External Argument Introducers

by

Kyumin Kim

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Linguistics Department
University of Toronto

© Copyright by Kyumin Kim 2011
Abstract

This thesis shows that the mapping of semantics to syntax can be more complex than is generally assumed. In general, the mapping of semantics to syntax is thought to be many-to-one; for instance, many types of external argument roles are mapped to a subject position, and a theme or patient role is mapped to an object position. Contrary to this view, I show, by studying the syntax and semantics of external arguments, that one-to-one mapping between syntax and semantics is possible. External arguments are generally assumed to be introduced by a functional head, called Voice or \( v \), regardless of the semantics of the argument, rather than being actual arguments of the verbs. A high Appl head similar to Voice has recently been argued to introduce external arguments as well as arguments of other semantic types. At present, no theories propose how these heads are distinguished in argument structure. This thesis articulates the differences between the external argument introducing heads and explores the consequences of these differences. Moreover, this thesis proposes a new type of event-related applicative, namely peripheral Appl. Like Voice and high Appl, peripheral Appl introduces an argument external to the verb phrase. The key differences among the external argument introducing heads are in their semantics as well as their syntactic position. Semantically, Voice is specified for agentivity, but high and peripheral Appls are specified for non-agentivity. Syntactically, high Appl merges below Voice, not above, while peripheral Appl can merge above Voice. An important result
emerging from this thesis is that not all external arguments are treated in the same way in syntax: not only are agent and non-agent external argument roles mapped into different positions, but different types of non-agent roles are also mapped into different positions.
Acknowledgments

First and foremost, I wish to give thanks to God. He is always by me. He shows me ways to go, gives me the courage to go on, and holds me tightly by his side.

There are many people to whom I would like to express my thanks.

First, I would like to thank my supervisor, Diane Massam. It was always fun to discuss syntax with her. Diane is a great supervisor, helping me find my direction without ever telling me what to do. Diane has also been wonderful to discuss life beyond linguistics with, whether good or bad. I wish to thank her for her unfailing encouragement throughout my years as a Ph.D. I also thank her for her generous research funding, which was a great help to my research.

I wish to thank my other committee members, Elizabeth Cowper and Cristina Cuervo. Working with Elizabeth enabled me to tackle issues in ways that I hadn’t tried before, which led me to an epiphany moment. I also thank her for introducing me English have constructions, which are central to this dissertation.

Cristina always helped me to refine my thoughts on issues, particularly applicatives. She was keen to provide points that I had missed, which makes this dissertation better and clearer. My discussions with her refreshed and clarified my ideas and approaches. Moreover, I thank her for her thorough comments on my drafts.

I would also like to thank my external committee member, Jaklin Kornfilt from Syracuse University. Her keen and detailed comments made this thesis a better work.

Though not a member of my committee, Keren Rice has been an important influence on my academic life in Toronto. Keren is a great mentor that has an answer for every question about linguistics as well as life. She was so supportive when I was in Calgary writing a first Generals paper. I wish to thank her for reading numerous reports and giving me feedback, having phone meetings with me, and sending me copies of papers that I couldn’t find in Calgary. Without her understanding and generosity, I wouldn’t have survived the first years of my Ph.D.
I also thank Yoonjung Kang and Alexei Kochetov, my committee members for my first Generals paper. Yoonjung showed me what to do with phonology, and I wish to thank her for her support and interest. Alexei taught me a lot of phonetics, stats, and phonetic experiments, which I never imagined I would do in my Ph.D. I would also like to thank Ron Smyth for providing much help on stats even though he was on sabbatical.

I also thank Simona Herdan. During her time in Toronto, she always happily answered my questions on semantics, and walked me through semantic derivations with respect to my trees. I thank her for her patience and interest on my work.

I would like thank my professors at the University of Calgary for their continued support during my doctoral research. Martha McGinnis, who is now at the University of Victoria, always gladly welcomed my requests to discuss linguistics and life in general. She and John Archibald were very thoughtful and caring, providing me with very useful advice on bringing up a baby and so many baby things. I wish to thank them for their support and caring during a scary time in my life.

Kimiko Nakanishi, who is now at Ochanomizu University, is a good friend as well as a teacher. Kimiko very kindly met with me whenever I went home to talk about linguistics and life matters over lunch, dinner, or coffee. She also patiently answered my questions on Japanese, gave endless Japanese judgments, and read my paper on Japanese. I wish thank her for her patience and her warm heart.

I also would like to express my thanks to Elizabeth Ritter at University of Calgary for her wonderful support during my time in Calgary.

I wish to thank my good friends, Eugenia Suh, Jaehee Bak, Jeeyoon Shin, and Milica Radisic at University of Toronto, and Sean Madigan at University of Delaware. They were so supportive during my Ph.D. years. We have talked about so many things over the years, and shared so many worries and joys. I will never forget those moments. In particular, I wish to thank Eugenia for being a great friend, and for being with me when I delivered MinJae in Toronto. Although it was the happiest time in my life, there were also hard and scary moments. However, I got through those times because she was there with me and my family, providing endless support. I also thank Yumiko Gondaira for being a good friend as well as an excellent Japanese
teacher during her years in Toronto. I wish to thank Manami Hirayama for being such a good friend, and for being patient; I couldn’t have done my phonetic research without her help with Praat and other experimental issues. I thank her for helping me whenever I asked her, and for her Japanese judgments. I also thank Kenji Oda and Kaori Furukawa for their Japanese judgments. I would like to thank Sarah Clarke for helping me with the editing of this thesis and other papers during my Ph.D. I thank Catherine Macdonald for being very supportive during my pregnancy year; without her, I would not have known what to do about pregnancy in academics. So many others have contributed to my graduate life in different ways that I cannot mention them all. Some of them are Maria Kyriakaki, Nattaya Piriyawiboon, Julia Yu-Ying Su, Cathleen Waters, Elham Rohany Rahbar, Lidia Jarmasz, Bethany MacLeod, Ailis Courmane, Annick Morin, Richard Compton, Liisa Duncan, Midori Hayashi, Monica Irimia, Ulyana Savchenko, Bridget Jankowski, Safieh Moghaddam, Vannesa Hardy, Tanya Slavin, Marina Sherkina-Lieber, Christine Pittman, and Rashid Al-Balushi. I also thank the members of the Syntax Project for their helpful comments and discussions throughout the years. I would like to thank Mary Hsu for her help and advice throughout my Ph.D. years in Toronto and even in Calgary, and Bill Forrest for all his help during my time at the University of Toronto.

Finally, I wish to thank my family here in Calgary and in Korea. I especially thank my husband Jae Park for his endless love and understanding, and for always providing the best for me. I also thank my son, MinJae Park, for being such a good baby. He is happy all the time and hardly cries, and he has been a good sleeper at night, which has given me lots of rest. I thank my parents-in-law and sister-in-law for their great support throughout the years. I wish to thank my mom, Duk-Hee Lee, for giving me endless love and support. I also thank my brother Kyusik Kim, and his wife, Mihyang Suh, for their encouragement from afar.

During my studies, I received financial support in the form of Ontario Graduate Scholarships, University of Toronto Fellowships, and a SSHRC doctoral fellowship (752-2009-2346). I am grateful to the donors of these funds.
# Table of Contents

Abstract .................................................................................................................. ii  
Acknowledgments .................................................................................................... iv  
Table of Contents ....................................................................................................... vi  
Abbreviations ........................................................................................................... ix  
List of Tables ............................................................................................................. xi  

**Chapter 1 Introduction** ......................................................................................... 1  
1.1 The question of external argument introducers: Voice and Appl ....................... 2  
1.2 Syntactic approaches to argument structure ..................................................... 6  
1.3 Voice, Appl, and event introducer v ................................................................... 7  
1.4 Syntax and semantics of applicatives ................................................................. 8  
1.4.1 Distributed Morphology ............................................................................. 10  
1.5 Outline of the thesis ......................................................................................... 11  

**Chapter 2 Applicatives in causatives** ................................................................. 17  
2.1 Assumptions: syntax and semantics of causatives ............................................. 18  
2.2 Causes in traditional view .................................................................................. 18  
2.3 Causes are not agents ....................................................................................... 20  
2.3.1 Basic data of Korean and English causatives ............................................. 20  
2.3.2 Why not vDO or Voice as causee-introducers? ......................................... 23  
2.3.2.1 Causes in Korean morphological causatives ......................................... 25  
2.3.2.2 Causes in English *have* causatives ..................................................... 28  
2.4 Causes are introduced by high Appl ................................................................. 31  
2.4.1 Morphosyntax and semantics of Korean morphological causatives and English *have* causatives .......................................................... 33  
2.4.2 A parallel between an instrument and a causee .......................................... 37  
2.5. Consequences of the applicative analysis of causatives .................................. 42  
2.5.1 Applicative selecting causatives ................................................................. 42  
2.5.2 Semantic difference between Voice and Appl ............................................ 45  

**Chapter 3 Peripheral Applicative** ................................................................. 48  
3.1 Appl in current applicative theory ................................................................. 50  
3.2 Appl without or above Voice ......................................................................... 51  
3.3 Possession interpretation of an affectee ......................................................... 58
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.1 Possession interpretation</td>
<td>58</td>
</tr>
<tr>
<td>3.3.2 An affectee vs. possession interpretation</td>
<td>61</td>
</tr>
<tr>
<td>3.3.3 Low applicative analysis and possessor raising analysis</td>
<td>62</td>
</tr>
<tr>
<td>3.4 Passives in Korean and Japanese</td>
<td>67</td>
</tr>
<tr>
<td>3.4.1 Semantics of nominative and dative DPs in passives</td>
<td>68</td>
</tr>
<tr>
<td>3.4.2 Syntax of arguments in passives</td>
<td>73</td>
</tr>
<tr>
<td>3.5 English experiencer <em>have</em> and Georgian malefactives</td>
<td>76</td>
</tr>
<tr>
<td>3.6 Peripheral applied affectee as a subject</td>
<td>83</td>
</tr>
<tr>
<td>3.7 Consequences of the peripheral applicative analysis</td>
<td>88</td>
</tr>
<tr>
<td>3.7.1 New type of transitive: Appl selects an unaccusative vP complement</td>
<td>88</td>
</tr>
<tr>
<td>3.7.2 Syntax of affectees: a cross-linguistic perspective</td>
<td>92</td>
</tr>
<tr>
<td>3.7.3 Experiencers as peripheral applied arguments</td>
<td>94</td>
</tr>
<tr>
<td><strong>Chapter 4 Applicatives in inchoatives</strong></td>
<td>97</td>
</tr>
<tr>
<td>4.1 Prepositional phrases in inchoatives and external arguments</td>
<td>100</td>
</tr>
<tr>
<td>4.1.1 Distribution of PPs in inchoatives</td>
<td>100</td>
</tr>
<tr>
<td>4.2 PPs in inchoatives</td>
<td>106</td>
</tr>
<tr>
<td>4.2.1 PPs are related to Voice and vCAUSE</td>
<td>106</td>
</tr>
<tr>
<td>4.2.2 Why no defective Voice [-AG] in Korean inchoatives?</td>
<td>109</td>
</tr>
<tr>
<td>4.2.3 Various features on Voice and PPs</td>
<td>112</td>
</tr>
<tr>
<td>4.3 Instrument PPs and defective Appl</td>
<td>113</td>
</tr>
<tr>
<td>4.3.1 Defective Appl in inchoatives</td>
<td>113</td>
</tr>
<tr>
<td>4.3.2 The structure of inchoatives</td>
<td>118</td>
</tr>
<tr>
<td>4.3.3 Two external argument introducing heads</td>
<td>121</td>
</tr>
<tr>
<td>4.3.4 Mapping between theta roles and syntax: configurational and featural approaches</td>
<td>127</td>
</tr>
<tr>
<td>4.4 Datives in inchoatives</td>
<td>129</td>
</tr>
<tr>
<td>4.4.1 Two readings in German inchoatives</td>
<td>130</td>
</tr>
<tr>
<td>4.4.2 Possessive Appl</td>
<td>132</td>
</tr>
<tr>
<td>4.4.3 Possessive Appl vs. non-agentive Appl</td>
<td>135</td>
</tr>
<tr>
<td><strong>Chapter 5 Conclusion</strong></td>
<td>139</td>
</tr>
<tr>
<td>References</td>
<td>141</td>
</tr>
</tbody>
</table>
Abbreviations

1: first person
2: second person
3: third person
ABS: absolutive
ACC: accusative
ACT: active
AGR: agreement
ANI: animate
AOR: aorist
APPL: applicative
ASP: aspect
BEN: benefactive
C: common
CAUSE: causative
CL: clitic
COMP: complimentizer
DAT: dative
DEC: declarative
ERG: ergative
FOC: focus
Fut: future
FV: final vowel
GEN: genitive
GER: gerund
HON: honorification
INANI: inanimate
INSTR: instrument
IND: indicative
LOC: locative
NACT: non-active
NOM: nominative
OM: object marker
P: proper
PASS: passive
PAST: past tense
PL: plural
PERF: perfect
PFX: aspectual prefix
PRE: present
REFL: reflexive
SB: subject agreement
SG: singular
SM: subject marker
SP: subject prefix
STAT: stative
TOP: topic
UNACCU: unaccusative
List of Tables

Chapter 2
Table 1 The correlation of the complement selection of causatives

Chapter 4
Table 1 The distribution of PPs in two types of Korean inchoatives
Table 2/3 Comparison of the distribution of PPs in Korean, German, and Greek inchoatives
Chapter 1
Introduction

The question of how to map various theta roles into syntactic positions has been an important issue in linguistics, as the interpretation of an argument closely interacts with the position of the argument in structure. It has been generally assumed that many external argument theta roles, such as agent, causer, or instrument, are mapped into a subject position, while a patient or theme role is mapped into an object position (i.e., many-to-one mapping). That is, syntax has been viewed as simple and narrow compared to semantics, which seems to be complex and wide.

However, syntax may not be as simple as previously considered but rather quite as fine-grained as semantics. For instance, different theta roles may be mapped into different positions. In this thesis, I show the mapping between semantics and syntax can be complex, and provide a finer mapping relation of theta roles to syntactic positions. Contrary to the pervasive simpler view of many-to-one mapping between semantics and syntax, I argue that one-to-one mapping is plausible.

In this thesis, I explore this issue through the study of the syntax and semantics of external arguments. In particular, I examine external argument introducing heads, Applicative (Appl), which is traditionally known for licensing extra arguments in Bantu, and Voice. I address the question of whether both heads are syntactically necessary, and if so, why. In showing that Appl and Voice are both necessary, this thesis argues that not all external arguments are represented in the same way in syntax. It is shown that a different external argument role is mapped into a particular structural position provided by each head. For example, an agent is mapped into the specifier of Voice, while an affectee is mapped into the specifier of Appl. Moreover, this thesis reveals that non-agent external argument roles are more fine-grained in terms of where they appear in syntax. Although they are all introduced by an Appl head, their syntactic positions are not the same; for instance, an affectee is introduced by a hierarchically higher Appl head than the Appl head that introduces an instrument. The proposals made in this thesis provide for the possibility that there may in fact be a general theory of one-to-one mapping between semantics and syntax.
1.1 The question of external argument introducers: Voice and Appl

Theories of argument structure are largely theories about how arguments are projected into syntax, and how arguments are semantically interpreted (e.g., Hale and Keyser 1993). In particular, the projection and interpretation of external arguments (Marantz 1984; Kratzer 1996) has been the central issue for theories of verbal argument structure. This thesis examines the projection and interpretation of external arguments, focusing on the question of how the external argument introducing heads, Voice and an (event-related) applicative head (henceforth, Appl) are similar and different. Each head has been proposed (Voice by Kratzer 1996; high Appl by Pylkkänen 2002) to introduce an argument external to eventualities. However, at present, there is no theory about how Voice and Appl should be distinguished in argument structure. More specifically, what is lacking in current theories on argument structure is an explicit account of a distinction between the roles of each head and the consequences of this distinction. In this work, I develop these consequences of the distinction between Voice and Appl.

Marantz (1984) observed that the external argument is not an argument of the verb, but rather an argument of the VP, which assigns it an agent role. Since this observation, external arguments have been implemented in syntax by means of Voice (Kratzer 1996) or \( \nu \) (Chomsky 1993, 1995). Voice has a VP as its complement, and the argument in the specifier of Voice receives a compositional theta role from the VP.

Regarding the semantics of an argument that merges in the specifier of Voice, Kratzer proposed that Voice can introduce either an agent (e.g., ‘John’ in (1a)) or a holder (e.g., ‘John’ in (1b)) as long as the event type of the function can undergo Event Identification. For instance, Voice adds an agent to an event, as indicated by its semantics (1c):

---

1 In this thesis, Appl refers to either high Appl or peripheral Appl (chapter 3). There is an entity-related Appl, low Appl, which denotes a relation between two DPs. See sections 1.4 and 1.5 for details.
2 For the purposes of this section, I treat Voice and \( \nu \) as equivalent, in that they both introduce an external argument.
(1) a. John feeds the dog.
   b. John owns the dog.
   c. $\lambda x. \lambda e$. Voice [Agent (e, x)]

The difference between an agent and a holder is in the condition on matching event types. Presumably, in (1a), the agent role of ‘John’ matches with an active event, but in (1b), the holder role of ‘John’ matches with a stative event. Thus, in principle, Voice appears to introduce external arguments of any semantic type in addition to agents. In fact, this type of approach to Voice is prevalent in the literature on argument structure. In causatives, for instance, a causer, an external argument of the causing event, and a causee, an external argument of the base verb, are both argued to be introduced by Voice heads equipped with different semantics (i.e., flavour), such as $v_{\text{CAUSE}}$ vs. $v_{\text{DO}}$ (Harley 1995; Folli and Harley 2007). Under this view, in the Korean sentence (2), the causer ‘Suni’ and the causee ‘Minsu’ are both introduced by $v$.

(2) Swuni-ka Minswu-eykey chayk-lul ilk-hi-ess-ta
   Suni-NOM Minsu-DAT book-ACC read-CAUSE-PAST-DEC
   ‘Suni made Minsu read the book.’

Another example of this view of Voice as an introducer of all types of external arguments is the proposed introduction of an experiencer by a stative $v$ (e.g., Arad 1998). Hence, in current theories on argument structure, Voice can introduce arguments of various semantic types equipped with different semantic features.

Current theories on high Appl are similar to those on Voice. Pylkkänen (2002, 2008) proposed that high Appl introduces an external argument in the same manner as Voice does, namely Event Identification. For example, in Chaga (3), the benefactive argument ‘his wife’ is an external argument of the event (VP) described by the verb ‘eating food,’ and it is introduced by high Appl. High Appl denotes a thematic relation between the benefactive argument and the event.

3 Korean and Japanese data without citations are provided by native speakers of each language.
Like Voice, which introduces several semantic types of external arguments, high Appl seems to have a wide application. For example, in Spanish, it can introduce an experiencer (4a) as well as an unintentional causer (4b) (Cuervo 2003, 2008):

(4) a. A Daniela le gustan los gatos
Daniela.DAT CL.DAT like.PL the cats
‘Daniela likes cats’

b. Al tintorero se le quemaron los pantalones de Carolina
the dry-cleaner.DAT se CL.DAT burnt.PL the trousers of Carolina
‘The dry-cleaner (accidentally) burnt Carolina’s trousers’ (no intention on the dry-cleaner)

According to these analyses, both Voice and high Appl appear to introduce external arguments of various semantic types. In fact, high Appl seems to have the same function as Voice: adding a participant to the event described by the VP. A question arises: what is the difference between Voice and high Appl? Given the similarities listed above, there is no apparent reason to have two external argument introducing heads. For instance, we could posit a benefactive ‘flavour’ of v to introduce the benefactive argument in (3) rather than high Appl, eliminating the need for the two different heads.

However, there is a syntactic difference between Voice and high Appl. According to Pylkkänen, the two heads differ in their relative position in the syntax: as in (5), high Appl always merges below Voice, not above, as shown by the c-command relation between the arguments introduced by each head.
However, it is hard to prove that the syntactic distinction between Voice and high Appl illustrated in (5) is sufficient or necessary, as an external argument similar to a benefactive argument can appear in a sentence-initial position preceding an agent, as exemplified with the Japanese adversity passive in (6):

(6) Taroo-ga Hanako-ni eiga-o mi-rare-ta
Taro-NOM Hanako-DAT movie-ACC see-PASS-PAST
‘Taro was adversely affected by Hanako’s seeing a movie.’ (Adapted from Uda 1994)

In (6), the subject ‘Taro’ is interpreted as adversely affected by the event described by the verb phrase. Unlike the benefactive argument in (3), arguments of this type appear in a (left) peripheral position, always merging above the dative DP, which is an agent (Kuroda 1979; Hoshi 1994a). Interestingly, the adversely affected argument is semantically distinct from the dative argument, being non-agentive (Hoshi 1994a; Uda 1994; K. Kim in press a, among others). Note that in (3) a similar semantic difference is found. In (3), the argument of Voice is in an agentive relation to the event of eating food and the argument of high Appl is in a benefactive relation to the same event. This suggests that if Voice and high Appl are in fact two separate syntactic heads, there should be some semantic difference between them as well. The *non-explicit* idea behind Pylkkänen’s proposal in (5) appears to be that high Appl introduces a non-agentive external argument while Voice introduces an agent. Moreover, the fact that an affectee can precede an agent as in (6) suggests that, while high Appl must merge below Voice, there could be another applicative head (i.e., peripheral Appl) that can merge above Voice.

---

5 Although (6) is a passive clause, I argue in chapter 3 that evidence from scope ambiguity and WCO shows that there is no passive movement. That is, the subject ‘Taro’ merges above the agent ‘Hanako’ without movement.
What is lacking in the proposals of Voice and high Appl is an account of how the arguments introduced by these two heads are semantically different, and whether the hierarchical difference between them proposed in (5) is necessary or sufficient to distinguish them. The overarching goal of this thesis is to articulate the differences between the two external argument introducing heads and develop the consequences of these differences.6

1.2 Syntactic approaches to argument structure

In order to explore the ways in which the external arguments introduced by Voice and Appl are similar and different, it is necessary to form a hypothesis about how arguments are mapped onto syntax and interpreted. In this thesis, I assume a syntax-driven approach to the interpretation of arguments (e.g., Baker 1988, 1997, 2002; Hale and Keyser 1993; Borer 1998, 2005; Ritter and Rosen 1998), specifically a configurational approach. This approach hypothesizes that there is a structural correspondence between a particular semantic role and the structural position of the argument. For example, in Hale and Keyser (1993), an agent appears in the specifier of a VP that takes a lexical VP complement, while a theme appears in the specifier of a lexical VP that takes an AP or PP complement.

In featural approaches, on the other hand, a syntactic head with different possible feature values (e.g., Voice [+/-AG]) can accommodate arguments of various semantic types (Folli and Harley 2005; Kallulli 2007). Configurational approaches predict that different thematic roles appear in different syntactic configuration. By contrast, in featural approaches, the only configurational differences among different thematic roles of arguments are featural differences on the argument-introducing head. For example, an agent and a benefactive argument would both be introduced by Voice, differing only in terms of the feature on the head. In other words, in a configurational approach, the semantic role of an argument is determined by where the argument appears in a structure, while in a featural approach, it is determined by the feature of an argument-introducing head.

6 As will be argued throughout this thesis, Appl introduces a non-agentive external argument. This raises the question of how these non-agents can be sub-divided. I do not address this question here.
As will be shown throughout this thesis, features are still useful even in a largely configurational approach. Although Voice and Appl are syntactically different, showing different selectional differences, there are some cases when they take the same kind of complements (e.g., unaccusative vP; see section 1.5 for details). In those cases, the two heads should be distinguished featurally.

The challenge for a theory of external arguments is to find out what configurational differences account for the differences between Voice and Appl. I will argue that the necessary configuration for external arguments can be expressed in terms of a correspondence between a particular thematic role and a particular head with a relevant semantic feature (see section 1.5).

1.3 Voice, Appl, and event introducer ν

I assume that Voice (Kratzer 1996) introduces an argument external to an eventuality (i.e., an event or state, following Bach (1981)), VP, and that a verb itself names a property of an eventuality.

Contra Kratzer, however, I assume a narrower role of Voice in argument structure. Voice is widely believed to introduce an agent thematic role (Hale and Keyser 1993, Pylkkänen 2002, Cuervo 2003). I argue that Voice is specified for agentivity, AG, and thus an external argument introduced by Voice can show volition (i.e. deliberateness). As will be discussed in chapter 4, the morphological difference between an agent and a non-agentive argument expressed on the verb seems to support the privileged status of Voice for agentivity.

Following current work on argument structure (Pylkkänen 2002, 2008; Cuervo 2003, 2010; Harley 2007), I assume that ν is not the same as Voice (or Appl). Unlike Voice or Appl, which introduce arguments, the role of ν is a verbalizing head by combining with a lexical root (Marantz 1997). In other words, ν is not an argument-introducing head. I further assume, following Harley (1995), Cuervo (2003), and Folli and Harley (2005), that ν introduces an event of the predicate. In other words, ν combines with a root syntactically to build event predicates.
1.4 Syntax and semantics of applicatives

Central to the analysis proposed in this thesis is the syntax and semantics of applicatives, as discussed in Pylkkänen (2000, 2008). Building on previous studies of Bantu applicatives (Baker 1988; Bresnan and Moshi 1993; Marantz 1993), Pylkkänen proposed two distinct types of applicatives, high Appl and low Appl, according to whether the applicative head relates the DP in its specifier to an event \( vP \) (7a), or to an individual, an object DP (7b). In other words, high Appl is an event-related applicative, while low Appl is an entity-related applicative:

\[
\begin{align*}
(7) \ a. \ \text{High applicative} & & \ b. \ \text{Low applicative} \\
\text{Voice} & \rightarrow & \text{ApplP} \\
\quad \text{DP} & \rightarrow & \text{Appl} \rightarrow \text{vP} \\
\quad \quad \quad \text{v} & \rightarrow & \sqrt{\text{P}} \\
\quad \quad \quad \sqrt{\text{P}} & \rightarrow & \sqrt{\text{DP}} \\
\end{align*}
\]

In both types of applicative, the applied argument asymmetrically c-commands the direct object, which is a well-known asymmetry in applicatives across languages (Barrs and Lasnik 1986; Marantz 1993). Relevant to this asymmetry is a scope property in which the applied argument scopes over the theme argument but no inverse scope is allowed (e.g., Marantz 1993). This asymmetric property will be used as a test to identify whether a relevant phrase can belong to an applicative phrase.

The syntax and semantics of high applicatives is particularly relevant to the analysis proposed in this thesis. In (7a), a high applicative licenses the applied DP in a position external to \( vP \), in a parallel manner to Voice introducing the external argument in its specifier position. Semantically, the applicative head adds a participant to the event by the rule of Event Identification (8), just as the Voice head does (see (1c)). For instance, in Chichewa (9), high Appl introduces an instrument argument ‘knife’ to the event of ‘moulding the waterpot’.
(8) $\lambda x.\lambda e. \text{high APPL} \ (e, x)$

(9) Mavuto a-na-umb-ir-a mpeni mtsuko
    Mavuto SP-PAST-mould-APPL-ASP knife waterpot
    ‘Mavuto moulded the waterpot with a knife.’ (Baker 1988)

In principle, the relation between a high applied DP and the event can be maintained without the
object DP, as the possibility of high applicatives in unergatives indicates (Pylkkänen 2002,
2008).  

A low applicative (7b) relates two entities: it denotes a transfer of possession relation
between two DPs, either in terms of a recipient (e.g., ‘I baked John some cookies’) or source
(e.g., ‘A thief stole a ring from Mary). Low Appl introduces a recipient or a source, which
appear in the specifier of low Appl. In addition, a low Appl can denote a static possessive
relation between two entities, not necessarily a transfer of possession, as shown by the Spanish
static low Appl (10) (Cuervo 2003). In (10), the dative possessor ‘Andreína’ is introduced by a
static low Appl, and the low Appl indicates a static relation between the possessor and the DP
‘the suitcase.’ In this case, there is no transfer of possession between ‘Andreína’ and ‘the
suitcase.’

(10) Pablo le sostuvo la valija a Andreína
    Pablo CL.DAT held the suitcase Andreína.DAT
    ‘Pablo held Andreína’s suitcase

Unlike high Appl (7a), low Appl is a complement of a verb (7b). That is, it is internal to
the verb phrase. An argument introduced by a low Appl is not an external argument, unlike an
argument of high Appl or Voice (or peripheral Appl, as will be discussed in chapter 3).

Given the semantic difference between high and low applicatives that denote a transfer of
possession relation, compatibility with a static verb like ‘hold’ is proposed as a test to distinguish
the two types of applicatives. As the verb ‘hold’ does not denote a transfer of source or recipient

\footnote{This possibility does not seem to be absolute. For example, Korean adversity passives do not allow unergatives
(chapter 3), in contrast to morphological causatives (chapter 2), although both are argued to involve an event-related
Appl.}
relation between two DPs, it is only compatible with a high applicative (as well as peripheral Appl), not with a low applicative. This test is used to determine the category of relevant phrases (for instance, the embedded phrases of morphological causatives in Korean).

Furthermore, the structure in (7a) indicates that high Appl merges below Voice, never above. In chapter 3, I argue that an event-related applicative head can merge above Voice (i.e., peripheral Appl), based on the properties of affectee arguments in English, Japanese, Korean, and Georgian.

1.4.1 Distributed Morphology

The analysis proposed in this thesis is naturally captured by a post-syntactic approach to morphology, specifically Distributed Morphology (DM) proposed by Halle and Marantz (1993, 1994) and subsequent work. In DM, the syntax consists of a set of rules that generate syntactic structures, which are then subject to further operations in the derivation to the PF and LF interface levels. Under this view, the phonological expression of syntactic terminal nodes is inserted after the syntax builds all the relevant semantic/syntactic feature bundles. In other words, the insertion of phonological expressions adds phonological information only, and does not contribute any syntactic/semantic information. In particular, DM assumes underspecification of morphemes with respect to syntactic/semantic information. This is illustrated by the syncretism of the Greek voice morpheme (Embick 1997, 1998). Embick argues that the occurrence of the Greek voice morpheme in various syntactic contexts (reflexives, passives, and anticausatives) is due to the underspecification of this morpheme; it is sensitive only to a certain syntactic environment shared by those syntactic contexts, namely \( v \) without an external argument. The crucial point is that the morpheme is sensitive to a particular syntactic relation between \( v \) and an

---

8 Static low applicatives are compatible with ‘hold,’ as shown in Spanish (10) (Cuervo 2003). Given this type of data, Cuervo concluded that this diagnostic for low vs. high Appl may not work cross-linguistically. Importantly, however, Cuervo noted that we need to examine the meaning of these sentences in terms of whether they are interpreted as event-related (as in Korean and Japanese; see chapter 2 and 3) or as entity-related as in Spanish (10). Even though the sentences in both languages are grammatical with the verb ‘hold’, the meanings are different. As the meaning of the relevant sentences in the languages under investigation provides solid evidence for a high Appl, I continue to argue that these languages involve high Appl, not low Appl.
externally projected argument, not to the semantics of \( v \). In other words, the occurrence of the morpheme depends on the syntax of the relevant head, not the semantics.

In this thesis, I claim that, like the Greek voice morpheme, the Korean verbal morpheme -I, which appears in different syntactic contexts, is sensitive to a certain syntactic property, not to semantics. The Korean morpheme that appears in morphological causatives, adversity passives, and inchoatives is sensitive to a particular head shared by those structures (i.e., high Appl) but not to the semantics of each context (e.g., causative, adversity, or inchoative semantics).

1.5 Outline of the thesis

The main claim of this thesis is that Voice and Appl are not the same semantically. Each head consists of a different semantic feature, [+AG] vs. [-AG], as shown in (11) and (12). Moreover, this thesis shows that there is an applicative head that can merge above Voice, namely peripheral Appl (12). Like high Appl in (11), its semantics is [-AG], while, unlike high Appl, it can merge above Voice, as illustrated in (12). In other words, it is the highest argument-introducing head below T. Thus, an argument introduced by peripheral Appl will be shown to appear in the subject position (i.e., in the specifier of TP).

(11) VoiceP
    ├── agent
    │    └── VoiceP
    │        ├── [+AG]
    │        └── non-agent
    │            └── Appl
    │                └── [-AG]
    └── vP

(12)
The data from Korean, Japanese, English, and Georgian examined in this thesis provide evidence that high Appl and peripheral Appl introduce a wide range of non-agentive arguments: causees, affectees, instruments, and possibly experiencers with psychological predicates. Although the two Appls are similar in terms of the semantics of their arguments, they are distinct syntactically. When they co-occur, as in the Korean adversity passives discussed in chapter 3, peripheral Appl appears in a hierarchically higher position than high Appl, as illustrated in (13). This is not surprising given the proposal that peripheral Appl can merge above Voice (11) but high Appl merges below Voice (12). The arguments of both Appls are distinct from arguments introduced by Voice in that they are non-agentive.

The languages under investigation also show that Appls and Voice are different syntactically: they merge in different positions. The fact that both Appls and Voice can appear in the same clause provides evidence for their being syntactically and semantically different; for example, we may have both a causee (introduced by high Appl) and an agent (i.e., a causer introduced by Voice) in Korean and English causatives, or both an affectee (introduced by peripheral Appl) and an agent (introduced by Voice) in Japanese passives. Morphological
support from several languages also provides evidence that Appl is semantically and syntactically distinguished from Voice. For example, in Georgian and Bantu, non-agentive arguments are marked by an applicative verbal morpheme, in contrast to agentive arguments, which receive no special marking.

In fact, the semantic compositions of Voice and high Appl proposed in Kratzer (1c) and Pylkkänen (8) predict that both heads s-select an event. An event can be syntactically (or categorically) any type of vP with either VoiceP or high ApplP on the top of vP, as those phrases denote an event. Thus, in principle, an applicative head appears to be able to merge above VoiceP (as it is an event). It does not obligatorily take a transitive vP, contrary to the implication in Pylkkänen (2008).

To the extent that the proposed claim (11-13) is correct, it constitutes evidence for two external argument introducing heads, Voice and Appl, in the current theory of argument structure. That is, Voice and Appl are not different flavours of the same head. Furthermore, the proposed peripheral Appl, which is syntactically different from high Appl, refines current applicative theory by extending the domain of an applicative head to introduce an affectee in the subject position.

In chapter 2, I propose that high ApplP is the complement of causatives in Korean and English. The syntax and semantics of causatives have been examined in numerous studies, but less attention has been paid to the syntax and semantics of causees. Unlike some previous studies on causatives, this thesis argues that a causee is not a full-fledged agent in some languages, and is introduced by high Appl. This yields interesting consequences with respect to Pylkkänen’s (2008) typology on the variation of complement selection of causatives. The claim that high ApplP is a complement of a causative adds a new type of causative complement selection, namely an applicative-selecting causative. Moreover, the consequences reveal that high Appl is semantically distinguished from Voice by being non-agentive.

In chapter 3, I show that the hierarchical relation between Voice and high Appl proposed by Pylkkänen, as illustrated in (11), is too rigid to capture the empirical data examined in this thesis. For instance, in the Japanese adversity passive in (6), the affectee ‘Taro’ appears to merge
above the agent ‘Hanako.’ In this chapter, I argue that an applicative head can merge above Voice. This head, peripheral Appl, is the highest argument-introducing head under T, as illustrated in (12), and can take either a high ApplP or an unaccusative vP as a complement. The consequence of the addition of peripheral Appl to current argument structure is the expansion of the theory of applicatives. Further, I show that Appls do not show the same selectional properties. Although both peripheral Appl and high Appl can select high ApplP or unaccusative vP as a complement, as illustrated in (14) and (15) respectively, only peripheral Appl can select a VoiceP complement, as shown in (16a) and (16b):

(14) a. 

```
T          Peripheral ApplP
         /          \
        /            |
       DP            Appl
                      |
                      vP
```

```
T          VoiceP
         /          \
        /            |
       DP            Voice
                      |
                      High ApplP
```

e.g., Korean adversity passive (chapter 3)
e.g., Bantu applicative (McGinnis and Gerdits 2003)

(15) a. 

```
T          Peripheral ApplP
         /          \
        /            |
       DP            Appl
                      |
                      vP
```

e.g., Georgian malefactiv (chapter 3)
Spanish unintentional causers

e.g., Bantu applicatives (e.g., Simango 2005)
A question arises: how do we know whether ApplP is peripheral or high when there is no VoiceP? For example, in (15a), where unaccusative vP is a complement of peripheral Appl, how do we know that it is a peripheral ApplP, not high ApplP in (15b)? In chapter 3, I argue that it can be distinguished based on whether the applied argument becomes a subject (peripheral Appl) or an object (high Appl). In addition, the structures in (15a) and (15b) cannot be distinguished from the configuration illustrated in (17), where Voice takes an unaccusative vP complement. In these cases, features ([−AG] vs. [+AG]) are needed to distinguish the heads.

In chapter 4, I argue that PPs in inchoatives can be related to defective high ApplP, not defective VoiceP as often claimed in the literature (e.g., Alexiadou and Schäfer 2006; Kallulli 2007). By examining two types of inchoatives in Korean and comparing them to Greek and German inchoatives, I show that instrument PPs in Korean inchoatives are neither instrument causers nor pure instruments. Thus, instrument PPs cannot be related to either (defective) Voice [−AG] or Voice [+AG]. Building on both cross-linguistic and language internal evidence, I argue that instrument PPs in Korean inchoatives are related to defective high ApplP.
In Chapter 5, I present my conclusions, showing that all external arguments cannot be represented in the same way. There is a syntactic boundary between agent and non-agent external arguments. The results of this thesis suggest that there are four argument-introducing heads, including low Appl. Agents are introduced by Voice, while non-agents are introduced by peripheral, high, or low Appls. Non-agent external argument roles are mapped into the specifiers of high and peripheral Appls, while entity-related roles are mapped into the specifiers of low Appl. Peripheral and high Appl are hierarchically different: peripheral Appl can merge above Voice, while high Appl must merge below Voice. When they co-occur, peripheral Appl merges in a higher position than high Appl.
Chapter 2
Applicatives in causatives

In this chapter, I argue that, in some languages, the complement of causatives is high ApplP (1), rather than a phrase whose head introduces an agent (e.g., Voice). Based on Korean morphological and English have causatives, I argue that causees are non-agents, and must be licensed by high Appl. An important consequence of the proposed analysis (1) is that causatives can select high ApplP as a complement, a possibility that was absent in Pylkkänen’s typology of complement selection of causatives.

(1)

Another interesting consequence emerging from the proposed analysis (1) is that Voice and Appl are semantically different. In this thesis, as mentioned in chapter 1, Appl refers to an event-related Appl, either high Appl, as discussed in this chapter, or peripheral Appl, which will be discussed in chapter 3. These Appls are both distinct from low Appl, which is entity-related. High and peripheral Appls take an event as a complement, while low Appl takes a DP as a complement (see chapter 1 for details). In this chapter, I show that an argument introduced by Appl is non-agentive, but the one introduced by Voice is agentive. I argue that this is because Appl is not specified for agentivity (2b), while Voice is (2a):

(2) a. Voice  
[+AG]  
b. Appl  
[-AG]

---

9 The fact that both Voice and high Appl can appear in the same clause (1) indicates that Voice and high Appl are also syntactically different, an issue that will be discussed in chapter 4.
2.1 Assumptions: syntax and semantics of causatives

In this thesis, I assume that causatives are bi-eventive (e.g., Dowty 1979; Parsons 1990; Pylkkänen 2002; Cuervo 2003). For example, Pylkkänen (2002) argues that causatives are bi-eventive structures in which \( v_{\text{CAUSE}} \) introduces an implicit causing event argument to the \( vP \) describing a caused event.\(^{10}\) I also assume that in Korean morphological causatives and English *have* causatives, there is a \( v_{\text{CAUSE}} \) head that introduces an implicit event argument.

2.2 Causees in traditional view

In this chapter, I discuss Korean morphological causatives (3a) and English *have* causatives (3b):\(^{11}\)

(3) a. Swuni-ka Minswu-eykey chayk-lul ilk-hi-ess-ta
    Suni-NOM Minsu-DAT book-ACC read-CAUSE-PAST-DEC
    ‘Suni made Minsu read the book.’

b. John had Mary pick up a book.

Causatives like those in (3) pose interesting problems, which can be expressed in terms of clause union (Perlmutter and Postal 1974). Although these causatives have two verbs, a causative verb and a base verb, they pattern like a single clause with a single verb. For example, in terms of case and agreement, only one argument, that of the causative verb, has subject case, and the tense agreement is the same as that of a subject of a single transitive clause.

Unlike a single clause, however, there seem to be two theta role assigning verbs, namely a causative verb and a base verb. In particular, each of these two verbs seems to have argument structure of its own within a single causative sentence. Under this view, a causee bears a dual

\(^{10}\) Under this theory, \( v_{\text{CAUSE}} \) is separated from Voice. Under this separation, the role of Voice is to relate its argument to the event introduced by \( v_{\text{CAUSE}} \), which is non-Voice bundling. There is another variation of this, namely Voice bundling, in which \( v_{\text{CAUSE}} \) is combined with Voice. I leave open the question of which type of bundling takes place in Korean and English.

\(^{11}\) The causatives in (3) display a pattern similar to FI (Faire Infinitif)-type causatives in Romance, which I discuss in this section, with respect to case and passivization availability.
role, acting as both the patient of the causative predicate and the logical subject of the base predicate (e.g., Alsina 1992; Guasti 1996). Kayne (1975) initially observed this phenomenon in French, and it has since been found to be a robust cross-linguistic pattern (Alsian and Joshi 1991 for Chichewa; Alsina 1996 for Catalan; Cole 1983 for Kannada, Modern Hebrew, Quechua; H. Lee 1985 for Korean; Folli and Harley 2007 for Italian). This is illustrated by a contrast between FI and FP type causatives in Catalan (4):

(4) a. FI (Faire Infinitif)
   He fet netejar els lavabos al general
   I have made clean the toilets to the general
   ‘I made the general clean the toilets.’

   b. FP (Faire Par)
      He fet netejar els lavabos pel general
      I have made clean the toilets by the general
      ‘I had the toilets cleaned by the general.’ (Hyman and Zimmer 1975)

Hyman and Zimmer (1975) observed a semantic difference between the causees in (4a) and (4b). In (4a), the dative marked causee is acted upon by a causing event and is thus affected by the event. In (4b), on the other hand, the by phrase marked causee does not have this affected interpretation. Causees in FI type causatives have a dual role: a patient role affected by a causing event, $v_{CAUSE}$, and some type of subject role of the embedded predicate.

The dual role of causees has been problematic, since in current argument structure theory (e.g., Baker 1988, 1997; Hale and Keyser 1994; Borer 1994, 1998, 2005; Ritter and Rosen 1998) two theta roles are not allowed in the same syntactic position. As a solution to this problem, the dual role is argued to be understood in terms of ‘obligation’ (Folli and Harley 2007), in that a causer obliges a causee to perform a relevant action. Importantly, an obligation effect is argued to be possible only when the causee is an intentional agent. $v_{DO}$ is proposed to license such an

---

12 However, the dual theta role analysis of causatives was pursued in Alsina (1992) and Guasti (1996). For example, Guasti proposed that a causee in a certain syntactic position is shared as an argument by two predicates, a causative and base predicate. In this position, a causee receives a dual semantic role: a subject role from the base predicate and an affected role from the causative predicate.
intentional agentive causee (Folli and Harley 2007).\textsuperscript{13} Under this view, the causee is assigned one theta role, namely an agent. An affected interpretation seems to stem from the obligation effect.\textsuperscript{14} Folli and Harley (2007) argue that an obligation effect is present in FI type causatives but absent in FP type causatives, and thus the observed difference between (4a) and (4b) is captured.\textsuperscript{15}

To sum up, under the traditional view, a causee has a dual role, a patient as well as an agent, which is as attributed to an obligation effect.

2.3 Causees are not agents

In this section, I argue that causees are \textit{not} agents, in contrast to the traditional view. Evidence for this claim comes from Korean morphological and English \textit{have} causatives. I show that an agent-licensing head such as $\nu_{DO}$ (Folli and Harley 2007) or Voice (Pylkkänen 2002, 2008: see section 2.5 for details), is inappropriate for the causees. Moreover, I argue that in some causatives, like Korean morphological and English \textit{have} causatives, an obligation effect is not necessary.

2.3.1 Basic data of Korean and English causatives

Morphological causatives in Korean are marked with a voice morpheme -$i$ (henceforth -I morpheme), which may surface as -$i$, -$hi$, -$li$, or -$ki$.\textsuperscript{16} This -I morpheme marks both morphological causatives and adversity passives (e.g., \textit{John$_1$ had Mary step on his$_1$ foot}) (Lee

---

\textsuperscript{13} Unlike the event introducer $\nu$ assumed in this thesis, $\nu$ for Folli and Harley can introduce an (external) argument as well as an event (see section 2.3.2 for some discussion).

\textsuperscript{14} Folli and Harley (2007) do not provide an account of how the affected interpretation arises.

\textsuperscript{15} FP is argued to embed a nominalized VP, and thus there is no agent in the structure. This explains the absence of obligation effect in FP (Folli and Harley 2007).

\textsuperscript{16} The allomorphs are mainly conditioned phonologically (Yeon 1991; J. Park 1994).

(5) Swuni-ka ai-eykey chayk-lul ilk-hi-ess-ta
   Suni-NOM child-DAT book-ACC read-I-PAST-DEC
   ‘Suni made the child read the book.’

A similar pattern is found with English have constructions that take non-nominals as complements (e.g., Cowper 1989; Ritter and Rosen 1993, 1997; Harley 1998). 18 It was observed that the subject of have is interpreted as either a causer or experiencer (e.g., I had my students leave early) like the subject of Korean morphological causatives and adversity passives respectively. 19 This chapter focuses on the causative use of have, in which the subject of have is interpreted as a causer, as illustrated in (6). 20

(6) a. John had the students read three articles.  
b. John had Mary pick up the articles.  
c. John had Mary paint his hair black.

Although English have causatives can take various types of complements in addition to bare infinitives (Harley 1998), such as passive participles, progressive participles, PPs, and adjective phrases (e.g., ‘Asterix had Obelix red in the face.’ from Harley (1998)), this thesis discusses bare


17 Korean also has a periphrastic causative (A. Kim 1998; Yang 1979), which is marked with a different morpheme, -key.ha. It has been shown that the syntactic and semantic properties of the periphrastic causative are different from those of the morphological causative (see A. Kim 1998; S. Park and Whitman 2003; S. Park 2005). In this thesis, I do not provide an analysis of the periphrastic causative.

18 This type of morpheme is also found in other languages, such as Manchu (Haspelmath 1990), Even (Knott 1995), and Taiwanese (Cheng et al. 1999).

19 Have also has possessive (i), locational (ii) and auxiliary (iii) uses. I leave it as a question whether the proposed analysis can account for these uses of have. For the possessive use of have, a proposal similar to the current analysis is made in K. Kim (in press b).

(i) John has a hat/ a brother.  
(ii) This box1 had books in it1.  
(iii) John had read the book.

20 See chapter 3 for an analysis of the experiencer use of have.
infinitival complements only.\footnote{I do not discuss whether the analysis proposed in this chapter (and in chapter 3) can extend to other types of complements of English have. For a discussion of other types of complements in terms of an analysis similar to the one proposed here, see K. Kim (in press b).} Due to the interpretational similarities of Korean morphological causatives and English have causatives, both causatives will be glossed throughout this thesis as $\text{have}_{\text{caus}}$.

It has been observed that morphological causatives in Korean do not behave uniformly with respect to the scope of manner adverb modification (A. Kim 1998; Son 2006; Um 1995):

(7) a. Swuni-ka ai-eykey chayk-lul ppali ilk-hi-ess-ta
    Suni-NOM child-DAT book-ACC quickly read-I-PAST-DEC
    i) ‘Suni quickly had$_{\text{caus}}$ the child read the book.’
    ii) ‘Suni had$_{\text{caus}}$ the child quickly read the book.’

b. Swuni-ka ai-eykey pap-lul ppali mek-i-ess-ta
    Suni-NOM child-DAT rice-ACC quickly eat-I-PAST-DEC
    i) ‘Suni quickly had$_{\text{caus}}$ the child fed.’
    ii) * ‘Suni had$_{\text{caus}}$ the child quickly fed.’

With the modification of manner adverb, (7a) is ambiguous between two readings, but (7b) is not. In particular, the caused event (ii) in (7a) can be modified by the adverb ‘quickly’ but the caused event (ii) in (7b) cannot. Some verbs that show this ambiguity in morphological causatives are $\text{takk}$-i ‘have$_{\text{caus}}$ x clean,’ $\text{ssu}$-i ‘have$_{\text{caus}}$ x write,’ $\text{ssel}$-li ‘have$_{\text{caus}}$ x cut,’ $\text{tul}$-li/$\text{cap}$-hi ‘have$_{\text{caus}}$ x hold,’ and so on, while some verbs that do not show this ambiguity are $\text{nw}$-i ‘have$_{\text{caus}}$ x take a pee,’ $\text{an}$-ki ‘have$_{\text{caus}}$ x embrace,’ $\text{ep}$-hi ‘have$_{\text{caus}}$ x carry,’ $\text{mwul}$-li ‘have$_{\text{caus}}$ x bite,’ etc. Some of these verbs are illustrated in (8):

    Suni-NOM Minsu-DAT bread-ACC cut-I-PAST-DEC
    ‘Suni had$_{\text{caus}}$ Minsu cut the bread.’
b. Swuni-ka Minswu-eykey ilki-lul ssu-i-ess-ta
   Swuni-NOM Minsu-DAT diary-ACC write-I-PAST-DEC
   ‘Suni had\(_{\text{caus}}\) Minsu write a diary.’

c. Swuni-ka Minswu-eykey ocum-lul nwu-i-ess-ta
   Swuni-NOM Minsu-DAT pee-ACC excrete-I-PAST-DEC
   ‘Suni had\(_{\text{caus}}\) Minsu take a pee.’

d. Swuni-ka Minswu-eykey ai-lul an-ki-ess-ta
   Swuni-NOM Minsu-DAT child-ACC embrace-I-PAST-DEC
   ‘Suni had\(_{\text{caus}}\) Minsu embrace the child.’

I call the examples in (7a) and (8a, b) that show this ambiguity actional morphological causatives, as the events described by the verbs can be modified by the adverb ‘quickly.’ On the other hand, the events described by the verbs in (7b) and (8c,d) cannot be modified by an adverb like ‘quickly,’ and thus I call them non-actional morphological causatives.\(^{22}\)

2.3.2 Why not \(_{\text{vDO}}\) or Voice as causee-introducers?

This section shows that causees in Korean and English causatives are non-agentive. I compare the causees in Korean morphological and English have causatives to Japanese and Italian causatives, which are argued to have intentional agents that are introduced by an agent-introducing head \(_{\text{vDO}}\) (or Voice; see section 2.5). This comparison reveals that such an agent-introducing head cannot introduce causees in Korean and English.

Italian FI (Faire Infinitif) causatives and Japanese morphological causatives are argued to select an embedded phrase headed by \(_{\text{vDO}}\) (Folli and Harley 2007 for Italian, Harley 2006 for Japanese). A \(_{\text{v}}\) head can come in different flavours, reflecting the nature of events (Harley 1999, 2005). For example, \(_{\text{vDO}}\) introduces an agentive event, while \(_{\text{vCAUSE}}\) introduces a causative event (unlike Voice, which does not introduce an event). The \(_{\text{v}}\) head can also introduce an external

\(^{22}\) I do not pursue an analysis of the different scope of manner adverbs in these causatives. See K. Kim (2008, 2011) for such an analysis.
argument to a verb phrase like Voice (or a high or peripheral Appl). Different types of \( v \) heads introduce different types of arguments. An argument introduced by \( v_{DO} \) is an intentional agent like that of Voice, while an argument introduced by \( v_{CAUSE} \) is a causer. More specifically, \( v_{DO} \) is different from \( v_{CAUSE} \) in that it requires its external argument to be agentive, while the external argument of \( v_{CAUSE} \) does not have to be agentive (i.e., animate). \(^{23}\) According to Folli and Harley (2007) and Harley (2006), causees in Italian and Japanese show the properties of intentional agents. Therefore, an agent-introducing head, \( v_{DO} \), introduces causees in those languages, as illustrated in (9). The head \( v_{CAUSE} \) introduces a causer in its specifier and indicates that the event is causative:

\[
(9) \quad \underline{v_{CAUSE}} \quad \underline{v_{DO}} \\
\text{causer} \\
\text{causee (agent)}
\]

In the unmarked case, the agent is animate and intentional (Folli and Harley 2005, 2008), as shown by the fact that in both Italian FI causatives and Japanese morphological causatives, the dative causee must be animate. If the causee is inanimate, the causative is ungrammatical, as exemplified with the following Italian FI causative:

\[
(10) \quad \text{Gianni ha fatto rompere la finestra a Maria / *al ramo.} \\
\text{Gianni has made break the window to Maria / to the branch} \\
\text{‘Gianni made Maria / *the branch break the window.’} \quad \text{(Folli and Harley 2007)}
\]

The crucial role of \( v_{DO} \) is to restrict its specifier position to animate agents. Thus, under this view, the causee is an animate intentional agent.

\(^{23}\) Similar heads are proposed to capture the animacy difference; as will be discussed in chapter 4, Voice [+AG] and Voice [-AG] are proposed to introduce an agent and an inanimate causer respectively (Alexiadou and Schäfer 2006).
The $v_{DO}$ proposal is also able to account for the binding facts in Italian and Japanese. Causees in both Japanese and Italian causatives can bind reflexive pronouns, as illustrated by the Japanese sentence in (11):

(11) Tanaka$_1$-ga  Suzuki$_2$-ni  zibun$_{1/2}$-no  hon-o   yom-ase-ta
    ‘Tanaka$_1$ made Suzuki$_2$ read his$_{1/2}$ book.’    (Kuroda 1965)

In Japanese, the reflexive pronoun zibun ‘self’ can be bound by either a structural subject or a semantic subject (i.e., an agent). Importantly, in (11), the dative-marked causee ‘Suzuki’ can bind the reflexive pronoun, indicating that the causee is an agent. This binding fact is argued to support the proposal in (9), in which a causee is introduced by $v_{DO}$, which can take an (animate) agent only. However, as we will see in subsequent sections, this proposal remains problematic for Korean and English.

2.3.2.1 Causees in Korean morphological causatives

Unlike Italian FI causatives and Japanese morphological causatives, not all Korean morphological causatives must have an animate causee. Although actional morphological causatives require animate causees, as in (12), non-actional morphological causatives allow both animate and inanimate causees, as in (13). In Korean, the inanimate and animate dative markers have different forms: -ey and -eykey respectively (K. Lee 1987).

(12) Swuni-ka  ai-eykey/#inhyung-ey  chak-lul  ilk-hi-ess-ta
    Suni-NOM  child-DAT/doll-DAT  book-ACC  read-I-PAST-DEC
    ‘Suni had $caus$ the child/the doll read the book.’

(13) Swuni-ka  ai-eykey/inhyung-ey  kkoch-lul  an-ki-ess-ta
    Suni-NOM  child-DAT/doll-DAT  flower-ACC  embrace-I-PAST-DEC
    ‘Suni had $caus$ the child/the doll embrace the flower.’

24 The fact shown in (11) suggests that the dative causee is a structural subject as well (Harley 1995, 2006; Miyagawa 1999).
The fact that non-actional causatives allow an inanimate causee indicates that \( \nu_{\text{DOP}} \) cannot be the complement of the causative. Furthermore, the contrast between (12) and (13) suggests that \( \nu_{\text{DOP}} \) cannot unify both actional and non-actional causatives, which are both marked by the same morpheme \(-I\).

Furthermore, even though actional causatives allow only animate causees, \( \nu_{\text{DOP}} \) cannot be the complement for this type of causative either. The binding facts in Korean show that the animate causees cannot be agents. Korean has a reflexive pronoun \textit{caki} ‘self’ that requires a semantic subject antecedent (Shibatani 1973), as shown in (14a). In (14a), the semantic subject ‘Suni’ binds the reflexive pronoun. In the periphrastic causative illustrated in (14b), both the causer ‘Mr. Kim’ and the causee ‘the girl’ can bind the reflexive pronoun:

\[
(14) \quad \text{a. Swuni}_{1\text{-ka}} \quad \text{caki}_{1\text{-uy}} \quad \text{chayk-lul} \quad \text{ilk-ess-ta} \\
\quad \text{Suni-NOM} \quad \text{self-GEN} \quad \text{book-ACC} \quad \text{read-PAST-DEC} \\
\quad \text{‘Suni1 read her1 book.’}
\]

\[
\text{b. kimssi}_{1\text{-ka}} \quad \text{ku sonye}_2\text{-eykey} \quad \text{caki}_{1,2\text{-uy}} \quad \text{chayk-lul} \quad \text{il-key.ha-ess-ta} \\
\quad \text{Kim-NOM} \quad \text{the girl-DAT} \quad \text{self-GEN} \quad \text{book-ACC} \quad \text{read-CAUSE-PAST-DEC} \\
\quad \text{‘Mr. Kim1 made the girl2 read his1/her2 book.’}
\]

In (14b), the reflexive pronoun \textit{caki} can refer to either the causer ‘Mr. Kim’ or the causee ‘the girl,’ which suggests that both the causer and the causee are agents.\(^25\) Importantly, however, the reflexive pronoun cannot be bound by a causee in morphological causatives marked with \(-I\) (Shibatani 1973; Um 1995; Whitman and Han 1988), as illustrated in (15):

\[
(15) \quad \text{i. Swuni-ka} \quad \text{Minswu-eykey} \quad \text{chayk-ul} \quad \text{ipwule} \quad \text{ilk-key.hay-ess-ta} \\
\quad \text{Suni-NOM} \quad \text{Minsu-DAT} \quad \text{book-ACC} \quad \text{on purpose} \quad \text{read-CAUSE-PAST-DEC} \\
\quad \text{‘Suni1 made Minsu2 read the book on purpose1/2.’}
\]

\[
\text{b.*Swuni-ka} \quad \text{inhyung-ey} \quad \text{os-ul} \quad \text{ip-key.hay-ess-ta} \\
\quad \text{Suni-NOM} \quad \text{doll-DAT} \quad \text{clothes-ACC} \quad \text{wear-CAUSE-PAST-DEC} \\
\quad \text{‘Suni made the doll put on the clothes.’}
\]

\(^{25}\) Both the causer and the causee in the periphrastic causative (14b) are compatible with an agent-oriented adverb (ia), in contrast to the causee in the morphological causatives in (16). Moreover, unlike non-actional causatives like (12), an inanimate causee is not allowed in a periphrastic causative, as illustrated in (ib).
In (15), the causee ‘the girl’ cannot bind the reflexive pronoun caki ‘self,’ while the causer can. These binding facts indicate that the causee in morphological causatives cannot be an agent as it is unable to bind the reflexive pronoun.26

Another crucial piece of evidence that v\_DO cannot be the head of the embedded phrase of Korean morphological causatives comes from the fact that an agent-oriented adverb cannot modify a caused event where the causee is the subject (e.g., J. Song 1993) in either actional (16a) or non-actional (16b) causatives. Also, compare (16) to a normal transitive clause (17), where the causees in (16) appear as the subjects of the same verbs. Although these arguments are not agentive when embedded under causatives, as in (16), they are compatible with agent-oriented adverbs as the subjects (17):

(16) a. Swuni-ka ai-eykey chayk-lul ilpwule/yelsungcekulo ilk-hi-ess-ta
    Suni-NOM child-DAT book-ACC on purpose/this enthusiasm read-I-PAST-DEC
    i) ‘Suni on purpose/with enthusiasm had\textsubscript{caus} the child read the book.’
    ii) * ‘Suni had\textsubscript{caus} [the child read the book on purpose/with enthusiasm].’

b. Swuni-ka ai-eykey pap-ul ilpwule/yelsungcekulo mek-i-ess-ta
    Suni-NOM child-DAT rice-ACC on purpose/this enthusiasm eat-I-PAST-DEC
    i) ‘Suni on purpose/with enthusiasm had\textsubscript{caus} the child fed.’
    ii) * ‘Suni had\textsubscript{caus} [the child fed on purpose/with enthusiasm].’

(17) a. ai-ka chayk-lul ilpwule/yelsungcekulo ilk-ess-ta
    child-NOM book-ACC on purpose/with enthusiasm read-I-PAST-DEC
    ‘The child on purpose/with enthusiasm read the book.’

26 This fact also suggests that the causee cannot be a structural subject.
The evidence from animacy, binding, and agent-oriented adverb modification presented in this section suggests that causees in both types of Korean morphological causatives are not agentive. Therefore, the agent-introducing head \( v_{DO} \) cannot introduce these causees.

### 2.3.2.2 Causees in English have causatives

Ritter and Rosen (1993) argued that the predicate in the complement of causative *have* must involve an agent of the action, which is also pointed out by Harley (1998). This accounts for the ungrammaticality of causative readings with unaccusatives shown in (18).

\[
(18) \quad \begin{align*}
    (i) & \quad *Ralph \; \text{had}_{caus} \; \text{Sheila}/\text{his goldfish} \; \text{die}. \\
    (ii) & \quad *Ralph \; \text{had}_{caus} \; \text{Sheila} \; \text{fall down}. \\
    (iii) & \quad *Ralph \; \text{had}_{caus} \; \text{the plants} \; \text{grow}.
\end{align*}
\]

However, as illustrated in (19), the causee does not show deliberateness:

\[
(19) \quad \begin{align*}
    (i) & \quad \text{John}_1 \; \text{had}_{caus} \; \text{the students}_2 \; \text{read} \; \text{three articles on purpose}_1/*_2. \\
    (ii) & \quad \text{John}_1 \; \text{had}_{caus} \; \text{Mary}_2 \; \text{pick up} \; \text{the articles on purpose}_1/*_2. \\
    (iii) & \quad \text{John}_1 \; \text{had}_{caus} \; \text{Mary}_2 \; \text{paint} \; \text{his}_1 \; \text{hair} \; \text{black on purpose}_1/*_2.
\end{align*}
\]

The causees, ‘the students’ in (19a) and ‘Mary’ in (19b, c), cannot be modified by the agent-oriented adverb *on purpose*. While an agent generally exhibits deliberateness, a causee is not able to act deliberately: it is not a full-fledged agent. In fact, Givón (1975) argues that the predicate in the complement of English causative *have* is active (i.e., a causee must be capable of acting) but not deliberate. Givón further notes that by being embedded under causative *have*, the

---

\(^{27}\) Unaccusatives in causatives, as in (i), become possible when a modifier is added (Belvin 1996), as in (ii):

(i) ?Lou had_{caus} the bomb explode.

(ii) Lou had_{caus} the bomb explode [right when Charlie walked in].

At present, it is not clear to me what role(s) these modifiers play or how they can be represented in the syntax; I leave these questions for future research.
causee loses its deliberateness. For example, the agent ‘Mary’ shows deliberateness in (20a), but not when embedded under have as a causee, as in (20b) (see (16) and (17) for a similar pattern in Korean causatives; this point is discussed further at the end of this section).

(20) a. Mary picked up a book deliberately.
    b. John1 had Mary2 pick up a book deliberately1/*2.  (Givón 1975)

Interestingly, unlike Ritter and Rosen, he attributes the ungrammaticality shown in (18) to the fact that in unaccusatives there is no active causee. For example, ‘Sheila’ in (18a, b) is not an active entity, but has a patient-like role.

Observations supporting non-agentive causees have also been made in the traditional literature (Givón 1975, 1976; Talmy 1976; van Villan et al. 1996). The key point of these studies is that a causer is a deliberate agent but a causee is not a deliberate agent. For instance, Givón (1976) observed that causees in English have-type causatives do not act deliberately. Formally, Givón argued that causative verbs allow only one controller per causation chain; thus, only a causer has deliberateness, not a causee. Based on Givón (1975) and previous studies, I conclude that causees in English have causatives are not agentive, but active. Therefore, vDO, which introduces an intentional agent, cannot introduce causees in English have causatives.

Further, Voice is also unable to capture the properties of the causees illustrated in Korean (16) and English (19). According to Pylkkänen, VoiceP can be a complement of a causative (i.e., the causative head vCAUSE can have VoiceP as a complement). Importantly, in these causatives, Voice introduces a causee, and thus the causee can be modified by an agent-oriented adverb, unlike the causatives in (16) and (19) (see section 2.5 for details).

Now we can explain why the obligation effect discussed earlier is not necessary in Korean and English causatives. Recall that Folli and Harley argued that the dual role of a causee is captured by an obligation effect, which is possible only when the causee is an agent. However, as we have seen in Korean (16-17) and English (19), the causees in these languages are not necessarily agents, and this is why the obligation effect is not necessary in these languages. For example, in the Korean non-actional morphological causative in (13), an inanimate causee
cannot be obliged to perform the caused event, although it can be acted upon by a causing event. That is, there is no obligation effect in such a causative, but the causee is interpreted as affected. It should be noted that the absence of the obligation effect does not mean that causees do not have a dual role in these languages; it just indicates that the agent role is not necessarily one of them.28

The claim that a causee in a morphological causative is not a full-fledged agent raises the question of whether the non-agentivity of a causee is a universal property, not one exclusive to Korean and English. Although this question is not definitively answered in this thesis, there is considerable evidence that this property is indeed universal. Givón (1976) observed that in Bantu morphological causatives, a causee is always non-deliberate, as exemplified in Bemba (21).

(21) Naa-mu-fuund-ishya uku-laanda iciBemba ku-mufulo
I-PAST-him-learn-CAUSE to-speak Bemba on purpose

(i) ‘I on purpose made him learn to speak Bemba.’
(ii) *’I made him on purpose learn to speak Bemba.’

Givón concluded that it is a defining property of a morphological causative that a causer, not a causee, acts with deliberateness. In other words, a causee is always non-deliberate. Interestingly, this property does not necessarily hold of causees in periphrastic causatives. For example, in English cause causatives (e.g., John1 caused Mary2 to pick up her books deliberately1/2), a causee, not a causer, is deliberate, in contrast to make causative (e.g., John1 made Mary2 pick up her books deliberately1/2) (Givón 1975). Korean peripherastic causatives are similar to English cause causatives in this respect; as shown in footnote 25, both causees and causers are agentive. Non-agentivity seems to be a cross-linguistic property of causees in morphological causatives, although it does not appear so for causees in periphrastic causatives.

28 One of the possible roles of causees in these languages is an instrument (see section 2.4.2 for details).
2.4 Causees are introduced by high Appl

I have argued above that, unlike causers, causees are not agents (i.e., they do not act deliberately); therefore, merging causees in the specifier of $v_{DO}$ or Voice fails to capture their properties. The lack of obligation effect follows from the lack of agency in causees. Although causees are not agentive, they are interpreted as affected by a causing event. Immediate questions are raised by these conclusions as to what introduces a non-agentive causee, how to explain the affectedness of a causee, and what role a causee bears, if it is not an agent. I argue that high Appl introduces such a non-agentive causee, and the affectedness can be accounted for in a structural way. Further, I argue that the relevant high applicative in Korean and English is instrumental. I present evidence that the complement clauses of Korean and English causatives pattern similarly to those of high instrumental applicatives. Under the high instrumental applicative approach, the structure of Korean morphological causatives, both actional (22a) and non-actional (22b), can be illustrated as in (22c).

The structure of English *have* causative (23a) is illustrated in (23b).

(22) a. Swuni-ka ai-eykey chayk-lul ilk-hi-ess-ta
   Suni-NOM child-DAT book-ACC read-I-PAST-DEC
   ‘Suni had cause the child read the book.’

   b. Swuni-ka ai-eykey pap-lul mek-i-ess-ta
   Suni-NOM child-DAT rice-ACC eat-I-PAST-DEC
   ‘Suni had cause the child fed.’

29 I argue that the morpheme -I is realized under the high Appl head. See chapter 4 for details.
30 Following the proposal of K. Kim (2010, in press b), I assume that *have* is spelled out when both $v_{CAUSE}$ and Appl are present.
In both structures, a causee is introduced by high Appl, while a causer is introduced by Voice. The different semantics of these heads captures the agentivity difference between a causer and a causee. In this section, I discuss how the proposed analysis captures the affected interpretation of causees.

Proposals similar to the current analysis have been made: both W. Lee (2005) and Kiguchi (2006) propose that a periphrastic causative in Korean has a high applicative as its complement. W. Lee proposed that this is true for morphological causatives as well. Importantly, unlike these proposals, I provide different pieces of evidence for the presence of a high applicative phrase in morphological causatives, namely, adverb modification, binding, and the syntax/semantics of the complement of causatives discussed by Pylkkänen (2002, 2008). Furthermore, I propose that the relevant high Appl is instrumental. For Kiguchi, the evidence is
based on the A-movement patterns (McGinnis 2001) of periphrastic causatives. For W. Lee, on the other hand, the evidence is dative case marking on the causee. In both proposals, there is no discussion on the implications for the various types of complement selection in the causatives presented by Pylkkänen (2002, 2008) (see section 2.5). It should be noted that for Japanese morphological causatives, Kiguchi proposed a low applicative analysis, as opposed to the current high applicative analysis proposed for Korean and English. A proposal similar to an applicative analysis is proposed in Son (2006). Son argues that non-actional causatives (e.g., (12)) in Korean have an applicative complement. However, contrary to the current high applicative analysis, it is argued that the causee is not a high applied argument. It is argued that, unlike a high applied argument, a causee is not an external argument. Rather, it is the endpoint of a theme argument, which seems to be similar to a low applied argument.

2.4.1 Morpho-syntax and semantics of Korean morphological causatives and English have causatives

I have shown that actional and non-actional causatives in Korean differ with respect to manner adverb modification. In spite of these different scopal properties regarding manner adverb modification, morphological causatives show the same morphosyntactic properties. Consider the causatives in (24):

(24) a. Swuni-ka ai-eykey chayk-lul ilk-hi-ess-ta  
Suni-NOM child-DAT book-ACC read-I-PAST-DEC  
‘Suni had\textsubscript{caus} the child read the book.’

b. Swuni-ka ai-eykey pap-lul mek-i-ess-ta  
Suni-NOM child-DAT rice-ACC eat-I-PAST-DEC  
‘Suni had\textsubscript{caus} the child fed.’

The causer argument is nominative marked, the causee is dative marked, and the theme is accusative marked. This suggests that the morphosyntactic properties of the embedded phrases in morphological causatives (DPDAT-[DPACC-V]) fit with that of a (high) applicative structure as in (25), whose argument structure is DP-[V-DP].
The fact that the causee in (24) is marked with dative case also supports the (high) applicative analysis.\textsuperscript{31} Like other applied arguments (e.g., Cuervo 2003, 2008 for Spanish; Schäfer 2008 for German), the subject of the embedded phrase of morphological causatives is marked with dative case.

The argument frame of English \textit{have} causatives, as in (26), consists of a nominative causer, accusative causee, and accusative theme; this is similar to the argument frame of Korean morphological causatives in that the causer and causee take different case marking.\textsuperscript{32} The argument structure of the embedded clause in (26), indicated by a square bracket (DP-[V-DP]), fits with that of a (high) applicative structure in (25):

(26) John had\textsubscript{caus} [Mary pick up a book].

The dative and accusative arguments in Korean morphological causatives and the two DPs in the embedded phrase of English \textit{have} causatives also satisfy another syntactic property of applicatives: they show an asymmetric c-commanding relation. In the actional causative in (27) and the non-actional causative in (28), the quantified dative argument c-commands the accusative pronoun, as shown in the (a) sentences, but not vice versa, as shown in the (b) sentences. The same pattern is also found in English \textit{have} causatives, as shown in (29):\textsuperscript{33}

---

\textsuperscript{31} Dative marking is not an absolute criterion for an applied argument; in some Bantu languages, for example, an applied argument is not dative marked, taking the same marking as the theme argument (see Baker 1988; Marantz 1993 for data).

\textsuperscript{32} Unlike in Korean and many other languages (e.g., Japanese), a causee in English \textit{have} causative is accusative, as the form of a pronoun in its position indicates: her. This is not surprising as English lacks dative case.

\textsuperscript{33} An asymmetric relation between two DPs is not an exclusive property of high applicatives. Double object constructions, which are analyzed as low applicatives in some languages (e.g., Pylkkänen 2008), also show this property.
(27) a. na-nun [motun cakkatul]-eykey kutul1-uy chayk-lul ilk-hi-ess-ta
   I-TOP all authors-DAT their-GEN book-ACC read-I-PAST-DEC
   ‘I had\textsubscript{caus} [all authors]\textsubscript{1} read their\textsubscript{1} books.’

   b. *na-nun kukestul1-uy cakkatul-eykey [motun chayk-lul]\textsubscript{1} ilk-hi-ess-ta
   I-TOP their-GEN authors-DAT all book-ACC read-I-PAST-DEC
   ‘I had\textsubscript{caus} their\textsubscript{1} authors read [all books].’

(28) a. na-nun [motun cwuin]-eykey kutul1-ey pap-lul mek-i-ess-ta
   I-TOP all-GEN owner-DAT their-GEN rice-ACC eat-I-PAST-DEC
   ‘I had\textsubscript{caus} [all owners]\textsubscript{1} eat their\textsubscript{1} meal.’

   b. *na-nun kukestul1-uy cwuin-eykey [motun pap1]-lul mek-i-ess-ta
   I-TOP all-GEN owner-DAT all rice-ACC eat-I-PAST-DEC
   ‘I had\textsubscript{caus} their\textsubscript{1} owner eat [all meals].’

(29) a. Mary had\textsubscript{caus} [each author]\textsubscript{1} read his\textsubscript{1} book.
   b. *Mary had\textsubscript{caus} its\textsubscript{1} author read [each book].

Thus, the embedded phrases of Korean morphological causatives and English \textit{have} causatives appear to satisfy the syntactic properties of applicatives (cf. (25)) in that one DP merges higher than the other DP. Now a question arises: are these low applicatives or high applicatives? The semantics of the embedded phrases of these causatives indicates that they belong to the high applicative group. It is well established in Korean that there is a thematic relation between the dative argument and the embedded phrase, although there is disagreement as to what type of thematic relation it is (e.g., Shibatani 1973; Son 2006; Um 1995 for morphological causatives), and this relation has also been noted in English \textit{have} causatives (Cowper 1989; Ritter and Rosen 1997). For example, in morphological causatives, a causee is thematically related to a caused event, and the causee is traditionally considered to be the agent of the caused event.\textsuperscript{34} Crucially, the embedded phrase in morphological causatives and \textit{have} causatives involves a thematic relation between an embedded subject and an event, a property that is captured in the semantics of high applicatives, as shown in (30).

(30) \(\lambda x.\lambda e.\) high APPL (e, x) \ (Pylkkänen 2002, 2008)

\textsuperscript{34} Recall that I have shown in the previous section that causees in Korean and English causatives are not (volitional) agents.
More importantly, this relation is not agentive, as shown in section 2.3.2.\textsuperscript{35} Causees in Korean morphological causatives and English \textit{have} causatives cannot be modified by an agent-oriented adverb. It should be noted that Pylkkänen (2002, 2008) neither specifies a particular theta role of an applied argument nor argues for a non-agentive semantics of it.

The proposal that the embedded phrases of these causatives are high applicatives is confirmed by their compatibility with the static verb ‘hold’ (see the high applicative test in chapter 1). Both Korean morphological causatives and English \textit{have} causatives are compatible with the verb, as shown in (31) and (32):\textsuperscript{36}

(31) Swuni-ka Minsu-eykey chayk-lul tul-li-ess-ta
   Suni-NOM Minsu-DAT book-ACC hold-I-PAST-DEC
   ‘Suni had\textsubscript{caus} Minsu hold the book.’

(32) John had\textsubscript{caus} Mary hold the book.

The evidence provided above suggests that the complements of both morphological causatives in Korean and \textit{have} causatives in English are of the high applicative type. As will be discussed in section 2.4.2, the pattern of causatives in Niuean, a Polynesian language of the Tongic subgroup, and a parallel between causative and (instrumental) applicatives in Kinyarwanda lends further support to the high (instrumental) applicative analysis for morphological causatives in Korean and \textit{have} casuatives in English.

A high applicative analysis of these causatives provides a novel view of the semantic status of a causee. Contrary to the traditional views, the causee is not a full-fledged agent, and is thus introduced by high Appl. This applicative analysis captures the semantic distinction between a causer and a causee, which has been lacking in recent approaches to causatives (Pylkkänen 2002, 2008; Cuervo 2003; Folli and Harley 2007).

\textsuperscript{35} See section 2.5 for further discussion.
\textsuperscript{36} Contrary to the prediction, Spanish static low applicatives are compatible with this verb as well (Cuervo 2003). See the discussion in footnote 8 in chapter 1.
The high applicative analysis provides a welcome consequence for the dual role of causees. As discussed earlier, causees bear two roles: a patient role of the causative predicate and a subject-like role of the base predicate. As the causee is merged in the specifier of high Appl, it is a non-agentive external argument to the base predicate, the vP; thus, its subject-like role is captured. As for the patient-like role, an affectee role, I argue that it naturally falls out from the proposed structure, adopting the proposal of Cuervo (2003, 2010). Following Alsina (1992), Cuervo argues that the affected interpretation of a dative argument in Spanish lexical causatives, as in (33), is due to the fact that the dative argument is sandwiched between two events: the causing event and the stative embedded event. For example, in (33), the dative argument ‘Valeria’ is between a causing event and a caused event: an unspecified causing event (represented by \( v_{DO} \)) and the caused event ‘broken state (of the radio)’:

(33) Pablo le rompió la radio a Valeria

\[ \text{Pablo CL.DAT broke the radio Valeria.DAT} \]

‘Pablo broke the radio on Valeria’

It is argued that the dative argument is interpreted as affected in this particular configuration. In other words, the two eventualities produce the affected interpretation: ‘Valeria’ is on the receiving end of the caused event, and the causer indirectly affects her by causing the event. An important point of this example is that the affected interpretation is structurally based, resulting from the argument being positioned between the two events.

Like affected arguments in Spanish, causees in Korean and English are between two events, a causing event and a caused event. Hence, the affectee interpretation of the causee is a natural structural consequence.

2.4.2 A parallel between an instrument and a causee

The discussion so far has led to the conclusion that causees are high applied arguments. This leads us to ask what type of high applied arguments they are (instrumental, benefactive, etc.). I
argue that causees in Korean morphological causatives and English *have* causatives are instrumental.

In Korean, we find evidence for this in the morphological marking patterns on dative arguments (i.e., causees) in morphological causatives. As noted earlier, non-actional causatives allow inanimate causees, but with case marking that differs from that of animate causees:

(34) Swuni-ka ai-eykey/inhyung-ey pap-lul mek-i-ess-ta
    Suni-NOM child-ANI.DAT/doll-INANI.DAT rice-ACC eat-I-PAST-DEC
    ‘Suni had the doll/the child fed.’

In (34), the animate causee is marked with *-eykey* while the inanimate causee is marked with *-ey*. Notably, the inanimate dative marker is homophonous with an instrument marker, as in (35a):

(35) a. na-nun swuchpul-ey koki-lul kwuw-ess-ta
    I-TOP charcoal fire-STATIC.INSTR meat-ACC roast-PAST-DEC
    ‘I roasted the meat on the charcoal fire.’

b. na-nun swuchpul-lo koki-lul kwuw-ess-ta
    I-TOP charcoal fire-ACTIVE.INSTR meat-ACC roast-PAST-DEC
    ‘I roasted the meat using the charcoal fire.’
    (K. Lee 1987)

Korean has two types of instrument markers (K. Lee 1987): the static instrument marker *-ey* in (35a) and the active instrument marker *-(u)lo* in (35b). Importantly, the inanimate dative marker *-ey* in morphological causatives, as shown in (34), is the same as the static instrument marker *-ey*, as shown in (35a). This supports the proposal that the arguments marked with *-ey* in (34) are instruments. Historical evidence tells that an animate dative DP in a morphological causative can also be interpreted as an instrument. In Middle Korean, a causee was marked with the instrumental marker *-(u)lo* (J. Park 1994):38

---

37 Instrumental and benefactive applicatives appear cross-linguistically as complements of causatives (Peterson 2007). As far as I know, no theory or criteria has been proposed to distinguish between these two types of applicatives in causatives.

38 I have provided my own morpheme glosses for (36) in accordance with the context of this thesis.
(36) ai-lo hwenhi tung-ul kulk-hi-ko
Child-ACTIVE.INSTR cool back-ACC scratch-I-and
‘[I] had\textsubscript{caus} my child scratch my back cool [i.e. relieving the itch].’ (J. Park 1994)

According to K. Lee (1987), when an agent subject takes the static instrument marker -ey, it is interpreted as an agent who makes use of an instrument in situ, and when it takes the active instrument marker -(u)lo, it is interpreted as an agent who manipulates an instrument. This interpretation of instrument markers is in line with the instrumental property of causees in Korean morphological causatives argued for here: an inanimate causee in the language, which must be in situ, is marked with the static instrument marker -ey, as in (34). In contrast, in Middle Korean (as well as in Modern Korean; see (38)), an animate causee, which is not in situ, is marked with the active instrument marker -(u)lo (35).

Both synchronic and diachronic patterns of morphological marking on dative arguments in morphological causatives reveal that these arguments can be interpreted as instruments. For example, in morphological causatives, a causer uses a causee as an instrument to make a relevant event take place.\textsuperscript{39} In fact, it is argued that a causee in morphological causatives can be synchronically marked with an instrument marker, if an appropriate context is given (J. Park 1994). In a context like (37), a causee can be marked with an instrument marker, as illustrated in (38):

(37) A school principal is visiting a class to see how good the students are at reading; the teacher asks the principal the question (38a), and the principal answers as in (38b).

(38) a. etten haksayng-ulo ilk-hi-l-kkayo?
    Which student-INST read-I-FUT-INTERROGATIVE
    ‘Which student shall I have\textsubscript{caus} read?’ (i.e., by whom shall I have reading take place?)

    b. ce haksayng-ulo ilk-hi-e-poysio
    that student-INTS read-I-TRY-HON-IMPERATIVE
    ‘Please have\textsubscript{caus} that student read’ (i.e., please have reading take place by that student.)
    (adapted from J. Park 1994)

\textsuperscript{39} An instrument can be viewed as a causee as well: Kural (1996) argues that an instrument in English (e.g., ‘the knife’ in ‘Bill sliced the bread with the knife.’) can be treated as an optional causee.
For English, the non-agentive property of a causee can be likened to the semantics of an instrument, following Nilsen (1973). In his study of the instrumental case in English, Nilsen draws a distinction between an agent and an instrument in terms of deliberateness: an agent can act deliberately, but an instrument cannot. In this sense, he notes, an instrument is used by an agent to perform the action of the verb, as also pointed out in Gruber (1965) and in Talmy (1976). Importantly, in this sense of use, an agent is always acting deliberately. Further, we note that the instrument used by the agent merely performs the action described by the verb. That is, it does the action non-deliberately. Have causatives can be viewed along the same lines: a causer deliberately uses a causee as an instrument to initiate the causing event, and a causee performs the action non-deliberately.40

Like Korean causees, English causees are semantically similar to instruments in that they carry out the event described by the verb. The complement of causative have denotes a relation between a DP (i.e., a causee) and an event, which is exactly what high Appl denotes (see chapter 1).

Further supportive evidence for a parallel between causees and instruments is found in morphology. In Niuean, a high instrumental applicative is employed in causatives as a tool to extend the argument structure of a causative verb suffixed with a causative morpheme (39) (Gould et al., 2009).41 It is proposed that the causative morpheme faka- embeds high ApplP, which is headed by an instrumental applicative morpheme aki (39b).42

40 There is a different view in which an instrument is syntactically similar to an agent, and is introduced by Voice, the same head that introduces an agent (Alexiadou et al. 2006). This will be discussed in chapter 4.
41 In this language, it is also possible to have causatives without an applied argument (i):

(i) Kua  faka-lele  e  ia  e  manulele.
PERF  CAUSE-fly  ERG.P  3.SG  ABS.C  bird
He made the bird fly.                     (Gould et al. 2009)

It is proposed that in causatives like (i), faka selects vP complements.
42 The applicative morpheme aki can appear without the causative morpheme, as illustrated with the standard instrument use of aki in a high applicative clause (i) (Gould et al. 2009). The morpheme introduces an instrument ‘knife.’ The instrument ‘knife’ appears as a direct absolutive argument, usually preceding the original patient direct object argument:
(39) a.  Kua fakatotō aki e ia e kato e
PERF CAUSE-hold APPL ERG.P 3.SG ABS.C basket ABS.C
tama haaku
child 1.SG.GEN
‘She made my child hold the basket.’

b. She faka [HighApplP basket [vP child [vP hold]]] (Gould et al. 2009)

The structure (39b) is similar to the proposed structure of Korean morphological causatives (22c) and English have causatives (23b).43 Like vCAUSE in Korean morphological causatives and English have causatives, the Niuean causative morpheme faka embeds instrumental high ApplP in its complement. The Niuean case provides clear morphological evidence for a high instrumental applicative analysis of causatives, as the applicative morpheme aki is visible.

Similar interaction between causative and instrumental applicative morphology is found in Kinyarwanda. In this language, both constructions take the morpheme -iiish-, as illustrated in (40) (Kimenyi 1980):44

(40) a. úmwáálimu a-ra-andik-iiish-a íbárúwa íkárámu
teacher SUBJ-PRE-write-APPL-ASP letter pen
‘The teacher is writing a letter with the pen.’

b. umugabo á-r-úubak-iiish-a abanntu-inzu
man SUBJ-PRE-build-CAUSE-ASP people house
‘The man is making the people build the house.’

(i) Kua hele aki tuai e Sione e titipi haana e falaoa.
PERF cut INSTR PERF ERG.P Sione ABS.C knife 3.SG.GEN ABS.C bread
‘Sione has cut the bread with his knife.’

43 Note that in Niuean, unlike Korean or English, it is the theme argument that is argued to be introduced by high Appl, not an external argument of the stem verb. I do not discuss this difference in this thesis. See Gould et al. (2009) for some discussion of this issue.
44 Similar to the current proposal, Marantz (1993) proposes that causatives and applicatives may have the same structure, based on the Kinyarwanda pattern in (40).
Importantly, it should be noted that in both Niuean and Kinyarwanda, as in Korean and English, the embedded clause of a causative is non-agentive (see Gould et al.; Kimenyi for details), which also supports my claim that the complements of causatives are high applicatives.

2.5 Consequences of the applicative analysis of causatives

2.5.1 Applicative-selecting causatives

The current proposal claims that morphological causatives in Korean (22c) and have causatives in English (23b) take a high applicative structure as a complement. To the extent that the present proposal is correct, it provides solid evidence for expanding the typology of the complement selection in causatives in Pylkkänen (2008): in addition to VoiceP and vP, the causative head \( \text{v}_{\text{CAUSE}} \) may also select high AppIP as a complement. The result of this expansion constitutes evidence for a semantic distinction between high Appl and Voice, which has not been explicitly claimed in the previous studies on applicatives (Pylkkänen 2002, 2008). Although both (high) Appl and Voice introduce an external argument to an event, Voice is specified for agentivity while (high) Appl is not.

Pylkkänen (2002, 2008) proposes that \( \text{v}_{\text{CAUSE}} \) can select complements of different sizes: there is a phase-selecting causative that selects a constituent with an external argument (e.g., VoiceP) (41a), and there is a verb-selecting causative that selects a verb phrase (41b):

(41) a. Phase-selecting causative

\[
\begin{array}{c}
\text{v}_{\text{CAUSE}}^\text{P} \\
\Rightarrow \text{causing event} \\
\text{v}_{\text{CAUSE}} \\
\text{VoiceP}^{45} \\
\Rightarrow \text{caused event} \\
\text{causee} \\
\text{Voice}
\end{array}
\]

\[45\] Pylkkänen (2002, 2008) uses PhaseP here rather than VoiceP. Although she does not go into detail, her argument and examples clearly indicate that the relevant phase phrase is VoiceP.
b. Verb-selecting causative

\[ v_{\text{CAUSE}}^P \Rightarrow \text{causing event} \]

\[ v_{\text{CAUSE}} \quad v^P \Rightarrow \text{caused event} \]

\[ v \quad \text{root} \]

In (41), \( v_{\text{CAUSE}} \) adds a causing event to its complement. In (41a), it selects a VoiceP complement that introduces an external argument (i.e., a causee), and thus it is called a phase-selecting causative, as in McGinnis (2001).\(^ {46} \) In (41b), on the other hand, \( v_{\text{CAUSE}} \) selects a \( v^P \) headed by a verbalizing head \( v \) that does not introduce an argument; thus, it is called a verb-selecting causative. Importantly, in a phase-selecting causative, Voice introduces an intentional agentive causee. For example, the Luganda causative in (42) is argued to be a phase-selecting causative. In (42), the embedded phrase, of which the causee ‘Katonga’ is the subject, can be modified by an agent-oriented adverb, which suggests that the causee is introduced by Voice:

(42) Omusomesa ya-wandi-s-a Katonga ne obu nyikivu Luganda
teacher 3SG.PAST-write-CAUSE-FV Katonga with the dedication
‘The teacher made [Katonga write with dedication].’ (Pylkkänen 2008)

Pylkkänen (2002, 2008) argues that the two types of causatives differ in terms of whether an agent-oriented adverb can modify a caused event (a), and whether \( v_{\text{CAUSE}} \) can embed high applicative (b), as illustrated in Table 1:

---

\(^ {46} \) One may argue that the applicative-selecting causative is a subtype of the phase-selecting causative, given the proposal of McGinnis (2001, 2002, 2004) in which a high applicative is a phase in terms of A-movement. However, what the proposed analysis shows is that the complement selection of \( v_{\text{CAUSE}} \) is more detailed in terms of a specific head in the complement, not in terms of a phasal or non-phasal head. Furthermore, the agent-oriented adverb modification facts show that Voice and Appl have distinct semantics. This semantic distinction is sufficient to distinguish Appl from Voice without a (non)-phase distinction. I leave the issue as an open question.
This table indicates that in phase-selecting causatives, high applicative morphology between root and $v_{\text{CAUSE}}$ is possible (b) if agent-oriented modification of the caused event is possible (a), and vice versa. By contrast, in verb-selecting causatives, high applicative morphology between root and $v_{\text{CAUSE}}$ is not possible if agent oriented modification of the caused event is not possible, and vice versa. Importantly, Pylkkänen assumes that satisfying (a) indicates that the complement of $v_{\text{CAUSE}}$ is VoiceP. Given this assumption, she further argues that the correlation between (a) and (b) is evidence that $v_{\text{CAUSE}}$ can embed VoiceP (a) if it can embed a high applicative (b), and vice versa.

However, evidence for the proposed structures for Korean (22c) and English (23b) suggests that this correlation does not hold in these languages (see section 2.3.2 and 2.4). As indicated in Table 1, $v_{\text{CAUSE}}$ in Korean and English embeds a high applicative (b), but it cannot embed VoiceP (a). That is, although Korean morphological causatives and English *have* causatives are not phase-selecting causatives, they can embed a high applicative phrase, satisfying property (b), which runs contrary to Pylkkänen’s claim. The fact that (b) is satisfied in these languages also indicates that Korean morphological causatives and English *have* causatives are not verb-selecting causatives either.47 As Korean morphological causatives and

---

47 In Pylkkänen (2008), causatives in Finnish are argued to be verb-selecting causatives. Like Korean morphological causatives and English *have* causatives, Finnish causatives do not allow agent-oriented adverb modification of a caused event, negatively satisfying the property (a) in Table 1. According to Pylkkänen, Finnish does not have high applicatives, and thus it is hard to test whether causatives in this language satisfy the property (b) in Table 1. Nevertheless, she concludes that Finnish causatives are of the verb-selecting type. Moreover, Pylkkänen does not detail what introduces a causee in a verb-selecting causative, but leaves it as an open question. Note that $v$ cannot introduce a causee under her proposal, as $v$ is not an argument-introducing head but an event introducer as well as a verbalizing head. Thus, it remains questionable whether Finnish causatives are verb-selecting or
English *have* causatives show different correlation patterns from both verb-selecting causatives and phase-selecting causatives, as illustrated in Table 1, I maintain that the causatives in Korean and English are neither verb-selecting nor phase-selecting causatives.48

This empirical finding has consequences for complement selection in causatives: there is another type of complement selection, namely applicative selection, and Korean morphological causatives and English *have* causatives are examples of this type. This suggests that high ApplP can be selected by \( v_{\text{CAUSE}} \) as a complement. Crucially, contrary to Pylykänen’s claim, it is not the case that the embedding of Voice implies the embedding of high Appl and vice versa. In other words, even if \( v_{\text{CAUSE}} \) can embed a high ApplP, this does not necessarily imply that it can embed VoiceP, as evidenced by the Korean and English cases. Thus, the fact that \( v_{\text{CAUSE}} \) can embed a high ApplP does not predict that its caused event can be modified by an agent-oriented adverb.

### 2.5.2 Semantic difference between Voice and Appl

The discussion in the previous section shows that applicative-selecting causatives are distinct from phase-selecting causatives: the former do not allow agent-oriented adverb modification, while the latter do. Taking Korean morphological causatives and English *have* causatives as core evidence, I argue that this difference arises from a semantic difference between Appl and Voice: an argument introduced by Appl is non-agentive, while an argument introduced by Voice is agentive. Thus, causatives may select high ApplP as a complement while disallowing VoiceP. I propose that Voice is specified for agentivity \([+\text{AG}]\) and Appl is specified for non-agentivity \([-\text{AG}]\), as illustrated in (43). The applicatives discussed in chapter 3 and 4 also lead to a similar

---

48 Contrary to the current proposal, K. Kim (2011) argues that Korean morphological causatives are verb-selecting causatives wherein high Appl introduces a causee.
conclusion. It appears that agentivity is a privileged feature of Voice. This issue is discussed in more detail in subsequent chapters.

(43) a. Voice  b. Appl
    [+AG]          [-AG]

   The idea that Appl introduces a non-agent appears to be present in the literature, but only in a non-explicit manner (e.g., Pylkkänen 2002, 2008; Cuervo 2003, 2008, 2010). Pylkkänen’s (2002, 2008) proposal about the semantics of high Appl (44) does not specify a particular thematic relation between e and x:

(44) \( \lambda x. \lambda e. \text{high APPL} (e, x) \)

   It is clear that high Appl denotes a certain thematic relation between the DP introduced by high Appl and the event complement of high Appl. However, it is neither discussed nor argued what the thematic relation is. Based on the examples and the proposal on high Appl discussed in Pylkkänen, it seems that the relation is non-agentive.

   A similar point is found in Cuervo (2003, 2008). Cuervo proposed that Spanish experiencer subjects (45a) and unintentional causers (45b) are licensed by a high applicative head. Although it is not mentioned, high Appl seems to be non-agentive in these examples as well:

(45) a. A Daniela le gustan los gatos
     Daniela.DAT CL.DAT like.PL the cats
     ‘Daniela likes cats.’

     b. Al tintorero se le quemaron los pantalones de Carolina
        the dry-cleaner.DAT se CL.DAT burnt.PL the trousers of Carolina
        ‘The dry-cleaner (accidentally) burnt Carolina’s trousers.’

   What is lacking in those studies is a clear semantic distinction between Appl and Voice in terms of agentivity. As Korean morphological causatives and English have causatives suggest (as do possessive and adversity passives and experiencer clauses, which I discuss in chapter 3, and
inchoatives, which I discuss in chapter 4), a high applied argument is not a full-fledged agent, unlike an agent introduced by Voice. Further supportive evidence is found in Niuean; a high applied argument under a causative does not allow agent-oriented adverb modification in Niuean (Gould et al., 2009), which provides support for my proposal that high applied arguments in Korean and English are not agentive. Hence, my analysis provides a new argument in favour of distinguishing two different types of external argument introducing heads. 49 Although both Appl and Voice introduce external arguments, the semantics of the arguments each head introduces is distinct.

49 Chapter 4 discusses whether two external argument introducing heads are necessary or not.
Chapter 3
Peripheral Applicative

This chapter provides empirical evidence that affectees in some languages occupy a subject position, as illustrated in (1), in contrast to the well-studied affectees in Bantu, which occupy an object position, as shown by ‘his wife’ in (2):

(1) a. John1 had_{exp} Mary punch him1 in the nose.  
   b. Taroo-ga Hanako-ni gohan-o tabe-rare-ta  
      Taro-NOM Hanako-DAT meal-ACC eat-PASS-PAST  
      ‘Taro had_{exp} Hanako eat a meal.’
   c. deideb-s bavšveb-i da-e-mal-a-t.  
      aunts-DAT children-NOM PREV-APPL+V-hide-AOR-PL  
      ‘The aunts had_{exp} children hidden on them.’
   d. Swuni-ka Minswu-eykey pal-ul palp-hi-ess-ta  
      Suni-NOM Minsu-DAT foot-ACC step-I-PAST-DEC  
      ‘Suni1 had_{exp} Minsu step on her1 foot.’

(2) N-ā-ì-lyi-i-à mì-kà k-élyá  
    FOC-1SG-PRES-eat-APPL-FV 1-wife 7-food  
    ‘He is eating food for his wife.’

In this chapter, I address the theoretical question of how such arguments are projected in syntax within current theories of argument structure. I use the notation have_{exp} in glosses in order to indicate that affectees in the languages under investigation share an experiencer (i.e., affectee) meaning.

In chapter 2, it was shown that Appl is semantically distinct from Voice: an argument introduced by Appl is non-agentive, while an argument introduced by Voice is agentive. Assuming this, along with a configurational syntactic approach (see chapter 1), I argue that affectees in subject position, like those in (1), are introduced by Appl. In particular, unlike high Appl, which introduces an affectee in object position or a causee, as outlined in chapter 2, I argue that this Appl merges right below T (3), introducing an argument in a peripheral position, and thus it is called peripheral Appl. As an argument introduced by peripheral Appl is closest to T,
the argument will be in subject position (i.e., the specifier of TP). Moreover, unlike high Appl (as shown in (5) below), peripheral Appl merges above VoiceP.50 In this sense, peripheral Appl refines the current applicative theory of Pylkkänen (2008), according to which (high) Appl must always merge below Voice. The proposed analysis (3) expands the range of heads that can take an applicative phrase as a complement (i.e., T) and the types of complements that the applicative head can take (i.e., VoiceP):

(3) T → Peripheral ApplP → DP → Appl → XP; VoiceP, high ApplP, or unaccusative vP

I propose that peripheral Appl can take high ApplP or unaccusative vP as a complement as well as transitive vP (contra Pylkkänen 2008).51 Crucially, high ApplP, unaccusative vP, and transitive vP are all of the same semantic type (i.e., <s t>). Peripheral Appl can combine with these phrases by Event Identification, just as high Appl combines with a transitive vP (Pylkkänen 2008). That is, peripheral Appl (4b) adds an additional entity to the event, like high Appl in (4a) does. Thus, it is not the case that peripheral Appl introduces just any argument in its specifier; it only introduces an argument that fits with the semantic composition in (4b), as Pylkkänen argues for high Appl (4a):

(4)  a. λx.λe. high APPL (e, x)
     b. λx.λe. peripheral APPL (e, x)

50 The structure proposed in (3) shows that peripheral Appl, like high Appl, is syntactically different from Voice. This issue will be discussed in chapter 4.
51 This raises a question: how do we distinguish peripheral Appl from high Appl when it merges with unaccusative vP? As there is no VoiceP in either case, it is not clear how to distinguish the two. This issue is discussed in section 3.6.
3.1 Appl in current applicative theory

High Appl (5), like Voice, is argued to introduce a DP external to the event (Pylkkänen 2008). In Chaga (5a), high Appl introduces the argument ‘wife,’ which is external to the event ‘eating food’; it is a beneficiary of the event. Even though Voice and high Appl are similar in that they both introduce an argument external to an event, they are different syntactically (Pylkkänen 2008). They are argued to differ in their merging positions: high Appl merges below Voice (5b), never above. This claim suggests that a configuration where (high) Appl merges above Voice (5c) is ungrammatical:

(5) a.  N-ä-í-lyí-í-à m-kà k-élyá
        FOC-1SG-PRES-eat-APPL-FV I-wife 7-food
        ‘He is eating food for his wife.’

b.          VoiceP
       he
          Voice     High ApplP
                   his wife
                      Appl       VP
                            eat food

c.    *    (high) ApplP
       DP
          Appl     VoiceP
                   DP
                        Voice

52 Although no particular evidence for this claim has been provided, the claim seems to be mainly based on c-commanding relations between agents and applied arguments.
Furthermore, under a strong interpretation, the hierarchical relation between Voice and Appl in (5b) seems to predict that Appl cannot occur without Voice, as argued in Harley et al. (2009), based on the interaction between the (benefective) applicative morpheme and unaccusatives in Hiaki. In Hiaki, unaccusatives are not compatible with applicatives. By contrast, applicatives are compatible with transitives that project an agent-introducing head, i.e., Voice. The absence of this head in unaccusatives is argued to prevent them from appearing with applicatives. That is, the semantics of Appl requires it to appear with Voice, which introduces an agent argument.\textsuperscript{53}

The proposal on the syntactic and semantic relation between Appl and Voice (5b) in Pylkkänen (2008) and its interpretation in Harley et al. (2009), however, seems too simplistic. In fact, the semantics of Appl proposed by Pylkkänen (4a) predicts that Appl should be able to take any complement that denotes an event, not just transitive vP. For example, unaccusative vP also denotes an event, and thus it is predicted that Appl can take it as a complement. I show in section 3.5 that this is indeed the case.\textsuperscript{54}

In this chapter, I show that applicatives can appear with any vP that denotes an event, either transitive or unaccusative, and can appear even with another high ApplP, as attested in various languages. I argue that it is empirically inadequate to state that Appl must merge below Voice or occur with Voice (because of its semantics), as current applicative theory predicts.

### 3.2 Appl without or above Voice

In this section, I present empirical evidence from data from Bantu languages, English, Japanese, Korean, and Georgian that Appl can occur both (i) without Voice or (ii) above Voice.

\textsuperscript{53} It seems to be assumed by Harley et al (2009), though not explicitly stated, that for a benefactive applicative to be grammatical, the event needs to have an agent. In other words, an agent needs to initiate an event to affect someone in some (e.g., benefactive) way. However, this is not necessarily the case, as shown in Chichewa and Chinsenga (6).

\textsuperscript{54} It is not clear why some languages allow unaccusatives with applicatives but others do not. I do not pursue this question in this thesis.
In Chichewa and Chinsenga, two closely related Bantu languages of southeastern Africa, Appl is able to occur without Voice. That is, applicatives in these languages can occur with unaccusatives, as shown in (6) (Alsina and Mchombo 1990; Simango 1995, 2004). The verbs in (6) are unaccusatives; they do not occur with an agentive Voice.

(6) a. Chichewa

\[
\begin{array}{l}
\text{Zipatso} & \text{xi-na-psy-er-a} & \text{alimi} \\
\text{fruits} & \text{SB-PAST-ripen-APPL-FV} & \text{farmers}
\end{array}
\]

‘The fruits ripened for the farmers.’

b. Chinsenga

\[
\begin{array}{l}
\text{Mvula} & \text{w-a-w-il-a} & \text{sewo} \\
\text{rain} & \text{SB-PERF-fall-APPL-FV} & \text{1P}
\end{array}
\]

‘The rain has fallen for us.’ (Simango 2004)

Applicatives in Chichewa and Chinsenga are also able to occur with derived stative unaccusative verbs, as in (7) (Simango 1995; Dubinsky and Simango 1996). The verb ‘break’ has a stative suffix \(-k\) preceded by an applicative morpheme \(-er:\)

(7) Ndodo \(\text{i-na-mu-thyo-k-er-a}\) John

\[
\begin{array}{l}
\text{Stick} & \text{SB-PAST-him-break-STAT-APPL-FV} & \text{John}
\end{array}
\]

‘The stick broke for/on John.’

Importantly, it has been shown that the stative clauses like (7) are non-agentive. They are incompatible with an agent-oriented adverb (8a) or an agent by-phrase (8b) (Dubinsky and Simango 1996). The examples in (8) also show that a sentence with a stative morpheme is not passive (Dubinsky and Simango 1996), which suggests that there is no Voice in this type of sentence.

(8) a. *Chitseko \(\text{chi-na-tsek-eka}\) mwadala

\[
\begin{array}{l}
\text{Door} & \text{AGR-PAST-close-STAT} & \text{deliberately}
\end{array}
\]

‘The door was closed deliberately.’

\[55\] This pattern is also found in other Bantu languages, such as Kindendeule, a Southern Tanzanian Bantu language (Ngonyani 1998).
In Georgian, applicatives show a similar pattern of appearing with unaccusatives, as illustrated in (9):

(9) a. dedeb-s Nino da-e-čr-a-t
mothers-DAT Nino-NOM PREV-APPL+ V-cut-AOR-PL
‘The mothers had Nino wounded on them.’

b. deideb-s bavšveb-i da-e-mal-a-t.
aunts-DAT children-NOM PREV-APPL+V-hide-AOR-PL
‘The aunts had children hidden on them.’ (McGinnis 1997)

In Georgian, a malefactive argument is introduced by an applicative morpheme, α-, which is prefixed to the morpheme -i-, which marks unaccusatives (which are together spelled out as e) (Nash 1994; McGinnis 1998). In other words, like in Bantu (6)-(7), Appl in Georgian (9) occurs without Voice. This indicates that Appl can occur without Voice, contrary to the prediction of Harley et al (2009). In fact, data from many languages show that applicatives can occur with unaccusatives: unintentional causers in German (Schäfer 2008) or in Spanish (Cuervo 2003, 2008), and unaccusative inchoatives with Appl in Korean (see chapter 4).

As for Pylkkänen’s prediction (see (5b)) that Appl cannot merge above Voice, there are some languages that show that this is not always the case. Consider the English (SVO) experiencer have constructions in (10):

(10) a. John₁ hadₜ exp Mary die on him₁
b. John₁ hadₜ exp Mary punch him₁ in the nose.

As is well known in the literature (e.g., Cowper 1989; Ritter and Rosen 1997), have in (10) introduces an experiencer (generally a malefactive) of the event described by the verb. This construction usually has an ethical dative, on him₁ (10a), or a pronoun, him₁ (10b), that is coreferential with the subject. What is interesting to the present discussion is that the malefactive
argument ‘John’ appears in the subject position followed by the agent ‘Mary’.  

Appl, which I have argued to introduce non-agentive arguments, introduces the malefactive ‘John.’ Voice, on the other hand, introduces the agent ‘Mary.’ This indicates that in English, Appl merges above Voice.

The Japanese (SOV) passives in (11), which are marked with the morpheme -rare, show a similar pattern to English (10). The sentence in (11a) is a possessive passive (Kubo 1990; Terada 1990; Dubinsky 1997), as there is an optional possession relation between the nominative and accusative arguments: the possessor of the theme argument ‘arm’ can be understood not as Hanako’s but Taro’s. (11b) is traditionally known as an indirect passive, as this type of passive does not have an active counterpart (Kuroda 1965, 1979; N. McCawley 1972; Kuno 1973; Howard and Niyekawa-Howard 1976).

(11) a. Taroo-ga Hanako-ni ude-o or-are-ta
    Taro-NOM Hanako-DAT arm-ACC break-PASS-PAST
    ‘Taro1 had exp Hanako break his1 arm.’ (no adverse interpretation on the affectee, ‘Taro’)

    b. Taroo-ga Hanako-ni gohan-o tabe-rare-ta
    Taro-NOM Hanako-DAT meal-ACC eat-PASS-PAST
    ‘Taro had exp Hanako eat a meal.’ (adverse interpretation on the affectee, ‘Taro’)

Unlike the possessive passive (11a), the indirect passive (11b) does not imply a possession relation at all; ‘the meal’ does not belong to ‘Taro.’ There is also a slight meaning difference between (11a) and (11b) in terms of affectedness: in possessive passives, an affectee is neutrally affected by the event, while in indirect passives, an affectee is adversely affected by the event (e.g., Kitagawa and Kuroda 1992; Uda 1994).

---

56 The agentivity of these arguments in English and Japanese is discussed in section 3.5 and 3.4.2 respectively.

57 Japanese has other type of passives, such as ni-direct passives, where no accusative marked theme appears, and ni-yotte direct and possessive passives. The two types of passives mark agent DPs differently, with ni- ‘dative’ and ni-yotte ‘by’ respectively. However, ni-direct passives (see (17b)), unlike ni-yotte passives, are known to have similar semantic and syntactic properties to those of adversity passives, such as, for example, the interpretation of the subject and agent-oriented adverb modification (Kuroda 1979; Hoshi 1991), scope ambiguity, and WCO effects (Kitagawa and Kuroda 1992; Matsuoka 2001).

58 If there is no possession meaning implied in (11a), the affectee is interpreted as adversely affected (e.g., Uda 1994; Oshima 2006).
Although the sentences in (11) are passives, there is no passive movement (Kuroda 1965, 1979; Hoshi 1991, 1994). The absence of movement suggests that the affected argument ‘Taro’ in the subject position precedes (i.e., merges above) the agent ‘Hanako’, like the affectee in English (10) (see section 3.4 for details).

A similar pattern is found with Korean passives (12):

(12) Swuni-ka Minswu-eykey pal-ul palp-hi-ess-ta
    Suni-NOM Minsu-DAT foot-ACC step-PASS-PAST-DEC
    ‘Suni had\textsubscript{exp} Minsu step on her\textsubscript{1} foot.’

Passives like (12) are called adversity passives, as the subject is always interpreted as adversely affected by the event described by the verb phrase. The sentence is marked with the morpheme -I which also marks morphological causatives (see chapter 2). Interestingly, like possessive passives in Japanese, adversity passives in Korean imply a possessive relation between an affectee and a theme object: pal ‘foot’ belongs to the affectee ‘Suni.’ Unlike possessive passives in Japanese, however, the affectee in Korean is always interpreted as adversely affected. Like in Japanese passives, there is no passive movement in Korean adversity passives (e.g., Whitman and S. Park 2003; S. Park 2005, see section 3.4.1 for details). Thus, in (12), the affectee ‘Suni’ in the subject position precedes the agent-like argument ‘Minsu.’ Although the dative argument ‘Minsu’ appears to be an agent like ‘Mary’ in English (10b) or ‘Hanako’ in Japanese (11), I show in section 3.4.1 that it is not a full-fledged agent. I argue that (high) Appl, not Voice, introduces

59 Korean also has a periphrastic passive (S. Park 2005), marked with -ci, which lacks adversity meanings. In addition, Korean has canonical passives lacking this adversity meaning, as in (i), which is also marked with the morpheme -I.

(i) Swuni-ka Minswu-eyuyhay ccoch-ki-ess-ta
    Suni-NOM Minsu-BY chase-I-PAST-DEC
    ‘Suni was chased by Minsu.’

Adversity passives are distinct from canonical passives (i) (see Yeon 1991 for details). For example, the by-phrase has a different marking: in canonical passives (i), it is marked by -eyuyhay ‘relying on,’ while in adversity passives (12), it is marked by the dative case marker -eykey. Periphrastic passives are also distinct from adversity passives in terms of their semantic and syntactic properties (see A. Kim 1998; Whitman and S. Park 2003; S. Park 2005). An analysis of periphrastic passives and canonical passives is beyond the scope of this thesis.

60 In comparing passives in Korean (12) and Japanese (11), we note that there seems to be no correlation between the presence of possession relation and adversity meaning. For example, there is no possession relation in Japanese indirect passives, but the passives denote an adversity meaning.
the dative argument in Korean. Thus, Korean adversity passives show that Appl can take an event larger than vP: (high) ApplP.61

Data discussed in this section suggest that (i) Appl may not need to occur with Voice; and (ii) Appl does not always merge below Voice. In the subsequent sections, I discuss the data in (9)-(12) in detail, showing that this is indeed the case. This indicates that current applicative theory needs to be modified to accommodate these data.

There is an outstanding issue that needs to be addressed. Given that adversity passives are marked on the verb with the same morpheme as morphological causatives, adversity passives in Korean could also be called adversity causatives. This is not an option for Japanese, as adversity passives (i.e., indirect passive (11b)) and adversity causatives are marked with different verbal morphemes. As in (11b), an adversity passive is marked with the passive morpheme -rare, while an adversity causative is marked with the causative morpheme -sase (see (13) below). Unlike an adversity passive, an adversity causative in Japanese is possible only with an unaccusative verb (Miyagawa 1980). Pylkkänen (2008) presents an interesting analysis of Japanese adversity causatives; she argues that adversity causatives do bear a causative event head (v_{\text{CAUSE}}) as they allow a causing event (13a). More importantly, the argument of the causing event is not an external argument, as the by-phrase, ni-yotte, which introduces the causing event, does not allow an agent (13b). That is, an adversity causative does not contain Voice. Building on this evidence in (13), an adversity causative in Japanese is argued to be a causative without an external argument. Adversity passives in Japanese differ from adversity causatives in that they allow a dative-marked agent, which initiates the event described by a verb phrase (see (11b) and the

61 A similar pattern is found with high Appl. For example, in Kinyarwanda, high Appl can take another high ApplP as a complement (McGinnis and Gerdits 2003; McGinnis 2005). As illustrated in (i), in this language, a benefactive applicative is able to occur with a locative applicative:

(i) Úmwáana y-iicar-i-yé-ho intebe umugabo.
child he-sit-BEN-ASP-LOC chair man
‘The child is sitting on the chair for the man.’ (Kimenyi 1980)

Both types of applicatives are high, as both are compatible with an unergative vP (see McGinnis 2005 for details).
discussion in section 3.4.1), whose marking is not the same as the marking on the causing event in adversity causatives.

(13) a. Taroo-ga  sensoo-ni-yotte  musuko-o  sin-ase-ta
    ‘Taro’s son was caused to die on him by the war’

b. *Taroo-ga  Hanako-ni-yotte  musuko-o  sin-ase-ta
    ‘Taro’s son was caused to die on him by Hanako’

Assuming Pylkkänen’s the analysis of adversity causatives, Korean adversity passives may be considered adversity causatives: they allow a causing event with (inanimate) dative marking, as shown in (14). However, unlike Japanese adversity causatives, they also allow an event participant, a (animate) dative argument that initiates the event in the embedded clause, as illustrated in the example (12) above.

(14) Swuni-ka   sansatae-ey  tali-ul  nwul-li-ess-ta
    ‘Suni₁ had her₁ leg pressed by the landslide.’

Thus, we could refer to Korean adversity passives as adversity causatives. If we adopt this view, it is predicted that adversity causatives would always be ambiguous between an adversity reading and a causative reading, as the morpheme –I can be viewed as a causative morpheme under an adversity causative analysis. It is indeed the case that adversity passives in Korean are often ambiguous between these two readings. However, as discussed in section 3.4.1 (see examples (33)), the ambiguity does not always arise. With some clauses whose verbs are marked with the morpheme –I, only the adversity reading is available. In addition, as argued throughout this thesis, the morpheme –I is not a causative morpheme per se (see some discussion in section 1.4 and chapter 4). Rather, the morpheme –I can be interpreted as a causative

62 Kural (1996) argues that morphological causatives and passives in Korean and Japanese can have the same core structure. However, even if we assume this, it is problematic to refer to adversity passives as adversity causatives for the reason given above. For example, in Korean, Kural argues that causatives may have the same structure as passives: that is, a control structure where PRO is controlled by a DP in a passive by-phrase and a theme moves to the subject position. This proposal is based on the assumption that a clause whose verb is marked with the morpheme -I can be always ambiguous between causative and passive. However, ambiguity does not always arise, as shown in (33). The morpheme -I in adversity passives does not always function as a causative morpheme.
morpheme if it appears in a causative structure (see chapter 2), as an adversity passive morpheme if it appears in an adversity passive structure (see chapter 3), or as an inchoative morpheme if it appears in an inchoative structure (see chapter 4). That is, there is only one morpheme –I in Korean.\(^{63}\) For the reasons discussed, I use the term *adversity passive* for both Korean and Japanese.

### 3.3. Possession interpretation of an affectee

Regardless of where they appear, most of the affectees discussed so far are similar in that they have an additional possessive meaning.\(^{64}\) For example, in Japanese possessive passives and Korean adversity passives, the affectee is interpreted as a possessor of the theme (as in (11a) and (12)). Of these two meanings, the affectee interpretation and the possessive interpretation, which is primary and represented in syntax? In this section, I show that the affectee interpretation is the one that is encoded syntactically. I argue that the analysis proposed in (3) is better able to account for a peripheral affectee than a possessor raising type analysis (e.g., Kubo 1990 for Japanese; H. Kim 2005 for Korean) or low applicative analysis (Pylkkänen 2002, 2008).

#### 3.3.1 Possession interpretation

Although applicatives in Bantu have received much attention (e.g., Baker 1988; Alsina and Mchombo 1990, 1993; Bresnan and Moshi 1993; Marantz 1993), less attention has been paid to the fact that in Bantu a possession relation between an affectee and a theme object is expressed by a benefactive applicative morpheme, as illustrated by Kinyarwanda (15a) (Kimenyi 1976; Massam 1985) and Chichewa (15b) (Massam 1985; Simango 2007):

---

\(^{63}\) In Turkish, there is construction similar to adversity passives where a relevant morpheme on the verb is a causative morpheme, not a passive morpheme, e.g., ‘Oya had\(\text{m}^g\)_\(\text{h}^\text{p}\)_ her heart caught by Ali’. This construction seems to be an adversity causative like in Japanese, although the Turkish one allows a transitive verb. It is not clear whether the Turkish one should be analyzed in the same way as the Japanese one. In any case, this Turkish construction does not undermine the analysis proposed in this chapter, for the reasons discussed here.

\(^{64}\) This is well attested in other languages as well (e.g., Croft 1991; Pinker 1989).
(15) a. Kinyarwanda
   umugore y-a-mes-e-ye umugabo imyaambaro
   woman she-PAST-wash-BEN-ASP man clothes
   (i) ‘The woman washed the man’s clothes’
   (ii) ‘The woman washed [the man’s clothes/clothes] for the man.’
   (Kimenyi 1976)

b. Chichewa
   Tadala a- na-thyol-er-a mwana ndodo
   Tadala SM-PAST-break-BEN-FV child stick
   (i) ‘Tadala broke the child’s stick’
   (ii) ‘Tadala broke [the child’s stick/a stick] for the child’
   (Simango 2007)

The verbs ‘wash’ in (15a) and ‘break’ in (15b) are suffixed with a benefactive applicative morpheme. This marking indicates that there is a possession relation between the applied argument and the theme object, as indicated by the (i) readings; for example, ‘the stick’ in (15b) belongs to the affectee ‘the child.’ As the verbal suffix is a benefactive applicative morpheme, these sentences can also have a benefactive interpretation, as indicated in the (ii) readings. Importantly, with a benefactive reading, a theme argument can belong to either a benefactive argument or someone else. For instance, in (15b), ‘the stick’ can belong to either ‘the child’ or someone else.

Interestingly, a similar pattern is found with affectees in Japanese possessive and Korean adversity passives. Consider the following examples:

(16) a. Taroo-ga Hanako-ni kami-o kir-are-ta J
   Taro-NOM Hanco-DAT hair-ACC cut-PASS-PAST
   ‘Taro had\textsubscript{exp} Hanako’s cut his\textsubscript{1} (or someone else’s) hair.’

   b. Swuni-ka Inho-eykey meli-lul kkakk-i-ess-ta K
   Suni-NOM Inho-DAT hair-ACC cut-PASS-PAST-DEC
   ‘Suni\textsubscript{1} had\textsubscript{exp} Inho cut her\textsubscript{1} (*someone else’s) hair.’

The subjects in (16) are affectees. Like affectees in Bantu, these affectees often have an implied possessive relation with the theme object, although there is no overt possessor pronoun in front of the theme object. The possession relation is optional in Japanese, but in Korean it is obligatory if a theme is present. For example, in Korean (16b), the theme object ‘hair’ must belong to the
affectee ‘Suni.’ In Japanese (16a), it can either belong to the affectee ‘Taro’ or someone else. Based on the implied possession relation without an overt possessor, it is often argued that the affectee in the subject position is an underlying possessor moved from the object position (e.g., Kubo 1990; H. Kim 2005).

However, a possessive relation is not an absolute requirement for passives in Korean and Japanese, as illustrated in Korean adversity passives (17a) and Japanese ni-direct passives (17b) (K. Kim 2011; in press a). The absence of a possessive relation is due to the absence of an overt accusative-marked DP. That is, in these examples, there is no possession relation to be spoken of, since a relevant theme argument is absent. Nevertheless, as indicated by the translations, the examples (17a) and (17b) involve co-indexation with the subject, as in cases involving possession.65

(17) a. Mia$_1$-ka Minswu-eykey pro ccoch-ki-ess-ta K
Mia$_1$- NOM Minsu- DAT chase-I-PAST-DEC
‘Mia$_1$ had$_{exp}$ Minsu chase her$_1$.‘

b. Taroo-ga Hanako-ni pro oikake-rare-ta J
Taro-NOM Hanako-DAT chase-PASS-PAST
‘Taro$_1$ had$_{exp}$ Hanako chase him$_1$.‘

A similar pattern is also found in the English experiencer have construction. As noted earlier, English have allows a pronoun (18a) or an ethical dative (18b) that is coreferential with the subject. It has been argued that these types of possessor facilitate an affectee reading (Ritter and Rosen 1997; Harley 1998):

(18) a. John$_1$ had$_{exp}$ Mary step on his$_1$ foot.

b. John$_1$ had$_{exp}$ the boat sink on him$_1$.

65 Following K. Kim (2011), who proposes an applicative approach similar to the one proposed here, I assume examples like in (17) can be analyzed in terms of applicatives. For example, in Japanese (17b), the ni-marked DP is in the specifier of VoiceP and the accusative argument position is a null pro object. I will limit my discussion and analysis of passives in both languages to the types in (11-12), with an accusative DP.
However, unlike Japanese, Korean, or Bantu, the English possessor that is coreferential with the affectee is overt (18a, b). This difference suggests that it is not relevant to English have whether there is possessor raising or a process similar to the subject position discussed for Korean or Japanese.  

In Georgian malefactives, the possessive relation found in Japanese, Korean, and Bantu is not required (Léa Nash, p.c.). As illustrated in (19)  

(19) Nino-s vano-s/mezobl-is švileb-i da-e-mal-a-t.
‘Nino1 had John’s/neighbour’s sons hidden on her1.’

The following discussion is mainly focused on Japanese and Korean, as those languages show an implied possession relation between the subject affectee and the theme object.

3.3.2 An affectee vs. possession interpretation

The fact that an affectee can have a possessor interpretation raises the question of whether the affectee is raised from a possessor position within a DP, either to an object position as in Bantu or a subject position as in Japanese and Korean (as shown in section 3.6). If so, this would suggest that an affectee interpretation may not need to be syntactically encoded. If, on the other hand, an affectee is not necessarily moved from the possessor position but generated in the position closest to the subject position, it is the affectee interpretation that needs to be syntactically represented. I present evidence suggesting that the latter hypothesis fares better than

---

66 The issue with English experiencer have would be whether these coreferential items are licensed syntactically or not. It does not affect my proposal whether the coreferential item is licensed syntactically (Harley 1998) or semantically (Belvin 1993; McIntyre 2006). Following the previous observation (Belvin 1996; Brunson and Cowper 1992; Ritter and Rosen 1997), I assume that experiencer have requires a coreferential item, which facilitates an experiencer reading.

67 In this dissertation, Georgian examples without citation were provided by Léa Nash in personal communication.

68 Georgian sentences like (1c) have an obligatory possession relation, as the dative argument is a kinship noun (Alice Harris p.c.). The possession in these can take various forms; for example, in (1c), the children could be either ‘the children under the care of the aunts’ or ‘a classroom of children on a field trip.’
the former. It should be noted that it is not the purpose of this section to argue that a possessor interpretation is not derived syntactically or to provide a syntactic analysis of a possessor interpretation (e.g., Massam 1985). Rather, it is to show that the affectees under the investigation are not derived by possessor movement or some other movement. The claim of this section is not meant for all languages; in some languages, a possessor raising or low applicative analysis may be correct.

### 3.3.3 Low applicative analysis and possessor raising analysis

In Pylkkänen (2002, 2008), it is argued that a Japanese possessive passive like (20a) involves a low source applicative in its active counterpart, and a partial structure for the active is proposed as in (20b).

Unlike high Appl (and peripheral Appl), which denotes a relation between a DP and an event, low Appl denotes a relation between two DPs (see chapter 1). For example, in (20b), there is a source relation between ‘Taro’ and the theme ‘ring,’ as represented by the low Appl\textsubscript{FROM} head: ‘Taro’ is the source of ‘ring.’ The affectee ‘Taro’ in (20b) would presumably move to subject position, resulting in (20a). The dative DP ‘Hanako’ in possessive passive (20a) does not

---

69 Simango (2007) shows that for Chichewa and Chinsenga, a possessor movement type of analysis is untenable. He argues that possessor raising type of an analysis (e.g., possessor ascension) (Baker 1988; Kimenyi 1976, 1980; Perlmutter and Poster 1983) does not work for benefactive applicatives in Chichewa. For example, like in Japanese (21a) and Korean (21b) in section 3.3.3, the possessor position can be occupied with another possessor (i) (see Simango for more evidence):

(i) John a-na-ndi-masul-ir-a zipi wa-nga/-ke/-nu
   John SM-PAST-OM-unfasten-APPL-FV zipper ASSOC-1SG/3SG/2SG.POSSESS
   ‘John unfastened my/his/your zipper for me’

It is concluded that possessive interpretation in benefactive applicatives is not a structural meaning. As a reader may note, unlike Japanese and Korean, the relevant Bantu construction (13) is ambiguous between a benefactive and possessive interpretation. With a benefactive interpretation, a possessive meaning can be entailed, and this is what is similar to the properties of affectees in Japanese and Korean. What is important to the current discussion is that for benefactives with an additional possessive meaning, the evidence Simango (2007) presents suggests that neither a possessor ascension analysis nor a low applicative analysis is tenable.

70 Both the low applicative and the possessor raising analysis assume that an affectee in Korean and Japanese type adversity passive is derived by A-movement, contrary to the current proposal. However, evidence from quantifier scope fact and WCO effect (see section 3.4.1) indicate that the A-movement analysis is not tenable.
appear in (20b); it would appear in the subject position in the active sentence (20b), as it is the subject in the active counterpart of (20a):

(20) a. Taroo-ga Hanako-ni yubiwa-o to-are-ta
    Taro-NOM Hanako-DAT ring-ACC steal-PASS-PAST
    ‘Taro had Hanako steal the ring.’

    b. [VP steal [AppP Taro [Appl ApplFROM ring]].

The source applicative approach implies that the nominative subject, an affectee (e.g., ‘Taro’), has lost something (e.g., ‘ring’). Thus, a possession relation between the affectee and the theme is captured.

However, this type of account works well only with a particular type of example involving a source relation, like (20). It remains questionable how it can extend to different examples, as illustrated in Japanese (21):

(21) Taroo1-ga Hanako-ni kodomo1-o home/nagu(r)/yoba/-hihans-/nade-(r)are-ta
    Taro-NOM Hanako-DAT child-ACC praise/hit/call/criticize/pat-PASS-PAST
    ‘Taro1 had Hanako praise/hit/call/criticize/pat his1 child.’

(K. Kim in press a)

In these examples, it is not obvious what the affectee ‘Taro’ has lost. One can perhaps argue, for instance, that there is an abstract source relation, such as losing one’s respect or privacy when one’s child is criticized by someone else. Importantly, however, the affectee does not lose the accusative theme *kodomo* ‘child,’ which a low applicative analysis is supposed to capture.

A low applicative diagnostic proposed by Pylkkänen also shows that the low applicative analysis of passives is empirically inadequate. According to applicative theory, a static verb like ‘hold’ cannot denote a transfer of possession, and therefore cannot appear with a low applicative.\(^{71}\) On the other hand, high applicatives are compatible with static verbs, as they

\(^{71}\) As mentioned in chapter 1, it is not always the case that low applicatives denote a transfer of possession (see footnote 8 in chapter 1).
denote not a transfer of possession but a relation between an entity and an event (see chapter 1). In other words, the semantics of the verb ‘hold’ is compatible with the semantics of high Appl only, not low Appl. However, contrary to the prediction of the low applicative analysis for passives, passives in both Japanese (22a) and Korean (22b) are possible with the verb ‘hold’:

(22) a. Taroo-ga Hanako-ni sara-o mot-are-ta
    Taro-NOM Hanako-DAT plates-ACC hold-PASS-PAST
    ‘Taro1 had\textsubscript{exp} Hanako hold his\textsubscript{1} plate.’

b. Swuni-ka Minswu-eykey pal-lul cap-hi-ess-ta
    Suni-NOM Minsu-DAT arm-ACC hold-I-PAST-DEC
    ‘Suni\textsubscript{1} had\textsubscript{exp} Minsu hold her\textsubscript{1} arm.’ (K. Kim in press a)

Pylkkänen (2008) provides a Japanese example similar to (22a), as shown in (23), which is ungrammatical, and concludes that the ungrammaticality with the verb ‘hold’ indicates that Japanese possessive passives involve low Appl:

(23) *Taro-ga Jiro-niyotte sara-o mot-are-ta
    Taro-NOM Jiro-BY plates-ACC hold-PASS-PAST
    ‘Taro was affected by Jiro holding the plates’.

The crucial difference between (23) and (22a) is in the marking on the \textit{by}-phrase. In (23), it is marked with \textit{niyotte} ‘by,’ unlike (19a), which is marked with the dative \textit{ni}. As is well known in the Japanese literature (see the discussion in footnote 57 and references therein), the properties of \textit{ni} and \textit{niyotte} possessive passives are not the same with respect to the scopal relation between nominative and dative arguments, WCO effect, and the semantics of the arguments, and thus the two passives cannot be treated in the same way (see K. Kim in press a for detailed discussion and evidence). I conclude that the grammaticality of (22a) constitutes evidence that possessive passives marked with \textit{ni} do not involve a low applicative. Rather, the data in (22) indicate that these passives involve a high applicative. The data provided so far indicate that the low Appl analysis is not adequate for Japanese and Korean passives, and an applicable head in the passives of these languages is event-related rather than entity-related.

There is another similar approach to these types of passives: the possessor movement
analysis (e.g., Kubo 1990; H. Kim 2005). In this analysis, a nominative argument originates in a possessor position (e.g., a specifier of DP) and undergoes movement to the subject position, as schematically presented in (24):

(24) a. Taroo-ga Hanako-ni yubiwa-o to-are-ta
    Taro-NOM Hanako-DAT ring-ACC steal-PASS-PAST

    ‘Taro had Hanako steal the ring.’

   b. [Taro_{possessor} [XP t_{possessor} [X' X ring]]]

However, (24b) cannot account for the passives in (25), where the specifier position can be filled with other possessors (Uda 1994; S. Park 2005):

(25) a. Taroo-ga Hanako-ni Ziro-/kare-/haha-/rinzin-no yubiwa-o to-are-ta
    Taro-NOM Hanako-DAT Ziro-/he-/mother-/neighbor/-GEN ring-ACC steal-PASS-PAST

    ‘Taro had Hanako steal Ziro’s/his/mother’s/neighbor’s ring.’

   b. Swuni-ka Inho-eykey Mia/ku/umma/iwus/-uy ton-ul ppayass-ki-ess-ta
    Suni-NOM Inho-DAT Mia/he/mother/neighbor/-GEN money-ACC take away-PASS-PAST-DEC

    ‘Suni had Inho take away Mia’s/his/mother’s/neighbor’s money.’ (K. Kim in press a)

Furthermore, in Korean, it is not always the case that there is an active counterpart of the passives (26b) (Maling 1989; Maling and Kim 1992). For instance, consider the examples in (26). If the affectee in an adversity passive (26a) is A-moved to the subject position, the passive would have an active counterpart (26b) in which the possessor ‘Suni,’ which moves to the subject position in (26a), is in the object position. However, (26b) is ungrammatical:

(26) a. Swuni-ka Inho-eykey kwaca-lul ttamek-hi-ess-ta
    Suni-NOM Inho-DAT cookies-ACC eat-PASS-PAST-DEC

    ‘Suni had Inho eat her cookies.’

---

72 According to Maling (1989), passives that include an alienable possession relation do not always have an active counterpart.
Importantly, the passive (26) cannot be derived via possessor raising. A possessor raising analysis assumes that, before passivization, the genitive-marked possessor ‘Suni-uy’ (26c) moves to the object position and is marked with accusative case as in (26b)\textsuperscript{73}, and then later to the subject position as in (26a). As (26b) is ungrammatical, a possessor raising analysis of the passive (26a) is flawed.\textsuperscript{74}

As the syntactic and semantic data are clear enough to indicate that neither a low applicative analysis nor a possessor movement analysis is tenable, I conclude that the possession relation in Japanese possessive and Korean adversity passives is not represented by either approach. I assume, following previous approaches (Kitagawa and Kuroda 1992; Matsuoka 2001), that there is a null empty category in these passives that represents a possessive relation or a coindexation relation between an affectee and a theme: the possessor position is occupied with pro, which is coindexed with the subject (see (28) below).

I conclude that Japanese possessive and Korean adversity passives denote an affectee relation between the subject and the event described by the complement of the passives, and that this affectee interpretation needs to be directly syntactically represented.

\textsuperscript{73} In Korean, this type of active clause allows accusative case to be marked on both a possessor and a theme object (see Maling 1989 and references therein).

\textsuperscript{74} It may be possible that the genitive possessor in (26c) can appear in the subject position without the intermediate step of (26b), as discussed in Massam (1985). If so, there are two different steps of passivization with adversity passives in Korean. Assuming uniformity, I continue to argue that possessor raising approach is not preferred.
3.4 Passives in Korean and Japanese

The central proposal of this section is that affectee arguments in Japanese possessive and indirect passives and Korean adversity passives are introduced by Appl, specifically by peripheral Appl as presented in (28). It is peripheral in that the Appl head is the highest argument-introducing head under T and is distinct from high Appl, which merges below Voice (cf. (3)). That is, it introduces a peripheral argument to the relevant clause.75

(27) a. Taroo-ga  Hanako-ni  kodomo-o  nagur-are-ta   J  
     Taro-NOM  Hanako-DAT  child-ACC  hit-PASS-PAST
     ‘Taro had exp Hanako hit (his1) child.’

b. Taroo-ga  Hanako-ni  gohan-o  tabe-rare-ta   J
     Taro-NOM  Hanako-DAT  meal-ACC  eat-PASS-PAST
     ‘Taro had exp Hanako eat a meal.’

c. Swuni-ka  Inho-eykey  meli-lul  kkakk-i-ess-ta   K
     Suni-NOM  Inho-DAT  hair-ACC  cut-I-PAST-DEC
     ‘Suni had exp Inho cut her1 hair.’

(28) a. Japanese
    T     Peripheral ApplP
         /   \
       Taro1       VoiceP
                     /   \ 
                  Hanako   Appl
                            /   \ 
                         VP   Voice
                           /   \ 
                      [pro1 kodomo]-o nagur-gohan-o tabe-

b. Korean
    T     Peripheral ApplP
         /   \
       Suni1       High ApplP
                     /   \ 
                  Inho   Appl
                            /   \ 
                         VP   Voice
                           /   \ 
                      [pro1 meli]-lul kkakk-

75 I argued that the morpheme -I in Korean is realized under the high Appl head. I will discuss this issue in chapter 4. I do not pursue the issue of where the morpheme -rare in Japanese passives (both ni and ni-yotte passives) is realized, as this is beyond the scope of this thesis.
Peripheral Appl denotes a relation between a DP in its specifier and an event in its complement, and this is exactly what passives in both languages express. That is, in these passives, there is a relation (of affectedness) between the subject and the event expressed by the complement. It is well established in both the Japanese and Korean literature that nominative arguments in passives like (27) are thematic subjects (Kuroda 1979; Miyagawa 1989; Hoshi 1991, 1994a; Uda 1994, Whitman and Han 1988; S. Park 2005 for Korean), unlike the subject of an English-type passive (e.g., ‘The cake was eaten’). 76 Crucially, this assumes that a nominative subject of a passive is related to the event described by the complement of the passive, being an affectee. In terms of the proposed analysis, this can be stated as follows: an affectee in the specifier of peripheral Appl is related to the complement phrase, VoiceP in Japanese and high ApplP in Korean. The passive morpheme in (27b), for instance, is thought to assign a theta role to the subject, namely an affectee role: ‘Taro’ is an affectee of the event ‘Hanako watches a movie’. Thus, the subject ‘Taro’ in (27a-b) is interpreted as being affected by the event described by the complement. Under the proposed analysis, example (21), repeated here as (29), which does not have a source relation between the affectee and the theme, can be accounted for straightforwardly. That is, the subject ‘Taro’ is interpreted as being affected by the event described by the verb phrase, rather than standing in a source relation with the theme object kodomo ‘child’:

(29) Taroo1-ga Hanako-ni kodomo1-o home/nagu(r)/yoba-/hihans-/nade-(r)are-ta
Taro-NOM Hanako-DAT child-ACC praise/hit/call/criticize/pat-PASS-PAST
‘Taro had exp Hanako praise/hit/call/criticize/pat his1 child.’

3.4.1 Semantics of nominative and dative DPs in passives

This section provides evidence from agent-oriented adverb modification facts that the nominative subjects in Korean and Japanese passives are non-agentive. I argue that they are introduced by peripheral Appl. Further, I show that dative arguments are agentive in Japanese but

76 For example, idioms are not allowed in passives. For more evidence, see Hoshi (1994a) for Japanese and S. Park (2005) for Korean.
non-agentive in Korean. Thus, dative arguments are introduced by Voice in Japanese and by (high) Appl in Korean.  

In Japanese possessive and indirect passives, a dative argument is compatible with an agent-oriented adverb but a nominative argument is not (e.g., McCawley 1972; Uda 1994), as the following data illustrate:

(30) a. Taroo-ga  Hanako-ni  wazato  ude-o  or-are-ta     J  
    Taro-NOM  Hanako-DAT  on purpose  arm-ACC  break-PASS-PAST  
    ‘Taro had\textsubscript{exp} Hanako break his arm on purpose.’  
    (Hanako’s intention only, not Taro’s)

b. Taroo-ga  Hanako-ni  wazato  gohan-o  tabe-rare-ta   J  
    Taro-NOM  Hanako-DAT  on purpose  meal-ACC  eat-PASS-PAST  
    ‘Taro had\textsubscript{exp} Hanako eat a meal on purpose.’  (Hanako’s intention only, not Taro’s)

The fact that agent-oriented adverb modification is available for the dative argument but unavailable for the nominative argument indicates that the dative argument is agentive and the nominative argument is not. However, some speakers allow agent-oriented adverb modification of the nominative arguments in passives like (30). Thus, we must show that such cases do not indicate that the nominative argument is an agentive participant of the eventuality denoted by a passive verb. The modification of the nominative argument is only possible provided that the semantics and pragmatics are appropriate. Consider the following example (31), which is (30a) with a modifying clause:

---

77 There is a question of how the argument of Voice gets dative case. Miyagawa (1989) proposed that the passive morpheme -\textit{rare} is a case assigner according to Burzio’s (1986) generalization (i), assuming that -\textit{rare} introduces an external argument. Adapting this proposal, I assume that dative case on the argument of Voice is assigned from peripheral Appl, which introduces an affectee.

(i) All and only the verbs that can assign a theta role to the subject can assign (accusative) Case to an object.  
    (Burzio 1986).

78 As for possessive passives like (30a), for some speakers, an agent-oriented adverb does not modify a dative argument. In these cases, I assume that the Japanese possessive passive patterns similarly to the Korean adversity passive, where a dative argument cannot be modified by the adverb like ‘on purpose.’ Pylkkänen (2008) provides an example similar to (30b): ‘Taro was adversely affected by Hanako’s laughing.’ In her example, however, the adverb ‘on purpose’ cannot modify the dative DP ‘Hanako,’ in contrast to (30b). I tested the same example with native speakers, and all the speakers judged it grammatical with the adverb modification on the dative DP. I conclude this contrast may be speaker variation, and leave it as open question.
(31) Taroo-ga wazato [kanojo-no saifu-o funzuke-te] J
Taro-NOM on purpose [she-GEN purse-ACC step-reason]
Hanako-ni ude-o or-are-ta
Hanako-DAT arm-ACC break-PASS-PAST
‘Taro intentionally broke Hanako’s arm [because of his stepping on her purse on purpose].’

In (31), ‘Taro’ performed an intentional act of ‘stepping on Hanako’s purse.’ This intentional act brought about the event of Hanako’s breaking his arm. As a result, Taro was affected. In such a context, it is natural to utter (30a) with the modification of the nominative argument. That is, the possibility of modification does not indicate that ‘Taro intentionally was affected.’ Rather, it indicates that Taro’s deliberate action (i.e., ‘stepping on Hanako’s purse’) caused the realization of the event denoted by the passive verb. Importantly, note that this intentional act is outside the scope of the passive: it is separated from the event described by the verb to which the passive morpheme is suffixed, and it is available due to pragmatic knowledge. The availability of this adverb modification in a context like (31) thus indicates that agentive modification of a nominative argument in passives is not driven by syntax, but by semantics and pragmatics (see Kitagawa and Kuroda (1992) for a similar conclusion). The possibility of agentive modification of the nominative argument in passives does not constitute counter-evidence to the present proposal in which the argument is an affectee, i.e., non-agentive.79

Turning to Korean, previous studies on Korean adversity passives have noted that only the nominative argument can be modified by an agent-oriented adverb (e.g., S. Park 2005; K. Kim 2011). Consider (32):

79 An affectee role is not the only non-agentive role, but causers, holders, or expereincers with psychological predicates are also non-agentive. With respect to the peripheral Appl proposal, I discuss the experiencers in section 3.7.3, and leave casuers and holders for future research.
If reading (i), with adverb modification of the nominative argument, were possible, (32) could constitute counter-evidence to the peripheral Appl proposal, in which the Appl introduces an affectee. However, it turns out that the modification is only possible with a causative reading (32ii), not with a passive reading (32i). It is well established in the Korean literature that some passives can have a causative reading, because both causatives and passives are marked with the same verbal morpheme, -I (e.g., Yeon 1991, 2002, 2003; also see chapter 2 for the use of the morpheme in morphological causatives). However, the ambiguity does not always arise; for example, the passives in (33) do not have a causative reading and reading (ii) does not obtain (Yeon 1991; K.H. Kim 1994):

(33) a. Swuni-ka Inho-eykey yakcem-ul (*ilpwule) cap-hi-ess-ta K
   Suni-NOM Inho-DAT flaw-ACC on purpose catch-I-PAST-DEC
   (i) ‘Suni had\textsubscript{exp} Inho catch her weak points (*on purpose).’
   (ii) * ‘Suni had\textsubscript{caus} Inho catch her weak points.’

b. Swuni-ka Inho-eykey pal-ul (*ilpwule) kkekk-ki-ess-ta K
   Suni-NOM Inho-DAT arm-ACC on purpose bend-I-PAST-DEC
   (i) ‘Suni had\textsubscript{exp} Inho her arm twist (*on purpose).’
   (ii) * ‘Suni had\textsubscript{caus} Inho twist her arm.’ (Adapted from K.H. Kim 1994)

Interestingly, ‘on purpose’ modification of the nominative argument is not available in (33) where no causative reading is possible.\textsuperscript{80} The contrast between (32) and (33) with respect to the availability of adverb modification suggests that the modification is associated with a causative reading, not with a passive reading:\textsuperscript{81} the adverb modifies a nominative argument that is interpreted as a causer. This conclusion is further supported by the behavior of a verb with

\textsuperscript{80} The same fact is observed with English have. A relevant question would be what rules out the ambiguity in (32) but not (33). I do not pursue this question here.

\textsuperscript{81} The adverb may modify an affectee in Korean adversity passives, provided that the semantics and pragmatics allow it, as in Japanese (31).
different allomorphs for causative and passive: *mek*- ‘eat.’ This verb is marked with -i for causatives but with -hi for passives, as exemplified in (34):

(34) Swuni-ka saca-ey (ku) pal-ul K
    Suni-NOM lion-DAT that arm-ACC
    [(ilpwule) mek-hi-ess-ta]/ [ilpwule mek-i-ess-ta]
    on purpose eat-PASS-PAST-DEC / on purpose eat-CAUSE-PAST-DEC
    (i) ‘Suni₁ (*on purpose) had\textsubscript{exp} the lion eat her\textsubscript{1}arm.’
    (ii) ‘Suni₁ on purpose had\textsubscript{caus} the lion eat her\textsubscript{1} /someone else’s arm.’

(K. Kim in press a)

The causative reading (ii) is compatible with ‘on purpose’ modifying the causer ‘Suni.’ In the passive reading (i), however, the adverb is not able to modify the affectee ‘Suni.’

It is not the case that the unavailability of the modification in (34) is because the dative argument is non-human. Even an animate dative argument in an adversity passive cannot be modified by the adverb:

(35) Swuni-ka Inho-eykey kwaca-lul (*ilpwule) ttamek-hi-ess-ta K
    Suni-NOM Inho-DAT cookie-ACC on purpose take and eat-I-PAST-DEC
    ‘Suni₁ had\textsubscript{exp} Inho take away (her\textsubscript{1}) cookies (*on purpose).’

I take the unavailability of agent-oriented adverb modification of a dative argument as evidence that the dative argument in Korean adversity passives is not agentive, just like causees in morphological causatives. Recall that in Chapter 2, it was shown that causees in Korean morphological causatives are non-agentive and introduced by high Appl. As the semantics of the dative argument in adversity passives is non-agentive, I propose that it too is introduced by Appl. There is also morphological evidence supporting this conclusion: the fact that adversity passives are realized with the morpheme –I suggests that the passives should have high Appl where the morpheme appears (see chapter 4 for details).

The key difference between the nominative and dative arguments in Korean adversity passives is primarily in syntax, not in semantics (i.e., peripheral Appl vs. high Appl), as shown in the next section. However, this does not mean that the semantics of the arguments are identical.
Although they are similar in that both are non-agentive, the particular roles of the arguments are not the same. A nominative DP is an affectee, which a dative argument is not.  

3.4.2 Syntax of arguments in passives

I established in the previous section that nominative arguments in both Japanese and Korean are non-agentive. As such, they are introduced by (peripheral) Appl. I also showed that dative arguments in Japanese possessive and adversity passives are agentive and are introduced by Voice. This section provides evidence that the Appl that introduces an affectee in these languages is syntactically different from Pylkkänen’s (2002, 2008) high Appl in that it can merge above VoiceP. In addition, evidence from Korean shows that peripheral Appl is able to take high ApplP as a complement.

In the proposed structures (28) in section 3.4, peripheral Appl merges above VoiceP or high ApplP. That is, the arguments of peripheral Appl asymmetrically c-command the arguments of Voice or high Appl. In this configuration, no quantifier scope ambiguity between the two arguments is predicted, assuming that scope mirrors c-command (Aoun and Li 1989, 1993). This prediction is borne out in both languages, as illustrated in Japanese (36) and Korean (37) (see Kitagawa and Kuroda 1992; Matsuoka 2001; Whitman and S. Park 2003; S. Park 2005 for similar examples).

(36) a. someone > everyone; *everyone > someone
dareka1-ga daremo-ni atama1-o tatak-are-ta J
Someone-NOM everyone-DAT head-ACC hit-PASS-PAST
‘Someone1 had everyone hit his1 head.’

b. someone > everyone; *everyone > someone
dareka1-ga daremo-ni gohan-o tabe-rare-ta J
Someone-NOM everyone-DAT meal-ACC eat-PASS-PAST
‘Someone had everyone eat the meal.’

---

82 As for the role of a dative DP in adversity passives, I assume that it is an instrument (see K. Kim 2010, 2011 for details).
The non-availability of inverse scope in (36) and (37) indicates that the nominative argument asymmetrically c-commands the dative argument, supporting the proposed structures (28). Note that the lack of scope ambiguity (and the presence of WCO effects; see (38)-(40) below) also indicates that there is no passive movement, as previous studies on the passives have argued (e.g., Kitagawa and Kuroda 1992; Matsuoka 2001; S. Park 2005). For example, if there were movement, the dative quantified DP in (36) and (37) could c-command a trace of the moved nominative quantified DP, yielding a reading where the dative DP scopes over the nominative DP, which is not possible. In both languages, the dative quantified DP can take scope over the nominative quantified DP when it is scrambled over the nominative DP (see Matsuoka 2001 for examples). In such a configuration, the quantified dative DP c-commands the quantified nominative DP, and the nominative DP c-commands the trace of the dative DP, yielding the ambiguous scope readings.

Similar supporting evidence for an asymmetric relation between peripheral Appl and Voice in Japanese/high Appl in Korean comes from weak crossover (WCO) phenomena, which are based on the c-command relation (e.g., Reinhart 1983). WCO is predicted in Japanese and Korean adversity passives under the proposed configuration in which peripheral Appl merges above Voice or high Appl (cf. (28)). As the following examples demonstrate, this prediction is borne out:

---

83 In the Japanese literature, a non-movement approach appears to be non-controversial at least for indirect passives. However, it is debatable whether possessive passives can be analyzed under the same approach (e.g., Kubo 1990 for a movement approach; Kitagawa and Kuroda 1992 for a non-movement approach). Since the evidence for a non-movement approach is strong (Kuroda 1979; Kitagawa and Kuroda 1992; Uda 1994; Hoshi 1991, 1994; S. Park 2005; K. Kim 2008), I assume that a non-movement analysis to the passives is correct.

84 In Japanese and Korean, it appears to be controversial as to which pronoun can be a bound variable like an English pronoun. In Japanese, null pronouns, reflexive pronouns, or soi\(\text{it}\) ‘his’ (Saito 1992; Takano 1998) are assumed to show WCO. In Korean, WCO can be shown with either a pronoun ku ‘he’ (Choe 1989; Cho 1994) or a null pronoun (Y. Lee 1991). As the examples in (38)-(40) show a strong contrast for WCO, I assume that they serve the purpose of showing a hierarchical relation between nominative and dative arguments.
Japanese (38b) and (39b) and Korean (40b) show WCO effects, unlike the (a) examples. The contrast between the (a) and (b) examples supports that the peripheral Appl merges above VoiceP and high Appl. Like scope ambiguity, the WCO effects disappear in both languages if the quantified dative DP scrambles over the nominative quantified DP (see Kitagawa and Kuroda 1992; Matsuoka 2001). After scrambling, the quantified dative DP c-commands the pronoun contained in the nominative DP; therefore, there is no WCO effect.

Pylkkänen (2008) proposed that nominative arguments in Japanese indirect passives are introduced by (malefactive) high Appl (41b). Following her proposal on applicatives, in which an applicative head cannot merge above Voice (see section 1.4 in chapter 1), she argued that
the dative argument in Japanese indirect passives cannot be introduced by VoiceP, though she did not propose an alternative:

(41) a. Taroo\textsubscript{1}-ga Hanako\textsubscript{2}-ni gohan-o tabe-rare-ta
Taro-NOM Hanako-DAT meal-ACC eat-PASS-PAST
\textquoteleft Taro had\textsubscript{exp} Hanako eat a meal.\textquoteright

\textbf{b. }[\textit{HighApplP} Taro \textit{[Appl\textprime} Appl\textit{highMAL} [XP Hanako [X' X [VP eat meal]]]]] (X is not Voice)
(Adapted from Pylkkänen 2002)

As shown in section 3.4.2, however, these arguments are agentive, being introduced by Voice. An applicative head (i.e., peripheral Appl) in Japanese indirect passives merges \textit{above Voice}, contrary to the claim in Pylkkänen. The scope and \textit{WCO} effects discussed in this section also provide support for this conclusion.

### 3.5 English experiencer \textit{have} and Georgian malefactivs

As noted in chapter 2, English \textit{have} can appear in various contexts, such as causative, experiencer, and possessive constructions. This section examines the argument structure of the experiencer use of \textit{have} with bare infinitival complements, as illustrated in (42):\textsuperscript{86}

(42) a. John\textsubscript{1} had\textsubscript{exp} Mary punch him\textsubscript{1} on the nose
b. John\textsubscript{1} had\textsubscript{exp} Mary walk out of his\textsubscript{1} classroom.
c. John\textsubscript{1} had\textsubscript{exp} Mary die on him\textsubscript{1}.

In experiencer \textit{have}, like in causative \textit{have}, the complement of \textit{have} is verbal (Cowper 1989; Ritter and Rosen 1993, 1997). Is experiencer \textit{have} also non-agentive like causative \textit{have}? Harley (1998) argued that the complement of English experiencer \textit{have} is non-agentive. She showed that the interpretation of the entire \textit{have} construction relies on the interpretation of the complement of

\textsuperscript{86} Like causative \textit{have}, experiencer \textit{have} can also take various types of complements: bare infinitives, progressive participles, passive participles, adjective phrases, and prepositional phrases (Harley 1998). This thesis does not pursue an analysis of the various complement types of experiencer \textit{have}. See K. Kim (in press b) for the discussion of how other types of complements can be explained in terms of applicatives.
have, as noted in Belvin (1994). She tested the eventiveness of have with the pseudocleft 
construction and the progressive aspect, which are compatible only with eventive predicates, as 
also shown in Ritter and Rosen (1997). Examples of these tests are illustrated in (43): 87

(43) a. Pinnochio1 had Geppetto step on him1.

b. What Pinnochio1 did was have [Geppetto step on him1].
   (causative reading is ok; no experiencer reading).

c. Pinnochio1 is having [Geppetto step on him1].
   (causative reading is ok; no experiencer reading).

(Harley 1998)

The ungrammaticality of an experiencer reading in (43b) and (43c) suggests that experiencer have is not eventive, but stative. On the other hand, the grammaticality with a causative reading of these sentences suggests that causative have is eventive. The same tests are also used with complements of passive participles, progressive participles, PPs, and adjective phrases. (44) and (45) illustrate the result of the tests with passive participle and adjective phrase complements:

(44) a. What Reynard did was have [Pinnochio beaten to a pulp by his henchmen].
   (causative reading is ok; no experiencer reading)

b. Reynard is having [Pinnochio robbed by his confederates].
   (causative reading is ok; no experiencer reading)

(45) a. *What Pinnochio did was have [Geppetto sick as a dog].

b. *Pinnochio is having [Geppetto sick as a dog].
   (Harley 1998)

Passive participle complements like (44) show the same result as bare infinitive (43). On the other hand, neither causative nor experiencer readings are available with other types of complements, as the adjective phrase complement in (45) shows (see Harley 1998 for more examples); that is, with adjective phrase complements and others, neither causative nor

87 These tests were also used with causative have constructions. See Harley (1998) for details.
experiencer *have* is eventive. Only bare infinitives and passive participles may denote an event; therefore, a causative reading is available with those complements, but not with other types of complements.

Given this result, it is argued that the entire eventiveness of *have* is inherited from the eventiveness of its complement; for instance, with a bare infinitival complement, causative *have* is eventive, as its complement denotes an event. Following Travis (1994) and Harley (1995), eventiveness is structurally represented by a little *v* that merges above VP. Importantly, *v* introduces an agent in its specifier. As experiencer *have* with a bare infinitival complement is stative, Harley proposed that in experiencer constructions, the complement phrase is a VP without an agentive *vP*. In other words, the complement is stative, and thus experiencer *have* is stative.

However, the subject of the complement of an experiencer *have* construction is fully agentive, in contrast to the prediction of Harley (1998). As illustrated in (43), the argument ‘Mary,’ which is the subject of the complement of *have*, can be modified by an agent-oriented adverb, but the experiencer ‘John’ cannot. Contrary to Harley’s prediction, these examples suggest that the interpretation of experiencer *have* is stative, although the complement of experiencer *have* is agentive (46). In Harley’s analysis, the contrast in agentivity between ‘John’ and ‘Mary’ illustrated in (46) remains unexplained.

(46) a. John₁ *had*<sub>exp</sub> Mary₂ walk out of his classroom on purpose<sup>1/2</sup>.
    b. John₁ *had*<sub>exp</sub> Mary₂ punch him₁ in the nose on purpose<sup>1/2</sup>.
    c. John₁ *had*<sub>exp</sub> Mary₂ step on his₁ foot on purpose<sup>1/2</sup>.

The data in (46) provide evidence that the subject of the complement of experiencer *have* is agentive. It is introduced by Voice, as illustrated in (47), with an example of a transitive verb in the complement (47):

---

88 This proposal predicts that causative *have* that takes a progressive participle, PP or adjective phrase as a complement may be stative, as the ungrammaticality of the causative reading with the pseudocleft and progressive aspect tests shows (45). As pointed out in K. Kim (in press b), however, this may not be true. Causers in these causatives can be modified by an agent-oriented adverb, suggesting that the causatives are not stative.
Importantly, like an affectee in Korean or Japanese, an experiencer is non-agentive, as the adverb modification fact in (46) shows. An experiencer in an English have constructions is introduced by Appl, like an affectee in Korean or Japanese. Furthermore, the Appl that introduces an affectee in English experiencer have constructions (47) is peripheral Appl in that it is the highest argument introducing head under T. As mentioned previously, experiencer have is stative rather than eventive (Ritter and Rosen 1997; Harley 1998). $v_{BE}$, which introduces a state, is projected above peripheral ApplP (47). Note that peripheral Appl in (47) takes VoiceP as a complement, like peripheral Appl in Japanese possessive and adversity passives (see (28)).

Experiencer have is also able to occur with unaccusatives, as shown in (42c) above, and in (48) (brackets are mine), unlike causative have (see chapter 2):

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

(Ritter and Rosen 1993)

---

89 Another motivation to have $v_{BE}$ above peripheral Appl may be to provide verbal support for the Appl, as argued in K. Kim (in press b): the spellout of have in an experiencer construction is analyzed as the result of the combination of $v_{BE}$ and Appl.
In fact, peripheral Appl, like high Appl, denotes a relation between an entity and an event, either VoiceP (47) or unaccusative vP (49). The structure of experiencer have with unaccusatives is illustrated in (49) for the sentence (48a):

(49)  
T  
  
vBE  
  Peripheral ApplP  
    vBE  
      Ralph  
        Appl  
          vP  
            Shelia die on him

Morphological evidence provides further support for the peripheral Appl analysis of experiencer have. In Georgian, as shown earlier, malefactives similar to English experiencers are introduced by an applicative morpheme (McGinnis 1997, 1998):

(50) dedeb-s Nino da-e-čr-a-t
    mothers-DAT Nino-NOM PREV-APPL+ V-cut-ARO-PL
    ‘The mothers had Nino wounded on them.’

In (50), the morpheme e is the spell-out of a merger of the applicative morpheme a and the unaccusative verbal morpheme i (McGinnis 1998). What is important to the present discussion is the fact that a malefactive in Georgian, similar to an experiencer in English, is the last element introduced to the clause, and it is introduced by (peripheral) Appl. Thus, Georgian malefactives like (50) may be represented as in (51). Also note that in Georgian, unaccusative vP is a possible complement of peripheral Appl, as in English:  

90 In fact, in Georgian, malefactives are possible only with unaccusatives (McGinnis 1998). In other words, Georgian does not allow malefactives with transitives, unlike English (44). In this respect, Georgian malefactives are similar to Romance malefactive constructions (e.g., Cuervo 2003, 2008, 2010 for Spanish).

91 In Georgian, Appl merges above a verbal base (Nash 1994), v, not below, as argued for English in this section. In this regard, the English experiencer construction (49) is not possible in Georgian, as peripheral Appl merges below v. Moreover, with experiencer constructions, English and Georgian differ as to whether an additional verbal (and event) head w is present above Appl. In English, vBE is projected above peripheral Appl, but in Georgian it may not be. This may be due to the fact that in English there are two verbs in such constructions, requiring two verbal heads. However, these differences between the two languages do not necessarily weaken the parallel between English and
Interestingly, there is further morphological support for the peripheral Appl proposal from Zulu, a Bantu language of the Nguni cluster spoken primarily in South Africa (especially the southeastern provinces of KwaZulu and Natal). A pattern of locative applicatives in this language provides more support for the claim that a peripheral applied argument can merge above VoiceP, as in Japanese or English. Moreover, a locative applied argument in Zulu is a subject (Buell 2005), like a peripheral applied argument (see section 3.6).

Zulu has a locative applicative construction in which a locative applied DP merges above an agent (Buell 2005). In (52), the locative DP ‘the school’ precedes an agent DP ‘the children’:

(52) [I-7-sikole]DP si-fund-el- a a-bantwana
7-7school 7 SBJ-study-APPL-FV 2-2.child
‘The children study at school’. (Lit. ‘The school studies at the children.’) (Buell 2005)

Georgian drawn in this section. What this fact about Georgian suggests for English experiencer have constructions is that malefactives can be introduced by an applicative morpheme, and Appl in English have constructions may need verbal support like in Georgian. The configuration where Appl merges above \( v \) is not impossible in English as argued in Pylkkänen (2008): it is valid syntactically, although it may not be semantically. I leave the issues of Appl merging either above or below \( v \) for future research.

Zulu also has an applicative construction where a locative PP appears postverbally as shown in (i), and this type of construction is argued to have high Appl (see Buell 2005 for details).

(i) a-bantwana ba-fund- el- a [e-sikole-ni]pp
2-2.child 2 SBJ-study-APPL-FV LOC:7-7.schol-LOC
‘The children study at school.’
Providing evidence from word order (SVO), subject agreement, and binding, Buell argues that a locative applied DP in Zulu is indeed a subject that merges above an agent. For example, a locative applied DP binds an agent, as illustrated in (53):\(^93\)

\[(53) [I-7-sikole]DP ngasinye\(_1\) si-fund-el- a a-bantwana ba-so\(_1\) 7-7school 7.each 7 SBJ study-APPL-FV 2- 2.child 2.of-7.it
Lit. ‘Each\(_1\) school studies at its\(_1\) children’. (‘Each\(_1\) school is studied at by its\(_1\) children’.)\]

Based on these properties of locative applied arguments in Zulu, the structure (54) is proposed for the locative applicative constructions like (53) where an applied argument is a DP.\(^94\)

Although Buell proposes that a locative DP is introduced by high Appl, the Appl in (54) is similar to peripheral Appl in that it merges above VoiceP, and its argument shows subject properties:

\[(54) Peripheral ApplP
\]

This language provides clear morphological evidence to the peripheral Appl proposal, as the applicative morpheme -el is visible. In other words, Appl merges above VoiceP.

One of the important points of the Zulu locative applicatives is that it shows that the peripheral Appl proposal is not an isolated phenomenon restricted to a few languages, but is also found in Bantu languages, where applicatives are productive.

---

\(^93\) The agent cannot bind the locative DP in (53) (Buell, p.c.). In contrast to the locative applied argument, the agent shows object properties (See Buell 2005 for details).

\(^94\) I have modified Buell’s structure in accordance with the current context (e.g., VoiceP instead of vP), but the substantial elements of the structure remain the same.
3.6. Peripheral applied affectee as a subject

Before proceeding to the discussion of a peripheral affectee as a subject, a clarification on the notion of subject is in order. For the purposes of this section, a subject is defined structurally as an argument that moves to the specifier of TP (Chomsky 1993, 1995), regardless of its case marking.\(^9\) T attracts to its specifier the closest DP, irrespective of whether the DP has uninterpretable case features (Chomsky 1998). The attracted DP checks an EPP feature on T. A subject can show some properties typically related to T, such as subject-verb agreement. I assume that agreement with T does not always guarantee nominative case (e.g., Alboiu 2006).\(^9\) For the purposes of this section, this assumption means that it is not always the nominative DP that shows agreement with T, and thus a verb does not always have to agree with a nominative DP. In addition, it is not necessarily the case that a nominative DP that agrees with the verb is always in the specifier of TP.

I have claimed that an argument introduced by peripheral Appl is closest to T. This argument moves to the specifier of TP checking EPP, regardless of case. This implies that peripheral arguments show properties typical of a subject, unlike arguments introduced by high Appl, which show properties typical of an object, as in Bantu. I demonstrate here that this implication is correct.

It is well known that an affectee introduced by high Appl (as in Bantu, for example) behaves like an indirect or direct object as shown through word order, object agreement, and passivization (Baker 1988; Bresnan and Moshi 1990). Employing similar types of syntactic diagnostics for peripheral affectees, I show that these affectees are subjects.

---

\(^9\) This definition of subjects does not work for VSO languages or expletive constructions, where the subject does not move to TP.

\(^9\) A question arises: how do we explain nominative case on a DP in the absence of agreement with T? As this is not relevant to the main focus of this section, I do not discuss this issue.
The first piece of evidence comes from word order. Word order in Japanese (SOV), Korean (SOV), English (SVO), and Georgian (SOV) indicates that peripheral arguments occupy the subject position in these languages. The relevant examples are repeated for convenience:

(55) a. Taroo-ga Hanako-ni gohan-o tabe-rare-ta J
   Taro-NOM Hanako-DAT meal-ACC eat-PASS-PAST
   ‘Taro had_{exp} Hanako eat a meal.’

   b. Swuni-ka Minswu-eykey pal-ul palp-hi-ess-ta K
   Suni-NOM Minsu-DAT foot-ACC step-PASS-PAST-DEC
   ‘Suni$_1$ had_{exp} Minsu step on her$_1$ foot.’

   c. John$_1$ had$_{exp}$ Mary punch him$_1$ on the nose. E

   d. dedeb-s Nino da-e-čr-a-t G
      mothers-DAT Nino-NOM PREV-APPL+ V-cut-ARO-PL
      ‘The mothers$_1$ had$_{exp}$ Nino wounded on them$_1$.‘

Note that in Georgian (55d) the dative argument merges higher than the nominative theme object, like the nominative arguments in Japanese and Korean (see section 3.4.2). Further evidence comes from binding. The possessive reflexive pronoun tavis in Georgian can be bound by a higher A-position argument (Harris 1981). The dative argument can bind tavis in a nominative position (56a), while the nominative argument cannot bind tavis in a dative position (56b). This shows that the dative argument merges higher than the nominative argument in malefactive constructions. That is, the dative argument is closer to T than the nominative argument:

(56) a. deideb-s tavis švileb-i da-e-mal-a-t.
    aunts-DAT self son-NOM PFX-APPL+V-hide-AOR-PL
    ‘The aunts$_1$ had$_{exp}$ their$_1$ son hidden on them$_1$.‘

   b. *tavis deideb-s nino da-e-mal-a-t.
    her aunt- DAT Nino-NOM PFX-APPL+V-hide-AOR-PL
    ‘[Her$_1$ aunt]$_2$ had$_{exp}$ Nino$_1$ hidden on her$_2$.‘ (McGinnis 1997)

The binding facts in Korean (57a) and Japanese (57b) also support my claim that the peripheral arguments in these languages are in subject position. Non-subject arguments in
Japanese and Korean cannot bind the reflexive pronoun zibunzisin ‘self-self’ in Japanese (Katada 1991) and caki-casin ‘self-self’ in Korean (Sohn 1999). However, unlike the dative arguments, the peripheral arguments, ‘Suni’ in Korean and ‘Taro’ in Japanese, bind a subject-oriented reflexive pronoun, cakicasin ‘self-self’ and zibunzisin ‘self-self’ respectively, suggesting that they are subjects.

(57) a. Swuni1-ka Minswu2-eykey pal-ul cakicasin1/*2-uy cip-eyse K
    Suni-NOM Minsu-DAT foot-ACC self-self-GEN house-LOC
    palp-hi-ess-ta
    step-PASS-PAST-DEC
    ‘Suni1 had exp Minsu2 step on her foot in her1/*his2 house.’

b. Taroo1-ga Hanako2-ni gohan-o zibun-zisin1/*2-no uti-de J
    Taro-NOM Hanako-DAT meal-ACC self-self-GEN house-in
    tabe-rare-ta
    eat-PASS-PAST
    ‘Taro1 had exp Hanako2 eat a meal in his1/*her2 house.’

Crucially, in all these languages, the peripheral arguments show some sort of subject agreement. In Korean and Japanese, honorification agrees with a subject only (Toribio 1990; Ura 1998; Sohn 1999), as illustrated in Japanese (58a) and Korean (58b). Both ‘father’ and ‘mother’ have a higher social position, and can be honorified. However, in (58) only ‘father,’ the subject, can be marked with honorification on the verb:

(58) a. titi1-ga haha2-o o-yoba-ininat1/*2-ta
    Father-NOM mother-ACC HON-call-HON-PAST
    ‘Father called mother.’

b. apeci1 emeni2-lul pwulu-si1/*2-ess-ta
    father mother-NOM call-HON-PAST-DEC
    ‘Father1 called mother2.’

In Korean adversity passives (59) and Japanese possessive and indirect passives (60), only affectees can show honorific agreement.\(^{97}\) When the affectee has a higher social position than

\(^{97}\) In Japanese, there is also an object agreement marker, which is morphologically different from a subject agreement marker.
the dative argument, such as ‘father’ in Korean (59a) or ‘teacher’ in Japanese (60a), and it appears in the subject position, it takes an honorific agreement marker on the verb. The only time an argument corresponding to a socially superior individual can show honorific agreement is when it is in the subject position, as the contrast between (59a, 60a) and (59b, 60b) shows. The fact that the affectee shows honorification indicates that it is in subject position:

(59) a. apeci₁-ka Minswu₂-eykey pal-ul palp-hi-si₁/*₂-ess-ta
    father-NOM Minsu-DAT foot-ACC step-PASS-HON-PAST-DEC
    ‘Father had exp Minsu step on his foot.’

b. #Minswu₁-ka apeci₂-eykey pal-ul palp-hi-si₁/*₂-ess-ta
    Minsu-NOM father-DAT foot-ACC step-PASS-HON-PAST-DEC
    ‘Minsu had exp father step on his foot.’

(60) a. sensei-ga Taroo-ni gohan-o o-tabe-ninar₁/*₂-are-ta
    teacher-NOM Taro-DAT meal-ACC HON-eat-HON-PASS-PAST
    ‘The teacher had exp Taro eat the meal.’

b. # Taroo-ga sensei-ni gohan-o o-tabe-ninar₁/*₂-are-ta
    Taro-NOM teacher-DAT meal-ACC HON-eat-HON-PASS-PAST
    ‘Taro had exp teacher eat the meal.’

English and Georgian also display affectee agreement patterns. In English, a third person singular peripheral argument agrees with the verb in present tense (61). In Georgian, a third person subject nominal triggers number agreement, as shown in (62a) (Harris 1981), and this is what is found with an affectee (62b) (McGinnis 1998).

(61) He₁ has/*have them punch him₁ in the nose.

(62) a. Bavšveb-i da-i-karg-nen
    Children-NOM lost-UNACCU-AOR.3PL
    ‘The children are lost.’

b. deideb-s Nino-i da-e-karg-a-t
    Aunts-DAT Nino-NOM PREV-APPL+ UNACCU-lose-AOR-PL
    ‘The aunts had exp Nino lost on them.’ (McGinnis 1998)

It should be noted that peripheral arguments are not topics, unlike affectees in Bulgarian and Slovenian, which are argued to be introduced by Appl in the CP domain (Rivero 2009). In
Japanese and Korean, for example, there is a separate topic marker, -wa and -nun respectively, and these markers do not correlate with affectee marking. In English, topics are generally introduced by ‘as for,’ which does not introduce the peripheral argument in examples like (55c).

Unlike Japanese, Korean, and English, Georgian does not have a separate topic marker (Léa Nash, p.c.), and so we cannot use evidence from topic marking to show that peripheral arguments in Georgian are subjects, not topics. However, assuming the analysis in McGinnis (1997, 1998), along with the evidence shown in (56) and (62b), I conclude that dative malefactive arguments in Georgian occupies the subject position.

There still remains an important question: how do we know whether a given Appl is peripheral or high when there is no Voice? The empirical facts discussed in this section and elsewhere in this chapter suggest that peripheral arguments have subject-like properties, while high applied arguments have object-like properties. In Georgian, applied arguments in malefactive constructions behave like subjects, showing subject agreement. In Bantu, on the other hand, applied arguments behave like objects, showing object agreement (e.g., Bresnan and Moshi 1993; Simango 2005). The semantics of arguments cannot be a condition that divides applicatives into high and peripheral applicatives, as the two types of arguments share similar semantic properties. For example, affectees and locatives can appear as peripheral arguments (Korean, Japanese, or English/Zulu), as high applied arguments (Bantu), or as both (Zulu; see footnote 92).\(^{98}\) Thus, I conclude that the difference between peripheral and high Appl is syntactic, not semantic.\(^{99}\)

The conclusion that the difference between peripheral and high Appl is syntactic raises the question of whether it is necessary to have both types of Appls, as both introduce a semantically similar range of arguments; it could be the case that there is only one type of Appl.

---

\(^{98}\) There are still unanswered questions regarding this issue. For instance, why are the semantics of peripheral applied arguments not as varied as that of high applied arguments? I have not found any instrumental or comitative applied arguments as peripheral arguments.

\(^{99}\) The arguments of peripheral Appl seem to be restricted to locatives if affectees can be treated as locatives, like experiencers with psychological predicates (Landau 2009). If this hypothesis is correct, peripheral Appl may be semantically different from high Appl as well. I leave this issue for further research.
(and that whether it merges below or above Voice is open to parametric variation). However, the evidence presented in this thesis supports my proposal of two distinct Appl heads. Peripheral and high Appl can co-occur, as illustrated with Korean adversity passives (see (28b)). Although their semantics are similar in that both are non-agentive, they can co-occur in the same clause in different positions. Crucially, high Appl is realized with the morpheme –I, while peripheral Appl is realized with no special morpheme, which also suggests that high and peripheral Appl are not identical.100 Furthermore, the fact that the same locative applied argument can merge either above an agent (see (54)) or below an agent (see (i) in a footnote 92) in Zulu indicates that peripheral Appl and high Appl occupy distinct positions.101 The syntactic distinction between the two positions is very clear when each head occurs without VoiceP. For instance, in Georgian (see (51)), Appl occurs with unaccusatives, and its argument shows a range of subject properties, indicating peripheral Appl. As discussed in Simango (1995), Chichewa benefactive applicatives can also occur with unaccusatives. Unlike Appl in Georgian, however, the benefactive argument in Chichewa exhibits a range of object properties, which suggests that the Appl in Chichewa is high Appl. If they were to be the same head, we would need to account for this contrast between applied arguments in Georgian and Chichewa.

3.7 Consequences of the peripheral applicative analysis

3.7.1 New type of transitive: Appl selects an unaccusative vP complement

Peripheral Appl can take unaccusative vP as a complement (63a), as argued for Georgian malefactuals (51) and English experencer have (49). I argue that the configuration in (63a) constitutes a new type of a transitive wherein Appl introduces an external argument to the vP. In this sense, the configuration (63a) is similar to a normal transitive, in which Voice introduces an

100 As suggested by Jaklin Kornfilt, this evidence is stronger if we assume the existence of a constraint against duplicating functional heads. In Korean, for example, double morphological casuatives or passives are not allowed, which seems to support the constraint.

101 With Zulu, the morphological difference among applicatives is not crucial to this issue. The morpheme -el appears in a various range of applicatives in addition to locatives, such as benefactive, motive, or circumstance applicatives (Buell 2005)).
external argument (63b): both heads add a DP external to vP. As shown with Georgian malefactives, an argument of peripheral Appl occupies the subject position, like an argument of Voice does. However, peripheral Appl is different from Voice in that it introduces a non-agentive argument: while Appl introduces an affectee, Voice always introduces an agent. Nevertheless, both configurations are transitive, with one argument in subject position and one in object position:

\[(63) \begin{align*}
a. & \quad \text{T} \rightarrow \text{Peripheral ApplP} \\
& \quad \text{DP} \rightarrow \text{Appl} \\
& \quad \text{vP} \\
& \quad \text{DP} \rightarrow v \\

b. & \quad \text{T} \rightarrow \text{VoiceP} \\
& \quad \text{DP} \rightarrow \text{Voice} \\
& \quad \text{vP} \\
& \quad \text{DP} \rightarrow v \\
\end{align*}\]

Spanish provides further support for (63a). In Spanish, a dative argument can occur with a change of state verb (64) in unintentional responsibility constructions. The dative argument ‘dry-cleaner’ is interpreted as unintentionally responsible for the event described by the verb phrase, the causative event of ‘trousers getting burnt.’

---

102 The ban on transitives in Georgian malefactives may naturally fall out from the different types of transitives (63a) and (63b). As mentioned above, Georgian malefactives must be unaccusative. It is possible that Georgian malefactive constructions are a strategy to add a subject to unaccusatives. Transitives already have an external argument introduced by Voice that will occupy the subject position; thus, malefatives cannot apply to transitives but only to unaccusatives.

103 Examples without citation are from Maria Cristina Cuervo, p.c.

104 There is no possessive relation between the dative argument and the theme object (Cuervo 2010), as shown in (65), in which another possessor ‘Carolina’ can appear as a possessor of the theme object.
An important property of the dative argument in (64) is that it is non-agentive, like a peripheral applied argument; it is not compatible with an agent-oriented adverb or a purpose phrase (65a). In constrast, in the active transitive clause (65b), a nominative subject is compatible with the adverb or the purpose phrase. The contrast between (65a) and (65b) supports my proposal of the semantic distinction between Appl and Voice discussed in chapter 2: Voice is specified for agentivity, while Appl is specified for non-agentivity. Cuervo (2003) argues that the dative argument of unintentional responsibility is introduced by Appl, and an inchoative interpretation is represented by having two event heads $v_{GO}$ and $v_{BE}$, as illustrated in (66).

In (66), Appl introduces the dative argument and relates it to the complement $v_{GO}P$. $v_{GO}$ introduces a simple event of change, and $v_{BE}$ introduces a simple state. Crucial to the present
discussion is that Appl merges above unaccusative vP like peripheral Appl in (63a). In addition, like peripheral Appl, Appl in (66) is the highest argument-introducing head below T. The dative argument merges higher than the theme object, as the following asymmetric binding relation between the two arguments suggests:

(67) a. Al padre se le cayó su propio hijo
     the father.DAT se CL.DAT fell.PL his own son
     ‘The father (accidentally) dropped his own son’

     b. *A su₁ padre se le cayó el hijo₁
        his father.DAT se CL.DAT fell.PL the son
        ‘His₁ father (accidentally) dropped the/his son₁’

    Like peripheral Appl, the Spanish Appl (66) merges below T, and is closest to T; therefore, in unintentional responsibility constructions, it is the dative argument, not the nominative argument, that occupies the subject position.\(^{105}\) Tests that distinguish between topic DPs and subject DPs in Spanish (see Masullo 1992; Cuervo 1999 for details) indicate that dative DPs in unintentional responsibility constructions pattern with nominative DPs in normal transitives, not topics. Unlike a topic, for example, a quantified DP in an unintentional responsibility construction can appear in the dative DP position (68a). Moreover, unlike a topic, a dative argument in the construction can be modified by post-nominal, stressed *solamente* ‘alone’ (68b), and is raised in case of the raising predicate *parece* ‘seem’ (68c). Lastly, bare plurals in Spanish cannot appear in subject position, and they are also restricted in the dative argument position of unintentional responsibility constructions (68d):

(68) a. A nadie se le quemaron los pantalones de Carolina
    Nobody.DAT se CL.DAT burnt.PL the trousers of Carolina
    ‘Nobody (accidentally) burnt Carolina’s trousers’

\(^{105}\) In Spanish, the nominative DP agrees with the verb in dative subject constructions: unintentional responsibility or dative subject experiencer constructions. As assumed in this chapter, an agreeing nominative case does not necessarily indicates that it is in the specifier of TP. I continue to assume that in Spanish unintentional responsibility constructions, a closest DP to T, a dative DP, moves to the specifier of TP checking EPP, which is also shown with a dative DP in Spanish dative experiencer constructions (Cuervo 2003).
b. Al tintorero solamente se le quemaron los pantalones de Carolina
   the dry-cleaner.DAT alone se CL.DAT burnt.PL the trousers of Carolina
   ‘The dry-cleaner alone (accidentally) burnt Carolina’s trousers’

c. Al tintorero parecen [habérsele quemado los pantalones de Carolina]
   the dry-cleaner.DAT seem.PL have.se.CL.DAT burnt the trousers of Carolina
   ‘The dry-cleaner seems to have (accidentally) burnt Carolina’s trousers’.

d. *A tintoreros se le quemaron los pantalones de Carolina
   dry-cleaners.DAT se CL.DAT burnt.PL the trousers of Carolina
   ‘Dry-cleaners (accidentally) burnt Carolina’s trousers’

The data in (68) suggest that the dative argument in (64) is in the subject position, not in the topic position. Like affectees in Georgian, dative arguments in Spanish unintentional responsibility constructions belong to in the new type of transitive proposed in (63a).

The proposal of peripheral applicative uncovers a new type of transitive. An interesting consequence is that the parallel between Voice and Appl argued for in (63) provides novel empirical evidence for the claim that Appl is similar to Voice in the way that it combines with vP (Pylkkänen 2002, 2008). This proposal differs from Pylkkänen’s in that it semantically distinguishes the non-agentive Appl, from the agentive Voice, a refinement that was absent in Pylkkänen’s proposal.

3.7.2 Syntax of affectees: a cross-linguistic perspective

Adding peripheral Appl to the current applicative theory (Pylkkänen 2008) predicts that Appl can vary syntactically: peripheral Appl can merge above VoiceP, while high Appl must merge below VoiceP. Additionally, the finding of peripheral Appl accounts for the cross-linguistically different distribution of affectee arguments.

Peripheral Appl and high Appl are not significantly different semantically (also see (4)). Both types of Appl introduce an affectee; for example, peripheral Appl can introduce a malefactive argument in Japanese and Korean, and high Appl can introduce a benefactive or malefactive argument, as shown in Bantu languages (Baker 1988; Bresnan and Moshi 1993;
Marantz 1993; Pylkkänen 2008). This conclusion is also supported by the fact that affectees in several languages are analyzed in terms of Appl. In German (69), for instance, both benefactive and malefactive arguments are introduced by high Appl (McFadden 2004, 2006). 106

(69) Sie hat mir Bushs Ansprache ubersetzt German
She has me (DAT) Bush’s speech translated
‘She translated Bush’s speech for me.’ (McIntyre 2006)

As discussed earlier, affectee arguments in English experencer have constructions are also introduced by an applicative head (see section 3.5). 107 Nevertheless, the languages differ as to whether the affected argument appears in subject or object position. In German, like in Bantu, it appears in a position typical of an object (McIntyre 2006; McFadden 2004), while in English, it appears in a position typical of a subject (Cowper 1989; Belvin and den Dikken 1997; Ritter and Rosen 1997), like in Japanese and Korean.

The peripheral Appl argued for in this chapter can account for this cross-linguistic positional variation as well as for the semantic commonality among affectee arguments. In Japanese-type languages, an affectee argument is introduced by peripheral Appl, which is the highest argument-introducing head under T. In Bantu-type languages, it is introduced by high Appl, which merges below Voice. However, the semantics of the arguments is the same, as Appl introduces non-agentive affectee arguments.

It should be noted that under the current proposal, the affectee arguments in Japanese and Korean are not cross-linguistically peculiar arguments at all, contrary to observations made previously (e.g., Washio 1993). Rather, they are cross-linguistically available applied arguments like those in Bantu.

---

106 See McIntyre (2006) for evidence that a possessor movement type approach does not account for affectee arguments in German.
107 A similar analysis is pursued in McIntyre (2006).
3.7.3 Experiencers as peripheral applied arguments

This section compares the proposed structure for peripheral Appl with Belleti and Rizzi’s (1988) structure for experiencers, concluding that, for some experiencer arguments, a peripheral Appl approach fares better. A peripheral Appl construction like (63a), where a peripheral Appl merges above unaccusative vP, is similar to the experiencer construction proposed by Belleti and Rizzi for verbs like *piacere* ‘please’ in Italian. Like some peripheral applied arguments, an experiencer of *piacere* is dative marked and appears in subject position; in (70b), the experiencer ‘Gianni’ moves to the subject position (the sister of VP under S):

\[(70) a. \quad \text{A Gianni è sempre piaciuta la musica.} \]

\[\begin{array}{l}
\text{Gianni.DAT is always pleased the music} \\
\text{‘Gianni has always liked music’}
\end{array}\]

\[b.\]

\[\begin{array}{l}
S \\
NP Ec \\
VP \\
V' NP Experiencer \\
V \text{piacere} \quad NP \text{Theme}
\end{array}\]

Based on binding evidence in which a dative argument binds a nominative argument but not vice versa, Belleti and Rizzi argued that the dative experiencer merges higher than the nominative theme, which is similar to the hierarchical relation between a peripheral applied argument and the theme object proposed in this chapter. The structure in (70b) differs from the current peripheral Appl proposal in the way dative case is marked and the internal/external argument status of a dative argument. Dative case is argued to be inherent case expressed in a case grid associated with the verb in the lexicon. Under the assumption that inherent case is assigned VP internally, the dative experiencer is a verb-internal argument, not an external argument. Under this view, there is no relation between dative case and hierarchical structure, as pointed out by Cuervo (2003). However, in an applicative theory where a dative argument is introduced by Appl
(Cuervo 2003), the relation naturally falls out. In a peripheral Appl construction like (63a), dative case is inherently assigned by Appl, and the asymmetric c-command relation between the dative applied argument and the nominative theme is a property of Appl (see chapter 1). Importantly, the assumption that inherent case is assigned verb-internally is no longer necessary; rather, a dative applied argument introduced by peripheral Appl is an external argument.

Georgian experiencer constructions provide morphological support for a peripheral Appl analysis (63a) of experiencer constructions. In Georgian, the applicative morpheme that marks a peripheral applied malefactive argument (50) also marks experiencers (71).

(71) Gela-s u-qvar-s Nino
    Gela-DAT APPL-love-3PRE.PL Nino.NOM
     ‘Gela loves Nino.’ (Harris 1981)

Like experiencers in Italian and peripheral applied arguments, the dative experiencer and the nominative argument are in an asymmetric c-commanding relation, as evidenced by the binding examples in (72). In Georgian, a dative experiencer binds a subject-oriented reflexive pronoun *tavisi* ‘self’ (72a), unlike a nominative argument (72b) (McGinnis 1997, 1998). This suggests that the dative experiencer merges higher than the nominative theme argument.

(72) a. vano-s tavisi tav-i u-qvar-s
    Vano-DAT self-NOM APPL-love-PRES
     ‘Vano loves/has convinced himself.’

b. *vano tavisi tav-s u-qvar-s
    Vano-NOM self-DAT APPL-love-PRES
     ‘Himself loves/has convinced Vano.’ (McGinnis 1997)

Importantly, like peripheral applied arguments, experiencers in Georgian show subject-like properties. McGinnis (1997) points out that Georgian experiencers show number agreement with the verb, as in (73), suggesting that they occupy the subject position, the specifier of TP:

108 It is not always the case that an applied argument must be dative marked. In Bantu, for example, it can be marked in the same way as a theme object, which is not dative (see Baker 1988; Marantz 1993 for data). Furthermore, an affectee can be nominative case marked, as shown in Korean and Japanese.
The supporting evidence presented in this section indicates that the peripheral Appl approach appears to better account for dative experiencer arguments, as it straightforwardly captures the relation between hierarchical structure and dative case as well as the subject property of experiencers, unlike Belleti and Rizzi’s approach, which requires additional assumptions. Thus, the peripheral applicative approach may be possible for some experiencers.\textsuperscript{109}

\textsuperscript{109} A question can be raised: how does the current analysis capture the differences between an experiencer and an affectee? The most obvious difference would be the complements each takes: unaccusative vP vs.VoiceP in Japanese-type affectee constructions. However, this difference is not found with Georgian malefectives, which always take unaccusative vP. Although interesting, I leave this issue for future research.
Chapter 4
Applicatives in inchoatives

This chapter examines inchoatives, as illustrated in (2a), which are change-of-state verbs used intransitively (Levin 1993). It has long been thought that inchoatives do not have an external argument, unlike passives, which have an implicit external argument. (Manzini 1983; Marantz 1984; Jaeggli 1986; Roeper 1987; Baker, Johnson and Roberts 1989; Levin and Rappaport Hovav 1995; Reinhart 2000; Chierchia 1989, 2004, among many others; see Alexiadou et al. 2005 for a discussion of the relevant evidence). For instance, in passives, an implicit agent can be made explicit by an agent by-phrase or an agent-oriented adverb, such as ‘by Mary’ or ‘on purpose’ in (1). Such phrases are not possible in inchoative (2b); therefore, inchoatives are assumed to lack an external argument:

(1) The door was opened by Mary/on purpose.

(2) a. The door opened.
   b. *The door opened by Mary/on purpose.

However, contrary to this general assumption on the difference between passives and inchoatives, inchoatives in some languages allow PPs that may be related to an external argument role, as illustrated with ‘through an earthquake’ in German (3a) and ‘with the hair dryer’ in Greek (3b). This could indicate that inchoatives, like passives, have an implicit external argument, although not an agent (Alexiadou and Schäfer 2006; Kallulli 2007):

(3) a. die vase zerbrach durch ein erdbeben
    the vase broke through an earthquake
    ‘The vase broke through an earthquake.’ (Schäfer 2008)

    b. Ta mallia mu stegnosan me to pistolaki
    The hair my dried-ACT with the hair dryer
    ‘*My hair dried with the hair dryer.’ (Alexiadou and Schäfer 2006)

In fact, Alexiadou and Schäfer (2006) argue that these PPs in inchoatives indicate the presence of an implicit external argument and are licensed by a defective Voice head whose specifier is not
projected. The Voice head is argued to be non-agents and bear the feature [-AG]. Additionally, in the corresponding transitives of inchoatives, the instrument DP in those PPs may occupy an external argument position, a specifier of the same VoiceP that licenses those PPs in inchoatives (Alexiadou and Schäfer 2006). That is, there is one single Voice head whose feature is [-AG], but the Voice head shows variation with respect to the availability of its specifier. A defective Voice licenses an instrument PP in inchoatives, while a non-defective one licenses an instrument argument in transitives.

In chapter 2 and chapter 3, it was shown that peripheral and high Appl are, like Voice, external argument introducing heads. On the other hand, the Appl heads are semantically different from Voice in that they are non-agents. Thus, it seems that Appl is similar to Voice [-AG], which has been proposed to be related to PPs in inchoatives. It may be that in inchoatives Appl is associated with those types of PPs that are related to an external argument role. Importantly, however, Appl and Voice [-AG] may not be one and the same. For example, Appl could be syntactically different from Voice [-AG], merging in a different position.

In this chapter, I argue that this is indeed the case, presenting evidence from the distribution of PPs in Korean inchoatives as compared to those in Greek and German inchoatives. I show that in Korean inchoatives, like (4b), an instrument PP modifies ApplP, as illustrated in (4a), and a cause PP modifies $v_{\text{CAUSEP}}$.\(^{110}\) Importantly, Appl is defective without its specifier. While Appl is non-agentive like Voice [-AG], it is different from Voice [-AG] (as well as Voice [+AG]) syntactically. It merges in a different syntactic position from Voice: it merges below Voice, as shown in (5). That is, Appl in Korean I-morpheme inchoatives is high Appl. High Appl in (4a) is indistinguishable from peripheral Appl, as there is no VoiceP. However, I show that Appl in I inchoatives is not as high as Voice. The Appl in (4a) is a high applicative, not a

---

\(^{110}\) There is a question of whether all PPs are related to Appls. The Appl in the proposed account is high Appl, which denotes a relation between an entity and an event. Thus, PPs that may be in this type of semantic relation would be related to the Appl. Some PPs may be in the semantic relation that low Appl denotes, a relation between entities. However, there are other different types of PPs, e.g., directional PPs, which specify a direction and an endpoint for the motion. It is questionable whether these PPs can be analyzed in terms of Appl. I leave this issue for future research.
peripheral applicative, as Appl in I inchoatives is always defective, though it is non-defective in other configurations where another argument-introducing head merges above high Appl (e.g., morphological causatives or adversity passives) (see section 4.3.1; also chapter 2 and 3). In other words, high Appl in Korean can be non-defective only if an argument-introducing head merges above it. When there is no head above it, high Appl is defective as in I inchoatives like (4a):

(4) a. \[
\begin{array}{c}
\text{instrument PP} \rightarrow \text{High ApplP} \\
\text{vP} \\
\text{Appl [-AG]} \\
\text{haswukwu mak-} \quad \text{‘drainage block’}
\end{array}
\]

b. haswukwu-ka mak-hi-ess-ta
\quad \text{drainage-NOM} \quad \text{block-I-PAST-DEC}
\quad \text{‘The drainage blocked.’}

(5) \[
\begin{array}{c}
\text{VoiceP} \\
\text{DP} \\
\text{Voice [+AG/-AG]} \\
\text{High ApplP} \\
\text{Appl [-AG]} \\
\text{vP}
\end{array}
\]

Based on this, I argue that two syntactically and semantically distinct external argument introducing heads, Voice and Appl, are necessary in a theory of argument structure, rather than one external argument introducing head that appears in the same position with different features, like Voice [+AG/-AG].

This result supports a configurational approach (Hale and Keyser 1993; Borer 1993, 2005) rather than a featural approach (Folli and Harley 2005; Kallulli 2007) to the distinction

---

111 Further evidence for this comes from morphology: the morpheme -I is realized under high Appl (see section 4.3.1).
between Voice and Appl. Briefly, under the featural approach, it is predicted that the two heads are not distinguished syntactically, only semantically. The configurational approach, on the other hand, predicts that the two heads appear in different syntactic configurations, as the semantics of their arguments are not the same. This chapter shows that the two heads are indeed syntactically different. It also shows, however, that features are crucial, as they are needed to distinguish the two heads when they take the same complement, unaccusative vP. Refining the available syntactic configuration in current argument structure theory, I argue that the relevant configuration can be expressed by two syntactically different heads, Voice and Appl, with different semantic features.

I show that Appl may not bear possessive semantics, contrary to Schäfer (2008), and continue to argue that it is non-agentive bearing the feature [-AG].

4.1 Prepositional phrases in inchoatives and external arguments

4.1.1 Distribution of PPs in inchoatives

This section compares the distribution of PPs in Korean inchoatives with those of Greek and German inchoatives. This comparison shows that a single syntactic head with one head in the same syntactic position with feature variation (i.e., Voice [+AG/-AG]) cannot account for the distribution of PPs in Korean.

Korean has two types of inchoatives distinguished by their verbal morphology (K. Kim 2009), as illustrated in (6):

(6) a. haswukwu-ka mak-hi-ess-ta
    drainage-NOM block- I-PAST-DEC
    ‘The drainage blocked.’

    b. elum-i nok-(*-i)-ass-ta
    ice-NOM melt-(*)-PAST-DEC
    ‘The ice melted.’
The inchoative in (6a) is marked by the -I morpheme (S. Lee 1986; K. Lee 1987; J. Park 1994; Yeon 2003; H. Kim 2005), which marks morphological causatives and adversity passives (see chapter 2 and 3). The other type of inchoative, (6b), is not marked by a specific morpheme and cannot take the -I morpheme, as indicated in (6b).\(^{112}\) Following K. Kim (2009), throughout this thesis, the type of inchoative marked with the morpheme -I is called an I inchoative, while the type of inchoative without this marking is called a zero inchoative. These two inchoatives interact with various adjunct phrases, showing both similarities and differences. Three different types of adjunct phrases are examined: agent phrases, cause phrases, and instrument phrases.\(^ {113}\)

With regard to the first two adjunct phrases, the two types of inchoatives show the same pattern. As illustrated in (7), neither type of inchoative allows the agent phrase *Inho-eyuyhay ‘by Inho.’ However, they do co-occur with cause phrases, as shown in (8), with the cause phrases *hongswu-ey ‘by flood’ in (8a) and *hayspyeth-ey ‘by the sunshine’ in (8b):

(7) a. *haswukwu-ka Inho-eyuyhay mak-hi-ess-ta
    drainage-NOM Inho-BY block-I-PAST-DEC
    ‘The drainage blocked by Inho.’

    b. *elum-i Inho-eyuyhay nok-ass-ta
    ice-NOM Inho-BY melt-PAST-DEC
    ‘The ice melted by Inho.’

\(^{112}\) In Korean, there is another class of inchoative marked with *ci- (Yeon 2003; S. Park 2005); for example, *kkay-ci- ‘break’, *tele-ci- ‘fall’, *neme-ci- ‘fall down’, *ppaci- ‘fall into’, and so on.

\(^{113}\) Both types of inchoatives allow the phrase ‘by itself,’ as do the German and Greek inchoatives discussed later in the section. In German and Greek, the compatibility of inchoatives with ‘by itself” is argued to indicate that inchoatives are causative (Alexiadou and Schäfer 2006): the phrase modifies \(v_{\text{CAUSE}}\) P. In Korean, this phrase can also appear in inchoatives; however, it cannot appear in inchoatives with a cause phrase (i) (K. Kim 2009). This seems to support Pylkkänen (2002), who argues that ‘by itself” indicates the absence of a cause. It may be the case that Korean inchoatives are ambiguous between a causative and non-causative reading. When an inchoative is non-causative, ‘by itself” is allowed. I assume that in the non-causative reading, there is no \(v_{\text{CAUSE}}\) head projected, and ‘by itself” modifies a non-causative event phrase, \(vP\).

(i) a. *haswukwu-ka hongswu-ey cecello mak-hi-ess-ta
    drainage-NOM flood-BY by itself block-I-PAST-DEC
    ‘The drainage blocked by flood by itself.’

    b. *elum-i hayspyeth-ey cecello nok-ass-ta
    ice-NOM sunshine-BY by itself melt-PAST-DEC
    ‘The ice melted by the sunshine by itself.’
Interestingly, the two types of inchoatives show different patterns with respect to instrument phrases. The I-inchoatives are compatible with an instrument phrase, as shown in (9).\(^{114}\) Zero inchoatives, on the other hand, do not allow an instrument phrase, as shown in (10):

(9) a. haswukwu-ka ssuleyki-lo mak-hi-ess-ta
    drainage-NOM garbage-WITH block-I-PAST-DEC
    ‘The drainage blocked with garbage.’

b. ttang-i tol-lo pa-i-ess-ta
    ground-NOM stone-WITH dig-I-PAST-DEC
    ‘The ground dug with a stone.’

c. path-i mwul-lo cam-ki-ess-ta
    field-NOM water-WITH fill-I-PAST-DEC
    ‘The field was filled with water.’

d. san-i nwun-ulo tep-i-ess-ta
    mountain-NOM snow-WITH cover-I-PAST-DEC
    ‘The mountain was covered with snow.’

---

114 Some verbs that appear in I-inchoatives are ambiguous between inchoative and passive meanings (without an adversity meaning), as both structures are marked by the same morpheme -I. For example, an agent phrase is grammatical with (9a) when the sentence has a passive (i.e., agitative) meaning. Verbs like *yel-* ‘open’ and *tat-* ‘close’ also show ambiguity. However, as shown in K. Kim (2009), an instrument phrase that is compatible with some I-inchoatives is not compatible with an agent *by*-phrase, as illustrated in (i) with the example (9a). (i) is ungrammatical when the agent *by*-phrase ‘by Inho’ appears. That is, I-inchoatives with some instrument phrases cannot co-occur with an agent phrase. Based on this fact, it is concluded that an ambiguous sentence is inchoative when it is interpreted as non-agitative and passive when it is interpreted as agitative (K. Kim 2009). From this contrast, I assume that Korean passives are necessarily agitative, unlike inchoatives.

(i) haswukwu-ka ssuleyki-lo (*Inho-eyuyhyay) mak-hi-ess-ta
    drainage-NOM garbage-WITH Inho-BY block-I-PAST-DEC
    ‘The drainage blocked with garbage (*by Inho).’
Table 1 summarizes the distribution of PPs in the two types of inchoatives:

Table 1 The distribution of PPs in two types of Korean inchoatives

<table>
<thead>
<tr>
<th>A</th>
<th>Agent phrase</th>
<th>Cause phrase</th>
<th>Instrument phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>zero</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

The difference between the two inchoatives is that an instrument PP is allowed only in I inchoatives, not in zero inchoatives. An agent phrase is not allowed in either type of inchoative, and both types allow cause phrases.

Inchoatives in other languages also interact with different types of PPs. For example, German and Greek also have two types of inchoatives distinguished by verbal morphology. Like Korean, German has marked and unmarked inchoatives (11) (Schäfer 2008), which correspond to I and zero inchoatives respectively in terms of morphological marking. A reflexive pronoun
sich appears in marked inchoatives (11b), but is absent in unmarked ones (11a). In Greek, one type of inchoative is marked with an active morpheme on the verb (12a), while the other type is marked with a non-active morpheme on the verb (12b) (Alexiadou and Schäfer 2006; Alexiadou et al. 2006):

(11) a. Die vase zerbrach (*sich)
   the vase broke REFL
   ‘The vase broke.’

   b. die tür öffnete *(sich)
   the door opened REFL
   ‘The door opened.’

   (Schäfer 2008)

(12) a. Ta mallia mu stegnosan
   The hair my dried-ACT
   ‘My hair dried.’

   b. to pani skistike
   the cloth tore-NACT
   ‘The clothes tore.’

Unlike Korean inchoatives, the two types of inchoatives in German and Greek do not show any differences with respect to the distribution of PPs. In German, neither marked nor unmarked inchoatives allow an agent or an instrument PP, but both allow a causer PP (13). This distribution of PPs in German inchoatives is the same as that of Korean zero inchoatives:

(13) a. die vase zerbrach *von Peter/*mit dem hammer/durch ein erdbeben
   the vase broke by Peter/ with the hammer/through an earthquake
   ‘The vase broke by Peter/with the hammer/through an earthquake.’

   b. die tür öffnete sich *von Peter/*mit dem hammer/durch einen windstoß
   the door opened REFL by Peter/ with the hammer/from a blast of wind
   ‘The door opened by Peter/with the hammer/from a blast of wind.’

In Greek, on the other hand, both types of inchoatives show the same distribution of the PPs as that of Korean I inchoatives. They do not allow an agent PP (14), but allow a cause (15) and an instrument PP (16):
(14) a. *Ta mallia mu stegnosan apo tin komotria
The hair my dried-ACT by the hairdresser
‘*My hair dried by the hairdresser.’

b. *to hirografo katastrafike apo tin ipalilo
the manuscript destroyed-NACT by the employee
‘*The manuscript destroyed by the employee.’

(15) a. Ta ruxa stegnosan apo/me ton ilio
The clothes dried-ACT by/with the sun
‘*The clothes dried by the sun.’

b. to hirografo katastrafike apo/me tin pirkagia
the manuscript destroyed-NACT by/with the fire
‘The manuscript got destroyed by the fire.’

(16) a. Ta mallia mu stegnosan me to pistolaki
The hair my dried-ACT with the hair dryer
‘*My hair dried with the hair dryer.’

b. to pani skistike me to psalidi
the cloth tore-NACT with the scissors
‘*The clothes tore with the scissors.’

The comparison of the inchoatives with respect to various types PPs in the three languages is summarized in Table 2:

<table>
<thead>
<tr>
<th></th>
<th>Agent PP</th>
<th>Cause PP</th>
<th>Instrument PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean: Zero inchoative</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>German</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Korean: I inchoative</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Greek</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The common property of inchoatives among the languages is that they are incompatible with an agent phrase and compatible with a cause phrase. The difference emerges in whether the inchoatives allow an instrument phrase: Greek and Korean I inchoatives do, but German and Korean zero inchoatives do not.
4.2 PPs in inchoatives

This section presents two analyses of PPs with change of state verbs and discusses why they cannot account for the distribution of instrument PPs in Korean inchoatives. Although the analyses are not the same, they are similar in that they both argue that feature variation within a single syntactic head (e.g., Voice [+AG/-AG]) can account for the presence of different semantic types of arguments. I argue that the featural approach cannot explain the difference between I and zero inchoatives with respect to instrument PPs. Moreover, it is shown that an event head \( v_{\text{CAUSE}} \) cannot capture the presence of an instrument PP in I inchoatives and the absence of it in zero inchoatives. Thus, neither Voice nor \( v_{\text{CAUSE}} \) can capture the contrast between I and zero inchoatives with respect to instrument PPs.\(^{115}\)

As both types of inchoatives in German and Greek show the same pattern with respect to instrument PPs, only one type from each language is discussed in the following section.

4.2.1 PPs are related to Voice and \( v_{\text{CAUSE}} \)

In their cross-linguistic studies on inchoatives, Alexiadou and Schäfer (2006) and Alexiadou et al. (2006) propose that change of state verbs are composed of Voice and \( v_{\text{CAUSE}} \), as presented in (17). Voice introduces an external argument (Kratzer 1996) and bears features relating to agentivity. Voice can be of two types, depending on its feature: Voice [+AG] and Voice [-AG]. In inchoatives or passives which are both unaccusative, Voice is defective, regardless of its feature, in that it lacks a specifier (e.g., (18b) below). \( v_{\text{CAUSE}} \) introduces a causal relation between a causing event and resultant state denoted by a verbal root and theme.

\[ (17) \ [\text{Voice } [v_{\text{CAUSE}} [\text{root}]]] \]

\(^{115}\) Pylkkänen (2002, 2008) argues that a cause phrase in unaccusatives modifies a \( v_{\text{CAUSE}} \) head. Both I and zero inchoatives in Korean allow a cause phrase, as shown earlier. Under Pylkkänen’s proposal, both types of inchoatives are expected to project a \( v_{\text{CAUSE}} \) head. However, it remains unclear whether an instrument PP in I inchoative can also modify a \( v_{\text{CAUSE}} \) head. If so, the absence of an instrument PP in zero inchoatives remains unexplained. If not, the presence of an instrument PP in I inchoatives remains unexplained.
For inchoatives, it is argued that the structure of change of state verbs (17) can show two variations: no VoiceP projection (18a) and a VoiceP projection whose head bears [-AG] and whose specifier is absent (18b). It is predicted that there is no implicit causer argument in (18a), as there is no VoiceP. Nevertheless, inchoatives can be causative, as indicated by the $v_{\text{CAUSE}}$ head. By contrast, in (18b), an implicit external argument is expected to be present, as the presence of defective Voice [-AG] indicates, and it is interpreted as a causer because of the presence of $v_{\text{CAUSE}}$. In particular, the implicit external argument is non-agentive, as the [-AG] feature on defective Voice indicates:

(18) a. 

```
    v_{\text{CAUSE}}P
       \ \  \     \ 
     v_{\text{CAUSE}} root
```

b. 

```
    VoiceP
       \ \  \     \ 
    Voice [-AG] v_{\text{CAUSE}}P
               \ \  \     \ 
             v_{\text{CAUSE}} root
```

It is argued that an agent cannot appear in either of the inchoative structures in (18), as Voice is either absent (18a) or non-agentive (18b). A cause PP can appear in both cases, as there is $v_{\text{CAUSE}}$ in (18a) and (18b). The difference between (18a) and (18b) hinges on whether they allow an instrument PP: it is disallowed in (18a) where no VoiceP is projected and permitted in (18b), where defective VoiceP is projected. That is, an instrument PP is an implicit external argument that modifies defective VoiceP. In particular, the instrument argument is argued to be an implicit causer, not a pure instrument, as $v_{\text{CAUSE}}$ in (18b) indicates.

According to Alexiadou and Schäfer, Greek inchoatives (19a) allow an instrument causer only, while German inchoatives (19b) do not allow an instrument causer:

(19) a. Ta mallia mu stegnosan me to pistolaki
     The hair my dried-ACT with the hair dryer
     ‘*My hair dried with the hair dryer.’
b. die vase zerbrach *mit dem hammer
the vase broke with the hammer
‘The vase broke with the hammer.’

Following Kamp and Rossdeutscher (1994), it is assumed that instrument causers are instruments that can be conceived as acting on their own, once the agent has applied or introduced them, as exemplified with ‘with chamomile’ in the following German example:

(20) Der arzt heilte den patienten mit kamille
the doctor cured the patient with chamomile
‘The doctor cured the patient with chamomile.’ (Alexiadou and Schäfer 2006)

The instrument *kamille ‘chamomile’ in (20) is an instrument causer that acts on its own after it is applied by the agent *der arzt ‘the doctor.’ On the other hand, pure instruments are conceived as strictly auxiliary to the action of the agent by whom they are being employed, as shown in German (21):

(21) der arzt heilte den patienten mit dem skalpell
the doctor cured the patient with his scalpel
‘The doctor cured the patient with his scalpel.’ (Alexiadou and Schäfer 2006)

In (21), the instrument *dem skalpell ‘the scalpel’ is used by the agent *der arzt ‘the doctor,’ but it cannot act on its own. With respect to the syntactic properties of each type of instrument, it is argued that instrument causers can appear in the subject position but pure instruments cannot, as exemplified with German (22):

(22) die kamille /*skalpell heilte den patienten
the chamomile/*scalpel cured the patient
‘The chamomile/*scalpel cured the patient.’ (Alexiadou and Schäfer 2006)

In (22), the instrument causer ‘the chamomile’ appears in subject position. Conversely, the pure instrument ‘the scalpel’ cannot appear in subject position; pure instruments can only appear in the adjunct position with an agent that appears in subject position, as shown in (21). This fact is taken to indicate that pure instruments in the adjunct position are licensed by non-defective Voice [+AG], which introduces an agent. On the other hand, an instrument causer in subject position (20) is argued to be introduced by non-defective Voice [-AG], and it receives a causer
interpretation through $v_{\text{cause}}$. Presumably, in transitives, the non-defective Voice [-AG] is closest to T, and thus the argument of the non-defective Voice [-AG], i.e., an instrument causer, appears in the subject position.

In the German inchoative (19b), the PP is associated with a pure instrument role, and thus it cannot appear in inchoatives that lack Voice [+AG]. The instrument phrase cannot appear in the subject position in a corresponding transitive clause (23), as it is not an implicit causer. Hence, no Voice [-AG] would be projected in inchoatives of German, as in the structure (18a).

(23) */? Der hammer zerbrach die Vase
    The hammer broke the vase.

(The hammer broke the vase.) (Alexiadou and Schäfer 2006)

In the Greek inchoative (19a), on the other hand, the PP is associated with an instrument causer role, and it can appear in the subject position in a corresponding transitive, as shown in (24). Therefore, Greek inchoatives are argued to bear the structure in (18b), where defective Voice [-AG] and $v_{\text{cause}}$ are projected.

(24) To pistolaki stegnose ta mallia
    The hair dryer dried the hair
    ‘The hair dryer dried the hair.’ (Alexiadou and Schäfer 2006)

4.2.2 Why no defective Voice [-AG] in Korean inchoatives?

Korean inchoatives cannot be accounted for under the proposal of Alexiadou and Schäfer (2006) and Alexiadou et al. (2006). The contrast between I and zero inchoatives is whether an instrument phrase is available or not, being available in I inchoatives but not in zero inchoatives. The relevant data are repeated below for ease of explanation:

---

116 It is predicted that a causer phrase in German inchoatives cannot appear in the subject position, but there are no data provided. As shown in section 4.4.2, marked inchoatives in German project a Voice head (61b). However, it is argued that the Voice head is expletive, and thus does not bear any semantics, unlike Voice [-AG] (Schäfer 2008). Thus, (61b) correctly captures the fact that marked inchoatives do not allow instrument PP.
(25) haswukwu-ka ssuleyki-lo mak-hi-ess-ta
drainage-NOM garbage-WITH block-I-PAST-DEC
‘The drainage blocked with garbage.’

(26) *elum-i motakpwul-lo nok-ass-ta
ice-NOM bonfire-WITH melt-PAST-DEC
‘The ice melted with the bonfire.’

Since I inchoatives allow a cause PP, as Greek inchoatives do (see Table 1), I inchoatives are expected to project \( v_{\text{CAUSE}} \). I inchoatives also allow an instrument PP, as in Greek, which suggests that the instrument may be an instrument causer. Given the distribution of the PPs, I inchoatives are predicted to have the structure in (27). Importantly, defective VoiceP in (27) licenses the instrument PPs:

(27) \[
\begin{array}{c}
\text{VoiceP} \\
\text{Voice [-AG]} \\
\text{v}_{\text{CAUSE}} \text{P} \\
\text{v}_{\text{CAUSE}} \text{ root}
\end{array}
\]

In zero inchoatives, on the other hand, an instrument phrase cannot appear, just like in German inchoatives. An instrument phrase cannot appear, as it may be a pure instrument licensed by non-defective Voice [+AG], like in German inchoatives. Moreover, zero inchoatives bear \( v_{\text{CAUSE}} \), as they allow a cause PP (see Table 1). Thus, the following structure (28) is expected for zero inchoatives:

(28) \[
\begin{array}{c}
\text{v}_{\text{CAUSE}} \text{P} \\
\text{v}_{\text{CAUSE}} \text{ root}
\end{array}
\]

Contrary to the prediction of Alexiadou and Schäfer, however, an instrument phrase in I inchoatives may not be an instrument causer licensed by defective Voice [-AG]. If it were, the instrument phrase should be able to appear in the subject position in transitives, which is not the case (29):

\[\text{(29) This example also suggests that in Korean, non-defective Appl, instead of non-defective Voice [-AG], is not possible in transitives. See the discussion in section 4.3.1.}\]
The ungrammaticality of (29) indicates that the head X that introduces an instrument PP in I inchoatives may not be as high as Voice head, not being closest to T; therefore, the instrument phrase cannot be in the subject position. One might argue that in I inchoatives, defective Voice [-AG] licenses an instrument PP. The ungrammaticality of (29) may come from the fact that Voice [-AG] cannot be non-defective in Korean. However, this account does not provide a good reason why Voice [-AG] should always be defective in I inchoatives. On the other hand, if X is not high enough to be closest to T, unlike Voice [-AG], then this structural property may be the reason that X should always remain defective in inchoatives. In other words, X may not be able to appear on its own. Thus, the argument of X cannot be a subject, as shown in (29). I show that in fact this is the case (see section 4.3.1) and conclude that defective Voice [-AG] cannot capture the presence of an instrument PP in I inchoatives.

Voice [+AG] cannot account for the presence of an instrument PP in I inchoatives either. Under Alexiadou and Schäfer’s proposal, this head is argued to allow pure instruments as adjuncts in transitive verbs and disallow them in inchoatives. However, pure instruments are permitted in Korean I inchoatives, which should not be possible under this account. \( v_{\text{cause}} \) cannot be the relevant head that licenses an instrument PP either. Given the presence of a cause phrase in both zero and I inchoatives, \( v_{\text{cause}} \) is predicted to be present in both types of inchoatives, as in (27) and (28). If an instrument phrase in inchoatives is thematically licensed by \( v_{\text{cause}} \) (i.e., it is interpreted as an instrument causer), as argued in Alexiadou and Schäfer, it cannot be the relevant head that licenses an instrument PP either:

\[
\text{(33) a. } \text{*hongswu-ka haswuku-lul mak-ess-ta} \\
\text{flood-NOM drainage-ACC block-PAST-DEC} \\
\text{‘The drainage blocked by flood.’}
\]

\[
\text{b. } \text{*hayspyeth-i elum-lul nok-i-ass-ta} \\
\text{sunshine-NOM ice-ACC melt-I-PAST-DEC} \\
\text{‘The ice melted by the sunshine.’}
\]

This fact, together with the fact that an instrument argument is not allowed in subject position, may suggest that a non-human argument (but not necessarily a non-agent argument; see adversity passives in chapter 3) is not allowed in subject position in Korean.
remains unclear why \( \nu_{\text{CAUSE}} \) does not allow an instrument phrase in zero inchoatives but allows it in I inchoatives.

As a consequence, a syntactic head that is distinct from both Voice and \( \nu_{\text{CAUSE}} \) is necessary to explain the presence of the instrument phrase in I inchoatives and capture the contrast between the two types of inchoatives. Importantly, the head in question must not be as high as Voice, as an instrument argument in Korean cannot appear in the subject position. Also, note that the two-way feature distinction \([+/- \text{ AG}]\) on the same Voice head cannot account for the fact that instrument PPs are allowed in I inchoatives and disallowed in zero inchoatives.

### 4.2.3 Various features on Voice and PPs

Kallulli (2007) proposes that different feature combinations on \( \nu \) can account for the differences in the distribution of PPs between passives and inchoatives. Some features proposed in Kallulli that are relevant to the present discussion are presented in (30). For Kallulli, \( \nu \) is similar to Voice in that it introduces an external argument bearing a feature relevant to agentivity. I use Voice instead of \( \nu \) throughout this chapter to avoid any potential confusion.

\[(30)\]

\begin{enumerate}
\item \([+\text{activity}]\) (actor-initiated; i.e., activity verbs)
\item \([+\text{cause}]\) (change-of-state verbs)
\item \([+\text{act}, +\text{cause}]\) (actor-initiated caused change of state)
\item \([+\text{external argument}]\), which has the effect of preventing an overt DP from being merged in Spec of VoiceP.
\item \([+\text{non-intent(ional)}]\)
\end{enumerate}

The combination of features in (30) may capture the distribution of PPs in inchoatives, as predicted in (31). Voice in inchoatives is always \([-\text{external argument}]\) (i.e., is defective), as inchoatives are unaccusative. An agent is intentional; thus, a Voice that licenses an agent by-phrase (31a) bears a \([-\text{non-intent}]\) feature. Both cause and instrument phrases are non-intentional, as indicated by the feature \([+\text{non-intent}]\) on Voice (31b, c), but they are causative, with the corresponding feature \([+\text{cause}]\) on Voice:
(31) Types of PPs
   a. an agent by-phrase in passives: Voice [-non-intent, -external argument]
   b. a cause phrase in inchoatives: Voice [+non-intent, +cause, -external argument]
   c. an instrument phrase in inchoatives: Voice [+non-intent, +cause, -external argument]

The various feature combinations on Voice presented in (31) do not seem to capture the contrast between zero and I inchoatives. Both types of inchoatives are predicted to have Voice with [+non-intent, +cause, -external argument] features, as they allow a cause phrase but do not allow an agent by-phrase. Both are unaccusatives, and thus bear the feature [-external argument]. Since both inchoatives have the same featural makeup, it is predicted that both would pattern the same with respect to an instrument phrase, which they do not. That is, their featural makeup cannot explain why instrument PPs are permitted in I inchoatives but not in zero inchoatives. This leads to the same conclusion drawn in the previous section: Voice cannot explain the presence of an instrument PPs in I inchoatives, no matter what features are attributed to it. Instrument PPs in I inchoatives must therefore be licensed by a head other than Voice.

4.3 Instrument PPs and defective Appl

In this section, I argue that instrument PPs in I inchoatives modify ApplP. In particular, I argue that the Appl head is defective, as it lacks a specifier and it does not have case-assigning ability. However, it bears a certain semantics (i.e., [-AG]), like a defective Voice head in passives that bears agentivity (see Embick 1997, 1998 for details).

I show that defective Appl in I inchoatives is of the high Appl type. It is always defective in inchoatives, as it cannot appear on its own. This explains why an instrument in I inchoatives cannot appear in the subject position. In order to be non-defective, high Appl needs an argument-introducing head above it (as in morphological casuatives or adversity passives). The argument of a head above high Appl always moves to the subject position.

4.3.1 Defective Appl in I inchoatives

Appl has been proposed to introduce an instrument argument (Pylkkänen 2008) (see chapter 1), and there is cross-linguistic evidence that an instrument is introduced by an applicative
morpheme (e.g., Peterson 2007). For example, consider the sentence (32a) from Chichewa, where the instrument applied argument ‘a knife’ is introduced by the applicative morpheme -ir.

In the Niuean sentence (32b), the applicative morpheme aki introduces an instrumental applied argument ‘the knife’:

(32) a. Mavuto a-na-umb-ir-a mpeni mtsuko
    Mavuto SP-PAST-mould-APPL-ASP knife waterpot
    ‘Mavuto moulded the waterpot with a knife’

    b. Kua hele aki tuai e Sione e titipi haana e falaoa.
    PERF cut INSTR PERF ERG.P Sione ABS.C knife 3.SG.GEN ABS.C bread
    ‘Sione has cut the bread with his knife.’ (Gould et al. 2009)

There is evidence from Korean that inchoatives involve Appl. Recall that, as shown in chapters 2 and 3, the morpheme -I appears in morphological causatives and adversity passives. The relevant examples are repeated below:

(33) a. emma-ka ai-eykey chayk-lul ilk-hi-ess-ta
    mother-NOM child-DAT book-ACC read-I-PAST-DEC
    ‘Mother had\(\text{caus}\) the child read the book.’

    b. Swuni-ka Minswu-eykey ton-lul ppay-ki-ess-ta
    Suni-NOM Minsu-DAT money-ACC take away-I-PAST-DEC
    ‘Suni\(1\) had\(\text{exp}\) Minsu take away (her\(_1\)) money.’

In chapter 2, I argued that morphological causatives take high ApplP as a complement, and in chapter 3, I argued that adversity passives also take high ApplP as a complement. Given these analyses, I assume that causatives and passives share the same structure in that they take high ApplP as their complement, and the morpheme -I is realized under high Appl, as represented in (34) (irrelevant details are omitted). I argue that XP in morphological causatives is VoiceP (Chapter 2) and in adversity passives it is PeripheralApplP (Chapter 3):
Assuming Distributed Morphology (Halle and Marantz 1993, 1994), in which shared morphology in various syntactic configurations indicates a common syntactic property among the configurations (see chapter 1 for details), the fact that the morpheme -I also appears in inchoatives suggests that it is sensitive to a syntactic property shared by the structure in (34) and inchoatives. I propose that this syntactic property is high Appl. The facts that an instrument can be introduced by Appl and that Korean I-inchoatives have high Appl show that instrument PPs in I inchoatives modify high ApplP. Zero inchoatives lack high ApplP, as they do not allow instrument PPs.119

Unlike Appl in morphological causatives (33a), adversity passives (33b) and instrumental applicative constructions (32), however, high Appl in I inchoatives is defective, lacking a specifier, just like defective Voice in passives (Embick 2004) or defective Appl in Spanish ethical dative constructions (Cuervo 2003). In other words, an overt DP argument that corresponds to an instrument cannot appear in inchoatives. In the I inchoative in (35), an instrument is marked with the postposition -(u)lo, which marks instruments in Korean. This indicates that the instrument DP in the PP may not be realized in the specifier of high ApplP, as it is a DP, not a PP, that occupies the specifier of high ApplP (see chapter 1). Note that this morphological marking is different from the marking on applied arguments in morphological causatives and adversity passives (33), whose high Appl is not defective; these applied arguments are marked with dative case, -eykey for a human and -ey for a non-human. Regardless of the status of a dative argument as human or non-human, it is ungrammatical to mark the applied arguments in morphological causatives (36a) and adversity passives (36b) with an

---

119 The lack of Appl in zero inchoatives also accounts for their lack of the morpheme -I.
instrument postposition. The fact that instruments in I inchoatives cannot be marked with dative case (35) suggests that high Appl in I inchoatives is defective because of its lack of case-assigning ability too. Although high Appl in I inchoatives is defective, it licenses semantics like defective Voice or defective Appl in Spanish: it indicates that the argument related to the defective Appl is non-agentive, e.g., instrumental.

(35) haswukwu-ka ssuleyki-lo/-*ey mak-hi-ess-ta
    drainage-NOM garbage-with/-DAT block-I-PAST-DEC
   ‘The drainage blocked with garbage.’

(36) a. *emma-ka ai/inhyung-(u)lo os-lul ip-hi-ess-ta
    mother-NOM child/doll-INST clothes-ACC wear-I-PAST-DEC
   ‘Mother had the child/the doll wear the clothes.’

b. *Swuni-ka Minswu-lo ton-lul ppass-ki-ess-ta
    Suni-NOM Minsu-INST money-ACC take away-I-PAST-DEC
   ‘Suni had Minsu take away her money.’

As noted previously, the instrument argument in the PP of inchoatives cannot appear in subject position, as shown in (29) repeated here as (37), which suggests that an instrument argument cannot be realized in the specifier of VoiceP, even in transitives:

(37) *ssuleyki-ka haswukwu-lul mak-ass-ta
    garbage-NOM drainage-ACC block-PAST-DEC
   ‘The garbage blocked the drainage.’

There are two possible ways for an instrument to be realized in the specifier of non-defective high Appl. The first possibility is shown in (38a): when an instrument merges in the specifier of non-defective high Appl, it could move to subject position (i.e., spec of T) and take nominative case. In the second possibility, shown in (38b), it remains in the specifier of non-defective high Appl and takes dative case, and the theme is marked with nominative case. In both cases shown in (38), the verb is marked with the morpheme -I, as high Appl is present in both. However, merging non-defective high Appl instead of defective high Appl in the inchoatives in (38) yields ungrammatical sentences. The ungrammaticality of (37)-(38) indicates that neither non-defective Voice nor non-defective high Appl is allowed in inchoatives. I conclude that high Appl in I inchoatives is always defective; instruments cannot be realized in the specifier of non-
defective high Appl. On the other hand, high Appl is non-defective in morphological causatives or adversity passives (see (34)). In both cases, there is a higher head above Appl: Voice in morphological causatives and peripheral Appl in adversity passives. It may be the case that in Korean, non-defective high Appl cannot appear on its own without a higher head above it;\(^{120}\) that is, in order to be non-defective, high Appl requires an argument-introducing head above it.

\[(38) a. \text{*ssuleyki-ka haswukwu-lul mak-i-ass-ta} \]
\[
\text{garbage-NOM drainage-ACC block-I-PAST-DEC} \\
\text{‘The garbage blocked the drainage.’}
\]

\[(38) b. \text{*haswukwu-ka ssuleyki-ey mak-i-ass-ta} \]
\[
\text{drainage-NOM garbage-DAT block-I-PAST-DEC} \\
\text{‘The drainage blocked with the garbage.’}
\]

Interestingly, the fact shown in (38a) also suggests that Appl in I inchoatives cannot be peripheral Appl, which is the head closest to T. If Appl in I inchoatives were peripheral, an instrument should be able to appear in subject position, which is not the case. Furthermore, peripheral Appl cannot capture the presence of the morpheme -I in morphological causatives and adversity passives (see (34)).

It should be noted that as high Appl in I inchoatives is defective, its specifier cannot be filled with an operator, unlike in French, as argued in Roberge and Troberg (2009). In French dative affected constructions (39), there is no overt affected DP that can merge in the specifier of high ApplP. It can only appear in a form of a clitic:

\[(39) \text{les invités lui ont mangé tout ce qu’il y avait dans le frigo} \]
\[
\text{The guest DAT.3SG AUX.3PL eaten all that which-it had.3SG in the fridge} \\
\text{‘The guest ate everything in the fridge on him/her.’}
\]

\(^{120}\) This property of high Appl may be language-specific. The Bantu examples (6) and (7) discussed in chapter 3 seems to show that non-defective Appl may appear with unaccusatives.
However, high Appl in French is argued not to be defective, as its specifier is filled with an operator (which binds a referential DP in its complement; see Roberge and Troberg 2009 for details). The presence of an operator in a sentence like (39) is drawn from the possibility of a null operator merging in the specifier of CP. Moreover, the Appl in French does not show defectiveness, meaning that it fully encodes case and the semantics of Appl. In contrast to Appl in French, Appl in Korean I-inchoatives is defective in the sense that it lacks case-assigning ability, as noted earlier (see (35)). Moreover, in Korean, the C domain is not filled with a null operator. Korean has C filled by external merge, namely by a base-generated question particle. Thus, in Korean, it is not natural to draw a parallel between Appl and the C domain, unlike in French. The specifier of high Appl in I inchoatives cannot be occupied by an operator. High Appl in Korean I-inchoatives is defective.

In Roberge and Troberg (2009), the role of Appl as an argument-introducer is taken to be a necessary property. Under this assumption, a defective Appl is impossible. However, this consequence seems to be too strong. Appl is proposed to introduce an argument external to an event, like Voice head (Pykkänen 2008). In passives, even Voice head is defective and does not introduce an argument. Likewise, defective Appl, which lacks the ability to introduce an argument, is possible, as Korean indicates.

The pieces of evidence presented in this section provide support for my proposal that an instrument PP in I inchoatives modifies high ApplP, whose head is defective and thus cannot assign case and lacks a specifier.121

### 4.3.2 The structure of inchoatives

Given the proposal that an instrument PP in inchoatives modifies defective high ApplP, I propose structures (40a) and (40b) for I (41a) and zero inchoatives (41b) respectively:

---

121 I propose that the instrument PP in this case is adjoined to the high ApplP. The instrument PP modifies high ApplP, not vCAUSEP, unlike usual adjuncts. For instance, a cause PP may adjoin to vCAUSEP. Both types of inchoatives have vCAUSE, but only I inchoatives allow an instrument PP. This fact suggests that the instrument PP (at least in Korean) is not directly related to vCAUSEP. See section 4.3.2 for more discussion.
I assume that a cause phrase modifies \( v_{\text{CAUSE}} \)P (Pylkkänen 2002, 2008; Alexiadou and Schäfer 2006). Both structures have a \( v_{\text{CAUSE}} \)P, which captures the acceptability of a cause phrase in both (see Table 1). The presence of defective high Appl in I inchoatives and its absence in zero inchoatives captures the different distribution of instrument phrases in the two types of inchoatives.\(^{122}\)

Importantly, note that \( v_{\text{CAUSE}} \) per se does not guarantee the presence of an instrument phrase in I inchoatives. In zero inchoatives, a \( v_{\text{CAUSE}} \) head is present, but no instrument phrase is allowed. I conclude that a causative event is compatible with an instrument phrase, but it is neither a sufficient nor a necessary condition for the presence of an instrument. This conclusion is in fact what the cross-linguistic data indicate. Consider Table 2, repeated as Table 3 below, which summarizes the distribution of PPs in the languages discussed earlier:

---

\(^{122}\) In Korean, the morpheme -I is a derivational suffix that can attach to a verb or an adjective (Sohn 1999). However, only verbs can appear in I inchoatives. Thus, in (40a), Appl takes a vP complement whose head is a verbalizing head \( v \). Similarly, only verbs can appear in zero inchoatives like (40b). It is questionable whether the \( v \)s in (40) are also eventive. If they were, inchoatives in Korean should be bi-eventive, contrary to the claim in Son (2006). I leave \( v \)s below \( v_{\text{CAUSE}} \) in (40) without any event indication.
In Korean zero and German inchoatives, cause PPs are allowed but instrument phrases are not. In Korean I and Greek inchoatives, on the other hand, both cause PPs and instrument phrases are allowed. It is clear that causativity of inchoatives does not correlate with the presence of an instrument PP, which suggests that it is not always the case that an instrument PP in inchoatives is a causer or modifies a $v_{\text{CAUSE}}P$.

The presence of defective high Appl captures the lack of an external argument and the absence of agentivity in Korean inchoatives, as defective Voice [-AG] does in Greek inchoatives. Moreover, like defective Voice [-AG], the presence of defective high Appl captures the fact that inchoatives have an implicit external argument. Unlike Voice in Greek, however, high Appl in Korean I inchoatives cannot be non-defective, as there is no argument-introducing head above it (see discussion in section 4.3.1). These results yield three syntactic ways to capture the lack of a non-agentive external argument.\textsuperscript{123} Voice (42a) and high Appl (42b) are defective; when either defective Voice [-AG] or defective high Appl [-AG] is present, the clause does not have an external argument. External arguments could also be absent when there is an event head only, without an argument-introducing head, as in (42c). Thus, in addition to the division between passives and inchoatives in terms of defective Voice [+AG] and Voice [-AG], it can be also expressed in terms of defective Voice [+AG] and high Appl [-AG]:\textsuperscript{124}

\begin{equation}
(42) \begin{align*}
\text{a. Voice [-AG]} & \quad \text{b. High Appl [-AG]} & \quad \text{c. } v_X \text{ (e.g., } v_{\text{CAUSE/BE}}) \\
\end{align*}
\end{equation}

\textsuperscript{123} With (42c), an external argument, if any, could be agentive.

\textsuperscript{124} It is questionable whether peripheral Appl can be defective. It may be not in Korean, as adversity passives cannot undergo passivization, for instance. I leave this as an open question.
Moreover, this consequence supports the proposal that Appl, like Voice, is an external argument introducing head. These similarities between Appl and Voice lead us to ask how Voice and Appl are different, which is the topic of the next section.

4.3.3 Two external argument introducing heads

I argued in chapter 2 that high Appl and Voice are different semantically, as indicated in (43) and (44): Voice is specified for agentivity, and high Appl is specified for non-agentivity. In chapter 3, I argued that there is another type of applicative head, namely peripheral Appl as shown in (44), which is different syntactically from high Appl in Pylkkänen (2008). Peripheral Appl can merge above VoiceP, unlike high ApplP in (43). I also showed that peripheral Appl, like high Appl, is non-agentive. This chapter has provided further support for (43) and (44): high Appl is non-agentive like peripheral Appl, but it occupies a syntactic position different from those of both peripheral Appl and Voice.

(43)

```
          VoiceP
            /   \
           /     \nagent    High ApplP
          /
        Voice [+AG]
          /       \non-agent
         /         
Appl [-AG]  vP
```

125 When Voice, peripheral Appl, and high Appl co-occur, there would be three distinct positions external to vP. Voice and high Appl can co-occur, as shown in chapter 2, and peripheral Appl and Voice (as in Japanese possessive and adversity passives) and peripheral Appl and high Appl (as in Korean adversity passives) can co-occur, as shown in chapter 3. In principle, all the heads are predicted to be able to co-occur, although I have not found such an example yet.
The claims presented in (43)-(44) suggest that there are two different external argument introducing heads, Voice and Appls. This raises an important question: Is having two different argument-introducing heads necessary? The same question can be raised for the Appl proposal in Pylkkänen (2002, 2008), which argues for high Appl as an external argument introducing head in addition to Voice. It could be the case that a single syntactic head with different semantic features is able to account for the data. In other words, could Voice and Appls be different flavours of the same head?

In fact, the fact that both Voice and Appls can appear in the same clause (e.g., applicatives in Bantu (chapter 1; e.g., (53) below), causatives in Korean and English (chapter 2; e.g., (52a) below), adversity passives in Japanese (chapter 3; e.g., (52b) below)) is evidence that they are syntactically and semantically different. This section provides morphological evidence that (partly) addresses these issues, some of which has been presented earlier in this thesis. Taking these data as evidence, I argue that Appls and Voice are different heads syntactically as well as semantically, and for this reason they cannot be different flavours of the same head.

The most straightforward evidence is found in Georgian, in which non-agentive and agentive arguments are marked differently morphologically. Consider malefactivates that are marked by an applicative morpheme, as in (45). The presence of an applicative morpheme in structures like (45) indicates that the action described by the verb is non-intentional (Harris 1985): the dative subject is incompatible with an intentional adverb ‘on purpose.’
This morpheme can mark other types of non-agentive arguments, such as an experiencer (46). A contrast between these arguments and an agentive argument in a simple transitive (47) further supports the proposal that this morpheme marks non-agentive arguments. The nominative subject in a simple transitive in (47) is agentive, as indicated by its compatibility with the agent-oriented adverb gangeb ‘on purpose,’ and the verb is not marked by an applicative morpheme:

(47) Nino tavis deida-s gangeb akeb-s
Nino.NOM self’s aunt- DAT on purpose/willingly praise-PRES
‘Nino is praising her aunt on purpose/willingly.’

Similar morphological evidence is found in Bantu languages, such as Kindendeule, a Southern Tanzanian Bantu language. In this language, all verbs can be marked with an applicative morpheme. Importantly, this morpheme can mark all types of semantic roles except agents (Ngonyani 1998), as illustrated in (48). In contrast, in the simple transitive in (49), the nominative subject is agentive and the verb is not marked with the applicative morpheme:

(48) a. yesu a-ki-ba-hwel-e ba-ndu b-ɔha Benefactive
Jesus 1-PAST-2-die-APPL 2-person 2-all
‘Jesus died for all people.’

b. mw-anan a-ki-m-butuk-i mayi-mu-ndu Goal
1-child 1-PAST-1-run-APPL 1.mother-1-person
‘She ran to her mother.’

c. a-ki-n-hyɔm-ɛ Yuda Malefactive/Goal
1-PAST-1-be angry-APPL Judas
‘He was angry with Judas.’
d. a-ki-tyang-i   hi-latu  
1-PAST-walk-APPL  8-shoe  
‘He walked with shoes.’

e. a-ki-hyɔm-ɛ   ma-ligɔ  
1-PAST-be angry-APPL  6-insults  
‘He got angry because of the insults.’

f. Yesu  a-ki-hwel-e   ku-GɔlɔTA  
Jesus  1-PST-die-APPL  15-Golgota  
‘Jesus died at Golgota.’

g. ba-ki-lɔngɛ  mi-haru  
2-PAST-talk-APPL  4-issue  
‘They talked about the issues.’  (Ngonyani 1998)

(49) John a-li-m-pig-a    Mary  kwa  makusudi  
John he-PAST-her-hit-FV   Mary   by  purpose  
‘John hit Mary on purpose.’   (Deo Ngonyani, p.c.).

The contrast between (48) and (49) shows that it is always a non-agentive argument that is marked with the applicative morpheme, never an agent.

A similar conclusion can be drawn from the Spanish unintentional responsibility constructions (50) examined in chapter 3. An applied argument receives a different morphological marker from that of an agent, namely dative case. The dative argument ‘dry cleaner’ is interpreted as unintentionally responsible for the causative event of the trousers getting burnt described by the verb phrase. It is proposed that the dative argument is introduced by Appl, which takes an event as a complement (Cuervo 2003).

(50) Al tintorero   se  le  quemaron  los pantalones de Carolina  
the dry cleaner.DAT  se  CL.DAT burnt.PL  the trousers of Carolina  
‘The dry cleaner (accidentally) burnt Carolina’s trousers.’   (Cuervo 2003)

Recall that an important property of the dative argument is that it is not compatible with an agent-oriented adverb or a purpose phrase (51a), unlike the nominative subject argument in (51b):
The syntactic distinction between an agent and a non-agentive applied argument is particularly evident when both an agent and an applied argument are present at the same time, as in Korean morphological causatives or in Japanese possessive or indirect passives. In Korean (52a), the agent ‘mother’ and the applied argument ‘child’ take different case markings. Similarly, in Japanese (52b), the agent ‘Hanako’ has a different morphological marking from the affectee ‘Taro’:

(52) a. emma-ka  ai-eykey  chayk-lul  ilk-hi-ess-ta
    mother-NOM  child-DAT  book-ACC  read-I-PAST-DEC
    ‘Mother made the child read the book.’

    b. Taroo-ga  Hanako-ni  gohan-o  tabe-rare-ta
    Taro-NOM     Hanako-DAT  meal-ACC  eat-PASS-PAST
    ‘Taro was adversely affected by Hanako’s eating a meal.’

In fact, Pylkkänen’s (2008) applicative structure is in accordance with the distinction between Appl and Voice argued for throughout the thesis, although she does not explicitly discuss this distinction. Pylkkänen proposes that Appl merges below Voice, which introduces an agent, but she makes no particular claim about the semantics of Appl in comparison to Voice. The crucial point relevant to the present discussion is that Appl and Voice are different in syntax as well as semantics, as proposed in (43) and (44). Consider the Bantu examples in (53) below:

(53) a. N-ä̃-lyi-ì-à  m-kà  k-élyá  Chaga
    FOC-1SG-PRES-eat-APPL-FV  1-wife  7-food
    ‘He is eating food for his wife.’
The agents ‘he’ (53a) and ‘Mavuto’ (53b) do not need a separate (argument-changing) morpheme, in contrast to the applied arguments, which are marked on the verb morphologically. Importantly, in Pylkkänen’s analysis, this morphological marking difference between an agent and an applied argument is represented by a different head: agents are introduced by Voice, and non-agentive arguments (i.e., applied arguments) are introduced by Appl.

The morphological distinction presented in this section not only supports the proposal that Appls and Voice are semantically distinct, but also provides evidence that the two heads are syntactically distinct.

The [-AG] feature of Appls raises the issue of how various the meanings of applied arguments (e.g., instrument, locative, or affectee) can be explained under the proposed analysis, given the fact that non-agentive interpretation of an applied argument is very limited. Given that in Korean (as well as in Zulu), there is one morpheme that expresses all possible meanings (e.g., causees, affectees, or instruments), the interpretation may be a constructional meaning. However, this may not be the case in other languages, where each different morpheme marks a different meaning of an applied argument. I leave this issue for future research.

Finally, there is an important issue to be discussed regarding the proposed structures illustrated in (43) and (44). As discussed in footnote 125, the structures suggest that there are three possible argument-introducing positions external to vP: are these three positions always present, as in the cartographic approach (e.g., Rizzi 1997; Cinque 1999), or can they sometimes be absent, as in the non-cartographic approach? I have presented evidence that the argument positions provided by the three heads (peripheral Appl, Voice, and high Appl) are all available (see the end of section 3.6 in chapter 3 for discussion on the difference between high and peripheral Appl). However, I take a moderate stance between the cartographic and non-cartographic approaches: I conclude that the heads do not always need to be projected, but will appear in a certain hierarchical order when they are projected. For example, if peripheral ApplP and high ApplP appear in the same clause (e.g., Korean adversity passives), peripheral ApplP
must be in a structurally higher position than high Appl; however, VoiceP is not projected in this particular clause.

4.3.4 Mapping between theta roles and syntax: configurational and featural approaches

The conclusion that there are two syntactically and semantically different external argument introducing heads provides support for configurational theory (Hale and Keyser 1993; Borer 2005) wherein different thematic roles are predicted to appear in different syntactic configurations. This appears to argue against featural theory, the prevalent theory that one syntactic head with feature variation (e.g., Voice [+/-AG]) can accommodate arguments of various semantic types (Folli and Harley 2005; Kallulli 2007). Although featural theory is valid, as discussed in section 1.5 in chapter 1, I show in this section that it fails to account for certain properties.

According to featural theory, wherein (non-defective) Voice can bear either [+AG] or [–AG], the mapping between a theta role and an argument is predicted as presented in (54). The roles presented in (54) are those relevant to the inchoatives discussed in this chapter:


agent non-agent (e.g., a causer or instrument causer)

126 I use the features [+/-AG] used by Alexiadou and Schäfer (2006) instead of the features [+/-non intent] used by Kallulli.

127 Schäfer (2008) proposes that Voice [–AG] introduces a non-human causer argument, and that Appl also introduces a causer. The difference between the two heads is in whether the argument of each is non-human (Voice [–AG]) or human (Appl). However, Appl can introduce a non-human argument, as evidenced by (53b). It seems superfluous to have two different heads that introduce the same role.

128 An argument introduced by Voice [–AG] that appears with vCAUSE is interpreted as a causer. vCAUSE could be a feature of Voice, e.g., [+cause], as in Kallulli. A vCAUSE head alone, without defective Voice [–AG], can thematically license a causer or instrument causer PP.
Importantly, arguments merged in the specifiers of the heads in (54) are expected to merge in the same syntactic position. That is, it is predicted that both an agent and a causer/instrument causer merge in the same position, namely in the specifier of VoiceP. As Korean inchoatives demonstrate (see section 2), however, a single head with different features is not sufficient to account for instrument PPs in inchoatives. An instrument phrase in I inchoatives cannot appear in the subject position, which suggests that it cannot be introduced by Voice [-AG]. An instrument PP in inchoatives cannot be a pure instrument related to Voice [+AG]; if it were, the instrument PP should not be able to appear in I inchoatives, which is not the case. (54) also predicts that we cannot have both Voice [+AG] and Voice [-AG] (i.e., an agent and an instrument) in the same clause. However, the data presented in this thesis, e.g., Korean morphological causative (52a) or Bantu instrument applicative (53b), show that this prediction is incorrect. I conclude that these data also constitute evidence against the approach in (54).

Under the featural theory, the asymmetric c-commanding relation between the arguments introduced by Voice and (peripheral and high) Appl (see chapter 2 and 3) is unexplained. Furthermore, the featural approach does not account for the fact that there are morphological differences between the arguments discussed in the previous section. This is because, under the featural approach, there is no syntactic difference between the heads (e.g., Voice [+AG/-AG]) that introduce these arguments, and because the relevant arguments are introduced by the same head.

On the other hand, the configurational approach predicts that an agent and a non-agent will appear in different syntactic configurations; for instance, an agent appears in the specifier of a VP that takes another VP complement, while a theme appears in the complement of the lower VP (Hale and Keyser 1993) (see chapter 1 for discussion). Keeping the insight of the configurational approach, the configuration that we need can be expressed in terms of a correspondence between a particular thematic role and a particular head. In addition, as in featural approaches, an argument-introducing head bears a semantic feature relevant to its argument, as illustrated in (55) (see chapter 1 for discussion of why features are still necessary).
An argument that merges in the specifier of Voice [+AG] is an agent, while an argument that merges in the specifier of Appl [-AG] is a non-agent. Furthermore, these heads merge in different syntactic positions (when they co-occur; see footnote 125 and section 3.6 of chapter 3 for some discussion). Appl is merged either above or below Voice, which captures the asymmetric c-commanding relation between the arguments introduced by each head.

Overall, the proposed analyses suggest that the mapping between theta roles and structural positions may be finer than a many-to-one mapping: an agent is mapped to the specifier of VoiceP, but non-agents to the specifiers of Appls. Among the non-agents, some external arguments, affectees or locatives, are mapped to the specifier of peripheral Appl, while others, benefactives or instruments, are mapped to the specifier of high Appl.

4.4 Datives in inchoatives

Recall that in German, a dative DP can optionally appear with both marked and unmarked inchoatives. Interestingly, the DPs in these inchoatives are argued to be introduced by Appl.
Moreover, it is argued that the semantics of Appl is possessive (Schäfer 2008), which is different from the non-agentive semantics of Appl argued for in this thesis. In the subsequent sections, I present Schäfer’s (2008) proposal for Appl, which was built on Cuervo (2003), and discuss why it is untenable for instrument phrases in I inchoatives as well as a wide range of cross-linguistic applicative data discussed in the previous section.

4.4.1 Two readings in German inchoatives

Unlike Korean inchoatives, German and Greek inchoatives allow an optional dative DP with two different readings, namely an affectedness reading and unintentional causer reading. According to Schäfer (2008), this is a very general pattern in many Indo-European languages, such as Spanish (Cuervo 2003), the Balkan languages (Rivero 2009; Kallulli 2005), and Russian (Rivero and Savchenko 2005). In this section, I focus on German examples, due to the availability of relevant German data.

The two readings are not always available with both types of inchoatives; unmarked inchoatives allow both readings, while marked inchoatives allow an affectedness reading only. This is exemplified in (56) for unmarked inchoatives, and in (57) for marked inchoatives:

(56) a. Dem Hans zerbrach die Vase
the.DAT John broke the vase
   (i) ‘The vase broke and John was affected by this.’
   (ii) ‘The vase broke and John caused this (unintentionally).’

129 The two readings in the German examples are absent in Korean inchoatives, since a dative DP is not allowed in inchoatives, as shown in (i):

(i) a. *haswukwu-ka Inho-eykey mak-hi-ess-ta
   draniage-NOM Inho-DAT block-I-PAST-DEC
   *‘Inho was affected by the drainage’s blocking.’
   *‘Inho unintentionally blocked the drainage.’

   b. *elum-i Inho-eykey nok-ass-ta
      ice-NOM Inho-DAT melt-PAST-DEC
      *‘Inho was affected by the ice’s melting.’
      *‘Inho unintentionally melted the ice.’
b. Dem Mann ist das Segel zerrissen
   the.DAT man is the.NOM sail torn
   (i) ‘The sail tore and the man was affected by this.’
   (ii) ‘The sail tore and the man caused this (unintentionally).’

(57) a. Der Maria öffnete sich die Tür
   the.DAT Mary opened REFL the door
   (i) ‘The door opened and Mary was affected by this’
   (ii) *‘Mary unintentionally caused the door to open’

b. Mir hat sich der Wecker verstellt
   me.DAT has REFL the alarm clock shifted
   (i) ‘The alarm clock shifted and I was affected by this’
   (ii) *‘I unintentionally caused the alarm clock to shift’

In the affectedness readings (56i) and (57i), the dative DP is interpreted as an affectee (either malefactive or benefactive) of the event described by the verb. In the unintentional reading (56ii), the dative DP is interpreted as an unintentional causer of the event described by the verb.\(^{130}\) The dative DPs in the affectedness readings are non-intentional, as indicated by the interpretations in the readings. As shown in (58b), as compared to a human nominative subject (58a), a causative dative DP (56ii) is also non-intentional:

(58) a. Der Hans zerbrach die Vase
   the.NOM John broke the vase
   (absichtlich/ aus Versehen/um die Versicherung zukassieren)
   (on purpose/ by mistake/in order to collect the insurance)
   ‘John broke the vase (on purpose/ by mistake/ in order to collect the insurance).’

b. Dem Hans zerbrach die Vase
   the.DAT John broke the vase
   (*absichtlich/ aus Versehen/*um die Versicherung zu kassieren)
   (on purpose/ by mistake/in order to collect the insurance)
   ‘John broke the vase (*on purpose/ by mistake/*in order to collect the insurance).’

---

\(^{130}\) Note that this reading is the same as the unintentional responsibility construction in Spanish (50).
Unlike to the nominative human causer, which can be modified by an agent-oriented adverb (58a), the dative human causer (58b) cannot be modified by the adverb. This contrast indicates that the dative DP is not acting intentionally even though it is human. If a dative DP in an unintentional reading is a non-agentive causer, an inanimate causer might be able to appear in the dative DP position. However, this is not the case, as shown in (59). The natural causers ‘the earthquake’ or ‘the wind’ cannot be dative causers (59); only humans can appear as datives in these inchoatives:

(59) *Dem Erdbeben / dem Wind ist die Vase zerbrochen.
the.DAT earthquake / the.DAT wind is the.NOM vase broken
‘The earthquake/the wind broke the vase’

4.4.2 Possessive Appl

Based on Cuervo (2003), Schäfer (2008) proposes that an affectedness reading is possible when a dative DP is structurally between two events (60b). An unintentional causer reading, on the other hand, is available when a dative DP merges on top of the whole change of state predicate, as illustrated with both an unmarked inchoative (60c) and a marked inchoative (61b). Both types of inchoatives have $v_{\text{CAUSE}}$, as they both allow a causer PP (see Table 2):

(60) Unmarked inchoative

a. Dem Hans zerbrach die Vase
the.DAT John broke the vase
(i) ‘The vase broke and John was affected by this.’
(ii) ‘The vase broke and John caused this (unintentionally).’

---

131 Recall that in chapter 2, I argued that the affected reading of a causee arises from its position between two events, a causing event and a caused event, following Cuervo (2003).

132 I do not discuss how the structure in (61b) blocks an unintentional causer reading. See Schäfer (2008) for details.
b. affectedness reading
c. unintentional causer reading

(61) marked inchoative\textsuperscript{133}

a. Der Maria öffnete sich die Tür
the.DAT Mary opened REFL the door

(i) ‘The door opened and Mary was affected by this.’
(ii) ‘Mary unintentionally caused the door to open.’

b. VoiceP

Importantly, the dative DP in both structures is introduced by Appl, under the assumption that Appl expresses an abstract possessive have-relation between its specifier and its complement (Cuervo 2003; McIntyre 2006).\textsuperscript{134} Building on this assumption, Schäfer argues that Appl semantically encodes a possession relation, as illustrated in (62); Appl indicates that a dative DP possesses or has a change of state of a theme:

\textsuperscript{133} Voice in (61b) is argued to be an expletive that does not introduce an external argument theta role, and the morpheme sich is realized in the specifier of VoiceP. As this is not relevant to the present discussion, I do not discuss this issue.

\textsuperscript{134} It should be noted that Cuervo (2003) does not argue that the semantics of Appl is always possessive, although she mentions that it is possessive in affected applicative constructions like German (60i).
In both types of readings, a dative DP introduced by Appl is interpreted as ‘getting’ the event that Appl takes as a complement. In the affectedness reading, a dative DP gets a resultant state ‘the vase broke’ (60i) or ‘the door opened’ (61i), while in the unintentional causer reading (60ii), it gets the event ‘breaking the vase.’ Following Cuervo (2003), Schäfer argues that the causative interpretation of (60ii) is due to the fact that the possession relation expressed by Appl is evaluated as a relation of causation. In other words, the dative DP is interpreted as ‘having a causative event,’ or the causative event is interpreted as ‘having the dative as its source.’

He further argues that possession semantics can account for the unintentionality of dative DPs in inchoatives: possession semantics predicts that Appl is stative, and stative events are not compatible with intentionality. Therefore, the unintentionality of the dative DPs in inchoatives follows from the stative semantics implied by the possession semantics of Appl. The possession semantics is also argued to be able to account for human restrictions found with a dative DP in inchoatives. It has been observed that an inanimate DP can be an applied argument only if it is in an inalienable possessive relationship with a certain entity in the clause (McIntyre 2006), which is not possible with the semantics of Appl in (62). If an inanimate DP appears in the dative DP position in (62), it is difficult to derive a meaning in which the inanimate DP is in an inalienable possessive relation to an entity undergoing a change of state and, at the same time, can cause this entity to undergo the change of state. In (63), for example, the meanings ‘the chair has two broken legs, and it affects the chair’ and ‘the chair causes its two legs to be broken’ are not possible:

---

135 This is slightly different from what is argued in Cuervo (2003). Cuervo argues that a causative interpretation is due to the presence of two event complements below Appl. In other words, a causative event in her view is not a type of event itself; as it is for Schäfer, but a complex event that is comprised of two events.
(63) Dem Stuhl brachen zwei Beine ab
   the.DAT chair broke two legs off
   ‘Two legs of the chair broke’

That is, the meaning ‘the inanimate DP can cause its subpart to undergo change of state’
is argued to be unavailable with the proposed semantics of Appl in (62); therefore, Appl in (62)
allows only human DPs in its specifier.

Summarizing the core point of Schäfer (2008), the semantics of Appl (62) indicates that a
dative DP ‘possesses’ the change of state of a theme: it expresses a relation between an entity
and an event. However, it does not indicate an inalienable possession relation between two DPs,
i.e., a relation between inanimate entities.\(^{136}\)

### 4.4.3 Possessive Appl vs. non-agentive Appl

The non-agentive semantics of Appl proposed in this thesis and the possession approach to the
semantics of Appl discussed in the previous section have different consequences for theta role
mapping in syntax. Schäfer (2008) discusses the prediction of the possession approach as
illustrated in (64). Each head in (64) introduces an external argument with a different role: In
(64a), Voice introduces an argument with an agent role, while in (64b), Appl introduces an
argument with an unintentional human causer role or an affectee role. The argument of Appl
merges under Voice, if Voice is present (cf. (61)):

(64) a. Voice [+AG]
      |  
      agent

\(^{136}\) In Schäfer (2008), the semantics of the proposed structure is not discussed in terms of the relation with an entity
or an event, i.e., low vs. high Appl. However, based on the arguments and the examples in Schäfer, it is clear that
the issue discussed in this section is the difference between low and high Appl.
b. Appl [possession]  
| unintentional human causer\textsuperscript{137} or affectee

There are some problems with the mapping illustrated in (64). First, the semantics of Appl is too narrow to account for the applicative data discussed throughout this thesis. It may work well with benefactive or malefactive applied arguments with change of state event complements, but it may not with other types of applied arguments with other types of events (e.g., an instrument or a causee with a non-change of state event). The relevant examples are repeated in (65) below. The event relevant to an instrument or a causee applied argument in (65) is not a change of state event but an active event. These arguments are close to performers of the event complement, rather than being in a possessive relation with the event complement:

\begin{center}
\begin{tabular}{lllll}
\textbf{a.} & Mavuto & a-na-umb-ir-a & mpeni & mtsuko & Chichewa \\
 & & SP-PAST-mould-APPL-ASP & knife & waterpot \\
 & ‘Mavuto moulded the waterpot with a knife’ \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{lllll}
\textbf{b.} & Swuni-ka & Minswu-eykey & chayk-lul & ilk-hi-ess-ta & Korean \\
 & Suni-NOM & Minsu-DAT & book-ACC & read-I-PAST-DEC \\
 & ‘Suni had\textsubscript{caus} Minsu read the book.’ \\
\end{tabular}
\end{center}

Even an instrumental applied argument that can appear with a change of state event complement cannot be interpreted as being in a possession relation with the event, as the Korean I inchoative in (66) shows:

\begin{center}
\begin{tabular}{lllll}
\textbf{(66)} & haswukwu-ka & ssuleyki-lo & mak-hi-ess-ta & \\
 & drainage-NOM & garbage-with & block-I-PAST-DEC & \\
 & ‘The drainage blocked with garbage.’ \\
\end{tabular}
\end{center}

At best, the instrument can be understood as a performer of the event, rather than a possessor of the event. Moreover, as noted previously, the instrument phrase is not conditioned by a $v_{\text{CAUSE}}$ head, but is merely compatible with a causative event (see the discussion in section 4.3.2). It is

\textsuperscript{137} Schäfer argues that $v_{\text{CAUSE}}$ thematically licenses a causer. In (64b), a causer interpretation in an unintentional causer reading arises from the presence of $v_{\text{CAUSE}}$, but the argument interpreted as a causer is introduced by Appl merging in the specifier of ApplP.
not necessarily interpreted as a causer, unlike dative DPs in German. Thus, the instrument may not be a source of the causative event either.

Another problem is the fact that Appl is not restricted to animate arguments only, contrary to the proposal in (64). It is true that affectee arguments are generally restricted to humans, as shown in German, Korean, and Japanese (chapter 3), in addition to Spanish (Cuervo 2003). However, a broad range of data illustrate that applied arguments are not restricted to humans. As the instrument applied argument in (66) indicates, a non-human can be an applied argument even though its complement is a change of state event.

To summarize, the possession approach to the semantics of Appl is too restricted to capture the wide range of applicative data, which seems to be a natural consequence, as it is based solely on the data of affectees and unintentional causers with change of state of verbs. It cannot account for applied arguments that are not affectees or do not take a change of state event complement.

The non-agentive approach to the semantics of Appl proposed in this thesis (55) captures not only the applicative data that the possession approach cannot capture, but also affectees or unintentional causers with a change of state event. Under the account proposed in this thesis, Voice introduces an agent argument, and thus it can exhibit intentionality. Appl, on the other hand, lacks agentivity, introducing non-agentive arguments; therefore, applied arguments are observed to be non-agentive cross-linguistically. The non-agentive semantics of Appl also accounts for the wide range of possible semantics associated with applied arguments, all of which are non-agentive. There is no human restriction with Appl in (55), and this seems to be true cross-linguistically. Moreover, there is no restriction on event type in the complement of Appl (see the outline of the proposal in chapter 1 for details); Appl merely sets up a relation between a DP in its specifier and an event in its complement, regardless of the event type. For example, as argued in chapter 3, it does not matter what type of event occurs in the complement.

138 This may be because that most of the affectees are also alienable possessors. An inalienable possessor is hard to be interpreted as a mental affectee. Thanks to Cristina Cuervo for pointing this out.
of peripheral Appl: it can be either stative or causative/active, as shown in German, Korean, or English.
Chapter 5
Conclusion

The interaction between semantics and syntax has been a central area of linguistic investigation. In particular, the question of how different theta roles can be mapped into different positions has been an important issue. To explore this issue, this thesis examined the syntax and semantics of external arguments, focusing on the question of how external arguments are projected and interpreted in syntax. As initially proposed by Marantz (1984) and subsequently developed by Kratzer (1996), external arguments have been generally assumed to be introduced by a functional head, Voice or $v$, rather than being verbal arguments. Since then, there has been an overflow of functional heads of various semantic types that represent corresponding semantics of an external argument; for instance, $v_{\text{CAUSE}}$, $v_{\text{DO}}$ or $v_{\text{BE}}$ and so on (e.g., Harley 1995; Folli and Harley 2007).

A high applicative head has been proposed to be similar to Voice, introducing an argument external to an event (Pylkkänen 2008). The crucial question that these studies leave unanswered is whether all semantically different external arguments can be treated in the same way in syntax. This question is non-trivial, as the mapping of an argument in syntax closely interacts with the semantics of the argument (e.g., Baker 1988, 1997; Hale and Keyser 1993).

This thesis shows that not all external arguments are represented in the same way. Put differently, the result that emerges from this thesis is that different external argument roles can be mapped into different syntactic positions. Agents are introduced by Voice, which merges either above high Appl or below peripheral Appl, which both introduce non-agentive external arguments. The Appl heads merge in hierarchically different positions: the argument (e.g., affectee or locative) of peripheral Appl merges asymmetrically above the argument (e.g., instrument) of high Appl. The external argument introducing heads, Voice and Appls, are not merely different flavours of the same head, but distinct elements; therefore, they are all necessary in argument structure.

---

139 See Travis (2005) for the discussion of a similar question.
Many interesting issues surrounding non-agentive external arguments and their interaction with agents are left unaddressed. Among them, some immediate questions are whether we need more argument-introducing heads than the four identified here (peripheral Appl, Voice, high Appl, and low Appl), whether other non-agentive external arguments, such as causers, can be introduced by Appl, and what differences exist among the non-agentive external arguments. Hopefully, this thesis provides the groundwork for this line of research.
References


Belvin, R. S. 1993. The two causative haves are the two possessive haves. *MITWPL* 20:19–34.


Cuervo, M. C. 2008. Some datives are born, some are made. Selected proceedings of the Hispanic Linguistics Symposium, Université Laval.

Cuervo, M. C. 2003. Datives at large, Doctoral dissertation, MIT.


Reinhart, T. 2000 The Theta System: Syntactic realization of verbal concepts. OTS Working papers, 00.01/TL.


