1992) argues that indirect passives are further categorized into two distinct types: "gapped" and "gapless" indirect passives. In the "gapped indirect passive" exemplified in (428), the subject is in the possessive relation with an argument of the stem verb; whereas, in the "gapless indirect passive" exemplified in (429), it is not.

(428) Hanako-ga doroboo-ni yubiwa-o tor-are-ta.
Hanako-NOM thief-by ring-ACC steal-PASS-PST
'Hanako$_i$ was affected by a thief's stealing of her$_i$ ring.

(Kubo 1992:237, (15b))

(429) Taroo-ga Hanako-ni sinkoo syuukyoo-o hazime-rare-ta.
Taro-NOM Hanako-by newly.arising religion-ACC start-PASS-PST
'Taro was affected by Hanako as she started believing a new religion.'

(Kubo 1992:238, (18a))

According to Kubo, the subject in the "gapped indirect passive" originates in the possessor position of an argument, and the subject in the "gapless indirect passive" originates in the specifier position of *-(r)are*. So, moving to its surface position, the subject leaves behind a trace in the possessor position of an argument in the "gapped indirect passive", but it does so in the specifier position of *-(r)are* in the "gapless indirect passive". As a result, in the former but not in the latter, the possessive relation holds between the subject and an argument of the stem verb.

Although Kubo's proposal appears to be well-motivated in general, the picture can be a little more complicated than that. Under the approach advocated in this chapter, the indirect passive is, by definition, a construction involving Aff, which introduces an affected experiencer that is to become the subject in the construction. Given that Aff appears above PassP, and thus above VoiceP and VP, a trace of the affected experiencer that Aff introduces

cannot be left behind in the possessor position of an argument of the stem verb; in other words, there cannot exist any 'gap' below PassP in the indirect passive, rendering the derivation of the "gapped indirect passive" definitionally impossible. Moreover, Kubo notes that an inanimate subject is allowed in the "gapped indirect passive" as in (430a), while it is disallowed in the "gapless indirect passive" as in (430b).

(430) a. Sono daisyuzyutu-ga Yamada isi-niyotte sittoo-o kaisis-are-ta.
that big.operation-NOM Yamada doctor-owing.to performance-ACC begin-PASS-PST
'That big operation had Dr. Yamada start its performance.'

(Kubo 1992:239, (20a))

b. * Sono kekkonsikizyoo-ga Hanako-ni Ziroo-to kekkons-are-ta.
that wedding.hall-NOM Hanako-by Jiro-with marry-PASS-PST
Intended: 'That wedding hall had Hanako marry Jiro (in it).'

(Kubo 1992:240, (21b))

If the indirect passive always involves Aff, its surface subject has to be an animate entity that can have a psychological experience. The grammaticality of (430a), then, suggests that the sentence is not an instance of the indirect passive in the sense that I define it in this chapter.

In fact, Bosse *et al.* (2012) point out that Kubo's "gapped indirect passive" is actually the possessor raising construction (or the "external possessor construction" in Bosse *et al.*'s terms), which does not involve Aff in the derivation and hence is a construction that is distinct from the indirect passive (or the "affected experiencer construction" in Bosse *et al.*'s terms). Such a view is supported by the fact that the surface subject in (430a) or the example in (431) is not interpreted as an affected experiencer. It is merely interpreted to be a possessor that can be expressed with genitive case *-no* in the active.

(431) Kono daigaku-ga yuumeena kentikuka-ni niwa-mo dezains-are-ta.
this university-NOM famous architect-by garden-also design-PASS-PST
'This university had its garden also designed by a famous architect.'

(Bosse *et al.* 2012:1206, (52b))

Under these considerations, I propose in this section that (i) the "gapped indirect passive" with an *inanimate* subject is actually the direct passive that involves the applicative head, $Appl_{pw}$ (Bosse 2015; L. Kim 2014; see Chapter 3 in this dissertation; cf. Pylkkänen 2002, 2008); and

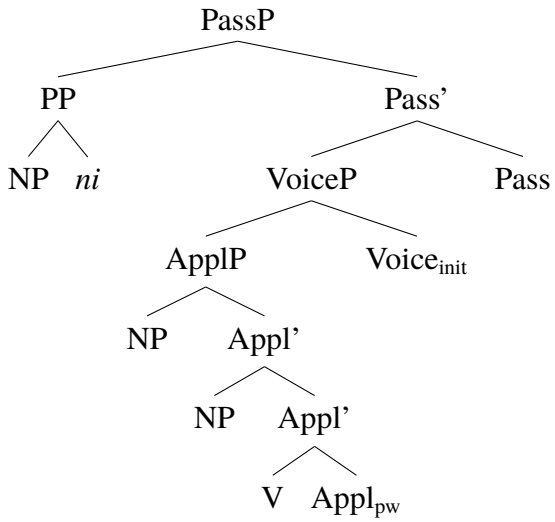
(ii) the "gapped indirect passive" with an *animate* subject is structurally ambiguous between the direct passive involving Appl_{pw} and the indirect passive involving Aff, but the parsing preference is biased towards the indirect passive involving Aff for pragmatic reasons.

First, as for the "gapped indirect passive" with an inanimate subject, the construction must not involve Aff in that the subject is not a sentient being that can be psychologically affected and thus cannot be selected by Aff (unless the inanimate subject is personified and taken to have feelings; see Bosse *et al.* 2012:1207–1208). This leads to the possibility that it is actually an instance of the direct passive. In fact, Pylkkänen (2002, 2008) suggests that the "gapped indirect passive" is the direct passive which involves the source applicative head that encodes the possessive relation between two entities by introducing a theme and a source arguments below VP (Pylkkänen 2008:68). In line with Pylkkänen's view, I suggest that the "gapped indirect passive" with an inanimate subject is the direct passive involving Appl_{pw} in (432) between VoiceP and VP.

(432) $[\![\mathbf{Appl_{pw}}]\!] = \lambda P_{\langle e,st\rangle}\lambda x\lambda y\lambda e[P(e,x)$ & x $\triangleleft$ y for the duration of e] (where $\triangleleft$ indicates that x is a material part of y) (Bosse 2011:198, (346))

The derivation of the "gapped indirect passive" with an inanimate subject, then, will be associated with the structure shown below.

(433)



As in Chapter 3, to ensure that semantic composition proceeds cyclically in a bottom-up fashion, I assume departing from Bosse that Appl_{pw} has the selectional features [S:V(S:N);

S:N; S:N; S:Voice$_{init}$], and that semantically it takes an open predicate as the complement, projects the unsaturated argument of the predicate in the first specifier, and introduces another argument in the second specifier while making the argument in the first specifier be the material part to the one in the second specifier.

In (433), the initiator argument that would be introduced by initiative Voice is suppressed by Pass; accordingly, the NP in the second specifier of Appl$_{pw}$ moves to Spec,TP later in the derivation and becomes the structural subject of the construction. In this view, the "gapped indirect passive" with an inanimate subject is the passive counterpart of the possessor raising construction. One issue that immediately arises regarding this view is that why the 'active' possessor raising construction does not exist in Japanese, in other words, why Appl$_{pw}$ can be used in the passive but not in the active (cf. Pylkkänen 2008:72). The issue can be easily resolved with the assumption that Appl$_{pw}$ in Japanese lacks the ability to assign case just as Aff in the indirect passive does. That is, if Appl$_{pw}$ does not provide case for the NP that it additionally introduces into the structure, one of the selected arguments of the stem verb has to be suppressed, because otherwise, an NP will end up being caseless leading to a derivational crash. Since Pass is the functional head that syntactically suppresses an argument, whenever Appl$_{pw}$ is used in a derivation, Pass has to be used as well.

Turning to the "gapped indirect passive" with an animate subject, I suggest that in principle, it can be either the direct passive involving Appl$_{pw}$ or the indirect passive involving Aff, but due to the fact that the subject is an animate entity that can be psychologically affected by the verbal event, the parsing preference is strongly biased towards the indirect passive involving Aff. That is, some of the examples that Kubo (1992) claims to be the "gapped indirect passive" such as (428) is practically the "gapless indirect passive". Such a view is pragmatically motivated in the sense of Grice (1975): if the animate subject in (428), for instance, were not psychologically affected by the verbal event, the speaker would use an alternative construction in which the whole NP including both the possessor and the possessee takes an argument position as in (434a–b) below, so that the utterance is just as informative as it should be (maxim of quantity) and that potential ambiguity can be avoided (maxim of manner).

(434) a. Doroboo-ga Hanako-no yubiwa-o tot-ta.
thief-NOM Hanako-GEN ring-ACC steal-PST
'A thief stole Hanako's ring.

b. Hanako-no yubiwa-ga doroboo-ni tor-are-ta.
Hanako-GEN ring-NOM thief-by steal-PASS-PST
'Hanako's ring was stolen by a thief.

The same holds for the intransitive-based "gapped indirect passive" with an animate subject in (435a–b). The alternatives of (435a–b) are shown in (436a–b).

(435) a. Hanako-ga musume-ni sin-are-ta.
Hanako-NOM daughter-by die-PASS-PST
'Hanako$_i$ was affected by her$_i$ daughter's dying.'

b. Hanako-ga musume-ni iedes-are-ta.
Hanako-NOM daughter-by run.away-PASS-PST
'Hanako$_i$ was affected by her$_i$ daughter's running away (from home).'

(436) a. Hanako-no musume-ga sin-da.
Hanako-GEN daughter-NOM die-PST
'Hanako's daughter died.'

b. Hanako-no musume-ga iedesi-ta.
Hanako-GEN daughter-NOM run.away-PST
'Hanako's daughter ran away (from home).'

Note that since intransitive verbs are incompatible with the direct passive (see Section 4.3.1), the only alternative for (435a) and (435b) is the active in (436a) and (436b), respectively; while, the alternative for (428) can be the active in (434a) or the direct passive in (434b), which are truth-conditionally equivalent and thus choosing one over the other between the two does not make as much difference as choosing the indirect passive in (428) over either of the two alternatives. The fact that the examples in (428) and (435a–b) were chosen to be uttered instead of (434) and (436a–b), respectively, implicates that the animate subject must have some psychological experience from the verbal event in accordance with the maxims of quantity and manner; hence, the parsing bias towards the indirect passive with Aff. Of course, no such implicature arises if the subject is inanimate since an inanimate is not something that can be psychologically affected in the first place; therefore, when the subject is inanimate, the "gapped indirect passive" is always interpreted as the direct passive with Appl$_{pw}$.

In short, the interpretation of the "gapped indirect passive" with an animate subject, where the subject is an affected experiencer of the verbal event, is attained because it is possible for its surface order to be parsed as the indirect passive with Aff, and importantly, the pragmatic considerations force it to be parsed as such. The question, then, is how the affected experiencer in the subject position in examples like (428) and (435a–b) is also interpreted to be in the possessive relation with an argument of the stem verb.

Note first that the possessive relation exhibited in the indirect passive in (428) and (435a–b) can also be observed between the subject and the object in the active as in (437) or between the subject and the demoted argument in the direct passive as in (438).

(437) Hanako-ga yubiwa-o nakusi-te simat-ta.
Hanako-NOM ring-ACC lose-CONN PRF-PST
'Hanako$_i$ has lost her$_i$ ring.'

(438) Hanako-ga musume-ni home-rare-ta.
Hanako-NOM daughter-by praise-PASS-PST
'Hanako$_i$ was praised by her$_i$ daughter.'

In (437) and (438), the surface subject must not originate in the possessor position of the object NP or the oblique NP, respectively. This is because the lexical verb in these examples, *nakus-* 'lose' and *home-* 'praise', is a dyadic predicate that requires two NP arguments, and the subject NP is one of the required arguments of the predicate. If the subject were introduced in the possessor position of the NP that it is associated with, forming a single NP together with it, then the initiator variable of the initiative Voice head in (437) or the theme variable of the stem verb in (438) would not be saturated, leading to the violation of the principle of Full Interpretation. Given this, the possessive relation in the above examples can be viewed to be established outside the workings of syntax and semantics, namely, through pragmatics. If so, the same can be said for the indirect passive as well. That is, the possessive relation exhibited in (428) and (435a–b) can be taken to be not due to a grammatical operation such as movement but due to pragmatic enrichment. This way, the subject in (428) and (435a–b) can be seen to be generated at Spec,AffP while at the same time capturing the possessive relation that it shows with an argument of the stem verb.

The fact that the "gapped indirect passive" with an animate subject is derived with Aff and the possessive relation is established via pragmatics becomes more evident when its behavior is taken into account that are distinct from that of the retained object construction in Korean (which corresponds to the "gapped indirect passive" in Japanese; see Chapter 3). Consider the following examples of the "gapped indirect passive" in Japanese (439) and the retained object construction in Korean (440):

(439) Taroo-ga inu-ni ude-o kam-are-ta. Japanese
Taro-NOM dog-by arm-ACC bite-PASS-PST
'Taro was affected by a dog's biting on the arm.'

(440) Cheli-ka kay-eykey phal-ul mwul-li-ess-ta. Korean
Cheli-NOM dog-by arm-ACC bite-PASS-PST-DECL
'Cheli was bitten on the arm by a dog.'

Superficially, the above examples appear to involve the same structure since they have the exact same word order; but evidence suggests that they are derived in two distinct ways. To be specific, the possessive relation between the subject and the object does not have to hold in Japanese, but it has to in Korean. So, the "gapped indirect passive" with an animate subject in Japanese is still grammatical in the context where the object belongs to someone other than the subject, but the retained object construction in Korean becomes ungrammatical in the same context. This is illustrated in (441) and (442).

(441) Taroo-ga inu-ni Hanako-no ude-o kam-are-ta. Japanese
Taro-NOM dog-by Hanako-GEN arm-ACC bite-PASS-PST
'Taro was affected by a dog's biting on Hanako's arm.'

(442) * Cheli-ka kay-eykey Swuni-uy phal-ul mwul-li-ess-ta. Korean
Cheli-NOM dog-by Swuni-GEN arm-ACC bite-PASS-PST-DECL
Intended: 'Cheli was bitten on Swuni's arm by a dog.'

In both (441) and (442), the theme object does not belong to the subject; it belongs to 'Hanako' or 'Swuni' as indicated by genitive case. Yet, the example in (441) is grammatical, while that in (442) is not. This indicates that the possessive relation between the subject and the theme object is not obligatory in the "gapped indirect passive" with an animate subject in Japanese, while it is obligatory in the retained object construction in Korean. Extending the

observation to the examples in (439) and (440), it can be said that the possessive relation in (439) is pragmatically implicated (as it is not obligatory as demonstrated in (441)), whereas that in (440) is grammatically encoded (as it is obligatory as demonstrated in (442)).

4.6 Summary

This chapter has investigated the RARE-constructions in Japanese, and claimed that they are all truly passives in the sense that they either demote or remove an argument that would function as the subject in the corresponding active. I suggested that the morpheme *-(r)are* is the realization of the passive element, Pass, whose primary function is to syntactically suppress an argument of its sister predicate. Whether the suppressed argument is projected as an oblique phrase (demotion) or stays unprojected throughout (removal) was argued to be determined according to language-specific features of Pass and the properties of the other elements involved in the derivation. It has been shown that such a view can successfully account for the major patterns of the direct and indirect passive in Japanese including the incompatibility of intransitive verbs in the direct passive, the impossibility of argument removal and the impossibility of replacement of *-ni* with *-niyotte* in the intransitive-based indirect passive. Based on the analyses of the passive in Japanese, I argued that the RARE-constructions in Japanese constitute a support for the claim that the defining feature of the passive should be demotion or removal of any argument rather than of an external argument (Bruening 2013; Kiparsky 2013; Murphy 2014; Williams 2015).

Chapter 5

CONCLUSION

In this dissertation, I have proposed a purely syntactic approach to argument structure and argument structure alternation. I have claimed that rigidity and flexibility of argument structure can be successfully accounted for in terms of selection, and suggested a feature-based system of selection building on Bruening's (2013) feature checking principles.

Based on the proposed system, I have provided comprehensive analyses of natural reflexives, causatives, and passives. Through the analyses, it has been demonstrated that crosslinguistic variation of argument structure can be attributed to the different selectional features that functional elements like Refl, Caus, and Pass have in different languages. Natural reflexives in French are more productive in various ways than those in English because Refl in French selects for an element bigger than Refl in English does. In the same vein, causatives in Korean are more productive than those in English because Caus in Korean selects for an element bigger than Caus in English. Causatives in Korean are paradoxical in the sense that they show both the mono-predicational properties of "lexical causatives" and the bi-predicational properties of "syntactic causatives". The paradoxical behaviors of the causative in Korean have been claimed to be resolved under the approach proposed in the dissertation. Lastly, passives in Japanese are more productive than those in Korean or English, because (i) Pass in Japanese is underspecified such that it selects for any VoiceP as the complement, whereas Pass in Korean or English is specified to select for initiative VoiceP only, and (ii) Japanese has an additional functional element, Aff, which selects for PassP, whereas Korean or English does not have one.

The discussion in this dissertation, accordingly, shows that argument structure variability can be accounted for from a purely syntactic perspective in terms of selection. We need not resort to lexical operations, Voice-bundling, bundling, the Projection Principle, the

θ-Criterion, a thematic hierarchy, linking rules, etc. to account for the variability. Under the current system, the grammar of argument structure can be modeled in a parsimonious way in which everything is reduced to the basic structure-building operation of merge.

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